



**Tennis Courts adjacent to 38-  
84 Cornwall Road, Tottenham,  
London**

Arboricultural Survey

For

London Borough of Haringey

Project No.: JHRG104/002

February 2020

**London & South East**  
Compass House  
Surrey Research Park  
Guildford  
GU2 7AG . UK  
t: +44 (0)1483 466 000

**North & Borders**  
The Tannery  
91 Kirkstall Road  
Leeds  
LS3 1HS. UK  
t: +44 (0)113 247 3780

**Wales & South West**  
Williams House  
11-15 Columbus Walk  
Cardiff  
CF10 4BY . UK  
t: +44 (0)2920 020 674

**Scotland**  
20-23 Woodside Place  
Glasgow  
G3 7QF . UK  
t: +44 (0)141 582 1333

**Enquiries**

e: [enquiries@thomsonec.com](mailto:enquiries@thomsonec.com)

w: [www.thomsonec.com](http://www.thomsonec.com)



| Project Number | Report No. |
|----------------|------------|
| JHRG104/002    | 001        |

| Revision No. | Date of Issue | Author                        | Reviewer        | Approver     |
|--------------|---------------|-------------------------------|-----------------|--------------|
| 001          | 21/02/2020    | Neil Francis and Iain Waddell | Lynnette Pearce | Neil Francis |

**Disclaimer:**

Copyright Thomson Ecology Limited. All rights reserved.

No part of this report may be copied or reproduced by any means without prior written permission from Thomson Ecology Limited. If you have received this report in error, please destroy all copies in your possession or control and notify Thomson Ecology Limited.

This report has been prepared for the exclusive use of the commissioning party and unless otherwise agreed in writing by Thomson Ecology Limited, no other party may use, make use of or rely on the contents of the report. No liability is accepted by Thomson Ecology Limited for any use of this report, other than for the purposes for which it was originally prepared and provided.

Opinions and information provided in the report are on the basis of Thomson Ecology Limited using due skill, care and diligence in the preparation of the same and no explicit warranty is provided as to their accuracy. It should be noted and it is expressly stated that no independent verification of any of the documents or information supplied to Thomson Ecology Limited has been made.

## Contents

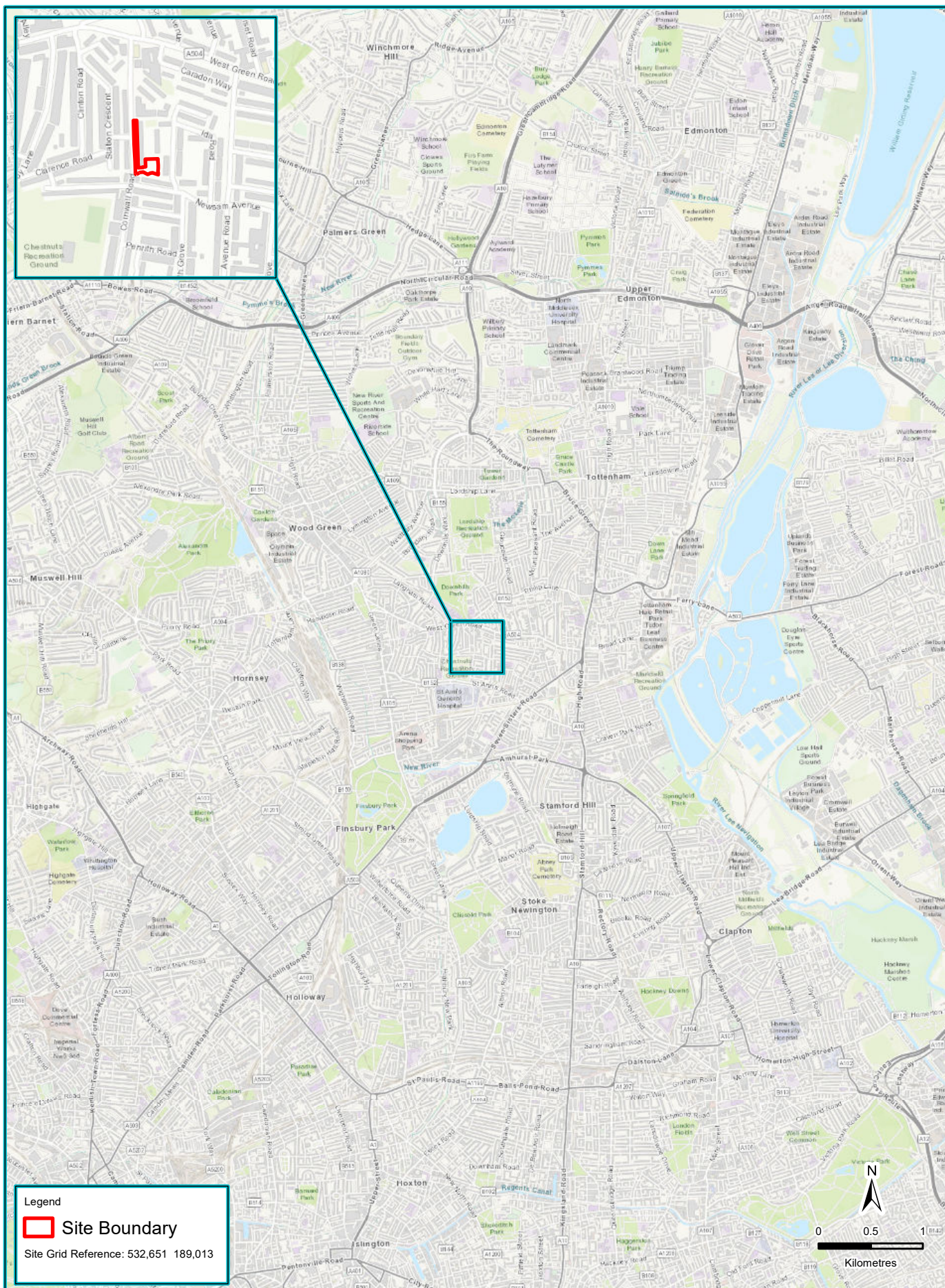
|                                                   |    |
|---------------------------------------------------|----|
| 1. Summary .....                                  | 5  |
| 2. Introduction .....                             | 6  |
| 2.1 Development Background .....                  | 6  |
| 2.2 Site Description .....                        | 6  |
| 2.3 Brief and Objectives .....                    | 6  |
| 2.4 Limitations .....                             | 7  |
| 3. Methodology .....                              | 8  |
| 3.1 Desk Study .....                              | 8  |
| 3.2 Tree Survey .....                             | 8  |
| 4. Results .....                                  | 12 |
| 4.1 Desk Study .....                              | 12 |
| 4.2 Tree Survey .....                             | 12 |
| 5. Recommendations .....                          | 13 |
| 5.1 General Tree Retention Guidance .....         | 13 |
| 5.2 Site Specific Guidance .....                  | 13 |
| 5.3 Tree Protection .....                         | 13 |
| 5.4 General Recommendations .....                 | 14 |
| 6. Bibliography .....                             | 15 |
| Appendix 1 - Tree Schedule .....                  | 16 |
| Appendix 2 - Table of Quality Assessment .....    | 17 |
| Appendix 3 - Example of Protective Fencing .....  | 18 |
| Appendix 4 - Tree Protection Fencing Notice ..... | 19 |

FIGURE 1: SITE LOCATION

FIGURE 2: TREE CONSTRAINTS PLAN (TCP01)

## 1. Summary

- 1.1.1 London Borough of Haringey is proposing the redevelopment of a plot of land at the Tennis Courts adjacent to 38-84 Cornwall Road, Tottenham, London (see Figure 1).
- 1.1.2 London Borough of Haringey commissioned Thomson Environmental Consultants to undertake an arboricultural survey of trees within and adjacent to the site. The arboricultural survey was carried out in accordance with BS5837:2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (BS5837:2012).
- 1.1.3 All trees were categorised in accordance with the cascade chart for tree quality assessment in BS5837:2012 (see Appendix 2). Trees were given a ranking of A, B or C in descending order of value and assigned one or more subcategories qualifying the basis of that value as either arboricultural, landscape or cultural. Trees with only short-term remaining value or that require immediate removal for safety or management reasons are given a U rating.
- 1.1.4 A total of three Category B trees, one Category C tree and two Category C groups of trees were recorded within or adjacent to the site during the survey (see Figure 2) and are listed in the Tree Schedule (see Appendix 1).
- 1.1.5 Category B and C trees represent a material consideration to development. Concerted effort should be made to retain B category trees within the development and while Category C trees should be retained where possible, they should not be retained where they would present a serious constraint to development.
- 1.1.6 In order to meet the requirements of the Local Planning Authority, an Arboricultural Impact Assessment and Arboricultural Method Statement should be undertaken once detailed plans of the proposed development are available.



|               |                            |             |                 |                                                                                                               |         |            |
|---------------|----------------------------|-------------|-----------------|---------------------------------------------------------------------------------------------------------------|---------|------------|
| Client        | London Borough of Haringey | Drawing Ref | JHRG104/28630/1 | <div>Thomson<br/>environmental<br/>consultants</div> <div>www.thomsonec.com<br/>enquiries@thomsonec.com</div> |         |            |
| Figure Number | 1                          | Scale at A4 | 1:50,000        |                                                                                                               |         |            |
| Figure Title  | Site Location              | Drawn       | EA              |                                                                                                               | Checked | TP         |
|               |                            | Date        | 18/12/2020      |                                                                                                               | Date    | 18/12/2020 |

Filepath: S:\Leeds\Projects\JHRG104 - Arboricultural Services Cornwall Road N15 5AR\Mapping\Working\JHRG104\_Fig2\_TCP\_EA\_291019.mxd



- Legend
- Root Protection Area of Category 'B' Tree
  - Root Protection Area of Category 'C' Tree
  - Tree Canopy Extents
  - Tree Stem Location
  - Site Boundary

Site Grid Reference: 532,654 188,979

Contains Ordnance Survey data  
© Crown copyright and database right 2020.

This map must not be copied or reproduced by any means  
without prior written permission from Thomson Environmental  
Consultants.

|               |            |                                  |
|---------------|------------|----------------------------------|
| Drawing Ref   |            | JHRG104/28631/1                  |
| Scale at A3   |            | 1:200                            |
| Drawn         | EA         | Checked<br>TP                    |
| Date          | 31/01/2020 | Date<br>31/01/2020               |
| Client        |            | London Borough of Haringey       |
| Figure Number |            | 2                                |
| Figure Title  |            | Tree Constraints Plan<br>(TCP01) |

## 2. Introduction

### 2.1 Development Background

**2.1.1** London Borough of Haringey is involved in the potential redevelopment of a small plot of land at the Tennis Courts adjacent to 38-84 Cornwall Road, Tottenham, London. Proposals are still being developed but it is expected that the site will be used for new residential dwellings with limited hard and soft landscaping. These proposals are hereafter referred to as 'the development'.

**2.1.2** The development is located on an approximately 0.0673ha area of land (grid reference TQ326889), shown on Figure 1. The area affected by the development is hereafter referred to as 'the site'.

**2.1.3** There are two trees and two groups of trees within the site and two trees adjacent to the site boundary that may be affected by development. Detailed development plans are in the process of being drawn up and a planning pre-application is to be submitted in November 2019.

### 2.2 Site Description

**2.2.1** The site is located between Cornwall Road to the west and Ida Road to the east with access from Cornwall Road. Formally a tennis court, it is predominantly hard standing with a number of trees bordering the tennis court section of the site. There are mixed residential properties and commercial units surrounding the site on all sides.

### 2.3 Brief and Objectives

**2.3.1** London Borough of Haringey commissioned Thomson Environmental Consultants to complete an arboricultural survey and report of the site.

**2.3.2** The objective of the survey and report was to assess the condition of the existing trees on site and any off-site trees that might be affected by the development, providing sufficient information to enable decisions to be made on potential design layout and tree retention for the proposed development. The brief was to complete:

- An arboricultural survey of trees within or immediately adjacent to the site, in line with BS5837:2012.
- Liaison with the Local Planning Authority and Tree Officer to determine whether trees on site are subject to a Tree Preservation Order or are covered by Conservation Area restrictions.
- An arboricultural report detailing our methods, results and recommendations, including the Tree Schedule and a Tree Constraints Plan (TCP), which can be used to inform feasibility studies and design options.
- A desk study to determine the presence of any Tree Preservation Order and Conservation Area restrictions at the site.
- An arboricultural report of our methods and the results, including the Tree Schedule and a Tree Constraints Plan.

- An Arboricultural Impact Assessment (AIA), based on the proposed site layout, which evaluates the direct and indirect effects of the proposed design on the trees on site, identifies which trees can realistically be retained, and recommends any necessary mitigation to protect those trees.
- An Arboricultural Method Statement (AMS) detailing how retained trees will be protected on site and how any aspect of the development that is within the root protection areas of retained trees will be implemented with minimum impact on the future health of the trees.
- A Tree Protection Plan detailing how retained trees will be protected during development works.

**2.3.3** This report details the methods and results of the tree survey and provides the Tree Schedule and TCP. The AIA and AMS will be completed once plans for the proposed development have been finalised.

## **2.4** Limitations

**2.4.1** The information provided within this report and in the accompanying Tree Schedule covers only those trees that were inspected and their condition at the time of survey.

**2.4.2** A full hazard assessment has not been made and therefore no guarantee is given as to the structural integrity of any of the trees on site.

**2.4.3** Where trees were clad in ivy (*Hedera helix*), or where dense epicormic growth or dense underplanting obscured the main stem, this was recorded in the Tree Schedule. The inspection of such trees is impeded and as such a further inspection may be required following the removal of the obstruction. The retention categories of such trees should be considered as provisional only.

**2.4.4** Measurements for off-site trees have been estimated and therefore may not fully represent the related constraints.

**2.4.5** Whilst this report makes general observations on the long term potential of the trees surveyed, trees are dynamic organisms and subject to continual change, thus this report should not be relied upon for the purposes of development for more than 12 months from the date of survey.

### 3. Methodology

#### 3.1 Desk Study

- 3.1.1 Records of Tree Preservation Orders (TPOs) existing at the site and Conservation Areas within or adjacent to the site were sought from the London Borough of Haringey.

#### 3.2 Tree Survey

- 3.2.1 All significant trees at the site were assessed for their potential to be affected by the development proposals. Significant trees are defined as those with a trunk diameter of greater than 75mm at 1.5m above ground level according to the survey methodology outlined in BS5837:2012. Off-site or third-party trees have been included where it is likely they would influence the development.
- 3.2.2 The trees surveyed were inspected from ground level only and no internal investigations were undertaken.
- 3.2.3 Trees were categorised as single trees or those that formed part of a distinct group such as a woodland or hedgerow. Groups can be defined as cohesive arboricultural features, either aerodynamically (for example, companion shelter), visually or culturally including for biodiversity (BS5837:2012). The information recorded for each tree can be seen in Table 1.

**Table 1: Information recorded for each tree during survey**

| Attribute              | Description                                                                                                                                                                                                                                                                     |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tree No.</b>        | Numerical reference given in sequential order starting at number '1', corresponding with the numbers as set out in Figure 2; trees are given the prefix 'T', groups 'G', woodlands 'W' and hedgerows 'H'.                                                                       |
| <b>Species</b>         | The common names are based upon on site identification and expressed according to <i>Tree Guide</i> (Johnson & More, 2004).                                                                                                                                                     |
| <b>Height</b>          | Measured approximately from ground level with the aid of a clinometer and shown in metres (m).                                                                                                                                                                                  |
| <b>Stem Diameter</b>   | Diameter measured at approximately 1.5m above ground level. In the case of multi-stemmed trees, measurement is taken of each stem at 1.5m, where there are two to five stems; or a mean stem diameter at 1.5m, where there are more than five stems. Given in millimetres (mm). |
| <b>Canopy Spread</b>   | Maximum branch spread measured in metres from the centre of the trunk in the direction of the four cardinal points of the compass (or an average can be given if branches demonstrate an even spread).                                                                          |
| <b>Crown Clearance</b> | Height above ground level of the first significant branch and direction of growth, and the height above ground level of the overall canopy.                                                                                                                                     |

| Attribute                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Age Class</b>                              | <ul style="list-style-type: none"> <li>• Young - less than one-third natural life span spent;</li> <li>• Middle-aged - between one-third and two-thirds natural life span spent;</li> <li>• Mature - greater than two-thirds life span completed;</li> <li>• Over-mature - mature, and in an overall state of decline;</li> <li>• Veteran - surviving beyond the typical age range for the species with a high value in terms of conservation and amenity.</li> </ul>                                                                                                                                                                                                                                                                                                                                |
| <b>Physiological Condition</b>                | Overall health, condition and function of the tree in comparison to a 'normal' example of the species of a similar age; e.g. 'good', 'fair', 'poor' or 'dead'. If deemed necessary, these gradings may be elaborated upon in the 'Comments' section.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Structural Condition</b>                   | <p>The overall structural condition of the tree including the roots, butt, trunk, limbs and their unions, and the presence of any structural defects, decay or pathological defects.</p> <ul style="list-style-type: none"> <li>• Good - no significant visible structural defects with a form typical for the species;</li> <li>• Fair - a specimen with only minor defects that are easily remedied or of no long term significance;</li> <li>• Poor - significant and irremediable physiological or structural defects that may lead to early or premature decline;</li> <li>• Hazardous - significant structural defects of such a degree that there is a risk of imminent collapse or failure. If deemed necessary, these gradings may be elaborated upon in the 'Comments' section.</li> </ul> |
| <b>Comments</b>                               | Comments have been made, where appropriate, relating to location, health and condition, structure and form, estimated life expectancy, conservation value and amenity value within the local landscape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Preliminary Management Recommendations</b> | Tree work that should be undertaken for good arboricultural management, regardless of the requirements of the development.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Estimated Remaining Contribution</b>       | The estimated time, in years, that the tree will provide a safe contribution to the site (i.e. <10, 10-20, 20-40 and >40).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### Quality Assessment

- 3.2.4** During the survey, the trees were assessed qualitatively, categorising the quality and value of the trees based on arboricultural, landscape and cultural (including conservation) features. Each tree was then placed into one of four categories. The four categories can be seen in Table 2. Definitions for these categories can be found in Appendix 2.

**Table 1: Quality assessment categories**

| Category          | Description                                                                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Category U</b> | 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. |
| <b>Category A</b> | Trees of high quality with an estimated life expectancy of at least 40 years.                                                                         |
| <b>Category B</b> | Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.                                                           |
| <b>Category C</b> | Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.               |

**3.2.5** Trees categorised as either A, B or C, were also allocated up to three subcategories. The subcategories chosen for each tree are dependent on the main reasons for selection of the particular category grading. The three subcategories are as follows:

1. Category grading based on mainly arboricultural qualities;
2. Category grading based on mainly landscape qualities; and
3. Category grading based on mainly cultural values, including conservation.

#### *Root Protection Areas (RPAs)*

**3.2.6** Trees that are selected for retention on the site could be at risk of damage during construction, such as root damage during excavations for foundations or services, or any ground-working for landscaping. Further impacts on the trees may potentially result from vehicle movements and materials storage, including root severance, compaction of the soil and exclusion of air and water to the soil. The risk of tree damage is minimised if construction activities are planned to avoid the roots of trees.

**3.2.7** The area of ground adjacent to each tree or group of trees that contains the majority of the roots can be calculated using the equation provided in the BS5837:2012. This Root Protection Area (RPA) is a radius around the tree of 12 times the stem diameter for a single stem. For multi-stemmed trees of two to five stems and greater than five stems, the cumulative stem diameters to be multiplied by 12, are calculated as per the equations in Table 3.

**Table 3: Equations for the calculation of the RPA of multi-stemmed trees**

| Number of stems       | Equation                                                                                                 |
|-----------------------|----------------------------------------------------------------------------------------------------------|
| <b>Two to five</b>    | $\sqrt{((\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2)}$ |
| <b>More than five</b> | $\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$                                     |

- 3.2.8** The RPA for each tree in the Tree Schedule has been calculated and, where relevant, has been adjusted to take into account site conditions. For example, when a tree is growing in a confined root space adjacent to an existing building or other solid structure that would restrict root growth in that direction, the RPA has been adjusted accordingly (see Figure 2).
- 3.2.9** The RPA for tree groups is calculated using the stem diameter of the largest tree within the group. The RPA radius is calculated as per Section 3.2.7 and then used to define the RPA by following the outline of the group's extent.
- 3.2.10** Where the calculated RPA exceeds 707m<sup>2</sup>, it has been capped at this figure, as per BS5837:2012. This is equivalent to a circle with a radius of 15m or a square with approximately 26m sides.

*Date of Survey*

- 3.2.11** The site was visited, and the survey undertaken, on 30<sup>th</sup> January 2020, by Iain Waddell Tech Cert (ArborA) Dip Arb L6 (ABC) Tech ArborA.

*Weather Conditions*

- 3.2.12** The weather conditions at the time of survey was cloudy with low temperatures. Deciduous trees had no leaves.

## 4. Results

### 4.1 Desk Study

- 4.1.1 It was confirmed using the London Borough of Haringey online mapping service, on 24<sup>th</sup> October 2019, that no trees within the site boundaries are covered by Tree Preservation Orders or located within a Conservation Area.

### 4.2 Tree Survey

- 4.2.1 A total of four significant individual trees and two groups of trees located within or immediately adjacent to the site boundary were recorded during the survey. A breakdown of categories can be found in Table 4. The locations of all trees, RPAs, retention categories and reference numbers are shown on Figure 2. A detailed description of each tree is given in the Tree Schedule in Appendix 1.

**Table 2: Number of significant trees allocated to each retention category.**

| Tree Category | Number of Trees | Tree Numbers | Number of Groups | Group numbers | Total    |
|---------------|-----------------|--------------|------------------|---------------|----------|
| A             | -               | -            | -                | -             | -        |
| B             | 3               | T2, T3, T4   | -                | -             | 3        |
| C             | 1               | T1           | 2                | G1, G2        | 3        |
| U             | -               | -            | -                | -             | -        |
| <b>Total</b>  | <b>4</b>        |              | <b>2</b>         |               | <b>6</b> |

#### *Root Protection Areas (RPAs)*

- 4.2.2 The RPAs for the trees and groups surveyed can be seen in Figure 2. The actual RPAs, in m<sup>2</sup>, for the individual trees surveyed are shown in Appendix 1.

## 5. Recommendations

### 5.1 General Tree Retention Guidance

- 5.1.1 All trees on site should be considered for retention where possible, with the greatest consideration given to Category A trees and then B trees where these specimens occur, and finally Category C trees. However, the retention of Category C trees should not be at the expense of an efficient design. Category U trees are recommended for removal for sound arboricultural reasons. Where trees of any category are on adjacent land, and removal is required for the development, permission must be sought from the landowner before any works can be undertaken.

### 5.2 Site Specific Guidance

- 5.2.1 The three Category B trees T2, T3 and T4 are mature ash trees (*Fraxinus excelsior*) located between residential buildings in an area of green space. These trees provide screening between the blocks of flats enhancing the recreational area. The two trees T3 and T4 grow in a small raised planting bed made of brick which has failed and requires repair to prevent any damage being caused to the tree roots set behind the brick walls.
- 5.2.2 The Category C tree T1 is a mature goat willow (*Salix caprea*) located on the southern boundary which has been recently crown reduced. It provides good screening between the site and residential properties to the south and should be considered for retention. It shouldn't however, be considered a constraint to any development as its loss could be offset with compensatory planting along the southern boundary which would in time improve the quality of the screening.
- 5.2.3 The Category C groups of trees, G1 and G2, have undergone minor crown pruning and provide good screening between the site and flats to the east. They should be retained where possible which may require their crowns to be reduced to a more manageable height and spread.

### 5.3 Tree Protection

- 5.3.1 For those trees selected to be retained as part of the redevelopment, it will be necessary to maintain Construction Exclusion Zones (CEZs) during the construction phase. The purpose of CEZs is to prevent damage to the tree roots from severance, compaction of the soil, or exclusion of air and water to the soil.
- 5.3.2 The CEZ should cover the area around the RPAs of all trees at the site that are not directly affected by the works. The CEZ should be maintained by suitable stout fencing (see Appendix 3) and identified by marking with suitable notices (see Appendix 4) or adequate ground protection suitable to withstand any likely loading. The fencing should be fit for the purpose of excluding construction activity and remain rigid and complete throughout the duration of the works. If the ground protection is intended for pedestrian movements, a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile may be acceptable; however if intended for wheeled or tracked construction traffic, the ground protection should be designed by an engineer.

**5.3.3** Where CEZs overlap with existing areas of tarmac, restricted working may be allowed and may not require protection by fencing. Such areas should, however, be clearly identified as restricted working areas within the CEZ by markings on the ground and notices. Within restricted working areas in CEZs, construction activities should be limited to surfacing works only. Strictly no digging should be allowed within these areas, except in cases where root-sensitive excavation techniques have been recommended in an Arboricultural Method Statement.

**5.3.4** An adequate water and air supply to roots should be provided for all trees both during and after construction. This should include preventing impermeable surfacing from being allowed to cover more than 20% of the RPA.

## **5.4 General Recommendations**

**5.4.1** The following points are made as general recommendations:

- Building lines should be kept outside the RPA where possible. Limited use may be made for parking, drives or hard surfaces within the RPA, subject to advice from a qualified arboriculturist;
- Wherever possible, service runs should be routed outside the RPAs. If this is not possible, they should be kept together and trenchless techniques should be used. At all times where services pass within an RPA, detailed plans showing the proposed routing should be drawn up in conjunction with an arboriculturist;
- On residential developments consideration must be given to future tree growth and orientation (BS5837:2012), i.e. adverse shading and blocked views from windows, which may lead to pressure to fell or remove trees in the future. Wherever possible, the windows of primary rooms should be orientated to avoid any potential conflict with tree canopies;
- A full ecological survey should be undertaken in order to determine the presence of any protected species; and
- An Arboricultural Impact Assessment and Arboricultural Method Statement should be produced once detailed plans for the development are available.

## 6. Bibliography

- 6.1.1 British Standards Institution (2012) BS5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. BSI, London.
- 6.1.2 British Standards Institution (2010) BS 3998:2010 *Recommendations for Tree Work*. BSI, London.
- 6.1.3 Plant Health Service (2012) *Biosecurity Guidance* Forestry Commission, Edinburgh
- 6.1.4 Johnson, O. & More, D. (2004) *Collins Tree Guide*. London: HarperCollins.
- 6.1.5 Lonsdale, D. (1990) *Principles of Tree Hazard Assessment and Management*. The Stationery Office, London.
- 6.1.6 Matheny, N. & Clark, J.R. (1998) *Trees and Development*. ISA, Champaign, IL.
- 6.1.7 Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees*. The Stationery Office, London.
- 6.1.8 National Joint Utilities Group (NJUG) (2007) NJUG Volume 4: *Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*. NJUG, London.
- 6.1.9 National Tree Safety Group (2011) *Common Sense Risk Management of Trees* Forestry Commission, Edinburgh
- 6.1.10 Patch, D. & Holding, B. (2007) Arboricultural Practice Note 12: *Through the Trees to Development*. London: AAIS.
- 6.1.11 Robertson, J, Jackson, N & Smith, M (2006) *Tree Roots in the Built Environment*. The Stationery Office, London.

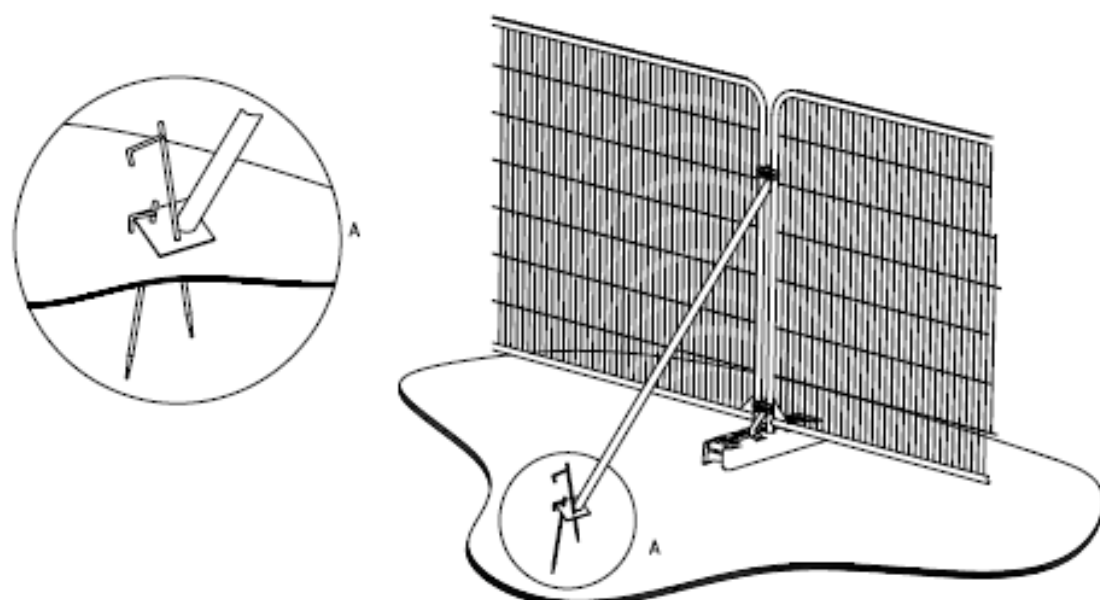
## Appendix 1 - Tree Schedule

| Tree/<br>Group No. | Species                          | Height<br>(m) | Stem<br>Diameter<br>(mm) | Canopy Spread (m) |     |     |     | Height of Lowest<br>Limb and Direction<br>(m) | Crown<br>Clearance<br>(m) | Age Class   | Estimated<br>Remaining<br>Contribution<br>(years) | Condition  |           | Comments                                                                                                                                                          | Preliminary Management<br>Recommendations | BS Category | RPA<br>(m <sup>2</sup> ) | RPA<br>Radius<br>(m) |
|--------------------|----------------------------------|---------------|--------------------------|-------------------|-----|-----|-----|-----------------------------------------------|---------------------------|-------------|---------------------------------------------------|------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------|--------------------------|----------------------|
|                    |                                  |               |                          | N                 | E   | S   | W   |                                               |                           |             |                                                   | Physiology | Structure |                                                                                                                                                                   |                                           |             |                          |                      |
| T1                 | goat willow; <i>Salix caprea</i> | 11            | 730                      | 5                 | 5   | 5   | 5   | 1S                                            | 2                         | Mature      | 20-40                                             | Good       | Fair      | The tree has been reduced in the past. The tree has had very poor past management resulting in poor firm                                                          | None                                      | C1;2        | 241.1                    | 8.8                  |
| T2                 | ash; <i>Fraxinus excelsior</i>   | 15            | 450                      | 5.7               | 6   | 7   | 7   | 2S                                            | 2                         | Mature      | 20-40                                             | Good       | Good      | No access around the base of the tree due to the fencing                                                                                                          | None                                      | B1;2        | 91.6                     | 5.5                  |
| T3                 | ash; <i>Fraxinus excelsior</i>   | 15            | 420                      | 5                 | 6.5 | 2   | 3.5 | 2.5E                                          | 2                         | Mature      | 20-40                                             | Good       | Good      | Grows in brick planter which has cracked and falling apart, tree has been crown lifted on the western aspect to 7m                                                | None                                      | B1;2        | 79.8                     | 5                    |
| T4                 | ash; <i>Fraxinus excelsior</i>   | 15            | 350                      | 2                 | 7   | 7   | 4   | 2.5E                                          | 2                         | Mature      | 20-40                                             | Good       | Good      | Grows in brick planter which has cracked and falling apart, tree has been crown lifted on the western aspect to 7m                                                | None                                      | B1;2        | 55.4                     | 4.2                  |
| G1                 | bay; <i>Laurus nobilis</i>       | 10            | 150                      | 2.9               | 2.9 | 2.9 | 2.9 | 2.9                                           | -                         | Middle-aged | 20-40                                             | Good       | Fair      | Boundary trees of the same age and height, the group has had little management in the past but had been topped at 2.5m some time ago, will tolerate heavy pruning | None                                      | C1;2        | 85.7                     | 1.8                  |
| G2                 | bay; <i>Laurus nobilis</i>       | 7             | 150                      | 2.9               | 2.9 | 2.9 | 2.9 | 2.9                                           | -                         | Middle-aged | 20-40                                             | Good       | Fair      | Boundary trees of the same age and height, the group has had little management in the past, will tolerate heavy pruning                                           | None                                      | C1;2        | 49.8                     | 1.8                  |

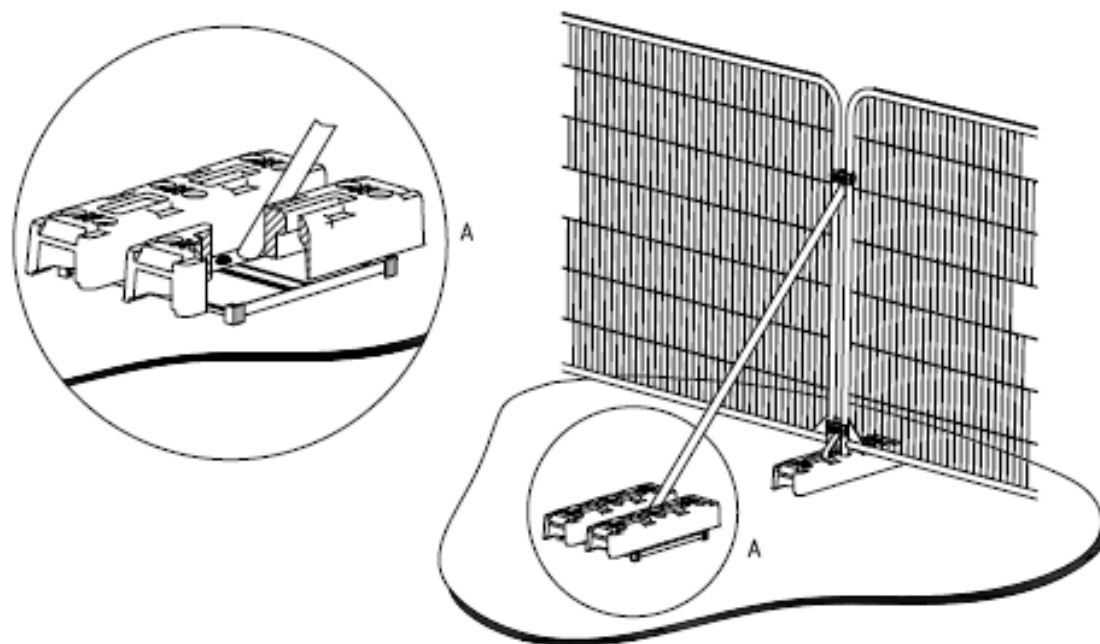
## Appendix 2 - Table of Quality Assessment

| Category and definition                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Criteria (including subcategories where appropriate)                                                                                                                                                                                                              |                                                                                                                                      | Identification on plan |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Trees unsuitable for retention (see Note)                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |                                                                                                                                      |                        |
| <b>Category U</b><br>Those in such a condition that they cannot be retained as living trees in the context of the current land use for longer than 10 years | <ul style="list-style-type: none"><li>Trees that have serious, irremediable, structural defects, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li><li>Trees that are dead or are showing signs of significant, immediate and irreversible overall decline</li><li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li></ul> <p>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve</p> |                                                                                                                                                                                                                                                                   |                                                                                                                                      | DARK RED               |
|                                                                                                                                                             | 1 Mainly arboricultural values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2 Mainly landscape values                                                                                                                                                                                                                                         | 3 Mainly cultural values, including conservation                                                                                     |                        |
| Trees to be considered for retention                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |                                                                                                                                      |                        |
| <b>Category A</b><br>Trees of high quality with an estimated remaining life expectancy of at least 40 years                                                 | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principle trees within an avenue)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features                                                                                                                                                            | Trees, groups or woodlands of significant conservation, historical commemorative or other value (e.g. veteran trees or wood-pasture) | LIGHT GREEN            |
| <b>Category B</b><br>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years                                             | Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation                                                                                                                                                                                                                                                                                                                                                                                    | Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality | Trees with material conservation or other cultural value                                                                             | MID BLUE               |
| <b>Category C</b><br>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value; and/or trees offering low or only temporary/transient landscape benefits                                                                         | Trees with no material conservation or other cultural value                                                                          | GREY                   |

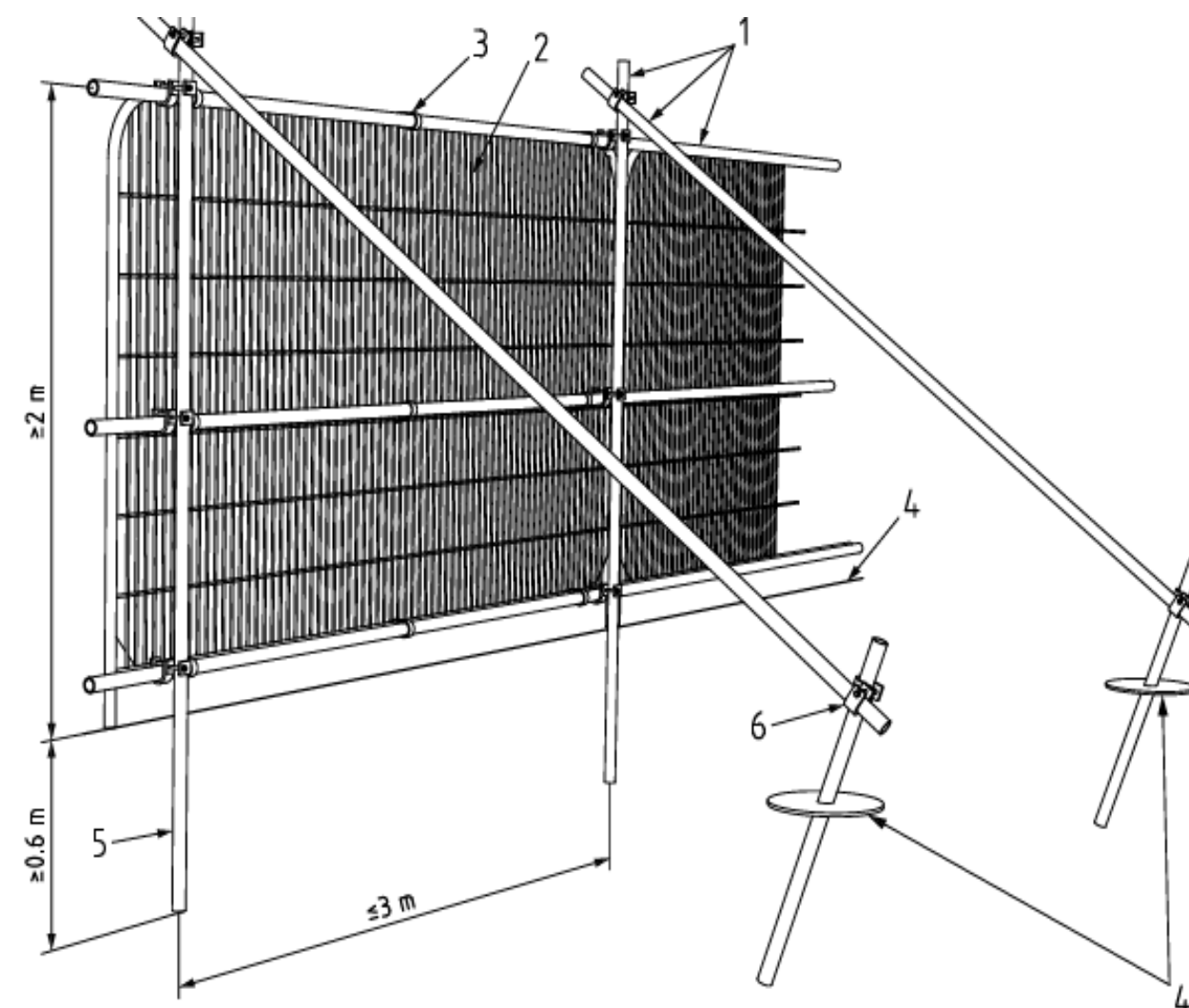
## Appendix 3 - Example of Protective Fencing



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray



### Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

#### Appendix 4 - Tree Protection Fencing Notice



**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**