

# Arboricultural Survey Report Plank Lane, Water Orton

---

June 2017

For: HSP



ecologylink

61 Middlewatch  
Swavesey  
Cambridge  
CB24 4RW

Tel: 01954 231375  
[www.ecologylink.com](http://www.ecologylink.com)

## Table of Contents

|  |          |
|--|----------|
| <b>1. Introduction .....</b>                                 | <b>3</b> |
| Site Description.....  | 3        |
| Survey Summary .....   | 3        |
| <b>2. Tree Descriptions and Recommendations.....</b>         | <b>4</b> |
| Root Protection Areas.....                                   | 5        |
| Construction Exclusion Zone .....                            | 5        |
| Above Ground Constraints .....                               | 5        |
| <b>3. Arboricultural Impact Assessment.....</b>              | <b>5</b> |
| <b>4. Evaluation and Recommendations.....</b>                | <b>5</b> |
| <b>5. Appendices .....</b>                                   | <b>6</b> |
| Appendix 1 – Tree Survey Data Sheets .....                   | 6        |
| Appendix 2 – Tree Constraints Map .....                      | 6        |
| Appendix 3 – Photographic Record .....                       | 6        |
| Appendix 4 – Methodology .....                               | 6        |
| Appendix 5 – Cascade Chart for Tree Quality Assessment ..... | 6        |

*By their very nature, ecological surveys can only assess a site or particular species at a set point in time, providing a snapshot of the environment and not a definitive evaluation. Every effort has been taken to provide an accurate assessment of the habitats or species surveyed. However, presence and population sizes of species can change over time and therefore the accuracy of this report will be affected by time and seasonality.*

*This document has been prepared by Ecology Link Ltd for the sole use of the client.*



## 1. Introduction

- 1.1 Ecology Link Ltd. was commissioned by HSP, to undertake a tree assessment of an area to the south west of Water Orton, Warwickshire. This report details the results of the field survey highlighting any arboricultural constraints to the proposed development works.
- 1.2 The survey was undertaken on the 30<sup>th</sup> May 2017 by Jonathan Panter, an experienced tree surveyor. All inspections were made at ground level. Any further specific investigations required (climbing or decay detection surveys) have been recommended where appropriate.

### Site Description

- 1.3 The site was located north of Plank Lane, Water Orton (NGR TL525221). The area was dominated by semi-improved grassland, which was grazed at the time of survey (cattle). The site was open with a main footpath running south to north, with a number of minor routes running across the grassland.
- 1.4 Mature trees were spread throughout the grassland and adjacent hedgerow. This included a number of oak and ash specimens which were mature to veteran in nature. Linear woodland and maturing pine provided screening from the road.

### Survey Summary

- 1.5 This report was compiled in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations. Preliminary recommendations have been given based on the quality of individuals or groups of trees, from the field survey data (Appendix 1). The Root Protection Area (RPA), for trees and groups have been calculated and presented within the Constraints Map (Appendix 2). The survey data has been supported by a Photographic Record (Appendix 3). However, any specific design proposals have not generally been taken into account at this stage.
- 1.6 The tree survey took the form of a standard ground level site survey, assessing trees and groups using BS Survey Methodology (Appendix 4). The objective was to produce:
  - A schedule of all trees, or groups of trees, located within or immediately adjacent to the proposed site.
  - An assessment of all trees based on BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations.
  - Advice on the removal, retention and management of trees.
  - An assessment of the requirement for the protection of trees during construction, with a tree constraints plan identifying Root Protection Areas (RPAs) for all categorised trees.
- 1.7 The client provided topographic maps for the site, detailing the trees to be surveyed.

## 2. Tree Descriptions and Recommendations

2.1 A total of 17 trees and eight groups were recorded during the survey (Appendix 1). A total of nine tree species were recorded under a range of retention categories (Table 2.1). The majority of trees were recorded under Category A, due to their mature nature and age which provided high landscape and conservation value. Category C trees were all relatively young examples, not warranting a higher classification.

**Table 2.1: Root Protection Area (RPA) and Tree Categories.**

| Ref. | Species                                  | Stem Dia. (mm) | Tree Qual. Ass. | Radius of RPA Guide Circle (m) |
|------|--|----------------|-----------------|--------------------------------|
| T1   | Beech ( <i>Fagus sylvatica</i> )         | 400            | B               | 4.8                            |
| T2   | Apple ( <i>Malus</i> sp.)                | 640            | A               | 7.7                            |
| T3#  | Apple ( <i>Malus</i> sp.)                | 300            | B               | 3.6                            |
| T4   | Holly ( <i>Ilex aquifolium</i> )         | 300#           | B               | 3.6                            |
| T5   | Ash ( <i>Fraxinus excelsior</i> )        | 200            | B               | 2.4                            |
| T6   | Pedunculate oak ( <i>Quercus robur</i> ) | 1230           | A               | 14.8                           |
| T7   | Pedunculate oak ( <i>Quercus robur</i> ) | 710            | A               | 8.5                            |
| T8   | Sessile oak ( <i>Quercus petraea</i> )   | 600#           | A               | 7.2                            |
| T9   | Pedunculate oak ( <i>Quercus robur</i> ) | 560            | A               | 6.7                            |
| T10  | Pedunculate oak ( <i>Quercus robur</i> ) | 890            | A               | 10.7                           |
| T11  | Pedunculate oak ( <i>Quercus robur</i> ) | 1110           | A               | 13.3                           |
| T12# | Ash ( <i>Fraxinus excelsior</i> )        | 1000           | A               | 12.0                           |
| T13  | Ash ( <i>Fraxinus excelsior</i> )        | 230            | B               | 2.8                            |
| T14  | Pedunculate oak ( <i>Quercus robur</i> ) | 910            | A               | 10.9                           |
| T15  | Corsican pine ( <i>Pinus nigra</i> )     | 950            | A               | 11.4                           |
| T16  | Pedunculate oak ( <i>Quercus robur</i> ) | 760            | A               | 9.1                            |
| T17  | Pedunculate oak ( <i>Quercus robur</i> ) | 1350           | A               | 15.0                           |
|      |  |                |                 |                                |
| G1   | Lime ( <i>Tilia</i> sp.)                 | 640            | A               | 7.7                            |
| G2   | Corsican pine ( <i>Pinus nigra</i> )     | 820            | B               | 9.8                            |
| G3   | Holly ( <i>Ilex aquifolium</i> )         | 150            | C               | 1.8                            |
| G4   | Pedunculate oak ( <i>Quercus robur</i> ) | 740            | A               | 8.9                            |
| G5   | White poplar ( <i>Populus alba</i> )     | 300            | C               | 3.6                            |
| G6   | Mixed group of mature trees              | 600#           | B               | 7.2                            |
| G7   | Ash ( <i>Fraxinus excelsior</i> )        | 250            | C               | 3.0                            |
| G8   | Corsican pine ( <i>Pinus nigra</i> )     | 720            | B               | 8.6                            |

### Root Protection Areas

- 2.2 RPA's have been calculated for each recorded tree (Table 2.1). This identifies the minimum area which should be left undisturbed around each tree if retained (this includes compaction by machinery and material storage). These areas must be protected during site works to ensure long-term survival and resource availability (water, nutrients, air) for the trees.

### Construction Exclusion Zone

- 2.3 Areas of Construction Exclusion Zones (CEZ) should be identified through the RPA indicated on the Tree Constraints Plan (Appendix 2). These can only be classed as indicative at this scale and should be measured on site to determine where protective barriers need to be erected. Protective fencing should be laid out on site, using the calculated measurements (Table 2.1).

### Above Ground Constraints

- 2.4 The age, position and nature of the trees recorded may present some above ground constraints. These restrictions should be incorporated when identifying the size of the CEZ, where branch spread is greater than the RPA (Appendix 1 & 2). For any retained trees, consideration should be given to the protection of branches from machinery, particularly aerial equipment, which could cause damage at a tree canopy level.

## 3. Arboricultural Impact Assessment

- 3.1 The development proposals may pose a potential risk to the trees recorded in this report, either directly (removal or construction within RPA) or indirectly (through incidental limb damage during construction works, storage of material and plant within RPA). The implementation of an Arboricultural Implications Assessment will outline the requirements for individual tree protection.
- 3.2 Precautions must be put in place to protect above and below ground elements of the trees throughout the construction process. The design must make provision for further growth and long-term survival of all retained trees.
- 3.3 Individual trees can only be assessed against a development design. Trees can then be evaluated for either their removal or protection during the construction process. At this stage tree position, RPA and canopy spread are presented as a guide within the design process.

## 4. Evaluation and Recommendations

- 4.1 The majority of mature trees surveyed were classified under Category A, due to their maturity. There were a number of trees which provided significant landscape and conservation value. These were all graded as Category A. The complex of trees across the site enhances the rural environment, which complements the village and wider countryside. Any development proposals must incorporate these key components into the design.
- 4.2 The development design should allow for the future growth of trees adjacent to any development works. Similarly, construction work (including accessing and storing materials on site) should allow for the defined RPAs and branch protection. These will need to be identified as definitive CEZs as part of a tree protection plan and be put in place before construction begins.

- 4.3 An Arboricultural Implications Assessment may be required to plan the protection or removal of identified trees as part of a formal planning process. This will aid the production of an Arboricultural Method Statement for onsite works.
- 4.4 Mitigation for any loss of trees should be in line with Council planting policy. This should include replacement tree planting within, and where possible adjacent to, the site. This must also include any trees that subsequently die or have to be removed due to any site damage.
- 4.5 Due to the number and diversity of mature trees within the site, it would be impossible to provide like-for-like mitigation, should any trees be removed to enable the scheme. However, a specific replacement strategy, which is linked to the development should combine arboricultural and ecological enhancement of the site. The use of specific specimen trees would provide focal aesthetic townscape features. Planting should be carefully planned to ensure continuity with existing site trees and connectivity beyond the site.
- 4.6 The erection of protective fencing for all trees to be retained is of vital importance and must be in place prior to any works commencing on site. Fencing should be robust and not easily moved or taken down, as outlined within BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations. The fencing must have signs attached to it stating that it should not be removed.
- 4.7 These recommendations are based on observations made at the time of the site visit. Trees are dynamic organisms that constantly change and are influenced by their surrounding environment. The information in this report should be considered as a ‘snap shot’ in time and not as a definitive record of the condition of trees on this site.

## 5. Appendices

[Appendix 1 – Tree Survey Data Sheets](#)

[Appendix 2 – Tree Constraints Map](#)

[Appendix 3 – Photographic Record](#)

[Appendix 4 – Methodology](#)

[Appendix 5 – Cascade Chart for Tree Quality Assessment](#)

## Appendix 1: Tree survey data sheet.

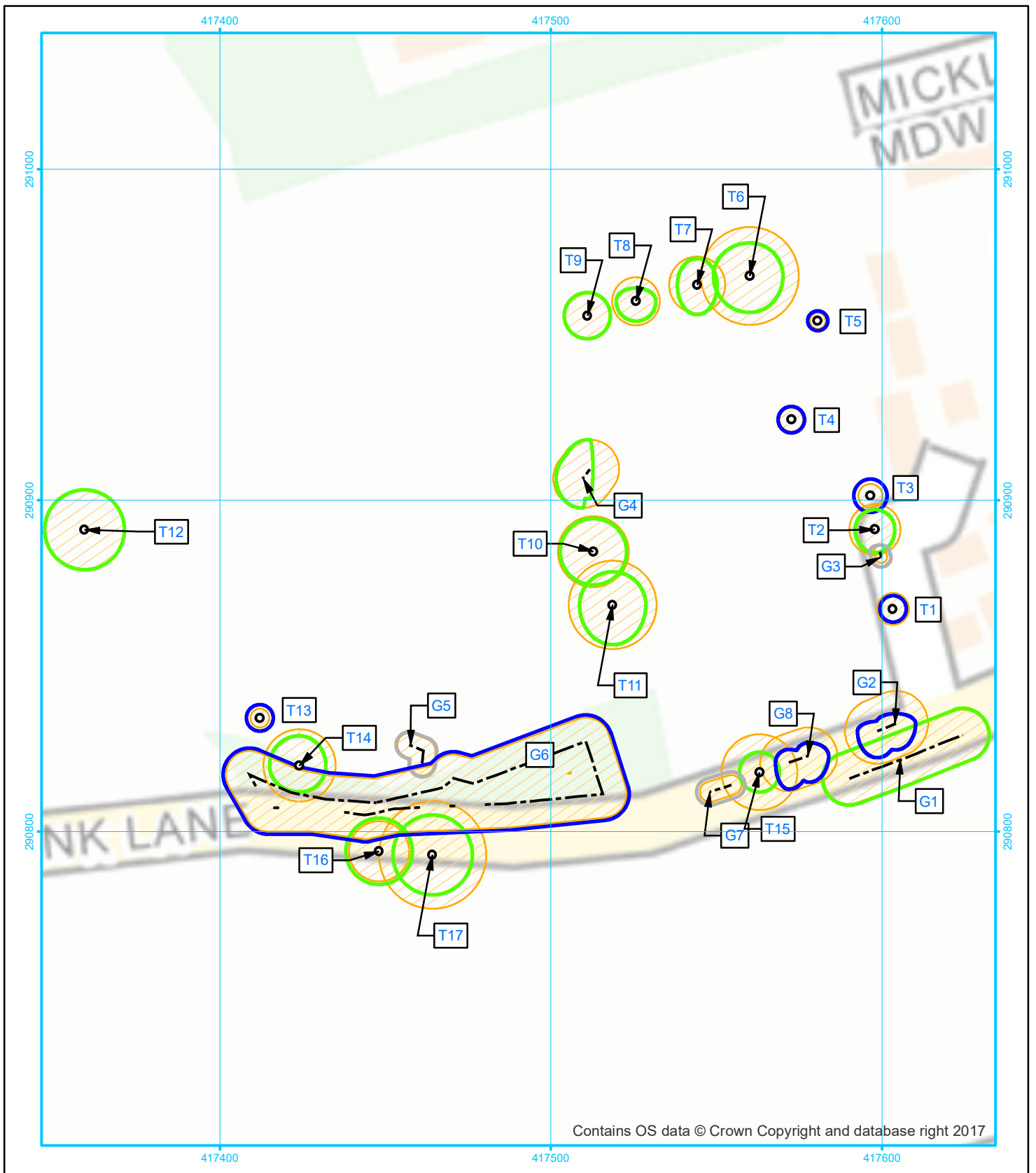
| Ref. | Species                                       | Height (m) | Stem dia. (mm) | No. of stems | Branch spread (m) |      |      |      | Crown height (m) | Age  | Condition | Comments                                    | BS5873 Tree Qual. Ass. | Ret. Cat. | Life Expect. (yrs) |
|------|---|------------|----------------|--------------|-------------------|------|------|------|------------------|------|-----------|---|------------------------|-----------|--------------------|
|      |   |            |                |              | N                 | E    | S    | W    |                  |      |           |   |                        |           |                    |
| T1   | Beech<br>( <i>Fagus sylvatica</i> )           | 9.0        | 400            | 2            | 4.0               | 4.0  | 4.0  | 4.0  | 0                | Semi | Good      | Managed tree on site boundary               | B                      | 1         | +40                |
| T2   | Apple<br>( <i>Malus</i> sp.)                  | 14.0       | 640            | 1            | 6.0               | 6.0  | 7.0  | 6.0  | 1.5              | Mat  | Good      | Mature tree adjacent to site                | A                      | 3         | +40                |
| T3#  | Apple<br>( <i>Malus</i> sp.)                  | 10.0       | 300            | 1            | 5.0               | 5.0  | 5.0  | 5.0  | 1.5              | Semi | Good      | Mature tree within adjacent garden          | B                      | 1         | +40                |
| T4   | Holly<br>( <i>Ilex aquifolium</i> )           | 8.0        | 300#           | 1            | 4.0               | 4.0  | 4.0  | 4.0  | 0.5              | Semi | Good      | Mature tree being part of an area of scrub  | B                      | 1         | +40                |
| T5   | Ash<br>( <i>Fraxinus excelsior</i> )          | 12.0       | 200            | 1            | 3.0               | 3.0  | 3.0  | 3.0  | 4.0              | Semi | Good      | Developing tree adjacent to boundary        | B                      | 1         | +40                |
| T6   | Sessile oak<br>( <i>Quercus robur</i> )       | 18.0       | 1230           | 1            | 10.0              | 10.0 | 11.0 | 11.0 | 2.0              | Mat  | Good      | Mature tree within northern hedgerow        | A                      | 3         | +40                |
| T7   | Sessile oak<br>( <i>Quercus robur</i> )       | 16.0       | 710            | 1            | 8.0               | 6.0  | 9.0  | 6.0  | 4.0              | Mat  | Good      | Mature tree within northern hedgerow        | A                      | 3         | +40                |
| T8   | Pedunculate oak<br>( <i>Quercus petraea</i> ) | 10.0       | 600#           | 1            | 4.0               | 5.0  | 6.0  | 6.0  | 2.0              | Mat  | Good      | Mature tree within northern hedgerow        | A                      | 3         | +40                |
| T9   | Sessile oak<br>( <i>Quercus robur</i> )       | 14.0       | 560            | 1            | 7.0               | 7.0  | 7.0  | 7.0  | 2.0              | Mat  | Good      | Mature tree within northern hedgerow        | A                      | 3         | +40                |
| T10  | Sessile oak<br>( <i>Quercus robur</i> )       | 15.0       | 890            | 1            | 10.0              | 10.0 | 10.0 | 10.0 | 2.0              | Mat  | Good      | Mature tree within central area of the site | A                      | 3         | +40                |
| T11  | Sessile oak<br>( <i>Quercus robur</i> )       | 14.0       | 1110           | 1            | 10.0              | 10.0 | 12.0 | 10.0 | 2.0              | Mat  | Good      | Mature tree within central area of the site | A                      | 3         | +40                |

| Ref. | Species                                 | Height (m) | Stem dia. (mm) | No. of stems | Branch spread (m) |      |      |      | Crown height (m) | Age  | Condition | Comments   | BS5873 Tree Qual. Ass. | Ret. Cat. | Life Expect. (yrs) |
|------|---|------------|----------------|--------------|-------------------|------|------|------|------------------|------|-----------|--|------------------------|-----------|--------------------|
|      |   |            |                |              | N                 | E    | S    | W    |                  |      |           |  |                        |           |                    |
| T12  | Ash#<br>( <i>Fraxinus excelsior</i> )   | 16.0       | 1000           | 1            | 10.0              | 10.0 | 10.0 | 10.0 | 2.0              | Mat  | Good      | Mature tree on the western boundary. Data was estimated due to lack of direct access | A                      | 1         | +40                |
| T13  | Ash<br>( <i>Fraxinus excelsior</i> )    | 9.0        | 230            | 1            | 4.0               | 4.0  | 4.0  | 4.0  | 2.0              | Yng  | Good      | Developing tree adjacent to boundary   | B                      | 3         | +40                |
| T14  | Sessile oak<br>( <i>Quercus robur</i> ) | 17.0       | 910            | 1            | 9.0               | 8.0  | 8.0  | 9.0  | 2.0              | Mat  | Good      | Mature tree within southern woodland area  | A                      | 3         | +40                |
| T15  | Corsican pine<br>( <i>Pinus nigra</i> ) | 20.0       | 950            | 1            | 6.0               | 6.0  | 6.0  | 6.0  | 8.0              | Mat  | Good      | Mature tree adjacent to road   | A                      | 3         | +40                |
| T16  | Sessile oak<br>( <i>Quercus robur</i> ) | 18.0       | 760            | 1            | 10.0              | 10.0 | 10.0 | 10.0 | 4.0              | Mat  | Good      | Mature tree on southern side of Plank Lane   | A                      | 1, 3      | +40                |
| T17  | Sessile oak<br>( <i>Quercus robur</i> ) | 16.0       | 1350           | 1            | 12.0              | 12.0 | 12.0 | 12.0 | 4.0              | Mat  | Good      | Mature tree on southern side of Plank Lane   | A                      | 1, 3      | +40                |
|      |   |            |                |              |                   |      |      |      |                  |      |           |  |                        |           |                    |
| G1   | Lime<br>( <i>Tilia sp.</i> )            | 19.0       | 640            | 1            | 8.0               | 8.0  | 8.0  | 8.0  | 3.0              | Mat  | Good      | Line of trees on adjacent amenity grassland south of Plank Lane                      | A                      | 2         | +40                |
| G2   | Corsican pine<br>( <i>Pinus nigra</i> ) | 21.0       | 820            | 1            | 3.0               | 6.0  | 8.0  | 6.0  | 4.0              | Mat  | Good      | Mature trees adjacent to road  | B                      | 2, 3      | +40                |
| G3   | Holly<br>( <i>Ilex aquifolium</i> )     | 6.0        | 150            | 1            | 2.0               | 3.0  | 3.0  | 3.0  | 1.0              | Semi | Fair      | Group of maturing trees adjacent to site   | C                      | 2         | +40                |
| G4   | Sessile oak<br>( <i>Quercus robur</i> ) | 16.0       | 740            | 1            | 9.0               | 1.0  | 9.0  | 8.0  | 2.0              | Mat  | Good      | Mature trees within the central area of the site                                     | A                      | 1, 2      | +40                |
| G5   | White poplar<br>( <i>Populus alba</i> ) | 10.0       | 300            | 1            | 4.0               | 4.0  | 4.0  | 4.0  | 2.0              | Yng  | Fair      | Small group of trees adjacent to woodland  | C                      | 2         | +20                |







| Ref. | Species                                 | Height (m) | Stem dia. (mm) | No. of stems | Branch spread (m) |     |     |     | Crown height (m) | Age  | Condition | Comments   | BS5873 Tree Qual. Ass. | Ret. Cat. | Life Expect. (yrs) |
|------|---|------------|----------------|--------------|-------------------|-----|-----|-----|------------------|------|-----------|--|------------------------|-----------|--------------------|
|      |   |            |                |              | N                 | E   | S   | W   |                  |      |           |  |                        |           |                    |
| G6   | Mix group of mature trees               | 16.0       | 600#           | 1            | 8.0               | 8.0 | 8.0 | 8.0 | 2.0              | Mat  | Fair      | Linear block of woodland adjacent to road, including a mix of trees and ages | <b>B</b>               | 2, 3      | +40                |
| G7   | Ash<br>( <i>Fraxinus excelsior</i> )    | 8.0        | 250            | 1.0          | 4.0               | 4.0 | 4.0 | 4.0 | 1.5              | Semi | Fair      | Developing trees within southern boundary hedgerow                           | <b>C</b>               | 2         | +40                |
| G8   | Corsican pine<br>( <i>Pinus nigra</i> ) | 20.0       | 720            | 1            | 4.0               | 6.0 | 8.0 | 4.0 | 4.0              | Mat  | Good      | Mature trees adjacent to road  | <b>B</b>               | 2, 3      | +40                |

# = estimated measurements, generally when the tree is outside of the site.



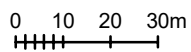
**Legend**

- Individual tree
- Tree group
-  RPA
- Tree Category**
-  Category
-  Category B
-  Category C

**North:**



**Scale: 1:1,600**



**Date:**

Jun 2017

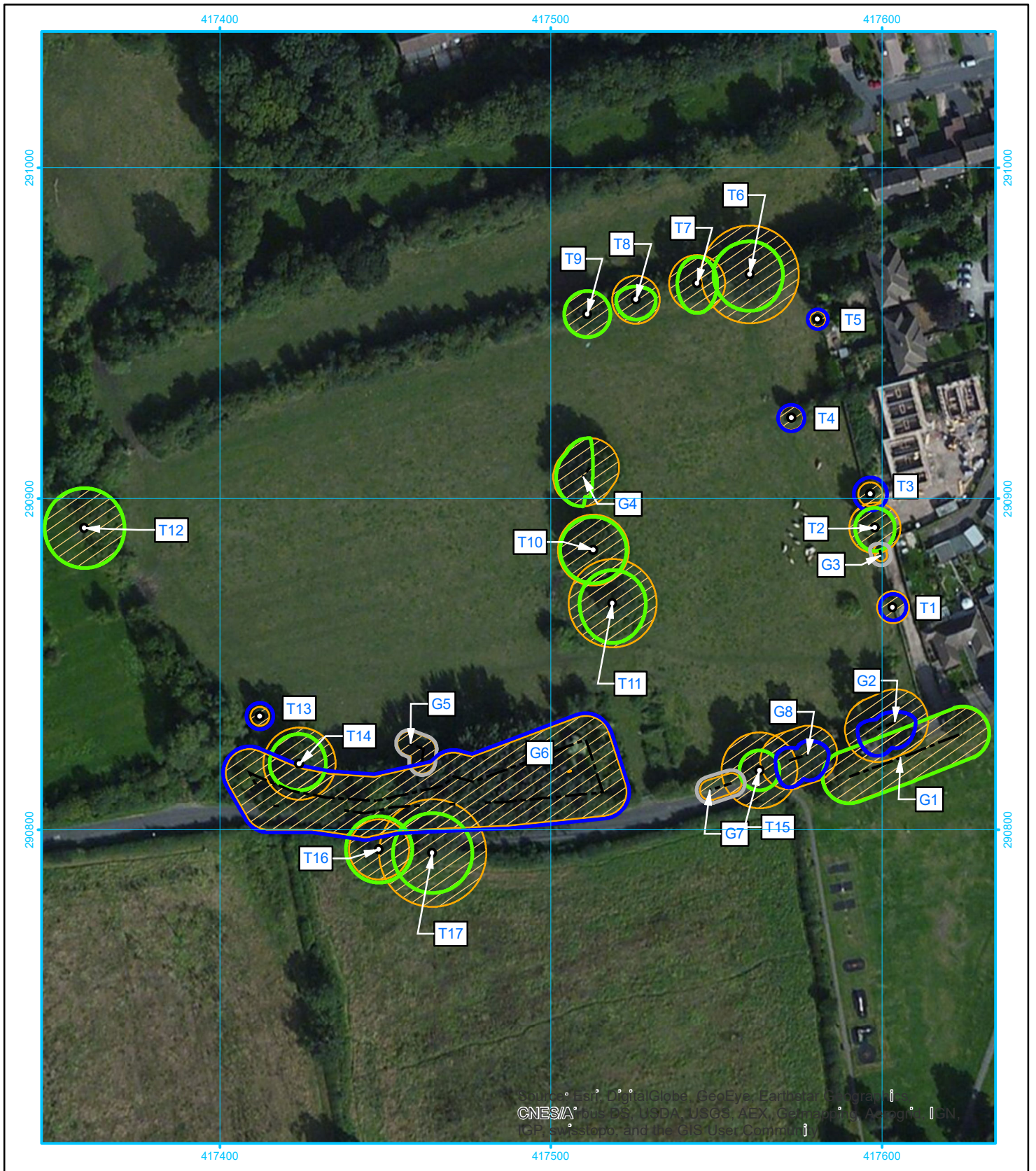
**Title: Appendix 2: Tree Constraints**

**Client: HSP Consulting**

**Project: Plank Lane, Water Orton**



This plan is provided for reference only and its accuracy is not guaranteed




Source: Esri, DigitalGlobe, GeoEye, Earthstar (Germany), CNES/Airbus DS, USDA, USGS, AEX, Geomatics, IGN, ICF, swisstopo, and the GIS User Community

**Legend**

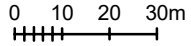
- Individual tree
- Tree group
- RPA

**Tree Category**

- Category
- Category B
- Category C

**North:** 

**Scale: 1:1,600**


0 10 20 30m  


**Date:**  
 Jun 2017

**Title:** Appendix 2: Tree Constraints

**Client:** HSP Consulting

**Project:** Plank Lane, Water Orton



This plan is provided for reference only and its accuracy is not guaranteed

## Appendix 3: Photographic Record



Photo 1: T1 adjacent to eastern boundary.



Photo 2: T2, T3 and G4 on eastern site boundary.



Photo 3: T6 and T7 mature oaks within northern hedgerow.



Photo 4: T12 mature ash on western boundary of site.



Photo 5: T15 and G8 mature pines on southern boundary of the site.



Photo 6: G6 boundary of woodland and grassland along southwestern boundary of the site.

## Appendix 4 – Tree Survey Methodology

This document summaries the survey requirements for an arboricultural survey, set out in British Standard 5837 (2012) Trees in Relation to Design, Demolition and Construction.

### Methodology

All trees, or groups of trees, within the defined work area, were surveyed from ground height, for their quality and value, in accordance with the BS5837: 2012. Any trees situated outside the area of the work, but may be affected by proposed works, were also included in the survey.

Tree locations to be mapped, GPS readings were taken in the field, for all recorded trees. This allowed the plotting of trees on a topographic survey base map (supplied by the client) and Root Protection Areas to be calculated.

Trees were recorded and assessed individually or, when appropriate, as groups. All data was recorded on Arboricultural Survey Sheets using BS 5837 criteria (Table 2.1). Each tree was given an individual reference.

Any other important observations were also noted. This included evidence of present or past maintenance (including coppicing), damage to the trees, potential hazards, and health and safety issues.

### Tree Categories and Implications for Development

**Category A** trees or groups are considered to be of high quality and value. Where possible, Category A trees should be retained and incorporated into the development design.

**Category B** trees or groups are considered to be of moderate quality and value. Such trees may be downgraded from Category A due to slight damage or lack of previous management. Category B trees should be considered for retention and incorporated into development design where possible.

**Category C** trees or groups are considered to have little value and are of poor quality. Such trees may be retained or removed, dependent on development priorities.

**Category U** trees or groups are considered likely to lose the little value they have within ten years and should be removed.

Retention and removal recommendations provided are not definitive and some trees recommended for retention may be considered for removal to facilitate particular construction activities. It may be justifiable to remove those trees within the site considered to be at an early growth stage, or individuals in close proximity to each other. Tree removal under these circumstances can be justified on the basis of sound design rationale and appropriate levels of mitigation, such as the planting of native species and local provenance stock. However, mature trees should be considered for retention if they are in sound health and are of significant arboricultural or landscape value.

**Table 2.1: Standard data recorded during the arboricultural survey.**

| Category                                     | Specific Information Collected  |
|--|---|
| Reference                                    | Trees are referenced T1, T2, etc. Groups are referenced G1, G2, etc.  |
| Species                                      | The common English and scientific names are given.  |
| Height                                       | Estimated from ground level and given in metres (recorded to nearest 0.5m, or to 1.0m for dimensions over 10m).   |
| Stem Diameter                                | <p>Measured in millimetres, 1.5 metres above ground level. For multi-stemmed trees (coppiced) combined (2-5 stems), or mean (&gt;5 stems), are calculated.</p> <p>Trees with a diameter of less than 75mm are not included in the survey as their value can be considered negligible (particularly as a replacement value).</p>   |
| Number of Stems                              | Number of stems on an individual tree.  |
| Branch Spread                                | The north, south, east and west branch spread is estimated in metres (recorded to nearest 0.5m, or to 1.0m for dimensions over 10m).  |
| Crown Height                                 | <p>The point at which the first branches start, estimated in metres. Trees which are coppiced (naturally or through management), are expressed with a 'C'.</p> <p>First significant branch (if different from above) and direction of growth (e.g. 3.0-N)</p>   |
| Life Stage                                   | <p>In accordance with BS 5837, trees are classified as:</p> <p><b>Young</b> – 1/3 life expectancy<br/> <b>Semi-mature</b> – tree 1/3 - 2/3 life expectancy<br/> <b>Early mature</b> – later stages of growth<br/> <b>Mature</b> – mature tree<br/> <b>Over-mature</b> – over-mature tree<br/> <b>Vet</b> – Veteran tree</p>   |
| Condition                                    | <p>In accordance with BS 5837, trees are classified as:</p> <p><b>Good</b><br/> <b>Moderate</b><br/> <b>Poor</b><br/> <b>Very poor</b></p>  |
| Tree Quality Assessment & Retention Category | <p>Based on BS 5837 Table 1: Cascade chart for tree quality assessment (Appendix 3)</p> <p><b>A</b> - Trees of high quality and value (sub categories 1, 2, 3)<br/> <b>B</b> - Trees of moderate quality and value (sub categories 1, 2, 3)<br/> <b>C</b> - Trees of low quality and value (sub categories 1, 2, 3)<br/> <b>U</b> - Trees in such a condition they should be removed</p> <p>Category <b>U</b> trees do not need to be considered in the development plan process.</p> |
| Life Expectancy                              | Estimated in years (in terms of natural growth rates) such as <10, 10+, 20+, 40+.   |

### ***Root Protection Areas***

The Root Protection Area (RPA) is the minimum area (m<sup>2</sup>) surrounding a tree that should be protected during construction, to avoid root damage. This ensures long term survival and resource availability.

The RPA for each tree or group of trees surveyed was calculated using the standard formulae given in BS 5837. For single stem trees, each circular RPA has a radius 12 times the stem diameter. For those trees with multiple stems the calculation is based on the combined stem diameter (two to five stems), or the mean stem diameter (more than five stems).

The calculated RPAs should be used to define Construction Exclusion Zones (CEZ). These CEZs must be fenced-off prior to any construction phase commencing to help ensure adequate tree protection.

## Appendix 5 - Cascade Chart for Tree Quality Assessment

| TREES FOR REMOVAL   |  |  |   |   |
|---|--|--|---|---|
| Category and Definition   | Criteria   |  |   | Identification on plan  |
| <p><b>Category U</b><br/>Those 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</p> | <ul style="list-style-type: none"> <li>■ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category 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 sign 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 it might be desirable to preserve.</p> |  |   | <p><b>DARK RED</b></p> <p>RGB code:<br/>127-000-000<br/>AutoCAD 246</p>   |
| TREES TO BE CONSIDERED FOR RETENTION  |  |  |   |   |
| Category and Definition   | 1. Mainly arboricultural qualities   | 2. Mainly landscape qualities  | 3. Mainly cultural values, including conservation   | Identification on plan  |
| <p><b>Category A</b><br/>Those of high quality with an estimated remaining life expectancy of a least 40 years</p>  | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal 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) | <p><b>LIGHT GREEN</b></p> <p>RGB code:<br/>000-255-000<br/>AutoCAD 90</p> |
| <p><b>Category B</b><br/>Trees of moderate quality with an estimated remaining life expectancy of a least 20 years</p>  | 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 minor 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 collective but situated so as to make little visual contribution to the wider locality | Trees with material conservation or other cultural value  | <p><b>MID BLUE</b></p> <p>RGB code:<br/>000-000-255<br/>AutoCAD 170</p>   |
| <p><b>Category C</b><br/>Those trees of low quality with an estimated remaining life expectancy of a least 10 years, or young trees with a stem diameter below 150mm</p>          | 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 collective landscape value; and/or trees offering low or only temporary/transient landscape benefit  | Trees with no conservation or other cultural value  | <p><b>GREY</b></p> <p>RGB code:<br/>091-091-091<br/>AutoCAD 252</p>       |

*Text extracted from BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'*



## Company Directors

### Jonathan Panter

Mobile: 07506 703540

[j.panter@ecologylink.com](mailto:j.panter@ecologylink.com)

### Helen Parish

Mobile: 07917 208040

[h.parish@ecologylink.com](mailto:h.parish@ecologylink.com)

Ecology Link Ltd. | Registered Office: 61 Middlewatch, Swavesey, Cambridge CB24 4RW  
Tel: 01954 231375 | Registered in England No. 07015978 | VAT registration No. 982 3666 82  
[www.ecologylink.com](http://www.ecologylink.com)

