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## **Arboricultural Report**

**7 Mapledene  
Reading  
RG4 7DQ**

**June 2024**



Guy Watson, MICFor, CEnv, ND Arb (RFS), F.Arbor.A.

## **1.0 Introduction**

1.1 Guy Watson is the principal consulting Arboriculturist for Certhia Consulting Limited. He is a Chartered Forester (Arboriculture), a Chartered Environmentalist, holds the Professional Diploma in Arboriculture (as awarded by the Royal Forestry Society) and is a Fellow of the Arboricultural Association.

## **2.0 Brief**

2.1 Certhia Consulting Limited has been instructed by Mr and Mrs Ruparelia to assess the tree cover affecting the proposed extension of the dwelling at 7 Mapledene Reading, RG4 7DQ. This report builds upon the data from a tree survey undertaken according to BS5837:2012, 'Trees in relation to design, demolition and construction – Recommendations'. The purpose of the survey is to assess existing trees in relation to potential construction in order to:

1. Record their principal attributes (species, height, crown spread, stem diameter, etc.).
2. Determine their quality and value in order to
3. Identify their retention priorities, and to
4. Determine root protection areas as detailed in the British Standard.

The survey indicates which trees will become material planning considerations and facilitates the mapping of the constraints which will be imposed by those trees identified for retention.

## **3.0 Documents and Information Provided**

3.1 Certhia Consulting Limited has been issued with an electronic plan of the site showing the proposed extension. Tree locations have been added by simple triangulation from the building.

## **4.0 Limitations**

4.1 All rights of this report are reserved. No part of it may be reproduced or transmitted in any form or by any means without our express permission. This report is intended for the sole use of the addressee and in relation to this site only. It may not be sold, lent, hired out or divulged to any third party unless directly involved in the site without the express consent of Certhia Consulting Limited.



## 5.0 Site Visit

5.1 A site visit was undertaken on 30 May 2024 to collect survey information.

## 6.0 Survey Methodology

6.1 This report was produced following a ground level survey only. No soil samples were taken, and this report does not consider any potential influence the trees may have on adjacent structures. Internal investigations to determine decay extent are limited to basic sounding and probing only. No invasive diagnostic tools were employed.

6.2 All dimensions are measured as far as reasonably practicable. Survey methodology follows that prescribed in the British Standard, where applicable.

## 7.0 Site Description and Tree Location

7.1 The site comprises a single detached property positioned with mature trees to the north and west boundaries that are covered by a Tree Preservation Order.

7.2 Tree cover is predominantly Sycamore, *Acer pseudoplatanus*, and Oak, *Quercus robur* with Silver Birch, *Betula pendula*, and Norway Maple, *Acer platanoides*. The trees range from young semi mature specimens to fully mature trees, in particularly the large Oak adjacent the drive. Levels have been changed throughout the site historically with retaining walls.

## 8.0 Constraints Mapping

8.1 Retained trees will result in constraints being placed on the land. The most important is the Root Protection Area (RPA). This is detailed in the tree survey schedule as both an area and radial dimension for all trees, whether they are intended to be retained or not (*see* Appendix 1).

### 8.2 Root protection area

8.2.1 The ground area, calculated in m<sup>2</sup>, which should be protected during construction, to safeguard sufficient roots and resources for the sustained health and viability of any trees retained.

8.2.2 This area is found by multiplying the stem diameter of the tree concerned by a factor of twelve (or following the formulaic methodology for multi-stem trees within the British Standard) and is based on a circle, or rhomboid, with the tree at its centre. It is possible for a competent arboriculturist to offset that area where previous land use, development, or simply rooting conditions are likely to preclude root development.



8.2.3 Protection for tree roots will be based upon the root protection area for retained trees. This will be provided by suitable fencing prior to the start of work on site. It may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retained trees. This is known as the Construction Exclusion Zone. No works or activities likely to affect the retained trees should be carried out in this zone without further arboricultural advice. This includes services, drainage, soakaways and hard landscaping, drives and parking areas.

### **8.3 Other Constraints**

8.3.1 The above-ground area occupied by the crown of the tree, plus allowances for working space and, if appropriate, for future growth, will also impose constraints on site planning. The extent of this constraint is determined by considering the existing and future crown spread of the tree(s), bearing in mind that this may be modified by arboriculturally acceptable pruning. Further matters relating to the above-ground portions of the tree include shading, seasonal debris and perceived safety issues. Site planning must take into account these concerns and adequate separation given to the buildings to prevent future problems arising. Design strategies such as orientation and room layout will help alleviate these issues.

### **8.4 Tree Constraints Plan**

8.4.1 Trees on site have been graded according to Table 1 of the British Standard, and are described as follows:

#### **8.4.2 Category U**

In accordance with the advice of BS5837:2012, those 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.

#### **8.4.3 Category C**

In general, C grade trees are those of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter under 150mm. These are further categorised as “unremarkable trees of limited merit” or “trees present in groups or woodlands.... trees offering low or only temporary/transient landscape benefits” and with no cultural value.

#### **8.4.4 Category B**

Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Further categorised as “trees of impaired condition, significant but remediable defects.... unsuitable for retention beyond 40 years or lacking the special quality” of Category A trees; and/or “trees present in numbers, usually growing as groups ... such that they attract a higher collective rating than they might as individuals.”



#### 8.4.5 Category A

Trees of high quality with an estimated remaining life expectancy of at least 40 years. “Particularly good examples of their species, especially if rare or unusual, essential components of groups or formal or semi-formal features” and “trees, groups or woodlands of particular visual importance” and with significant cultural values.

8.4.6 Clause 5.1.1 of the British Standard states: “The constraints imposed by trees, both above and below ground ... should inform the site layout design, although it is recognised that the competing needs of development mean that trees are only one factor requiring consideration. Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification. However, care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.”

## 9.0 Discussion

9.1 It is proposed to extend the existing garage by one bay to the west and construct increased accommodation above the existing and new garage area.

9.2 The extension does not affect any of the RPAs of the existing trees. The historic construction of the retaining wall, to the west of the drive and parking area, with the associated change in levels, 1.5m, has created a very effective root barrier. The RPA of the Sycamore [T3] has been amended to reflect this.

9.3 The RPA of the Oak does not extend into the construction area. The RPA of this tree should also be amended to exclude the area where retaining walls may have affected rooting but to try to anticipate actual rooting for this tree would be at best a very rough approximation. In any event, the RPA would be further excluded from where the garage extension is proposed. As such no trees will be affected by, nor affect the proposed extension.

9.4 Internal re-organisation will require new drainage connections to be made to the existing network. The existing network runs to the south of the property and any new connections will be made to the existing network and remain outside any RPA. All other services and soakaway will be extended or adapted to the original provision.

9.5 Shade, or any other above ground constraint, does not apply to this site as it is already under residential use and the extension does not materially alter the relationship between the existing trees and the property.

9.6 In order to protect the RPA of the trees from any disturbance during construction a scheme of tree protection is proposed (*see* Appendix 2). This will be based upon the RPAs of the trees and existing ground use and conditions.



9.7 The tree protection plan allows for the use of the existing drive and parking areas but must exclude the grass areas to the west as these could easily be used for contractor parking, skips or storage. These soft areas can be easily compacted and damaged so causing harm to the underground soil structure and therefore root systems and vitality of the trees. The retaining walls provide a high level of protection.

9.8 The trees to the north, adjacent the road, are at a lower level and are protected by their own retaining walls and railings. No protection measures are necessary for these trees other than the existing infrastructure.

## **10.0 Conclusion**

10.1 The construction of the proposed extension will not affect the surveyed trees.

10.2 Tree protection will be required to prevent construction activity encroaching into the RPA of the trees.

## **11.1 Statutory Controls**

11.1.1 All the trees surveyed are covered by Tree Preservation Orders administered by Reading Borough Council. Any works to the tree must be subject to an application and approval must be granted prior to those works being carried out.

11.1.2 Under the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 1990 birds' nests are protected and should not be disturbed. Bats and their roosts, whether occupied or not, are also protected. It is an offence to carry out any works that may harm nesting birds or cause them to desert their nests; or disturb bats or their roosts.

11.1.3 It is outside the scope of this report to consider these issues in any detail, and you are advised to carry out necessary investigations prior to carrying out any works



# **Appendix 1**

## **Tree Survey Data**



## 7 Mapledene: Tree Schedule

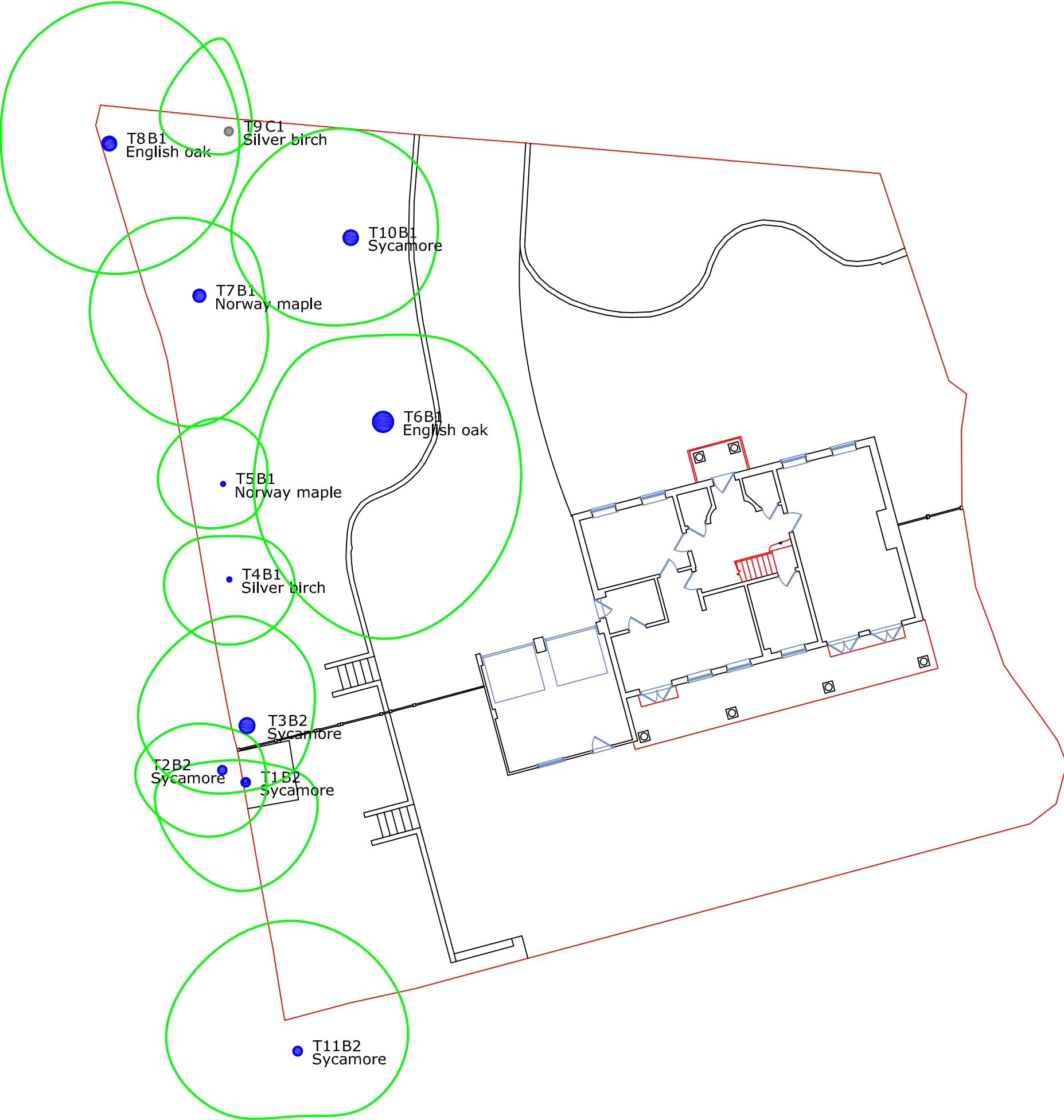
| Tree No. | Species                                  | Height (m) | Stem Diameter (mm) | Crown (m)      | Crown Clearance (m) | Age Class    | Physiological Condition | Remaining Contribution | Structural Condition                                                                                          | Quality Assessment | RPR (m) | RPA (m <sup>2</sup> ) |
|----------|------------------------------------------|------------|--------------------|----------------|---------------------|--------------|-------------------------|------------------------|---------------------------------------------------------------------------------------------------------------|--------------------|---------|-----------------------|
| T1       | Sycamore ( <i>Acer pseudoplatanus</i> )  | 17         | 390                | N1 E3 S5 W4    | 8                   | Early mature | Normal                  | 20+                    | Soil retained to west by 600mm retaining structure.                                                           | B (2)              | 4.7m    | 68.8m <sup>2</sup>    |
| T2       | Sycamore ( <i>Acer pseudoplatanus</i> )  | 17         | 380 est            | N2 E2 S3 W4    | 8                   | Early mature | Normal                  | 20+                    | Off site tree with moderate basal cavity.                                                                     | B (2)              | 4.6m    | 65.3m <sup>2</sup>    |
| T3       | Sycamore ( <i>Acer pseudoplatanus</i> )  | 17         | 360 590            | N5 E3 S3 W5    | 7                   | Mature       | Normal                  | 20+                    | Three main stems from normally formed unions.                                                                 | B (2)              | 8.3m    | 216.1m <sup>2</sup>   |
| T4       | Silver birch ( <i>Betula pendula</i> )   | 14         | 190                | N2 E3 S3 W3    | 5                   | Early mature | Normal                  | 20+                    | Typical young tree.                                                                                           | B (1)              | 2.3m    | 16.3m <sup>2</sup>    |
| T5       | Norway maple ( <i>Acer platanoides</i> ) | 14         | 180                | N3 E2 S2 W3    | 5                   | Semi-mature  | Normal                  | 40+                    | Typical young tree.                                                                                           | B (1)              | 2.2m    | 14.7m <sup>2</sup>    |
| T6       | English oak ( <i>Quercus robur</i> )     | 22         | 930                | N4 E6 S10 W5.5 | 7                   | Mature       | Normal                  | 40+                    | Historic large lower branch removal resulting in minor cavity formation Isolated moderate deadwood mid crown. | B (1)              | 11.2m   | 391.3m <sup>2</sup>   |
| T7       | Norway maple ( <i>Acer platanoides</i> ) | 22         | 560                | N3.5 E3 S6 W5  | 6                   | Mature       | Normal                  | 20+                    | Typical specimen.                                                                                             | B (1)              | 6.7m    | 141.9m <sup>2</sup>   |



| Tree No. | Species                                 | Height (m) | Stem Diameter (mm) | Crown (m)     | Crown Clearance (m) | Age Class | Physiological Condition | Remaining Contribution | Structural Condition                                               | Quality Assessment | RPR (m) | RPA (m <sup>2</sup> ) |
|----------|-----------------------------------------|------------|--------------------|---------------|---------------------|-----------|-------------------------|------------------------|--------------------------------------------------------------------|--------------------|---------|-----------------------|
| T8       | English oak ( <i>Quercus robur</i> )    | 21         | 640                | N6.5 E6 S6 W5 | 5                   | Mature    | Reduced                 | 20+                    | Slightly reduced vitality with minor isolated tip die back.        | B (1)              | 7.7m    | 185.3m <sup>2</sup>   |
| T9       | Silver birch ( <i>Betula pendula</i> )  | 17         | 380                | N4 E1 S1 W3   | 9                   | Mature    | Reduced                 | 10+                    | Suppressed under adjacent oak.                                     | C (1)              | 4.6m    | 65.3m <sup>2</sup>    |
| T10      | Sycamore ( <i>Acer pseudoplatanus</i> ) | 17         | 670                | N5 E4 S4 W5.5 | 5                   | Mature    | Normal                  | 20+                    | Twin stem from 2.2m normal union.                                  | B (1)              | 8.0m    | 203.1m <sup>2</sup>   |
| T11      | Sycamore ( <i>Acer pseudoplatanus</i> ) | 14         | 400 est            | N6 E5 S3 W6   | 6                   | Mature    | Normal                  | 20+                    | Off-site. Co-joined crown with slightly smaller specimen to south. | B (2)              | 4.8m    | 72.4m <sup>2</sup>    |

| Age Class    |                                                    | Physiological Condition |                                               |
|--------------|----------------------------------------------------|-------------------------|-----------------------------------------------|
| Young        | Recently planted                                   | Normal                  | Normally expected growth in all areas         |
| Semi Mature  | Strongly growing full apical dominance             | Reduced                 | Slightly reduced leaf colour size and density |
| Early Mature | In transition between age classes                  | Poor                    | Sparse leaf density, small or pale            |
| Mature       | Apical dominance lost crown at general proportions | Dead                    | Dead                                          |
| Over Mature  | In natural decline                                 |                         |                                               |





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-  Category B Trees
-  Category C Trees



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Tree Locations and  
Quality Assessment

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# **Appendix 2**

## **Tree Protection and Method Statement**



## **1.0 Tree Protection Sequence**

1.1 The following sequence of events will be followed before construction to secure tree protection and survival.

1.2 Prior to any demolition, ground works or construction:

- Tree protection will be installed to demarcate construction zones and protect the RPA of the main trees on and off site.

1.3 During construction:

- Retention of all tree protection throughout the duration of works.
- All provisions of the approved Method Statement will be adhered to at all times.

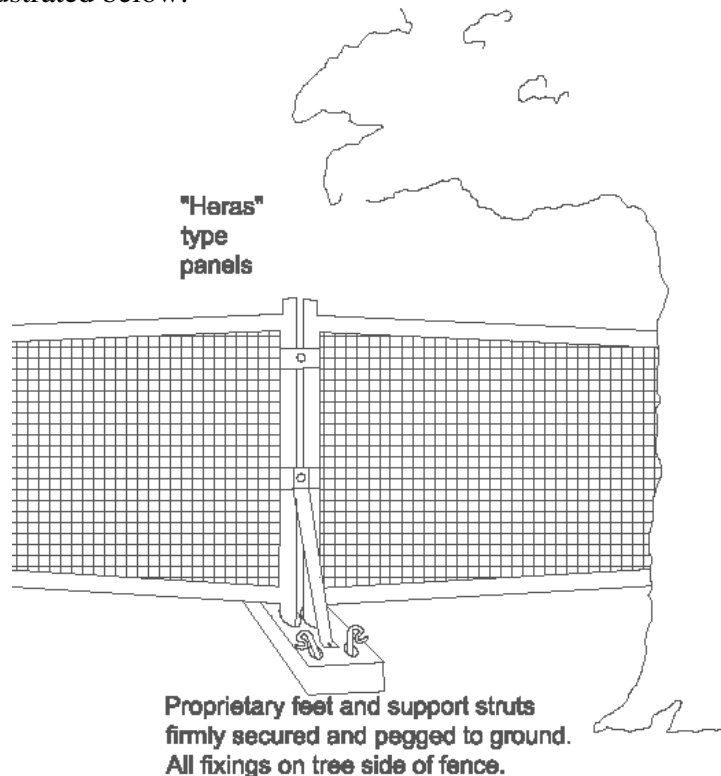
1.4 Post construction:

- Tree protection to be removed.



## 2.0 Tree Protection and the Construction Exclusion Zone

2.1 Tree protection shall be provided by fencing and ground protection where necessary. No construction activity will take place within the protected areas: this area is known as the Construction Exclusion Zone (CEZ). Fencing should be fit for purpose, i.e. strong, robust, and securely erected and therefore not easily breached. Fences should be robust enough to withstand impact, permanently fixed into the ground so as not to be easily moved and secured so that individual panels cannot simply be lifted out. Fencing is therefore required to demarcate the construction area and prevent the spread of construction-related activity into the rooting area of trees. A fencing specification appropriate to the trees, site and proposals is illustrated below:



2.2. All-weather (laminated) notices should be fixed to the fence where appropriate, stating:

### **“Protected Trees**

Construction Exclusion Zone – Keep Out”

2.3 The location of the protective fencing surrounding the CEZ has been determined with reference to the British Standard and site-specific conditions.



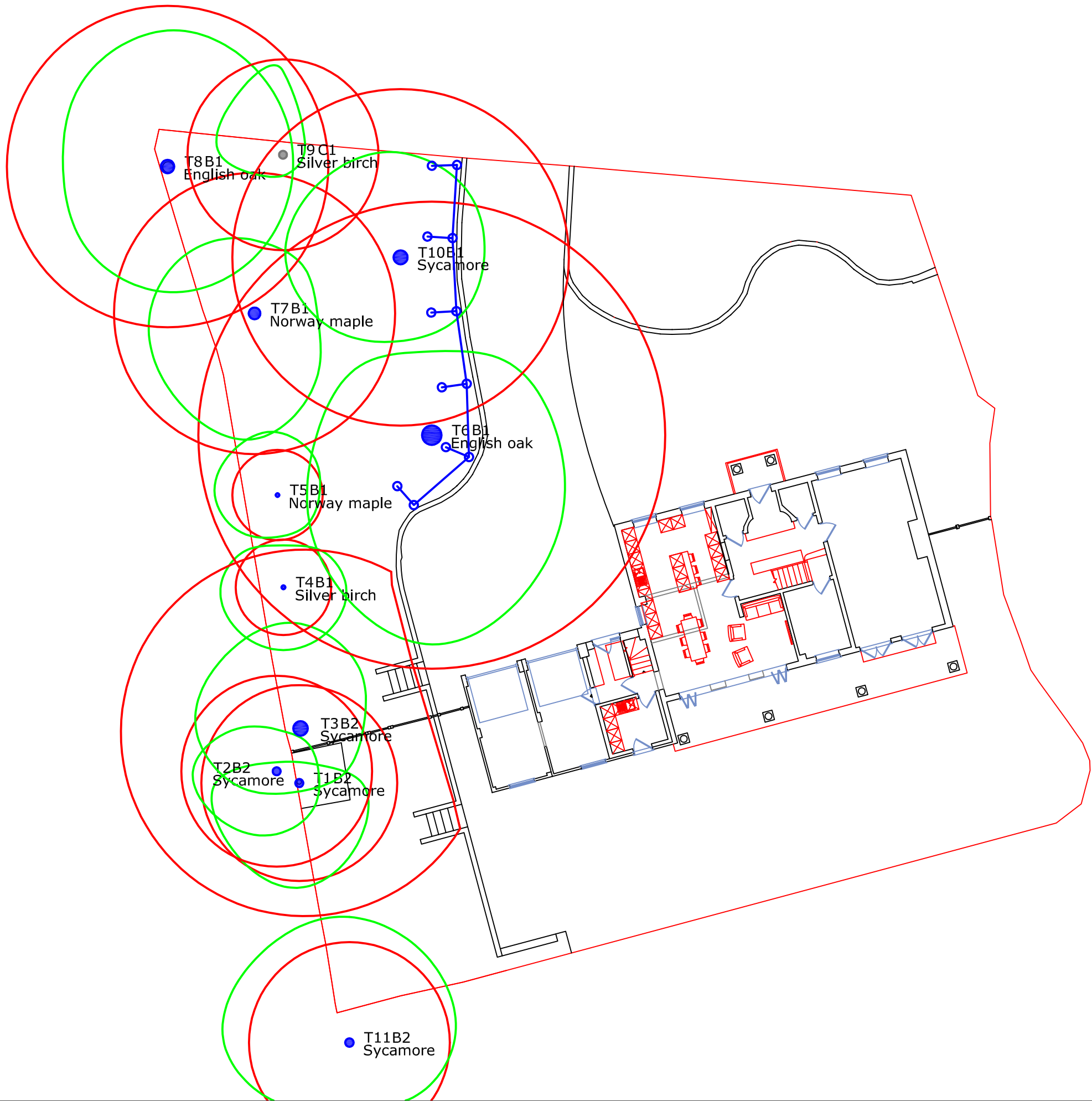
## 2.4 Other issues must be considered whilst working alongside the CEZ.

It must be ensured that wide or tall loads, or plant with booms, jibs and counterweights can deliver or operate without coming into contact with retained trees above the fencing line of the CEZ. Such contact can result in serious damage to the trees and might make their safe retention impossible. Any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman. This is to ensure that adequate clearance from trees is maintained at all times.

No stockpiling of excavated material within the RPA will be permitted.

Material which will contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, will **not** be discharged within 10m. of the tree stem. It is essential that allowance should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.





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Category B Trees



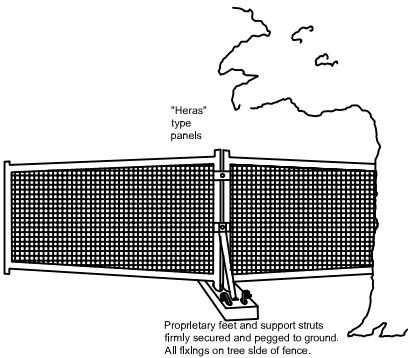
Category C Trees



Root Protection Areas  
as BS 5837:2012



Protective Fencing  
as detail below



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