



# ARBORICULTURAL IMPACT ASSESSMENT

SITE: MAPLE ROAD, TANKERSLEY

For: Company Shop and Rula Developments Ltd

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Prepared by Surface Property

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## 1 INTRODUCTION

Surface Arboriculture was appointed by Company Shop and Rula Developments Ltd to undertake a survey of existing trees on a development site at Maple Road, Tankersley (the Survey Area). This report presents the associated impacts of the development upon those trees surveyed, any suitable mitigation and outlines requirements for protecting trees throughout the development.

This Report supports an application seeking outline planning permission for a B8 storage and distribution warehouse with all matters reserved except access. This report and the accompanying notes also provide guidance as to the nature and quality of the existing tree stock both within and immediately adjacent to the Survey Area. The aim of this survey was to identify potential arboricultural constraints to inform the planning process. The proposed development (The Development) includes an area of grassland within Wentworth Industrial Estate and associated boundary planting associated with the adjacent development and a woodland corridor.

The tree survey drawings 50104-DR-ARB-101 (Existing Trees on Site) and 102 (Tree Constraints Plan); illustrate the location of the surveyed trees, the assigned tree category, canopy spread at the four cardinal points (north, south, east and west) and the extent of the Root Protection Area (RPA) for each tree/ tree group.

The survey schedule (Schedule of Existing Trees) provides guidance as to the nature and quality of the existing tree stock within the Survey Area and is shown on drawing 50104-DR-ARB-101.

The survey was undertaken in March 2017 by a Registered Consultant of the Arboricultural Association, and a Chartered Landscape Architect, of Surface Arboriculture.

At the time of the survey, weather conditions were good, with sunshine and good visibility.

### 1.1 Survey Area Description

The Survey Area is located within Wentworth Industrial Park, and is bounded by a large asphalt car/van parking area for a unit to the north, a commercial warehouse unit to the east, further commercial units to the south off Maple Court, and an area of grassland to the west.

The Survey Area contains three areas of woodland protected by Tree Preservation orders (TPO) referenced as number 15, and tree reference number W2.

## 2 METHODOLOGY

The arboricultural survey was conducted in accordance with the requirements of BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (BS 5837).

Fieldwork was undertaken on site during which dimensional data and observational information were collected. A diameter at breast height (DBH) tape measure and distometre were used in the collection of this information, which form the basis of this report.

Features comprising multiple trees, scrub or other arboreal features have, where sufficiently consistent, been categorised as grouped features listing species composition, age and condition ranges as appropriate to best describe each feature. Within these groups, principal trees have been identified individually.

The fieldwork informing this report comprised a non-intrusive, visual survey undertaken from ground level. Where further inspection is deemed appropriate to ascertain the condition of the tree or other arboreal features, this has been identified within the preliminary management recommendations. Average dimensions or dimensional ranges have occasionally been used where appropriate to best describe arboreal features.

Fieldwork survey information is subject to seasonal/ access constraints.

## 3 GENERAL CLIENT CONSIDERATIONS

Tree owners/ managers have a legal duty to prevent foreseeable harm to people and property resulting from trees. It is generally accepted that this duty can be fulfilled by undertaking proactive inspections of significant trees to identify obvious defects and by taking appropriate remedial action or further inspections as may be recommended in this

report. This report is primarily for planning purposes, focusing on the quality and benefits of the existing trees and is not specifically designed to assess the safety of people and property resulting from trees within the Survey Area. When obvious issues have been identified, recommendations are included on the schedule. This is of particular importance given the public access adjacent to the site; together with the location of the open grassland to the west of the site which is publicly accessible.

Full consideration must be given to the presence of species protected under the Wildlife and Countryside Act (1981 - as amended), the Countryside Rights of Way Act (2000) and the Habitat Regulations (1994); in particular the presence of bats and nesting birds. It is recommended that wherever possible, significant tree/ hedge works take place outside of the typical bird nesting season of March to September and a qualified and experienced ecologist is consulted as appropriate to ensure legal compliance.

Any tree surgery recommendations contained within this report are to be undertaken in accordance with BS3998:2010 Tree Work – Recommendations (BS3998) by suitably qualified and insured contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity to reduce the overall impact on energy available to the tree for growth and processes. In general the optimum period for works is from November to February, when the tree is less active, and July to August (subject to no protected species being present) when the tree is better placed to respond to wounding and a reduction in leaf area.

The 'Schedule of Existing Trees' provided on 50104-DR-ARB-001 should be read in conjunction with Surface Tree Constraints drawing Nos: 50104-DR-ARB-002.

## 4 GENERAL ARBORICULTURAL PRINCIPLES

Trees are dynamic living organisms which provide essential benefits to society and the wider environment. Any project with the potential to impact on trees should take into consideration the value of trees on site, the impact of any proposed activity along with any potential future conflicts. Suitable measures to safeguard retained trees or mitigate the loss of trees to be removed will need to be fully considered and may be a condition of planning consent.

Tree branches and roots frequently grow across site boundaries and off site trees can pose a significant constraint and should be carefully considered when assessing a site.

### 4.1 Below Ground Constraints

Below ground tree roots and the soil environment in which they grow needs to be protected if the tree is to be retained. Trees grow in association with fungi and other soil organisms which are of key importance to tree health. Roots are essential for anchorage, the uptake of water and nutrients and the storage of energy (carbohydrates) for the future growth and function of the tree.

Roots can be damaged by physical severance or wounding (e.g. following excavation of the soil) which can lead to the development of decay and a decline in vitality and/ or instability. Raising soil level effectively buries tree roots at a depth where suitable conditions for growth are less available. Toxic materials discharged into the soil (such as cement based aggregates, fuel and chemicals) can lead to root death and dysfunction. Soils can be compacted to levels inhospitable to tree growth with even a single pass of machinery, regular pedestrian traffic or the storage of plant and materials. Relieving compaction can be problematic and may require costly remedial works. Changes in drainage and water levels can also have significant long term impacts for tree health.

The effects of these incursions may take many years to manifest, with a resulting decline in amenity value and potentially the death or failure of the tree. It should be noted that older trees are particularly sensitive to damage and changes in conditions as are certain species such as Beech for instance.

The Root Protection Area (RPA) is a notional area considered to be the minimum zone that must be protected to avoid any adverse impacts on retained trees. This area is deemed to be particularly important for tree stability, growth, function and health. However, roots may extend far greater distances, with the distribution of the root system relating directly to the availability of suitable conditions for growth (namely oxygen, water and nutrients). It is generally accepted that tree roots are predominantly located in the upper 1,000 mm of soil; however, roots may develop at deeper levels where conditions allow.

The RPA defines the approximate underground area occupied by the tree roots based on a calculation relating to the girth of the tree, point above ground at which the trunk begins to branch out and the number of stems. BS5837 outlines the calculation of RPA as follows:

$$\text{RPA (m}^2\text{)} = \left( \frac{\text{Stem diameter (mm) at 1.5 m height above ground} \times 12}{1,000} \right)^2 \times \pi \quad (3.142)$$

Trees with more than one stem below 1.5 m height are given an aggregate stem diameter using either of the following two calculations as outlined in BS5837. This diameter is then used in the above calculation to estimate RPA:

For trees with two to five stems:

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$$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2}$$

For trees with more than five stems:

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$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

The RPA of existing tree stock is an important material consideration when considering site constraints and planning development activities.

Construction operations, materials storage or changes in level should generally be avoided within the RPA of a tree to be retained on a developed site. This is because these operations have the potential to damage or kill the tree, the safe retention of which may be a condition of planning permission. This is significant when considering construction in close proximity to off-site/ third party land. Special construction techniques (e.g. no-dig construction/ permeable surfacing) may be considered for light loadings (e.g. pedestrian footpaths etc.) within the RPA.

It should be noted that the RPA often varies in size to the physical area occupied by the canopy spread (due to particular tree species or management practices to artificially alter the canopy size). This is of particular importance when integrating new development in close proximity of existing trees. Similarly, the canopy heights (as identified in the Schedule of Existing Trees) should be considered as the usable

space below a low branching tree will be severely restricted without specific arboricultural works to raise the canopy (which may not always be appropriate).

It should also be noted that BS 5837 states that although RPAs should be plotted as a circle centred on the base of the stem, pre-existing site conditions or other factors may indicate that rooting has occurred asymmetrically and so RPAs may instead be represented as a polygon of equivalent area.

The RPA of the existing tree stock is an important material consideration when considering site constraints and planning development activities. The RPAs of all trees and hedgerows within the Survey Area are shown on drawings 50104-DR-ARB-102 'Tree Constraints Plan'.

The default position must be that all development, including any associated services will occur outside the RPAs of retained trees. Where this is unavoidable it may be appropriate to use special measures to install structures, services or surfacing within RPAs which allow the protection of roots and soil structure which are essential for tree growth and keep any incursion to a minimum. This methodology is usually set out in an Arboricultural Method Statement which describes how development around trees should be undertaken.

Further steps to improve or increase the useable rooting area available to the tree may also be required.

Where special measures are not possible, mitigation for tree removal should be sought in the form of replacement planting and assessed based on the quality of trees removed and the amount of mitigation likely to compensate the removal of arboricultural assets and to mitigate the impact upon the landscape.

## 4.2 Soils

On shrinkable clay soil, tree growth can lead to the differential movement of structures as moisture is removed from the soil during the growing season.

Soils must be carefully assessed and any foundations must be installed in line with the recommendations of NHBC Standards Chapter 4.2: Building Near Trees (2008) to avoid potential future damage. Where trees which predate existing structures are to be removed, this can result in heave as the soils re-wet. The advice of a suitably qualified engineer must be obtained to inform any potential issues associated with heave. The British Geological Survey records the general soil type in the area as 'Lambeth Group – Clay, Silt and Sand'. Specific advice in relation to this topic is beyond the scope of this report.

## 4.3 Above Ground Constraints

Tree stems and branches can restrict available space on site. Damage or wounding (including excessive pruning) can significantly reduce the amenity contribution along with the energy production (via foliage) and storage capacity (via woody material) of the tree and may in turn lead to the development of dysfunction and decay with significant long term implications for tree health. The future impact of existing trees should be carefully considered, including individual species characteristics (such as potential future size, fruit fall, shade etc.) and

how the tree will interact with any proposed development and future land use. Annual tree growth can lead to direct damage if stems/ branches (or roots) come into physical contact with structures and this must also be taken into consideration.

**Table 1: Key to Abbreviations Used in the Tree Survey**

| Term          | Definition                                                                                                                                                                                             |                                                                                                                                 |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Age           | Classification given in relation to the life expectancy of the specific species.                                                                                                                       |                                                                                                                                 |
|               | Young (Y)                                                                                                                                                                                              | Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size).        |
|               | Semi Mature (Sm)                                                                                                                                                                                       | Tree in the second third of its normal life expectancy for the species (some potential for future growth in size).              |
|               | Early Mature (Em)                                                                                                                                                                                      | Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size). |
|               | Mature(M)                                                                                                                                                                                              | Tree beyond the normal life expectancy for the species.                                                                         |
|               | Over Mature (Om)                                                                                                                                                                                       | Tree of interest biologically, aesthetically or culturally because of its condition, size or age.                               |
| Ave           | Indicates an average representative measured dimension for the group or feature.                                                                                                                       |                                                                                                                                 |
| Canopy Spread | Extent of the tree canopy spread, measured in metres on the four compass points and recorded to the nearest half metre for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m. |                                                                                                                                 |
| Category      | A                                                                                                                                                                                                      | High quality/ value 40 yrs+                                                                                                     |
|               | B                                                                                                                                                                                                      | Moderate quality/ value 20 yrs+                                                                                                 |
|               | C                                                                                                                                                                                                      | Low quality/value min 10 yrs/ stem diameter less than 150 mm.                                                                   |
|               | U                                                                                                                                                                                                      | Unsuitable for retention.                                                                                                       |
|               | 1                                                                                                                                                                                                      | Arboricultural quality/ value.                                                                                                  |

| Term                                   | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Landscape quality/ value.                                                                                                                                                                                      |
|                                        | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Cultural quality/ value (including conservation).                                                                                                                                                              |
| Condition                              | Classification given in relation to the life expectancy of the specific species.                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                |
|                                        | Good                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Normal vitality including leaf size, bud growth, density of crown and woundwood development, and/or no significant structural defects.                                                                         |
|                                        | Fair                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Lower than normal vitality, reduced bud development, reduced crown density; reduced response to wounds, and/or structural defects which can be resolved via remedial works.                                    |
|                                        | Poor                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Low vitality, low development and distribution of buds, discoloured leaves, low crown density, little extension growth for the species and/ or structural defects which cannot be resolved via remedial works. |
|                                        | Dead                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dead                                                                                                                                                                                                           |
|                                        | Fair to Good                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Indicates a range of conditions (e.g. within a group)                                                                                                                                                          |
| Crown clearance                        | The height to the lowest part of the crown, measured in metres and recorded to the nearest half metre for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                |
| DBH                                    | Diameter at Breast Height.                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                |
| Estimated Height                       | Height of the tree, measured in metres and recorded to the nearest half metre dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                |
| Observations                           | General observations, particularly of structural and/or physiological condition.<br>(E.g. the presence of any decay and physical defect).                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                |
| Preliminary Management Recommendations | Preliminary Management Recommendations are provided irrespective of whether the vegetation concerned will be lost to the proposed development or not. This accords with BS5837 (2012) 'Trees in Relation to Design, Demolition and Construction – Recommendations'. Amongst other functions, describing such measures ensures that any readily achievable potential value associated with vegetation can be taken into account during subsequent assessment. |                                                                                                                                                                                                                |

| Term                       | Definition                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ref No                     | Specific identification number given to each tree or group<br>Corresponding number on plan – T = Tree / H = Hedge / G = Group<br><b>(Emboldened text indicates a tree thought to be protected by TPOs.)</b>                                                                                                                                                                                                                 |
| Root Protection Area (RPA) | An area which defines the theoretical minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority. Measured as the radius of a circle in metres, and total area in square metres.                                                                                                   |
| Species                    | Common name followed by botanical name shown in italics                                                                                                                                                                                                                                                                                                                                                                     |
| Stem diameter              | Diameter measured in millimetres at 1.5 m above ground level (MS = Multi-stem tree measured in accordance with BS5837)                                                                                                                                                                                                                                                                                                      |
| Tree Tag No                | Where practicable identification tags have been attached to all individual trees. Where this was not possible, for example, where they are located on third party land, the entry will read 'N/A'. Tree tags for groups are located on the first significant tree. Large trees groups are not tagged. All tags are located in a prominent position facing the highway, approximately 1.5 m above the adjacent ground level. |
| Veteran Tree               | A tree which is of a great age; a great age relative to others of the same species, existing in an ancient stage of life or due to its biological, aesthetic or cultural interest.                                                                                                                                                                                                                                          |
| -                          | Dimension estimated due to tree(s), hedgerow(s) etc. not being accessible and preventing accurate measuring.                                                                                                                                                                                                                                                                                                                |
| *                          | Indicates the estimated position of a tree (that is not otherwise indicated on a topographical survey) or a value based upon an average of remaining measurements or visual estimate.                                                                                                                                                                                                                                       |
| #                          | Indicates where it is not possible to determine the extent of growth due to canopies overlapping.                                                                                                                                                                                                                                                                                                                           |

## 5 FIELDWORK OBSERVATIONS

The Survey Area consists predominantly of grassland with intermittent regenerating scrub particularly adjacent to the northern boundary. A large earth bund forms the northern boundary with the adjacent site and is densely planted with mixed deciduous trees (G21) creating a dense screen between the Survey Area and adjacent site.

A linear group of deciduous woodland lies to the west of the Site (W12) and areas of scattered and dense scrub are located within and around it. The woodland contains a mixture of slender silver birch, and oak trees to the north of the woodland belt. Other tree species present included sycamore and cherry. The shrub layer consists of hawthorn, elder, bramble and dog-rose, with a dense ground flora.

Spoil heaps towards the eastern boundary, and those used as bunds at the south of the Site, contain areas of grass cover and ruderal vegetation.

The majority of trees within the Survey Area are category 'C' and 'B' specimens (see table 2). The largest concentration of Category B trees are found within woodland W12, and G21 (offsite), with tree T1 located close to the southern boundary. Woodland group W12 forms an edge to the site between industrial land and open countryside. The woodland is an important linear feature in the landscape and as part of a wider woodland group. The trees within the woodland (W12) are of a mixed variety with some developing oak specimens. The birch specimens which form the majority of the woodland are generally in a poor to fair condition and would benefit from active management and restocking.

Table 2: Summary of tree classification

| Category | Tree Reference                      | Total |
|----------|-------------------------------------|-------|
| A        |                                     | 0     |
| B        | T1, T6-T8, T11-W12, T15-G21         | 5     |
| C        | G2, G4-G5, T9-T10, G13-G14, G22-G24 | 30    |
| U        | T3                                  | 0     |

## 6 PHOTOGRAPHS

This section provides a range of photographs to illustrate the arboricultural characteristics of trees within the Survey Area.



***Photograph 1 - Looking north towards G22***



***Photograph 2 - Looking west across the Survey Area with predominantly W12 in the background***



***Photograph 3 - Looking north-east showing the open character of predominantly Oak Woodland within this northern section of W12***



***Photograph 4 - Looking south showing the open character of predominantly Birch Woodland within this central section of W12***

## **TREE REMOVALS**

It is recommended that one tree (tree T3) is removed within the Survey Area on arboricultural grounds as the tree is poor and has dieback in the main bole with decay.

## **7 CONCLUSION**

The proposed indicative development layout shown on AJA Architects drawing 'Indicative Site Layout Plan Site' 6157 - 016 shows the introduction of a large new Warehouse on the Survey Area including a large service yard, car parking and an emergency access road. There is also a proposed embankment retaining land to the west of the proposed building and access road.

The proposals will result in the loss of some individual specimens within the site and part of woodland group W12. The trees lost to the development are mostly category C trees with the exception of trees T1, T11 and T15-T16. W12 will see the loss of up to 17% of the eastern woodland edge. Group G21 would be retained albeit with regenerating vegetation along the northern boundary removed to the boundary line (G22).

The loss of woodland frontage trees (W12) to the woodlands eastern boundary would increase inter-visibility between the site and surrounding open grassland. The function of the Wood as a linear element of Green infrastructure would however be retained in-situ along the length of the western boundary.

The proposals would result in tree loss in several areas of the site, including some of the trees found within woodland W12 which are currently protected by TPO status.

This woodland is important as a group visually within the landscape and providing the linearity of the woodland is maintained along the

entire western boundary the loss of those trees proposed could be mitigated by new woodland planting of native species. This would also introduce a greater diversity of species to the woodland to improve its habitat. As above the woodland is currently unmanaged, and as a result of development would benefit from active management to remove deadwood, and declining specimens.

The woodland is also open in character which affords opportunities for further re-stocking with native species trees and understorey upon completion of management work.

The loss of trees due to the development could be mitigated with new planting at a ratio of one new tree to each tree removed; together with the replanting of an trees removed as part of the woodland management. Specimens should be of local provenance and species should be in line with Barnsley Biodiversity Action Plan objectives and ecological advice.

In summary the proposed loss of category C trees on site is considered acceptable. The loss of category B trees and TPO'd trees could be mitigated along the western boundary if necessary to ensure the woodland group is maintained. Further planting within the Survey Area along the frontage of Maple Court, Maple Road and the sites eastern boundary would also benefit the Survey Area and local context creating a green envelope enclosing the site. Consideration of amending the current TPO outline should be considered, should the proposed development be consented. This would preserve the remaining woodland and associated new planting and re-stocking along its entire length.

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APPENDIX A: Schedule of Existing Trees

| No. | Species                | Height (m) | Stem Diameter (mm)                                 | Spread (m) |     |   |     | Age Class | Height of Crown Clearance (m) | Ht of 1st Sig Limb/ Direction | Physiological Condition | Structural Condition                                                                                                                                                          | Preliminary Management Recommendations | Estimated Remaining Contribution (years) | Category Grading |
|-----|------------------------|------------|----------------------------------------------------|------------|-----|---|-----|-----------|-------------------------------|-------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------|------------------|
|     |                        |            |                                                    | N          | S   | E | W   |           |                               |                               |                         |                                                                                                                                                                               |                                        |                                          |                  |
| T1  | Silver Birch           | 13         | 340                                                | 5          | 3.5 | 5 | 5   | EM        | 0                             | 3.5                           | Good                    | Single stemmed. Forked at 3.5m. Slight lean. Good shape and form. No major visible defects.                                                                                   | At present no action.                  | 20+                                      | B1               |
| G2  | Hawthorn, Elder, Birch | <7         | 250                                                | See Plan   |     |   |     | M         | 0+                            | 0+                            | Fair                    | Dense shrubby group. Reasonable shape and form. Not pruned to any extent. Limited individual value. The birch has potential but is easily replaced. No major visible defects. | At present no action.                  | 20+                                      | C2               |
| T3  | Silver Birch           | 9          | 410, 170                                           | 3          | 0   | 5 | 0   | OM        | 6                             | N/A                           | Poor                    | Thick main bole. Dieback of main leader with decay and possible nest. Limited crown. Limited long-term value.                                                                 | At present no action.                  | <10                                      | U                |
| G4  | Birch & Oak            | 6-12       | 260 + 180 + 250                                    | See Plan   |     |   |     | SM        | 0+                            | 2                             | Good                    | 2x single stemmed oak with potential but easily replaced. Birch of reasonable shape and form. No major visible defects.                                                       | At present no action.                  | 40+                                      | C2               |
| G5  | Birch                  | <16        | 300 + 230 + 320 + 290, 250 + 370 + 270 + 300 + 310 | See Plan   |     |   |     | EM        | 2+                            | 3+                            | Fair                    | Some snapped out limbs. Reasonable shape and form but limited individual value and limited long-term value.                                                                   | At present no action.                  | 10+                                      | C1               |
| T6  | Oak                    | 15         | 470                                                | 4          | 6   | 4 | 4   | EM        | 2+                            | 3+                            | Good                    | Single stemmed. Good shape and form. No major visible defects.                                                                                                                | At present no action.                  | 40+                                      | B1               |
| T7  | Oak                    | 14         | 460                                                | 5          | 6   | 7 | 7   | EM        | 2                             | 3.5                           | Good                    | Single stemmed. Forked at 3.5m. Some stubs and deadwood but no major visible defects.                                                                                         | At present no action.                  | 40+                                      | B1               |
| T8  | Oak                    | 16         | 540                                                | 8          | 0   | 7 | 4   | M         | 1+                            | 2N                            | Fair                    | Single stemmed. Leaning to east and one-sided crown. Reasonable shape and form and complements T7. Deadwood and stubs.                                                        | At present no action.                  | 40+                                      | B1               |
| T9  | Hawthorn               | 8          | 290                                                | 3          | 1   | 1 | 3   | M         | 1                             | 2                             | Good                    | Slightly buttswpt. Upright form. Bird's nest noted. No major visible defects.                                                                                                 | No action.                             | 20+                                      | C1               |
| T10 | Birch                  | 7          | 350                                                | 1          | 3   | 1 | 4   | M         | 0                             | 0                             | Poor                    | Single stemmed. Collapsed leader with new shoots from bent leader and one limb taken vertical form. Limited individual value.                                                 | At present no action.                  | 10+                                      | C1               |
| T11 | Oak                    | 20         | 570                                                | 6          | 7   | 8 | 4.5 | M         | 2                             | 3.5                           | Good                    | Single stemmed. Slight lean. Good shape and form. Some deadwood and stubs. No major visible defects.                                                                          | At present no action.                  | 40+                                      | B1               |

|            |                                                           |     |                         |          |   |   |   |    |      |      |      |                                                                                                                                                                                                                                                                                            |                                                                                                              |     |    |
|------------|-----------------------------------------------------------|-----|-------------------------|----------|---|---|---|----|------|------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----|----|
| <b>W12</b> | <b>Birch, Oak, Hawthorn, Elder, Cherry</b>                | <20 | 300 ave.                | See Plan |   |   |   | EM | 2+   | 2+   | Fair | Woodland dominated by early mature birch with occasional oak and some understorey and younger trees. Some birch are beginning to dieback with some dead stems and snapped out trees noted. Little regen around. Would benefit from new planting to improve woodland structure and age mix. | Look to plant up areas to improve species mix and provide tree cover to replaced declining birch population. | 40+ | B2 |
| <b>G13</b> | <b>2x Oak, 1x Ash</b>                                     | <8  | 280 + 170 + 200         | See Plan |   |   |   | Y  | 0+   | 2    | Good | 3x single stemmed trees. Potential but easily replaced. No major visible defects.                                                                                                                                                                                                          | No action.                                                                                                   | 40+ | C2 |
| <b>G14</b> | <b>Birch</b>                                              | 8   | 130+ 120 x3             | See Plan |   |   |   | Y  | 1+   | 2    | Good | One single stem and one triple stemmed forming one crown. Potential but easily replaced. No major visible defects.                                                                                                                                                                         | No action.                                                                                                   | 40+ | C2 |
| <b>T15</b> | <b>Birch</b>                                              | 20  | 400                     | 6        | 4 | 6 | 1 | M  | 2+   | 6+   | Good | Single stemmed. Good shape and form. Slightly one-sided but dense canopy. No major visible defects.                                                                                                                                                                                        | No action.                                                                                                   | 20+ | B1 |
| <b>T16</b> | <b>Oak</b>                                                | 19  | 420                     | 6        | 4 | 6 | 1 | M  | 1.5  | 6+   | Good | Single stemmed. Reasonable shape and form. Slightly one-sided. Some deadwood and stubs. No major visible defects.                                                                                                                                                                          | At present no action.                                                                                        | 40+ | B1 |
| <b>G17</b> | <b>4x Oak</b>                                             | <20 | 480+ 480+ 440+ 490      | See Plan |   |   |   | M  | 0+   | 6+   | Good | 4 single stemmed trees growing together and forming one crown. Some deadwood and stubs. No major visible defects.                                                                                                                                                                          | No action.                                                                                                   | 40+ | B2 |
| <b>T18</b> | <b>Oak</b>                                                | 17  | 690                     | 7        | 8 | 7 | 8 | M  | 1+   | 3+   | Good | Good shape and form. Some deadwood and stubs. No major visible defects.                                                                                                                                                                                                                    | At present no action.                                                                                        | 40+ | B1 |
| <b>G19</b> | <b>Oak</b>                                                | <16 | 580+ 650+ 310+ 450+ 420 | See Plan |   |   |   | M  | 0.5+ | 1.5+ | Good | Smallest tree with column of decay up stem but good woundwood. Also bent over due to canopy of adjacent tree. Generally some deadwood and stubs. Good shape and form. Work well as a group.                                                                                                | Remedial prune over footpath.                                                                                | 40+ | B2 |
| <b>G20</b> | <b>2 x Oak</b>                                            | <18 | 580+ 600                | See Plan |   |   |   | M  | 1.5+ | 3+   | Good | 2x single stemmed trees both with forked crowns. Good shape and form. Some stubs and deadwood. Minor ripped limbs.                                                                                                                                                                         | Remedial prune over footpath.                                                                                | 40+ | B2 |
| <b>G21</b> | <b>Cherry, Oak, Sycamore, Hawthorn, Holly, Ash, Birch</b> | <16 | 260                     | See Plan |   |   |   | SM | 0+   | 0+   | Good | Off-site shelterbelt along mound running behind the boundary fence. Reasonable shape and form. Minor overhang into site. No particularly large individuals. Potential.                                                                                                                     | No action.                                                                                                   | 40+ | B2 |

|            |                                                                           |    |          |          |    |    |   |      |                                                                                                                                                                                                                            |                       |     |    |
|------------|---------------------------------------------------------------------------|----|----------|----------|----|----|---|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----|----|
| <b>G22</b> | <b>Cherry, Oak,<br/>Sycamore,<br/>Hawthorn,<br/>Holly, Ash,<br/>Birch</b> | <6 | 80       | See Plan | Y  | 0  | 0 | Fair | Self-sown and/or suckers from adjacent trees off site.<br>Limited value and easily replaced.                                                                                                                               | At present no action. | 20+ | C2 |
| <b>G23</b> | <b>Goat<br/>Willow,<br/>Hawthorn,<br/>Rose, Holly,<br/>Birch</b>          | <8 | 200      | See Plan | SM | 0+ | 0 | Good | Dense group of vegetation along edge of site<br>adjacent to neighbouring building. Reasonable<br>shape and form. Limited individual value and easily<br>replaced. No major visible defects although not fully<br>surveyed. | At present no action. | 20+ | C2 |
| <b>G24</b> | <b>2x Goat<br/>Willow</b>                                                 | <6 | 320+ 240 | See Plan | EM | 0  | 0 | Good | 2x dense, bushy trees. Even spread. Easily replaced.<br>No major visible defects.                                                                                                                                          | At present no action. | 20+ | C2 |