Arboricultural Assessment

Site:
Land at Clifton Gate, York.

Client:
John Thompson & Partners

Date: 5th April 2014

Reference: BA4226

Prepared by
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SUMMARY

The trees on site offer screening between the nearby neighbouring properties and in light of this, their relative size, and their visibility in the street scene the trees have a high amenity value, particularly in light of the relative large number of large growing mature and occasional veteran trees.

The trees are in a generally good condition and appear to be in good overall vitality. None of the trees offer an elevated risk to site users or neighbours at the present time and the minor issues recorded within my assessment can easily be rectified though pruning works. The condition of the trees and their long-term sustainability could be improved through a combination of minor site changes and periodic remedial pruning works.

A breakdown of the 263 trees and groups have a predominately landscape value particularly when viewed as a group. The trees have been categorised using BS5837 method of tree valuation / categorisation, which shows the population to have 29.3% of the trees classed as 'A' category, with 34.2% of the trees being classed as 'B' Category trees, 27.8% of the tree classed as 'C' category, with 8.7% of the trees being classed as 'U' Category trees.

Several trees require removal and management regardless of the intention to re-develop the site and these works should ideally be viewed in isolation. A number of trees should be removed to simplify management and help improve local growing conditions for the retained trees.

There are no significant arboricultural restrictions in respect of the proposal. The risks associated with the development phase can readily be defended. Retained trees need to be considered as part of the site design and protected from the potentially negative effects of construction. In general, trees can be readily protected through a combination of protective fencing, ground protection, and the adoption of building techniques that will sustain normal growth. Risks offered by the proposed changes can be detailed and mitigated against which can be detailed within an Impact Assessment or Method Statement to help inform the decision process.

In light of the relative size of the site and the limited areas affected by constraints relating to trees, I conclude that a proposal to develop this site should be relatively straightforward.

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APPENDICES

1 INTRODUCTION

1.1 **Objective:** To assess the condition of the trees located close to the proposed development area, to provide sufficient information to enable a decision on the tree's value, management and protection during the proposed development works.

1.2 **The Site.** Is located on agricultural land east of Skelton close to the northern ring road. I have shown an indicative site boundary in red on the Google Earth image opposite, downloaded and used courtesy of ©Google and ©third-party suppliers notated on the image.

1.3 **Surveyor:** My name is Ian Barnes; I am an Arboricultural Association Registered Consultant, a Chartered Environmentalist, and Fellow of the Arboricultural Association.

1.4 **Qualifications and experience:** I have based this report on my site observations and the provided information; I have come to conclusions in the light of my experience details are in Appendix 1.

1.5 **Documents and information provided:** I have been provided with a digital site plan of the existing site layout, detailing the extent of the application area. This plan has formed the basis of my site plans.

1.6 **The scope of this report:** This report is principally concerned with the current condition of the trees and their retention value in relation to the redevelopment of the site. The trees have been assessed in line with the guidelines outlined in British Standard BS5837:2012 'Trees in relation to design, demolition, & construction - Recommendations'. In addition, tree safety is also considered and where appropriate remedial recommendations are based upon improving current site safety or extending possible safe life for trees.

1.6.1 The statements made in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Barnes & Associates cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the report are carried out to, or affecting, the Subject Tree(s), whichever is the sooner.

2 TREE SURVEY

2.1 **The Terms of Reference:** This report has been based upon a brief Visual Tree Assessment (VTA) methodology, as devised by Mattheck (1993) in addition to Hazard Evaluation devised by Matheny & Clark (1993). Guidance is also taken from Lonsdale (1999) Principles of Tree Hazard Assessment and Management. The format of the survey follows the guidelines of British Standard 5837:2012 'Trees in relation to design, demolition & construction - Recommendations' & The ISA Tree Risk Assessment Manual (2013).

2.2 **Date of Assessment:** 2nd to the 5th April 2014.

2.3 **Weather Conditions:** Bright - visibility was good.

2.4 **Brief site description:** The site is predominately arable land subdivided by well maintain hedges. Within the site are a few wooded areas or plantations; which appear to have been established on land associated with the former Airfield / former military site though some these have now been demolished and in places capped with top soil.

2.5 **Note**: The majority of trees are located in or close to cultivated areas and as a result periodic damage to tree root zones can be expected and this is typically observed as natural canopy retrenchment or 'stag heading' and is assumed the primary reason for the trees having smaller canopies than type. In a number of cases, deeper cultivation may have impacts for future tree health that may not become fully apparent for a number of years.

2.6 **Boundaries:** The site boundaries are well defined by a combination of security fencing and hedging.

2.7 **Soil Observations:** I did not assess the soils in light of the limited undisturbed soils available. To understand the soils I referred to the soil information on Canfield University, "Soilscapes Viewer" http://www.landis.org.uk/soilscapes/ which details the information of the National Soils Resources Institute. This refers to the southern and western section of the site being a **Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils** with the north eastern section of the site being **Naturally wet very acid sandy and loamy soils,** which aligns well with site observations.

2.7.1 Both soils are unlikely to withstand compaction and disturbance well, and wherever possible, this should be avoided within the Root Protection Areas of retained trees.

2.8 **Amenity Value:** The trees help define the local area helping identifying current and historic boundaries and combine with the various groups, copses and plantations helping to create a cohesive landscape, which is representative of the wider landscape to the west, north and east. As a result, the trees area assumed to have a **moderate and occasionally high visual amenity**.

2.9 **Tree Categorization.** To help understand the value of the trees both on the site and in relation to the wider area the trees have been assessed in line with the guidelines in BS5837:2012 section 4.5 Tree categorization method. Which suggests that trees should be categorized using the criteria shown in Table 1, which is included on the Tree Survey BA4226TS in Appendix 3.

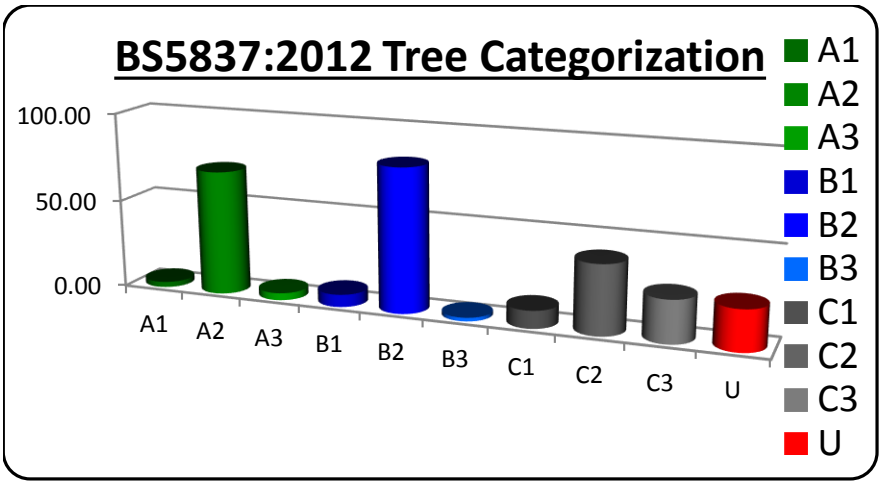
2.9.1 The purpose of the tree categorization method is to enable the rapid identification of a trees quality and value of trees in a non-fiscal sense, in addition to providing an insight into its expected safe life.

2.9.2 For a tree to qualify under any given category, it should fall within the scope of that category's definition (U, A, B, C) and, for trees in categories A to C, it should qualify under one or more of the

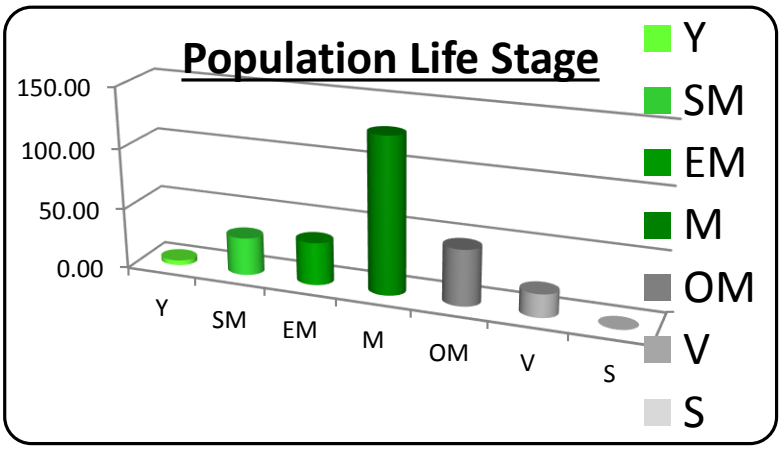
three subcategories (1, 2, 3). Subcategories 1, 2 and 3 are intended to reflect arboricultural and landscape qualities, and cultural values, respectively.

2.9.3 The graph opposite provides a breakdown of the 236 trees and groups, the tree categories on the site shows the trees to have a predominately landscape and conservation value. With the individual category's totals being:-

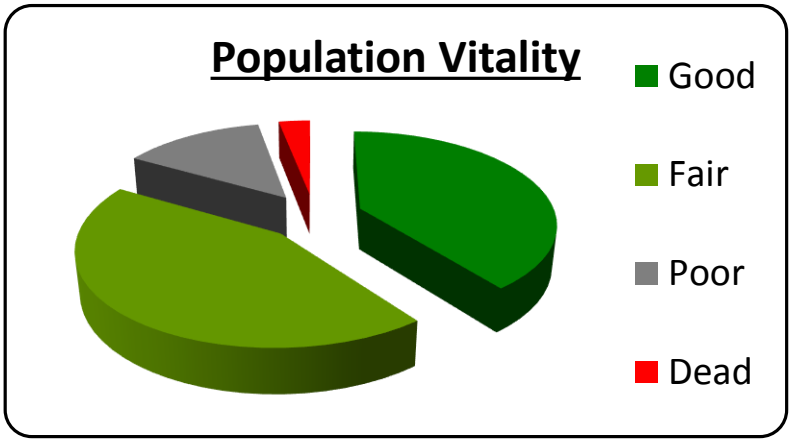
Category A = 77 Tree
Category B = 90 Trees
Category C = 73 Tree
Category U = 23 Trees



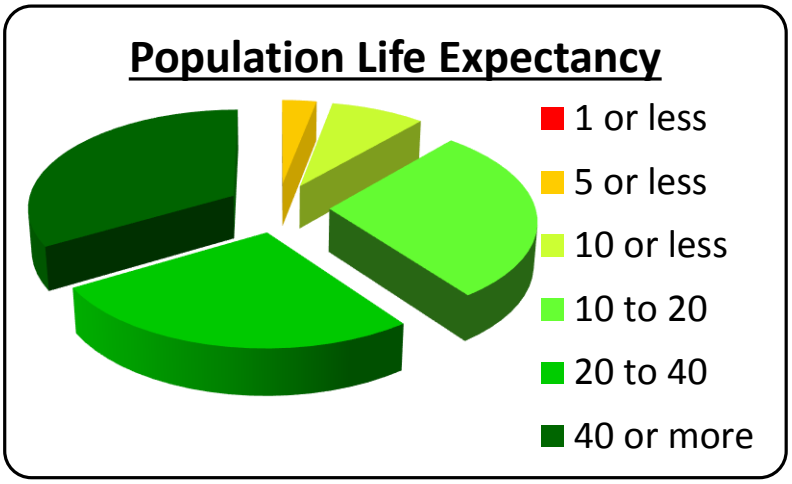
2.10 **Age Class.** The trees on site are predominately mature though a wide range of age classifications are present, which is typical for such a large group distributed over such a large area. Which points to the site has having had reasonable tree management over recent times.



2.11 **General Health.** The trees on site have a predominantly fair to good condition, which is better than expected for such a location and in light of the recent site changes. This suggests that the tree population as a whole is reasonably robust and is well placed to withstand or not to be negatively affected by site or environmental changes.



2.12 **Life Span.** An assessment of the population's life expectancy shows that trees on site have a reasonable potential with only around 60% of the trees having an expected safe life of greater than 20 years, which underlines the trees current good condition.



2.13 **Assessment of Trees**: this initial appraisal provides an assessment of the trees within and close to the redline area and provides information on their condition, key population characteristics, and makes general recommendations for management and protection.

2.14 **Tree Risk - Target evaluation.** To enable a balanced approach to the site assessment I undertook an initial assessment of the associated risks on site to identify areas of high public access, areas where trees are within striking range of valuable or fragile structures or high human occupancy locations. Targets are broadly zoned in the 'Target' ranges based on the levels of occupation, population and value. Target areas are assumed to be relatively low other than the public footpath.

2.15 **Risk Assessment.** The assessment follows the general principles of Risk Assessment; Risk assessment is important to reduce the risk of injury to people, property damage or disruption of services. **The International Society of Arboriculture (ISA)** Tree Risk Assessment Methodology takes a qualitative rather than quantitative approach to risk assessment. The system uses matrices (copied below) to compare the likelihood of failure of a tree or tree part, the likelihood of impacting the target and the potential consequences of failure.

2.15.1 The matrices generate an output describing the **Risk Offered** by the trees in line with general risk assessment methodologies; these are arranged into bands differentiated by coloured text within the tree schedule as detailed within the tree schedule in Appendix 2.

2.15.2 My assessment did identify 4 trees, which offer a **High Risk** when viewed over the next year and as a result pose an elevated risk of harm to Highway users and users of the internal drives close to Clifton Gate. The **High Risk Trees** T704, T852, T880, T881, T882 & T883 are highlighted **ORANGE** within my Tree Schedule in Appendix 2, with their positions shown on the site plan located in Appendix 3.

2.15.3 On the whole, the risks offered by the trees is through an increased potential for branch or main stem failure into occupied areas. Ideally, the recommended works should ideally be instigated in the current season to improve safety.

2.16 My assessment identified a further 4 trees, which offer a **Moderate Risk** when viewed over the next year and pose an elevated risk of harm to site users. Moderate Risk Trees are highlighted **YELLOW** within my Tree Schedule in Appendix 2, with their positions shown on the site plan located in Appendix 3. Ideally, the recommended works should ideally be instigated in the current season to improve safety.

2.17 The remaining trees are assessed as being within or close to the **Tolerable Region** of risk and appear to have a generally acceptable level of risk at the present time based on the current assessed site usage. Where, the level of site usage is expected to alter significantly this will require a revision of the risk assessment.

2.18 A universal principle of risk management is that the benefits of risk reduction (in terms of reduced harm) should be balanced with the cost of that risk reduction (in terms not only of the financial cost of implementing risk control measures but also the loss of benefits that are conferred by the hazardous agency). Overall, finding a balance between risks and benefits, effective risk management should seek to 'do no harm'.

2.19 The trees on site are a significant asset and help to both provide screening for the site within the broader landscape but also set the tone for the area giving it its own unique character. As with any asset such as a building or facility, the trees require a level of investment to enable suitable levels of monitoring and management works to be undertaken, to ensure continuity. If you require any further information regarding the findings of this report, the management of the trees or would like further information upon the value of the trees in terms of carbon sequestration or overall asset

values please feel free to contact me.

2.20 **Visual Assessment of Trees:** The trees have been assessed from ground level only in line with the guidelines outlined in British Standard BS5837:2012. This provides information for the retention and protection of trees upon development sites. Information upon the trees is located in the Tree Schedule in Appendix 2.

2.20.1 A significant aspect of the site is the 19 possible veteran trees, which are a significant feature and should be considered a particularly valuable asset, by virtue of the minimal intervention to date. They represent a very valuable collection both in terms of their connection to the history of the site as well as their worth to local biodiversity though habitat creation with a number expected to harbour unusual species of fungi or invertebrates in addition to providing nesting opportunities to birds and mammals including bats. These trees as with any population of trees will require ongoing management and assessment to maintain an acceptable level of risk, in addition to helping improve the population as a whole. Ideally, this should be undertaken periodically and for many sites alternating assessment between periods when trees are in and out of leaf allows assessments to centre on health and vitality or from and structure. Again, please feel free to call and discuss these options if required.

2.20.2 **General Site Issues**. Whilst on site a range of general Arboricultural issues were seen which have the potential to impact on the development of trees and may result in future problems or which again could result in elevated management costs for the site in the future. Please do not hesitate to contact me should you require any additional information or clarification of any of the points below.

2.20.3 **Excavation / Cultivation / Level Changes close to trees,** the soils around many of the trees have been altered through cultivation this has the potential to result in the decline of trees through root damage and asphyxiation increasing the chances of deadwood or failures due to pathogens. In a number of cases this has resulted in the death of trees and ideally this should be more closely assessed and where appropriate alleviated.

2.20.4 **Damaged by Cutting Machinery,** damage to bark exposes the inner wood that has the potential to become affected by pathogens. Ideally, an area around the bases of these trees should be left turf free avoiding the need to cut grass close to trees and avoiding potential damage by grass cutting machinery.

2.20.5 **Tree canopies are developing close the highway / vehicle access.** In some areas, trees are growing into the line of vehicles and damage to both can be expected formative pruning to avoid further problems is required.

2.20.6 **Over developing canopies / asymmetry** observed within the canopies has developed in response to site constraints and the limited availability of resources – principally light, which has resulted in trees vying to compete and outgrow their competition. This situation can be easily rectified through a program of canopy remodelling if required.

2.20.7 **Direct damage to structures.** Several trees have developed close enough to cause direct damage by branches striking or abrading on buildings and will require formative pruning to avoid further damage.

2.20.8 **Tree Pruning.** A number of the trees do require ongoing pruning works related to structural features that have developed in the main canopy formation. This pruning is required to limit potential risks to site users. Ideally, pruning should be undertaken in the current growing season.

2.20.9 **Ivy affects a small number of trees throughout the site,** advanced development obscures defects, increases the loading to a tree canopy, and prevents the internal section of the canopy from photosynthesising, and typically, this will lead to decline and the development of further defects. Ideally, Ivy growth should be controlled on the site.

2.20.10 **Woodland Areas,** Limited management is visible; the trees throughout the area are at much the same point in their life cycle, in addition to suffering localised competition for space and light. Ideally, the management in the groups should be altered to help improve available space and help improve the growing conditions for the remaining trees. In particular, the woodland close to the southern boundary would benefit from both the recommended works to the larger principal trees but also general thinning of the smaller understorey trees. In some areas, semi mature trees (some with stakes and ties remaining) are vying for dominance to the detriment of the group and in others are a dense thicket of seedling trees, particularly Sycamore which threaten to develop too close that access will be prevented. Ideally, the tree groups need to be selectively thinned to regular centres of between 3m & 6m to improve light availability and improve growing conditions.

2.20.11 **Inappropriately located Natural Regeneration -** Throughout the area seedling trees, and woody weeds such as Elder, have been allowed to develop, often in inappropriate locations likely to cause future management problems, affecting more valuable trees or damage to structures. Ideally, these should be controlled as part of the normal landscape management.

2.21 **General Tree Pruning.** The trees require management to improve their condition. General works are detailed within the tree schedule in Appendix 2. This work is required regardless of the development proposals and should ideally be undertaken within the next 12 months. These works should be viewed in isolation to the development proposal in planning terms.

2.22 **Conclusions.** The trees are in good overall condition in light of their location and do not represent an abnormal risk to site users at the present time, though many are poorly located and offer management difficulties if retained. Their retention could help improve shelter, screening, and improve the overall amenity of the site, though this will require significant management in the short to medium term.

2.23 **Legal Duty:** The common law imposes on everyone a duty of care not to injure his or her neighbour. To avoid liability, a tree owner should take steps to ensure that they are aware of whether a tree is likely to cause problems and if it is, to take appropriate avoiding action as necessary. It is important for owners of trees growing close to people and property to have them regularly inspected and to act on recommendations.

2.24 **Trees subject to statutory controls.** Where trees are covered by a tree preservation order or located in a conservation area works may be restricted. The works specified are necessary for reasonable management and should be acceptable to the local authority.

2.25 **Trees outside your control:** Where trees are on neighbouring land you have no right to undertake the recommended works without the consent of the tree's owner, other than trimming the canopy to the boundary, providing that the tree has no other form of legislative protection. The effect of none compliance requires legal interpretation, which is beyond the scope of this report.

2.26 **Implementation of works:** I advise that any Arboricultural work is carried out by a reputable contractor from the local authority list or one approved by the Arboricultural Association (www.trees.org.uk). The contractor should carry out all tree works to BS 3998 *Tree Work - Recommendations* (2010) and or the European Tree Pruning Guide - European Arboricultural Council (English Version) though in strict accordance with current Arboricultural best practice ensuring that any pruning works accord with current target pruning methodology.

2.27 I would always suggest that you get at least three fixed price quotations before deciding upon a contractor to undertake the works on your behalf.

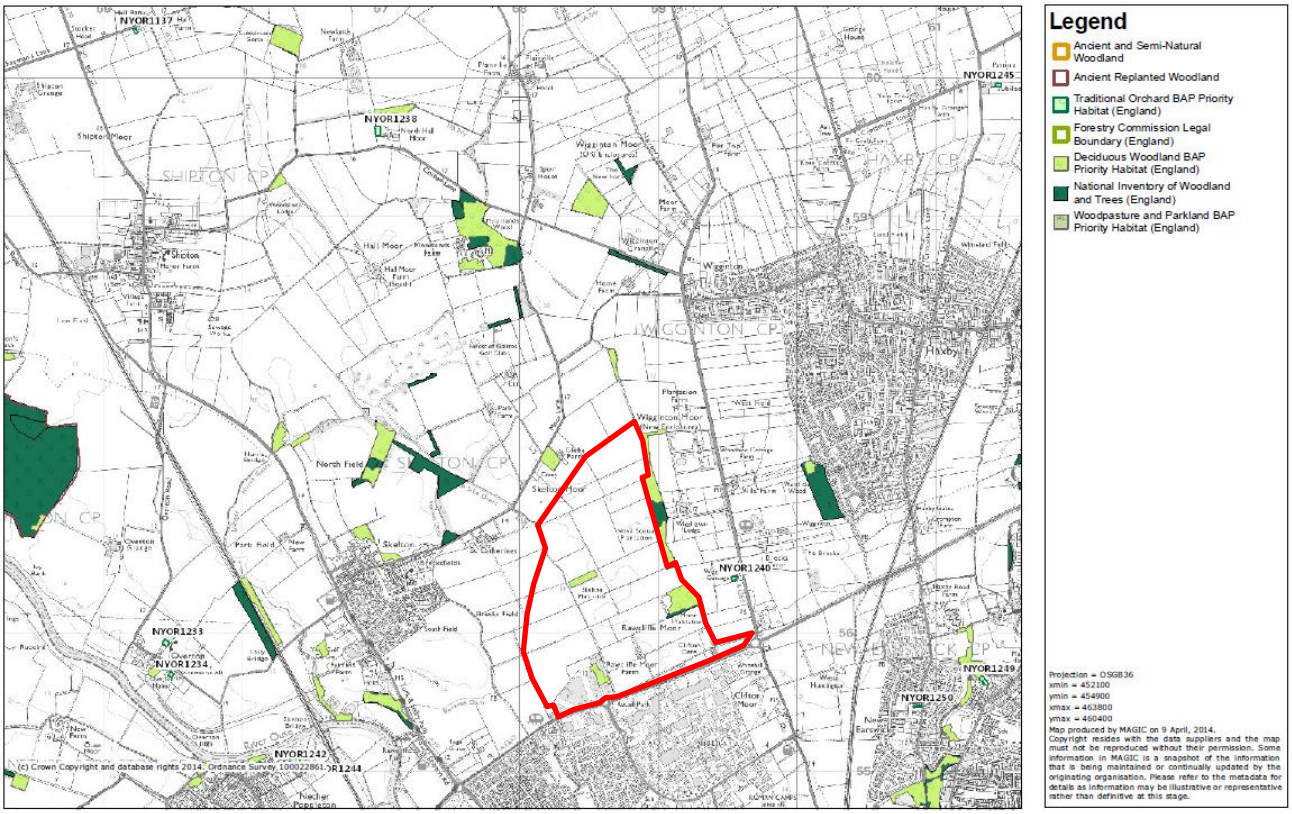
2.28 Works should be planned to avoid times when birds are nesting, and be aware that a bat survey may be needed on significant tree hollows, though in light of the relative moderate age of the trees this is thought to be unlikely. If bats are discovered during inspection or subsequent work, English Nature must be informed immediately.

3 TREE CONSTRAINTS

3.1 **Legal constraints** may be posed by existing trees. Trees can be protected by planning legislation in several ways, which include being located within a National Park or on a Site of Special Scientific Interest, located within the grounds of a listed building, conservation area or by being subject to a current Planning condition. In general, the main type of protection for trees adopted by the Local Planning Authority (LPA) on potential development sites is the Tree Preservation Order (TPO). I understand from conversations that the site is not covered by Tree Preservation Order's but is located within the Conservation Area which will result in notification of works being required by the local planning authority for the majority of the tree works.

3.1.1 The protection of trees is a duty of the LPA under the Town and Country Planning act 1990 and aims to encourage rational discussion and consideration of trees within the design process. The following guidelines are proposed to encourage rational discussion and consideration of trees within the design process. Legislation indicates that protection should be used to protect healthy trees that are likely to have a reasonable safe useful life expectancy. Generally, those classified with a condition rating of (A) Excellent & (B) Good are worthy of a TPO. Those classified (C) Fair are generally poorer and therefore unlikely to qualify for a TPO on grounds of poor appearance, management issues or unlikely to have a sufficient safe life expectancy. Those trees classified (U) are Unsuitable for retention, generally contain structural defects, have a short safe useful life expectancy or are dangerous and therefore would not qualify for a TPO as indicated within the legislation.

3.1.2 The Government geographical mapping information website http://www.magic.gov.uk/ map (extract below) with the site outlined in red, shows the plantation and shelter belts close to the eastern boundary within the site are listed as Deciduous Woodland Priority Habitat in the UK Biodiversity Action Plan, in addition to being part of the National inventory of woodland and trees(England).



3.1.3 The presence of a TPO's should be expected upon development sites for the above reasons. It can however only be regarded as a material consideration, as can any other tree or significant natural feature, within the planning process, and cannot be used as a means of preventing development. Any trees protected or otherwise, which are located on or close to the site can be expected to be regarded as a material consideration or offer a design constraint within the development process.

3.2 **General Constraints posed by existing trees.** The constraints imposed by trees, both above and below ground should inform the site layout design, although it is recognized 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.

3.2.1 Our tree survey schedule in Appendix 2 and the tree survey plan BA4226TS in Appendix 3 includes the relevant constraint information, plotted around each of the categories A, B and C trees and included information on shading and the minimum Root Protection Area (RPA), in addition to a suggested limit for construction.

3.2.2 Typically, development should endeavour to retain category A & B trees and category C trees where they can be either improved and included in low risk areas or help improve biodiversity.

3.2.3 As trees can affect and be affected by many aspects of site operations, during the conception and design process the project arboriculturist should be involved in ongoing review of layout, architectural, engineering and landscape drawings. All members of the design team should be made aware of the requirements for the successful retention of the retained trees and should make provision for these throughout the development process.

3.2.4 Ideally, structures should be located outside areas of shading and the recommended construction limit (Minimum Root Protection Areas plus an additional 2 metres) of trees to be retained should inform the development.

3.2.5 However, in some cases the existing site layout has impacted on the trees in particular when existing structures or hard surfacing extend or have been installed into the root protection areas. To help understand this I have colour coded the principal Structures, Hard Surfacing, Services, Earthworks and areas of High water content on the tree survey plan BA4226TS in Appendix 3.

3.2.6 However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s). If operations within the RPA are proposed additional information can be provided to demonstrate that the tree(s) can remain viable and offer mitigation measures such as but not limited to, improvements to the soil environment that is to be used by the tree for growth.

3.2.7 Care is needed regarding the retention of large, mature, over-mature or veteran trees which become enclosed within the new development. Where such trees are retained, adequate space should be allowed for their long-term physical retention and future maintenance. However, such retentions are seen as beneficial, helping to contribute to climate change resilience, amongst other benefits of habit and biodiversity. Achieving successful integration of large species trees requires careful consideration at the conceptual and design stages and specialist arboricultural input.

3.2.8 To enable a realistic assessment of the probable impacts of any proposed development on the trees and vice versa, which should be taken into, account the characteristics and condition of the trees. To maximize the probability of successful tree retention, the following factors are taken into account.

a) **Shading of Buildings**. This can be a problem, particularly where there are rooms, which require natural light.

b) **Shading of Open Spaces & Gardens**. Sitting normally requires direct sunlight for at least for part of the day. However, *shading can be desirable to reduce glare or excessive solar heating, or to provide for comfort during hot weather.*

c) **Privacy and screening**. The retention of trees helps to reduce overlooking by neighbours or to mitigate undesirable views, such as busy roads, railway lines or industrial premises.

d) **Direct damage**. Below ground, damage to structures can occur because of incremental root and stem growth. In addition, above ground damage can occur to trees and structures by the continuous whipping of branches against the fabric of a building. Therefore, this needs to be considered to avoid the need for frequent remedial pruning or other maintenance.

e) **Future pressure for removal**. The relationship of buildings to large trees can cause apprehension to occupiers or users of nearby buildings or spaces, resulting in pressure for the removal of the trees. Buildings and other structures should be sited to allow adequate space for a tree's natural development, with due consideration given to its predicted height and canopy spread.

f) **Seasonal nuisance**. Trees are naturally growing and shedding organisms. Leaves of some species can cause problems, particularly in the autumn, by blocking gullies and gutters. Fruit can cause slippery patches or accumulations of honeydew, which can be damaging to surfaces these aspects, should also considered.

3.3 **Design consideration.** In general, developments close to trees needs to maintain the site close to the current prevailing conditions and avoid significant changes, particularly in the root zone. A development is achievable providing the 8 key points listed below can be incorporated into the proposal's design and the buildings implementation when building near trees:-

a) **Available Space,** The proposal should consider the available space both now and in the future and avoid the need to remove large diameter branches and stems whilst providing sufficient space for future growth.

b) **Foundations,** the proposal will need to offer support to the structures with the need for minimal excavation to avoid tree root severance, typically a pile and beam or partial cantilever solution could be considered following the advice of a structural engineer.

c) **The Building,** particularly the underside of the proposal will need to be above the current soil level to avoid compaction, excavation and ensure continued soil hydration and aeration. Typically, either a timber frame or block and beam can be adopted to achieve this relatively simply.

d) **Ground Protection,** needs to be a principal theme running throughout the proposal with the current ground being protected from, Excavation, Cultivation or Compaction and should remain wherever possible close to its current condition. This can be significantly simplified through the adoption of timber frame construction avoiding the need for potentially damaging heavy weights and potential noxious material such as concrete blocks, bricks and chemicals such as cements to be used near trees.

e) **Services** for the proposal should be located outside the Root Protection Area to avoid the need for excavation. Where new services are required within the Root Protection Area, these should adopt low impact methods of installation such as moling. Ideally,

existing site utilities should be either isolated and retained in situ where they extend into the RPA or recycled or upgraded where this can be done without excavation.

f) **Hard surfacing** will typically be required unless it can be substituted for decking or above ground walkways. Hard surfacing will need to be installed without the need for excavation and should be porous to allow continued soil hydration and aeration. Typically, either a porous paving system or gravel supported by a NO-dig foundations such as Cell-Web can be adopted to achieve this.

g) **Building use,** within the proposal, available light should help inform the building design, layout and its use. Ideally, windows and views should be directed away from trees and towards open areas. In addition, the use of secondary or passive light through light reflecting tubes should be considered to help reduce the negative aspects of large trees.

h) **Building maintenance** will be required, particularly where canopies of trees extend close to or above the roofline, this can cause maintenance difficulties due to leaf and organic matter build up in the gutters and down pipes. This problem needs to be designed out as far as possible by the addition of filters in the gutters to restrict the access to leaves and small twigs.

3.4 By assessing the scheme in detail, we can evaluate the direct and indirect effects of the proposed design and where necessary recommend mitigation. The assessment takes account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed near retained trees. This might include the removal of existing structures and hard surfacing, the installation of new hard surfacing, the installation of services.

3.5 Within the evaluation, we can include information on the trees to be retained and removed, in addition to trees to be pruned, including any access facilitation pruning. In addition to the impact of the permanent works, account should be taken of the build ability of the scheme in terms of access, adequate working space and provision for the storage of materials; typically, these risks and any protection methods would be detailed within an Arboricultural Implication Assessment to help inform the planning process.

4 PROTECTION

4.1 **Threats to Trees.** The development process can be damaging to trees in several ways, below is a brief outline of the principal risks in addition I have included a brief guide as Appendix 4.

4.2 **Limiting Threats to Trees.** To help reduce the potential impact of site changes BS5837:2012 recommends in Section 3.7 that a **Root Protection Area (RPA)** is included as a layout design tool. This protection area is based upon the Root Protection Area - a point equivalent to 12 times the trunk diameter. This indicates the minimum area around a tree deemed to contain sufficient roots and rooting volume to sustain the tree's viability, though ideally the offset shown as the Construction Limit should be adopted to provide additional space and enable trees to thrive.

4.3 **Tree Protection:** where retained trees need to be protected this is most easily achieved by establishing a **Construction Exclusion Zone (CEZ)** to protect the roots and aerial parts as recommended in BS5837:2012 – further details upon request. Within this area, retained trees need to be protected from the effects of site changes and in particular excessive root severance, soil level changes or soil compaction.

4.3.1 Appropriate site organisation and management are essential following the adage of '***Prevention is better than Cure***'. Unfortunately, tree damage can easily occur and although it is costly to repair, it comes with few guarantees.

4.3.2 Inside the exclusion area of the fencing, the following actions need to be avoided:-

- **No linear mechanical excavation whatsoever.**
- **No excavation by any other means without arboricultural site monitoring.**
- **No hand digging without a written Method Statement having first been approved in writing by the consulting arboriculturist.**
- **No lowering of levels for any purpose (except removal of grass sward by hand).**
- **No construction of a sealed hard surface (except where agreed with the arborist)**
- **No storage of plant or materials.**
- **No storage or handling of any chemical including cement washings.**
- **No vehicular access.**
- **No fire lighting.**

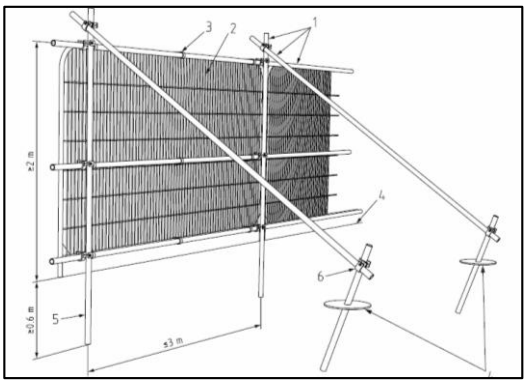
4.4 In addition to the above, further precautions are necessary adjacent to trees:-

- **A 10m separation distance shall be observed between any tree and substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders' sand, concrete mixing and other chemicals.**

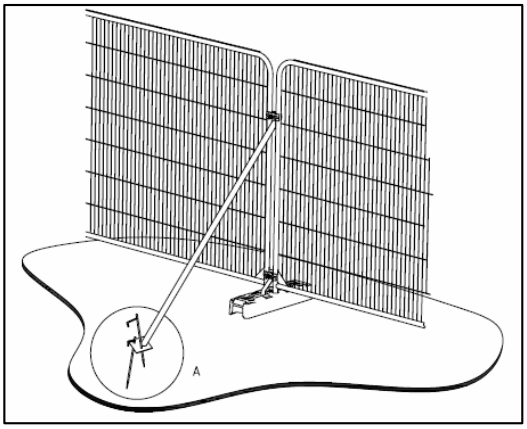
- **No fire shall to be lit such that flames come within 5m of tree foliage; this shall be taken to mean a fire separation distance of 20m from any tree's canopy.**

4.5 **Protective Fencing:** Based on tree survey data, **Root Protection Area (RPA)** have been calculated for the trees identified for retention and included in the tree schedule in Appendix 2. The RPA's are designed to protect at least a functional minimum of tree root mass in order to ensure that the trees survive the construction process. Tree protection will need to be installed following the initial tree works and before the onset of any demolition or ground works. The RPA should remain in position for the whole of the construction and demolition phase.

4.6 **Type 1 Tree Protection Fencing (TPF1)**, which is suitable for areas of high intensity development, shall comprise of interlocked Heras panels, or similar, well-braced to resist impacts by attachment to a scaffold framework that has been set firmly driven into the ground and braced as shown opposite.



4.7 **Type 2 Tree Protection Fencing (TPF2),** is to be erected as a temporary barrier to protect areas designated for later construction within TPZ, shall consist of Heras panels mounted on rubber/concrete 'boots' which shall be pinned into the ground using 450mm steel pins and/or clamped to adjacent Type 1 TPF, shown opposite.



4.8 **Type 3 Tree Protection Fencing (TPF3),** is to be erected as a visual barrier to protect areas designated for no or later construction and typically consist of light visual barriers such as stock fencing, post and rail, Chestnut Pale fencing or Orange Extruded Plastic Netting, supported on ground pins as shown opposite.

4.9 **Signage:** To inform site personnel of the purpose of the fencing and to underline the importance of the Construction Exclusion Zone, information notices such as the example shown opposite should be fixed to the fencing.

4.10 **Ground Protection (Temporary):** Access across the RPA, if this is required this can be achieved for the duration of the development phase in such a way, which will reduce the potential negative effects of compaction.

4.11 For pedestrian movements, which are expected to be limited on this site, a single thickness of scaffold boards placed either on top of a driven scaffold frame, to form a suspended walkway as detailed in the image opposite can be used. Alternatively, this could be positioned on top of a compression-resistant layer, laid onto a geotextile membrane.

4.12 If pedestrian-operated plant up to a gross weight of 2t are forecasted then, proprietary, interlinked ground protection boards are available, however their use should only be undertaken following the advice of the consulting arborist and following a detailed assessment of the particular soils.

4.13 Where heavy plant is expected to enter the Root Protection Area, bespoke methods will need to be agreed.

4.14 **Ground Protection (Permanent):** The creation of Hard Surfacing within or close to trees offers a risk to trees through compaction, excavation, soil level changes or contamination and this needs to be defended. Again, their adoption and use should only be undertaken following the advice of the consulting arborist and following a detailed assessment of the particular soils.

4.14.1 Protective measures can be adopted successfully to help retain trees. This information needs to be outlined within an Arboricultural Implication Assessment and detailed on a Tree Protection Plan to help inform the planning process.

5 CONCLUSION

5.1 **General.** Of the trees surveyed on site, the majority are in good condition and do not offer an elevated risk to site users.

5.1.1 The tree population will benefit from the general management recommendations outlined in our schedule, in addition to the establishment of additional new trees to provide succession. Ideally, this should be undertaken prior to development if the trees are to be retained.

5.2 **Proposed development.** Retained trees need to be considered as part of any site changes and protected from the potentially negative effects of alterations or construction. In general, tree protection requires a combination of protective fencing, ground protection, and the adoption of building design, materials and techniques that can sustain normal growth.

5.2.1 Where protection is not possible removal and replacement of a tree with a suitable landscaping scheme may help improve the overall levels of screening and biodiversity.

5.3 **Conclusion.** The trees on site are a significant material consideration in light of the number of mature and Veteran trees and the information within this report should be used to help inform the design of any development.

5.3.1 I can see no reason why a scheme to develop this site should not be considered favourably, in light of the available space and providing the retained trees can be suitably protected using the broad method outlined within this report. Where required this protection can and in many cases should be conditional and detailed within an Arboricultural Method Statement.

5.3.2 In light of the current site constraints, I would suggest that redevelopment should be relatively straightforward in light of the available space and the former land use.

5.3.3 Providing that the points suggested within this report are incorporated within the scheme and appropriately managed there are no significant arboricultural restrictions in relation to the proposed development.

5.3.4 Should you require any further information please contact me at the office above.

APPENDIX 1 - BRIEF QUALIFICATIONS AND EXPERIENCE OF IAN BARNES

Qualifications:
Higher Diploma in Arboriculture (H.N.D Arb)
National Diploma in Horticulture & Arboriculture (N.D.Ht/Arb)
Arboricultural Association Technicians Certificate (Tech.Cert. (Arbor.A))
International Society of Arboriculture – Tree Risk Assessment (TRAQ)

Membership grades by peer review:
Chartered Environmentalist (CEnv)
Corporate Member Institute of Horticulture (MI Hort)
Fellow of the Arboricultural Association (F.Arbor.A)
Professional member Consulting Arborist Society UK.

Registration Schemes:
Arboricultural association Registered Consultant (49)

Practical experience:
I have worked in the Arboricultural Industry since 1987. Firstly as a climbing Arborist in both the public and private, sector, undertaking a wide range of practical operations on a variety of sites, before becoming a gang foreman. I set up and ran my own Arboricultural contracting business for 15 years, though this is now under new ownership. I have developed an arboricultural consultancy practice since 1993, working throughout England for clients in both the public and private sector.

Continuing professional development:
As part of my ongoing education, I am a member of a range of related Arboricultural bodies. Including the Arboricultural Association (AA), International Society of Arboriculture (ISA), Royal Forestry Society (RFS), Forestry Contracting Association (FCA), and Consulting Arborist Society (CAS) of which I am a professional member. I am a corporate member of the Institute of Horticulture (MI Hort) and a Fellow of the Arboricultural Association (F.Arbor.A). An inclusive member of the British Mycology Society (BMS) in addition to being a Chartered Environmentalist (CEnv).

I am a registered consultant of the Arboricultural Association. I regularly attend seminars and training events on issues relevant to Arboriculture these include events focusing on General Tree Management, Veteran Tree Management, Tree Health, Tree Pest management, Tree Diseases management, Trees Biology & Morphology, Tree Stability, Wind Loading of Trees, Tree Risk Assessment, in addition to keeping an upto date level of CPD.

I am a licensed user of the Quantified Tree Risk Assessment (QTRA) System and regularly attend updates. I am a trained user of Picus 'Acoustic' Tomography and have attended training to extend my knowledge in this area. I am trained in the use of thermal imaging as an aid to detecting defects in trees.

Relevant experience:

My career to date has involved me in a variety of tree care, dealing with trees in many different environments, and with differing management aims, these included: Tree planting schemes, including Woodland Design & Management, Detailed Health and Safety Appraisals, Tree inventories / population surveys, Management & selection on both proposed and active development sites, Advice upon trees in relation to structures, Additional areas of work such as Contract Specification & Management, Planning applications, Expert Witness.

This has provided me with a range of experience, enabling me to comment upon trees and their management, in line with current best practice. Full CPD and training record can be forwarded upon request.

APPENDIX 2 – TREE SCHEDULE & EXPLANATORY NOTES

The following survey has been prepared from a visual assessment taken from ground level without any detailed investigation. Observations are based upon the body language of the trees and any visual indicators present at the time of inspection. This survey should be regarded as a preliminary overview; ongoing inspections will be required as specified individually. In most situations the health, condition and safety of trees should be checked on a cyclic basis, alternating between early and late seasons to ensure a full picture of tree health is established. Inspections should only be carried out by a suitably qualified arborist.

Similarly, numerous potential defects may not be detectable dependent upon timing of inspection, in particular, wood decay fungi, which may only occasionally produce external fructifications annually (rather than perennially), or may not provide external symptoms until an advanced state is achieved.

Reasonable risk management generally aims to provide a tree that can be regarded stable in a normal / foreseeable, regularly experienced storm events i.e. force 10 storms. The level of risk offered by the tree will be significantly greater as the wind speed that the tree is exposed to increases beyond this level. Additionally the threat from aerial parts i.e. tight unions may remain even following works, although failures of such parts are likely to be limited to small diameter branches and to periods of extreme weather.

As an arborist, I am a tree specialist and use my knowledge, education, training and experience to examine trees, recommend measures to enhance their beauty and health, and attempt to reduce the risk of living near trees. As a client, you may choose to accept or disregard these recommendations, or seek additional advice.

As an arborist, I cannot detect every condition that could possibly lead to a tree or limb failure. Trees are living organisms that may fail in many ways, some of which we do not fully understand.

Conditions are often hidden within the tree and below the ground. As arborists, we cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Sometimes trees may appear "healthy," but may be structurally unsound. Likewise, remedial treatment, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the arboricultural perspective, such as property boundaries and ownership, disputes between neighbours, planning issues, sight lines, landlord-tenant matters etc. Arborists cannot take such issues into account unless complete and accurate information is given to them. Likewise, as an arborist I cannot accept any responsibility for the authorization r non-authorization of any recommended treatment or remedial measure.

Furthermore, certain trees are borderline cases as to whether they should remain or be removed. If conditions change a tree may need further monitoring in the future to determine its health and structure. Trees can be managed, but they cannot be controlled, and to live near a tree is to accept some degree of risk.

Mathematical abbreviations: > = Greater than, < = Less than.

Measurements / estimates: All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '#'. Less reliable estimated dimensions are indicated with a '?'.

Colour Coding – The line of information highlighted blue refer to those trees outside the security fence, this information is general generally recording an estimated of the mean heights, canopy spread or stem diameter to provide an indication of the group condition or protection requirements

Tree number: Numbered Tag attached to each stem usually on the inside face of the stem at roughly 2.5 metres. Were the number is followed by a C this demotes that the tag refers to a compartment or group.

Name: Tree species are detailed by their common name.

Age: I record the age as an estimate of the tree likely span for guidance only i.e.

Y	**Young**	Recently established/planted tree.
SM	**Semi Mature**	Fully established and growing with high vigour
EM	**Early Mature**	The first third of its likely expected life span
M	**Mature**	The middle one third of its likely expected life span
OM	**Over Mature**	The later one third of its likely expected life span
V	**Veteran**	An aged example of the species, typically with defects / *existing or potential conservation value*
S	**Senescent**	Beyond its expected Life span possible of historical interest or in a state of decline

Height: I estimate height to the nearest metre to the mean height.

Height to underside: I estimate height to the nearest half metre to the mean underside of the canopy.

Height to First Significant Branch (FSB): Distance of separation between the ground and the underside of the canopy.

Direction of the First Significant Branch (FSB): Orientation of the first significant branch within the canopy.

Diameter: These figures relate to a measurement of the stem at 1.5m above ground level and I record them in millimetres measure with a rounded down diameter tape. Figures prefixed with MS denote trees or shrubs with multiple stems.

No. Stems: I record the number of significant stems that compose the tree i.e.

S - Single Stem 1 **M** - Multiple Stemmed. 2, 3, 4, 5 or >5

Canopy (N S E W): I estimate the distance of the canopy radius to the nearest metre to provide a mean distance of separation between the stem and the outer canopy.

Vitality: Is a personal assessment of the tree's growth rate in the current season, in comparison to other trees within the locality, region and an indicator of the tree likely response to site change.

D - Dead A dead or very low vitality tree **L- Low / Declining** A tree in noticeable poor state
P - Poor A tree of low vitality **- Fair** A tree of normal vitality
G - Good A tree of high vitality

Safe Life: Is a personal assessment of the trees likely expected remaining safe life span assuming the tree is protected from significant change.

40 or more **20-40**
10 to 20 **10 or less**
5 or less **1 or Less**

Category / Condition Rating: This is based upon the criterion of BS5837: 2005 Recommendations for trees in relation to construction and describes the condition of the tree based on age, vigour, structure and health as follows:

UNSUITABLE TREES - Category and definition Criteria Identification on plan

Category U - DARK RED
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.
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 category U trees (e.g. Where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)
Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality
NOTE *Category U trees can have existing or potential conservation value, which it might be desirable to preserve*

TREES TO BE CONSIDERED FOR RETENTION
Category and definition Criteria — Subcategories:
1 Mainly arboricultural values,
2 Mainly landscape values,
3 Mainly cultural values, including conservation

Category A - LIGHT GREEN
Trees of high quality with an estimated remaining life expectancy of at least 40 years
1. 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)
2. Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
3. Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. Veteran trees or wood-pasture)

Category B - MID BLUE
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
1. Trees that might be included in category A, but are downgraded because of impaired condition (e.g. Presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are
Unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.
2. Trees present in numbers, usually growing groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
3. Trees with material conservation or other cultural value

Category C - GREY
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm
1. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2. 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 benefits.
3. Trees with no material conservation or other cultural value.

NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.

Comments / Observations: General comments referring to tree health, structure and condition.

Management Options: Comments detailing remedial works required improving immediate safety or improve the management of the tree.

Priority: Guidance for the time scale in which works should be completed, from the date of the report.

Tree Risk Assessment: The International Society of Arboriculture (ISA) Tree Risk Assessment Qualification (TRAQ) takes a qualitative rather than quantitative approach to risk assessment. It uses matrices to compare the likelihood of failure of a tree or tree part, the likelihood that it will impact the target and the potential consequences of failure.

Qualitative Ratings (definitions)

Likelihood of Failure [2]
➢ **Improbable -** The tree or branch is not likely to fail during normal weather conditions and may not fail during many severe weather conditions within the specified time frame.
➢ **Possible -** failure could occur, but it is unlikely during normal weather conditions during the specified time frame.
➢ **Probable -** failure may be expected during normal weather conditions within the specified time frame.
➢ **Imminent** - failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. This is a rare occurrence for a risk assessor to encounter, and it may require immediate action to protect people from harm.

Likelihood of Impacting Target [1] (includes occupancy rate + protection factors + direction of fall)
➢ **Very Low -** The chance of the failed tree or branch impacting the specified target is remote. This is the case in a rarely used site fully exposed to the assessed tree or an occasionally used site that is partially protected by trees or structures. Examples include a rarely used trail or trail head in a rural area, or an occasionally used area that has some protection against being struck by the tree failure due to the presence of other trees between the tree being assessed and the target.
➢ **Low -** It is not likely that the failed tree or branch will impact the target. This is the case in an occasionally used area that is fully exposed to the assessed tree, a frequently used area that is partially exposed to the assessed tree, or a constant target that is well protected from the assessed tree. Examples include a little-used service road next to the assessed tree or a frequently used public street that has a street tree between the street and the assessed tree.
➢ **Medium -** The failed tree or branch may or may not impact the impact the target, with nearly equal likelihood. This is the case in a frequently used area that is fully exposed on one side to the assessed tree or a constantly occupied area that is partially protected from the assessed tree. Examples include a suburban street next to the assessed street tree or a house that is partially protected from the assessed tree by an intermediate tree.
➢ **High -** The failed tree or branch will most likely impact the target. This is the case when a fixed target is fully exposed to the assessed tree or near a high-use road or walkway with an adjacent street tree.

Occupancy Rate (primarily determines likelihood of impact)
➢ Rare - back country trails, remote gardens or estates
➢ Occasional - country roads, low use foot paths
➢ Frequent - heavy use during business hours
➢ Constant - buildings, landscape plants, constant traffic

Likelihood of Failure and Impact (terms from Matrix 1)
➢ **Unlikely**
➢ **Somewhat Likely**
➢ **Likely**
➢ **Very Likely**

Consequences of Failure [1] (includes size + distance of fall + protection factors + value of target)
➢ **Negligible -** Consequences are those that involve low-value property damage or disruption that can be replaced or repaired, and do not involve personal

Injury.

➢ **Minor -** Consequences are those that involve low-to-moderate property damage or disruptions to traffic or communication utility.
➢ **Significant -** Consequences are those that involve property damage of moderate-to-high value, considerable disruption or personal injury.
➢ **Severe -** Consequences are those that could involve serious personal injury or death, damage to high-value property, or disruption of important activities.

Failure Rating (terms from Matrix 2)
➢ **Low**
➢ **Moderate**
➢ **High**
➢ **Extreme**

[2] Definitions from page 133 of the *Tree Risk Assessment Qualification* Workbook or page 183 or the *Tree Risk Assessment Manual*.

Matrix 1. Likelihood of failure

Likelihood of failure	Likelihood of Impacting Target			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk Rating matrix

Likelihood of failure & impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Unless stated otherwise the risk assessment assumes the risk offered over the next year

Minimum RPA – Root Protection Area: Minimum distance in metres of position of protective fencing in line with section 4.6 BS5837:2012. In order to avoid damage to the roots or rooting environment of retained trees, an area equivalent to a circle with a radius 12 times the stem diameter.

Root Protection Area (Radius) (M) – RPA given in metres from the centre of the stem.

Root Protection Area (Area) (M^2) – The ideal total area for the RPA given in metres squared.

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TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	No. Stems	Observations / Comments	Recommendations	Risk Assessment	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m^2)
							North	South	East	West										
625	Balsam Poplar	M	18	3			4	2	5	2	Good	20 to 40	C2	380	1	Single stem with a moderate lean Self corrected. Growing as part of / edge of a group. Small deadwood can be seen in the outer canopy.		Low	4.56	65.3
626	Oak Copse x 16	M	16	2			6	6	6	6	Good	20 to 40	B2	upto 550	1	Growing roughly in a square within the plantation T630. Well established Bluebells suggests limited disturbance to date. Small diameter deadwood within the canopy. A very attractive group. Good habitat potential.		Low	6.6	136.8
627	Ash	V	15	2			7	7	7	6	Poor	10 to 20	A2	700	2	Growing on the eastern edge of the plantation. Decay within the main stem due to failure collapse of the main leader. Significant decay visible in the canopy due to Shaggy Polypore (Inonotus hispidus). Large deadwood can be seen in the outer canopy. Hung up branches can be seen within the canopy. Good habitat potential.	Undertake veteran management to limit the size of the canopy and encourage the continuation of the tree. Consider 'Halo' felling of nearby trees to improve light levels.	Low	11.88	443.4
627 a	Ash	M	16	2			5.5	5.5	5.5	5.5	Fair	10 to 20	B2	500, 200	2	Growing on the eastern edge of the plantation. Small deadwood can be seen in the outer canopy. An attractive spreading form.		Low	6.47	131.5
628	Oak	O M	16	4			3	5	5	5	Poor	20 to 40	A2	650	1	Large deadwood can be seen in the outer canopy. Branch failures are visible within the canopy. Dense compact bud on the end of the tips. High biodiversity worth.	Consider rootzone improvement	Low	7.8	191.1

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TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	No. Stems	Observations / Comments	Recommendations	Risk Assessment	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m^2)
							North	South	East	West										
629	Oak	M	18	4			8.5	9	8.5	8.5	Fair	20 to 40	B2	700	1	Small diameter deadwood within the canopy which overhangs the highway.	Crown Clean.	Moderate	8.4	221.7
630	Mixed Plantation	M	13	2			3	3	3	3	Good	40 or more	B2	upto 400	1	Black Pine, Ash, Sycamore Oak with Blackthorn understorey. A plantation established on ridge & furrow. Established in single blocks now requiring management.	Thin out the group to regular centres to improve local growing conditions and internal light levels.	Low	4.8	72.4
631	Group x Goat Willow 8	E M	7	0.5			3.5	3.5	3.5	3.5	Fair	10 to 20	C2	120	4	Multiple stemmed close to ground level. Located between plantation & highway.		Low	2.88	26.1
632	Goat Willow x 2 & Hawthorn	S M	4	0			2.5	2.5	2.5	2.5	Fair	10 to 20	C3	150	3	Growing as part of a group. Developing through concrete Retention not thought to be sustainable.		Low	3.12	30.6
633	Goat Willow	E M	7	0.5			3.5	3.5	3.5	3.5	Fair	10 to 20	C2	120	4	Multiple stemmed close to ground level. Located between plantation & highway.		Low	2.88	26.1
634	Goat Willow Group & Elder	E M	7	0.5			3.5	3.5	3.5	3.5	Fair	10 to 20	C2	120	5	Multiple stemmed close to ground level.		Low	3.22	32.6
634 a	Hawthorn	Y	5	0			3	3	3	3	Fair	20 to 40	C3	200	1	Growing as part of a group. Developing through concrete. Retention not thought to be sustainable.			2.4	18.1
635	Oak	V	20	2			8	8	8	8	Good	20 to 40	A2	700?	1	Naturally retrenching into secondary lower canopy. Root damage suspected.		Low	8.4	221.7
636	Informal screen	M	10	2			6	6	6	6	Fair	20 to 40	C2	650?	1	Informal screen.		Low	7.8	191.1
637	Informal screen	M	10	2			6	6	6	6	Fair	20 to 40	C2	700?	1	Informal screen.		Low	8.4	221.7
638	Ash	M	18	2			8	8	8	8	Fair	20 to 40	C2	650	1	Growing in hedge, root damage suspected. Large deadwood visible.		Low	7.8	191.1

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TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	No. Stems	Observations / Comments	Recommendations	Risk Assessment	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m^2)
							North	South	East	West										
639	Oak	V	20	4.5			7	7	7	7	Poor	40 or more	A2	900	1	Growing within hedge. Excavations are visible within the rootzone. Natural retrenchment is occurring.	Consider rootzone protection and improvement.	Low	10.8	366.4
640	Oak	M	12	4			6	6	8	8	Good	40 or more	B2	400	1	Growing within hedge. Excavations are visible within the rootzone. Natural retrenchment. Small deadwood can be seen in the outer canopy.		Low	4.8	72.4
641	Oak	O M	18	6			7	7	7	7	Fair	10 to 20	A2	790	1	Single stem with trunk shooting Growing close to road. Damage to main roots can be seen. Large deadwood can be seen in the outer canopy. Wounding from branch failures can be seen within the canopy.	Consider further assessment of the lower stem and buttress. Undertake veteran management to limit the size of the canopy and encourage the continuation of the tree.	Low	9.48	282.3
642	Oak	V	18	5			10.5	10.5	10.5	10.5	Fair	20 to 40	A2	1050	1	Growing within hedge. Impact damage can be seen on the buttress, with decay. Eiffel Tower (Inonotus dryadeus) suspected possible on base to 25% circumfrence. Significant epicormic shoots are visible throughout the canopy.	Undertake veteran management to limit the size of the canopy and encourage the continuation of the tree.	Low	12.6	498.8
643	Oak	M	16	2			7	7	7	7	Fair	20 to 40	B1	850	1	Growing within hedge. Excavations are visible within the rootzone. Natural retrenchment is occurring.	Consider rootzone protection and improvement.	Low	10.2	326.9
644	Crab Apple	O M	6	2			2	3	5	2	Poor	10 to 20	B2	350	1	Single stem with a slight lean and trunk suckers open formed multiple stems below canopy. Significant asymmetry to the canopy. Canopy is swamped by neighbouring trees. Inonotus hispidus – Shaggy Polypore on stem indicates decay. Good habitat potential.		Low	4.2	55.4

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TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	No. Stems	Observations / Comments	Recommendations	Risk Assessment	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m^2)
							North	South	East	West										
645	Ash	O M	8	3			3	3	3	3	Fair	10 or less	U	220	2	Biforked close to ground level. Growing within hedge. Excavations are visible within the rootzone. Shaggy Polypore - significant quantities of deadwood can be seen within the canopy. A poorly formed tree with little potential.		Low	3.73	43.7
646	Ash	O M	8	3			3	3	3	3	Fair	10 or less	U	220	2	Growing within hedge. Excavations are visible within the rootzone. Ivy developing throughout the canopy Shaggy Polypore suspected significant quantities of deadwood can be seen within the canopy. A poorly formed tree with little potential.		Low	3.73	43.7
647	Ash	O M	12	4			5	5	5	5	Fair	10 to 20	C1	600?	1	Ivy developing throughout the canopy Shaggy Polypore suspected significant quantities of deadwood can be seen within the canopy. A poorly formed tree with little potential.		Low	7.2	162.9
648	Ash	O M	12	4			5	5	5	5	Fair	10 to 20	C1	400?	1	Ivy developing throughout the canopy Excavations are visible within the rootzone. Shaggy Polypore suspected significant quantities of deadwood can be seen within the canopy. A poorly formed tree with little potential.		Low	4.8	72.4
649	Oak	E M	12	2			5	5	5	5	Good	20 to 40	B1	640	1	Growing within hedge. High lifting has affected the centre of gravity.		Low	7.68	185.3
650	Ash	S M	5	2			3	3	3	3	Fair	20 to 40	C3	110	1	Excavations are visible within the rootzone.		Low	1.32	5.5
651	Ash	O M	12	4			5	5	5	5	Fair	10 to 20	C1	400?	1	Ivy developing throughout the canopy Excavations are visible within the rootzone. Shaggy Polypore suspected significant quantities of deadwood can be seen within the canopy. A poorly formed tree with little potential.	Consider veteran management to limit the size of the canopy and encourage the continuation of the tree.	Low	4.8	72.4
652	Elm	O M	9	2			3	3	3	3	Dead	10 or less	U	350	1			Low	4.2	55.4

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							North	South	East	West										
653	Ash	O M	10	3			6	6	6	6	Poor	10 or less	U	600	1	Growing within hedge. Significant decay visible on the stem. Ivy has started to develop on the main stem. Shaggy Polypore - Inonotus hispidus within canopy. Large deadwood can be seen in the outer canopy. Hung up branches can be seen within the canopy.	Consider veteran management to limit the size of the canopy and encourage the continuation of the tree.	Low	7.2	162.9
654	Oak	M	9	4			7	7	7	7	Good	20 to 40	B2	500	1	Single stem with trunk shooting Small diameter deadwood within the canopy. An attractive spreading form. would benefit from the removal of 655.		Low	6	113.1
655	Ash	M	11	2			4	8	10	0	Fair	10 to 20	C3	240	1	Single stem with a significant lean. Significant asymmetry to the canopy. Significant epicormic shoots are visible throughout the canopy.		Low	2.88	26.1
656	Lombardy Poplar	S M	14	2			2	2	2	2	Good	40 or more	B2	350	1	Typical upright form.		Low	4.2	55.4
657	Oak	M	11	2			7	7	7	7	Good	40 or more	B2	600	1	Growing within hedge. Wounding from branch failures can be seen within the canopy. Significant epicormic shoots are visible throughout the canopy. Normal species characteristics.		Low	7.2	162.9
658	Oak	M	7	2			6	4	4	6	Fair	40 or more	B2	400	1	Canopy is suppressed by competing neighbouring trees. Large deadwood can be seen in the outer canopy. Good habitat potential.		Low	4.8	72.4
659	Ash	O M	16	2			7	7	5	6	Poor	10 or less	U	800	1	Damage to main roots can be seen. Cavity within the buttress can be seen. Small diameter deadwood within the canopy. Wounding from branch failures can be seen within the canopy. High seed retention visible within the canopy. A poorly developing tree.	Remove the canopy and retain the stem as habitat. Consider veteran management to retain the stem and provide habitat.	Low	9.6	289.5

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							North	South	East	West										
660	Oak	V	8	2			6	6	6	6	Good	40 or more	A2	850	1	Significant adaptive growth suggests internal decay. Large cavity visible within the main stem. An attractive spreading form.		Low	10.2	326.9
661	Ash	O M	16	2			7	7	5	6	Poor	10 or less	U	800	1	Damage to main roots can be seen. Cavity within the buttress can be seen. Small diameter deadwood within the canopy. Wounding from branch failures can be seen within the canopy. Cavities in the main branches within the canopy. High seed retention visible within the canopy. A poorly developing tree.	Remove the canopy and retain the stem as habitat. Consider veteran management to retain the stem and provide habitat.	Low	9.6	289.5
662	Oak & Poplar Shelterbelt	M	12	2			4	4	4	4	Fair	20 to 40	B2	upto 400	1	A densely planted screen resulting in mutual suppression.	Thin out to regular centres to enable improved growth.	Low	4.8	72.4
663	Hawthorn	M	6	2			4	4	4	4	Fair	10 to 20	C2	350	1	Single stem with a severe lean self-corrected. Growing within hedge. Small deadwood can be seen in the outer canopy.		Low	4.2	55.4
664	Oak	M	10	5			8	8	8	8	Fair	20 to 40	B2	700	1	Single stem with trunk shooting. Growing within field. Excavations are visible within the rootzone. Significant quantities of deadwood can be seen within the canopy. Significant epicormic shoots are visible throughout the canopy.		Low	8.4	221.7
665	Ash 2x & Oak x2	S M	8	2			3	3	3	3	Fair	40 or more	B2	400	1	Growing on a bank. Small deadwood can be seen in the outer canopy.		Low	4.8	72.4
666	Oak	O M / V	10	4.5			8	8	8	8	Fair	40 or more	A2	980	1	Growing next to hard landscaping with materials stacked below. High lifted canopy has left wounding on the stem. Small diameter deadwood within the canopy. An attractive tree which has good potential.	Limit the tipping of debris and consider rootzone improvement. Consider veteran management to retain the stem and provide habitat.	Low	11.76	434.5

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							North	South	East	West										
667	Oak	V	11	2.5			6	7	6	6	Good	40 or more	A2	750	1	Single stem with trunk shooting.		Low	9	254.5
668	Ash	O M	11	4			4.5	4.5	4.5	4.5	Poor	10 or less	U	490	1	Single stem with trunk shooting. Growing within hedge. Significant structural defect is visible. Large hollow visible in the main stem. Branches are predisposed to failure. A poorly developing tree.	Remove the canopy and retain the stem as habitat. Retain as a 4m pole.	Low	5.88	108.6
669	Oak	O M	22	2			9	9	9	9	Good	40 or more	A2	650	1	Single stem. Growing within hedge. Small deadwood can be seen in the outer canopy. Significant epicormic shoots are visible throughout the canopy. High end loading can be seen on branches.	Retrench the canopy in stages to create a smaller canopy.	Low	7.8	191.1
670	Oak	E M	8	4			4	4	4	4	Good	40 or more	B1	300	1	An attractive rounded form.		Low	3.6	40.7
671	Oak	E M	8	4			4	4	4	4	Good	40 or more	B1	360	1	An attractive rounded form.		Low	4.32	58.6
672	Oak	E M	8	4			4	4	4	4	Good	40 or more	B1	360	1	An attractive rounded form.		Low	4.32	58.6
673	Sycamore	E M	9	4			4	4	4	4	Declining	10 to 20	U	390	1	Single stem with a moderate lean with basal & trunk shooting. Impact wounding visible on the stem. Wire included in stem Branch failures are visible within the canopy. A poorly developing tree.	Remove the canopy and retain the stem as habitat. Retain as a 4m pole.	Low	4.68	68.8
674	Sycamore	E M	11	4			4.5	4.5	4.5	4.5	Declining	10 to 20	U	400	1	Single stem with a moderate lean with basal & trunk shooting. Impact wounding visible on the stem. Wire included in stem Branch failures are visible within the canopy. A poorly developing tree.	Remove the canopy and retain the stem as habitat. Retain as a 4m pole.	Low	4.8	72.4

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							North	South	East	West										
675	Crack Willow	M	10	5			6	6	6	6	Fair	10 to 20	C3	400	1	Single stem with a marked lean with basal shoots. Decay within the buttress can be seen. from previously removed leaders Significant quantities of deadwood can be seen within the canopy. Retention not thought to be sustainable.		Low	4.8	72.4
676	Crack Willow	M	10	5			6	6	6	6	Fair	10 to 20	C3	400	1	Single stem with a marked lean with basal shoots. Decay within the buttress can be seen from previously removed leaders Significant quantities of deadwood can be seen within the canopy. Retention not thought to be sustainable.		Low	4.8	72.4
677	Crack Willow	M	8	2			4	4	11	0	Fair	10 or less	U	450	1	Single stem with a severe lean. Rootplate heaved recently and expected to be loose.		Low	5.4	91.6
677 a	Oak x2	M	15	2			5	5	5	5	Fair	10 to 20	C2	320	1	Growing within hedge. Large deadwood can be seen in the outer canopy. Good habitat potential.		Low	3.84	46.3
678	Oak	M	15	2			6	6	7	3	Poor	20 to 40	C2	600	1	Growing within hedge. Wire included in stem. Significant quantities of deadwood can be seen within the canopy. Large deadwood can be seen in the outer canopy. Significant asymmetry to the canopy. Good habitat potential.	Formative pruning required to improve main branch architecture.	Low	7.2	162.9
679	Silver Birch	O M	12	6			6	6	6	6	Fair	10 to 20	C2	440	1	Marked lean self-corrected canopy. Small cavity visible within the main stem. Small deadwood can be seen in the outer canopy.		Low	5.28	87.6
680	Oak	M	18	2			10.5	10.5	10.5	10.5	Good	40 or more	A2	800	1	Single stem. Wire included in stem. Small deadwood can be seen in the outer canopy.		Low	9.6	289.5

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							North	South	East	West										
681	Oak	M	13	2			5	5	6	3	Poor	20 to 40	C2	600	1	Growing within hedge. Wire included in stem. Significant quantities of deadwood can be seen within the canopy. Cavity in the lower stem. Large deadwood can be seen in the outer canopy. Significant asymmetry to the canopy. Good habitat potential.	Formative pruning required to improve main branch architecture.	Low	7.2	162.9
682	Ash	M	15	4			6.5	6.5	6.5	6.5	Fair	10 to 20	C2	500	1	Single stem with a slight lean. Inonotus hispidus – Shaggy Polypore suspected. High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy. High seed retention visible within the canopy.		Low	6	113.1
683	Oak	M	13	2			5	5	6	3	Poor	20 to 40	C2	550	1	Growing within hedge. Wire included in stem. Significant quantities of deadwood can be seen within the canopy. Cavity in the lower stem. Good habitat potential.	Formative pruning required to improve main branch architecture.	Low	6.6	136.8
684	Ash	M	15	4			7	7	8	4	Good	10 or less	C3	520	1	High end loading can be seen on branches. Crossing and rubbing branches visible throughout the canopy. Inonotus hispidus – Shaggy Polypore noted. Significant quantities of deadwood can be seen within the canopy. Good habitat potential.	Retrench the canopy in stages to create a smaller canopy. Formative pruning required to improve main branch architecture.	Low	6.24	122.3
685	Ash	M	14	4			4	4	2	7	Poor	10 to 20	C3	480	1	High end loading can be seen on branches. Crossing and rubbing branches visible throughout the canopy. Inonotus hispidus – Shaggy Polypore Significant quantities of deadwood can be seen within the canopy. Good habitat potential.	Retrench the canopy in stages to create a smaller canopy. Formative pruning required improve main branch architecture.	Low	5.76	104.2

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							North	South	East	West										
686	Oak	M	16	4.5			8	8	8	8	Fair	20 to 40	B2	500	1	High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy.		Low	6	113.1
687	Oak	M	13	4.5			5	5	5	5	Poor	10 to 20	C3	480	1	Significant bend within the main stem. Large deadwood can be seen in the outer canopy. Hung up branches can be seen within the canopy. Significant quantities of deadwood can be seen within the canopy.		Low	5.76	104.2
688	Oak	M	15	4			8	8	8	8	Good	20 to 40	B2	600	1	High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy.		Low	7.2	162.9
689	Oak	M	14	4			7	7	7	7	Fair	20 to 40	B2	500	1	High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy.		Low	6	113.1
690	Oak	O M	12	3.5			7	7	7	7	Fair	10 to 20	B2	620	1	Single stem with a slight lean. Small cavity visible within the main stem. Branch failures are visible within the canopy. Cavities are visible within the main branches. A poorly developing tree.	Formative pruning required to improve main branch architecture.	Low	7.44	173.9
691	Hawthorn	S M	6.5	0			4	4	4	4	Good	40 or more	B2	260, 290	2	Small section of hedge has been allowed to develop. Single stem with a slight lean. Small cavity visible within the main stem.		Low	4.67	68.5
692	Oak	O M	12	3.5			7	7	7	7	Fair	10 to 20	B2	850	1	Single stem with a slight lean. Small cavity visible within the main stem. Branch failures are visible within the canopy. Cavities are visible within the main branches. A poorly developing tree.		Low	10.2	326.9

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							North	South	East	West										
693	Oak	O M	12	3.5			7	7	7	7	Fair	10 to 20	B2	600	1	Single stem with a slight lean. Small cavity visible within the main stem. Branch failures are visible within the canopy. Cavities are visible within the main branches. A poorly developing tree.		Low	7.2	162.9
694	Ash	O M	11	4			5	5	5	5	Poor	10 to 20	C3	430	1	Single stem with trunk shooting. Growing within hedge. Excavations are visible within the rootzone. Inonotus hispidus – Shaggy Polypore suspected. Significant quantities of deadwood can be seen within the canopy. High seed retention visible within the canopy.		Low	5.16	83.6
695	Oak	M	15	2			7	7	7	7	Good	40 or more	A2	600	1	Growing within hedge. Attractive rounded from. Excavations are visible within the rootzone.		Low	7.2	162.9
696	Oak	M	15	2			7	7	7	7	Good	40 or more	A2	800	1	Damage to main roots can be seen. Wounding from branch failures can be seen within the canopy.		Low	9.6	289.5
697	Oak	M	15	2			7	7	7	7	Good	40 or more	A2	550	1	Growing within hedge. Trunk suckers suggest possible physiological stress. Attractive rounded form. Excavations are visible within the rootzone.		Low	6.6	136.8
698	Oak	M	16	4			8	8	4	8	Good	40 or more	A2	680	1	Growing within hedge. Excavations are visible within the rootzone.		Low	8.16	209.2
699	Oak	M	14	4			8	8	8	4	Good	40 or more	A2	650	1	Growing within hedge. Attractive rounded form. Trunk suckers visible on the main stem. Excavations are visible within the rootzone.		Low	7.8	191.1
700	Oak	V	12	3.5			6	6	6	6	Fair	40 or more	A2	1600	1	Single stem with trunk shooting. Growing within hedge. Significant burring on main stem possible internal decay. Small deadwood can be seen in the outer canopy.	Consider veteran management to retain the stem and provide habitat.	Low	15	706.9

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							North	South	East	West										
701	Oak	M	10	4			7.5	7.5	7.5	7.5	Good	40 or more	B2	590	1	Single stem with trunk shooting.		Low	7.08	157.5
702	Oak	M	15	4			7.5	7.5	7.5	7.5	Good	20 to 40	A2	650	1	Growing within hedge. Large cavity visible within the main stem. **Active Bee Colony at 2.5m southern face of stem.** High lifting has left serious wounding on the stem. A reasonable condition tree.	Further inspection of the noted faults required.	Low	7.8	191.1
703	Oak	M	15	2			7.5	8	9	4	Fair	20 to 40	B2	600	1	Single stem with a moderate lean. High lifting has left serious wounding on the stem. Canopy is swamped by neighbouring trees.		Low	7.2	162.9
704	Oak	V	18	2			7	7	7	7	Fair	20 to 40	A2	600?	1	**# Assessed from distance #** Single stem with a moderate lean. High lifting has left serious wounding on the stem. Large deadwood within the canopy Close to highway.		High	7.2	162.9
705	Shelterbelt	M	18	2			9.5	9.5	9.5	9.5	Fair	40 or more	B2	upto 650	2	Mixed Sycamore Beech & Oak. Either side of ditch with over grown hedge. Small deadwood can be seen in the outer canopy. Occasional poor condition tree.	Management of the plantation should be considered to improve local growing conditions.	Low	7.8	191.1
706	Shelterbelt	M	18	2			8	8	8	8	Fair	40 or more	B2	upto 650	2	Mixed Sycamore Beech & Oak with the odd Birch and Sweet Chestnut. Single stem either side of ditch. Recently coppiced trees and developing new plating to east. Small deadwood can be seen in the outer canopy. Occasional poor condition tree.	Management of the plantation should be considered to improve local growing conditions.	Low	7.8	191.1
707	Shelterbelt	M	15	2			9	9	9	9	Fair	20 to 40	B2	upto 700	1	Mixed Sycamore Beech & Oak with the odd Birch and Sweet Chestnut. Single stem either side of ditch. Recently coppiced trees and developing new plating to east. Small deadwood can be seen in the outer canopy. Occasional poor condition tree.	Management of the plantation should be considered to improve local growing conditions.	Low	8.4	221.7

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							North	South	East	West										
708	Plantation	M	22	2			9	9	9	9	Fair	20 to 40	B2	600	1	Mixed Sycamore Beech & Oak with the odd Silver Birch with an elder understorey. Small deadwood can be seen in the outer canopy. Occasional poor condition tree.	Management of the plantation should be considered to improve local growing conditions.	Low	7.2	162.9
709	Oak	M	18	3			10.5	10.5	10.5	10.5	Good	40 or more	A2	800	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.	Undertake rootzone improvement.	Low	9.6	289.5
710	Oak	M	15	2			7.5	7.5	7.5	7.5	Good	40 or more	A2	550	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.	Undertake rootzone improvement.	Low	6.6	136.8
711	Oak	M	18	3			10.5	10.5	10.5	10.5	Good	40 or more	A2	800	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy. Significant bottle-butt suggests internal decay.	Undertake rootzone improvement.	Low	9.6	289.5
712	Oak	O M	14	2			5	5	5	5	Poor	10 to 20	C1	510	1	Single stem with trunk shooting. Compaction by livestock within rootzone. Impact damage can be seen on the buttress. Old fruiting bodies of Chicken of the Woods (Laetiporus sulphureus) suspected decay in the stem at 4m, lower secondary canopy. Significant quantities of deadwood can be seen within the canopy. Small bud size indicates low vitality.	Undertake rootzone improvement.	Low	6.12	117.7
713	Oak	M	14	4			6	6	6	6	Good	40 or more	A2	800	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy. Significant bottle-butt suggests internal decay.	Undertake rootzone improvement.	Low	9.6	289.5
714	Oak	O M	20	6			6	7.5	6.5	6.5	Poor	10 to 20	B2	620	1	Excavations are visible within the rootzone. Significant quantities of deadwood can be seen within the canopy. Small bud size indicates low vitality. A poorly developing tree. Natural retrenchment occurring due to root disturbance.	Undertake rootzone improvement.	Low	7.44	173.9

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							North	South	East	West										
715	Oak	M	16	3			6	6	6	6	Good	40 or more	A1	530	1	Growing within hedge. Small deadwood can be seen in the outer canopy. An attractive upright form.		Low	6.36	127.1
716	Group x Wild Cherry 3	O M	9	4			7	7	7	7	Fair	10 to 20	C2	360	3	Single stem open formed multiple stems below canopy. Growing within hedge. Significant decay visible on the stem. Good habitat potential. An attractive spreading group.	Retrench the canopy in stages to create a smaller canopy.	Low	7.49	176.2
717	Oak	M	18	3			10.5	10.5	10.5	10.5	Good	40 or more	A2	720	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.	Undertake rootzone improvement.	Low	8.64	234.5
718	Oak	M	18	3			10.5	10.5	10.5	10.5	Good	40 or more	A2	800	1	Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.	Undertake rootzone improvement.	Low	9.6	289.5
719	Oak	E M	11	1.5			5	5	5	5	Good	40 or more	A2	500	1	Compaction by livestock within rootzone. Minor epicormic shoots are visible within the canopy.	Consider rootzone improvement.	Low	6	113.1
720	Oak	M	18	2			8	8	8	8	Good	40 or more	A2	640	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.		Low	7.68	185.3
721	Oak	M	18	2			8	8	8	8	Good	40 or more	A2	710	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.		Low	8.52	228
722	Oak	M	18	2			8	8	8	8	Good	40 or more	A2	610	1	Growing within field. Compaction by livestock within rootzone. Small deadwood can be seen in the outer canopy.		Low	7.32	168.3
723	Mixed Informal Hedge	M	11	0			4	4	4	4	Fair	20 to 40	C2	upto 450	1	An abandoned hedge of Ash, Oak and Hawthorn. Growing on a bank.		Low	5.4	91.6
724	Oak	M	18	4.5			5	7	8	3	Good	10 to 20	B2	580	1	Single stem with a moderate lean. Growing on a bank. Medium cavity visible within the main stem. Canopy is swamped by neighbouring trees. Significant quantities of deadwood can be seen within the canopy.	Further inspection of the noted faults required.	Low	6.96	152.2

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TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	No. Stems	Observations / Comments	Recommendations	Risk Assessment	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m^2)
							North	South	East	West										
725	Oak	O M	18	6			9	9	9	9	Poor	10 to 20	C2	710	1	Single stem. Growing within hedge. Compaction by vehicles within in rootzone. Excavations are visible within the rootzone. Large deadwood can be seen in the outer canopy. Small bud size indicate low vitality.		Low	8.52	228
726	Ash x 3 & Oak	O M	12	2			7.5	7.5	7.5	7.5	Poor	10 to 20	C2	upto 600	1	Growing close to water. Large hollow visible in the main stem. Fruiting bodies of Shaggy Polypore (Inonotus hispidus) visible on the southern-most tree.		Low	7.2	162.9
727	Oak	M	18	2			9	9	9	9	Good	40 or more	A2	620	1	An attract tree with good potential.		Low	7.2	162.9
728	Oak	O M	20	2			9.5	9.5	9.5	9.5	Fair	40 or more	A2	950	1	Small deadwood can be seen in the outer canopy.		Low	11.4	408.3
729	Oak	E M	9	4			5	5	5	5	Good	40 or more	A2	380	1	Single stem with a slight lean with trunk shooting. High lifted canopy has left wounding on the stem.		Low	4.56	65.3
730	Oak	V	22	4			9	12	9	9	Good	10 or less	A2	900	1	Single stem biforked below the canopy with open unions. Growing within hedge. Failed included union with signs of progression down stem. Significant decay visible on the stem. High-end loading can be seen on branches. Crossing and rubbing branches visible throughout the canopy. Significant quantities of deadwood can be seen within the canopy. An attractive spreading form.	Consider bracing the feature. Retrench the canopy in stages to create a smaller canopy. Consider veteranisation to retain the stem and provide habitat. ***significant risk if occupancy increases.**	Low	10.8	366.4
731	Ash	O M	16	4.5			8	8	7	7	Poor	10 or less	C3	770	1	Growing within hedge. Inonotus hispidus – Shaggy Polypore suspected. Large diameter deadwood within the canopy. Wounding from branch failures can be seen within the canopy. A poorly developing tree.		Low	9.24	268.2

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							North	South	East	West										
732	Oak	M	18	2			9	9	9	9	Good	40 or more	A2	750	1	Deadwood in addition to crossing and rubbing branches possible decay in base of stem.	Consider further assessment.	Low	9	254.5
733	Oak	V	11	0.5			4	4	4	4	Good	40 or more	A2	620	1	Growing on a bank. Rootplate has heaved and re-established. Canopy has been reduced (topped) & redeveloped. Multiple attachments with included unions are visible throughout. Decay suspected at 5m.	Initiate and continue periodic veteran management / retrenchment to limit branch failures.	Low	7.44	173.9
734	Oak	M	14	2			8	4	6	8	Fair	20 to 40	B2	510	1	Developing included union visible. Canopy has been reduced (topped) & redeveloped the south eastern main leader has died. Multiple attachments with included unions are visible throughout. Large deadwood can be seen in the outer canopy. Good habitat potential.	Initiate and continue periodic veteran management / retrenchment to limit branch failures.	Low	6.12	117.7
735	Ash	E M	10	3			3	3	3	3	Poor	10 to 20	C2	210	1	Single stem with a slight lean. Growing within hedge. Impact wounding visible on the stem. Significant quantities of deadwood can be seen within the canopy. Small bud size indicates low vitality.		Low	2.52	20
736	Oak	E M	14	4			7	7	7	7	Good	40 or more	B2	300	3	Single stem triforked below the canopy with open unions. Growing within hedge. Small deadwood can be seen in the outer canopy. An attractive spreading form.		Low	6.24	122.3
737	Oak	S M	11	4			4	2	4	4	Fair	10 to 20	C2	290, 100	2	Canopy is swamped by neighbouring trees. Significant quantities of deadwood can be seen within the canopy.	Remove to benefit 736.	Low	3.68	42.5
738	Balsam Poplar Group x 25 within hedge	S M	13	4			3	3	3	3	Good	10 to 20	C3	180	1	A poorly developing group that will overtake hedge - short safe life due to high potential for canker. Elongated, poorly developing group of limited potential.	Remove and replace with a more appropriate species.	Low	2.16	14.7
739	Oak	E M	15	2			6	6	6	6	Good	40 or more	A1	380	1	Small deadwood can be seen in the outer canopy.		Low	4.56	65.3

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							North	South	East	West										
740	Balsam Poplar Group x 12 within hedge	S M	13	4			3	3	3	3	Good	10 to 20	C3	160	1	A poorly developing group that will overtake hedge - short safe life due to high potential for canker. Elongated, poorly developing group of limited potential.	Remove and replace with a more appropriate species.	Low	1.92	11.6
741	Oak	M	18	4			8	9	8	7	Good	40 or more	A2	650	1	Small deadwood can be seen in the outer canopy. Wounding from branch failures can be seen within the canopy. An attractive spreading form.		Low	7.8	191.1
742	Oak	V	20	2			8	13	13	4	Good	40 or more	A2	950, 1000	2	Possibly an old boundary marker ? Biforked close to ground level. Small deadwood can be seen in the outer canopy. Wounding from branch failures can be seen within the canopy.	Initiate and continue periodic veteran management.	Low	15	706.9
743	Oak	M	15	4			8	8	8	8	Fair	40 or more	A2	610	1	Small deadwood can be seen in the outer canopy. Crossing and rubbing branches visible throughout the canopy.		Low	7.32	168.3
744	Oak	M	11	2			6	6	6	6	Fair	20 to 40	B2	610	1	Deadwood can be seen in the outer canopy. Ivy has developed into the canopy. Crossing and rubbing branches visible throughout the canopy.	Control the Ivy.	Low	7.32	168.3
745	Oak	E M	9	2			5	5	5	5	Fair	40 or more	B2	400	1	Single stem with trunk shooting. Growing within hedge. Excavations are visible within the rootzone. Small deadwood can be seen in the outer canopy. Dense compact canopy.		Low	4.8	72.4
746	Oak	Y	5	2			4	4	4	4	Good	40 or more	B2	210	1	Single stem with trunk shooting. Growing within hedge. Excavations are visible within the rootzone.		Low	2.52	20
747	Oak	Y	5	2			4	4	4	4	Good	40 or more	B2	250	1	Single stem with trunk shooting. Growing within hedge. Excavations are visible within the rootzone.		Low	3	28.3

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							North	South	East	West										
748	Oak	M	11	2			6	6	6	6	Fair	20 to 40	B2	610	1	Deadwood can be seen in the outer canopy. Ivy has developed into the canopy. Crossing and rubbing branches visible throughout the canopy.		Low	7.32	168.3
749	Ash	V	15	2			9.5	8	6	8	Poor	10 to 20	A2	550 + 160	8	Former hedge layer. Single stem with basal shoots. Growing on a bank. Growing within hedge. Large cavity visible within the main stem. Fruiting bodies of Shaggy Polypore. Large deadwood can be seen in the outer canopy. Branches are predisposed to failure. Good habitat potential.	Undertake veteranisation to retain the stem and provide habitat.	Low	15	706.9
750	Ash	V	15	2			5	5	5	5	Poor	10 to 20	A2	400	8	Former hedge layer. Single stem with basal shoots. Growing on a bank. Growing within hedge. Large cavity visible within the main stem. Fruiting bodies of Shaggy Polypore. Large deadwood can be seen in the outer canopy. Good habitat potential.	Consider veteranisation to retain the stem and provide habitat.	Low	13.57	578.5
751	Hawthorn	O M	6	2			2.5	2.5	2.5	2.5	Poor	10 to 20	C3	280	1	Single stem with a marked lean. Growing within hedge. Growing on a bank. Significant quantities of deadwood can be seen within the canopy. This tree is likely to prove difficult to manage.	Consider reducing into hedge line.	Low	3.36	35.5
752	Oak	M	18	4	3	N	8	8	8	8	Good	40 or more	A2	620	1	Single stem with trunk shooting. Small deadwood can be seen in the outer canopy. Good overall vitality.		Low	7.44	173.9
753	Oak	M	18	4	3	N	10	10	10	12	Good	40 or more	A2	630	1	Single stem with trunk shooting. Small deadwood can be seen in the outer canopy. Good overall vitality.		Low	7.56	179.6
754	Oak	M	18	4	3	N	10	10	10	12	Good	40 or more	A2	630	1	Impact damage due to ditch works. Small deadwood can be seen in the outer canopy. Good overall vitality.		Low	7.56	179.6

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							North	South	East	West										
755	Plantation	M	20				8	8	8	8	Good	40 or more	A2	Upto 600	1	Mixed Oak, Sycamore Beech & Silver Birch with Holly & elder understorey. Single stem either side of ditch. Recently coppiced trees and developing new planting to east. Occasional poor condition tree.	Management of the plantation should be considered to improve local growing conditions by thinning of the group.	Low	7.2	162.9
756	Oak	M	18	4.5			8	8	8	8	Good	20 to 40	B2	650	1	Growing within hedge. Growing on a bank. Damage to main roots can be seen. Large deadwood can be seen in the outer canopy. Wounding from branch failures can be seen within the canopy.		Low	7.8	191.1
757	Oak	M	10	2			3	6.5	3	6	Fair	20 to 40	A3	500	1	Single stem with a moderate lean. Large cavity visible within the main stem. Good habitat potential.	Consider veteran management to retain the stem and provide habitat.	Low	6	113.1
758	Crack Willow	V	16	3			11	11	11	11	Good	10 or less	A3	600	4	Multiple stemmed close to ground level. Growing within hedge. Significant decay visible on the stem. Northern stem fallen and re-rooted, Wounding from branch failures can be seen within the canopy. A poorly developing tree prone to failure.	Reduce the end loading of over developed branches by roughly 1/3 to a suitable point. Consider veteran management to retain the stem and provide habitat. ***High risk if occupancy is increased**	Low	14.4	651.4
759	Oak	V	11	4			5	5	5	5	Fair	40 or more	A2	990	1	Single stem with trunk shooting. Excavations are visible within the rootzone. Scar on western stem lightening / limb failure. Wounding from branch failures can be seen within the canopy. Large diameter deadwood within the canopy - previous stag heading. An attractive tree which has good potential.	Consider veteran management to retain the stem and provide habitat.	Low	11.88	443.4
760	Oak	M	11	2			1.5	8	6	6	Good	20 to 40	B2	500	1	Single stem with a slight lean biforked below the canopy open union. Decay in main union. Significant asymmetry to the canopy. Elongated branches visible within the canopy. High end loading can be seen on branches. Retention not thought to be sustainable.	Crown clean throughout the canopy.	Low	6	113.1

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							North	South	East	West										
761	Oak	O M	20	6			12	12	12	12	Fair	20 to 40	A2	820	1	Wounding from branch failures can be seen within the canopy. Small deadwood can be seen in the outer canopy. High end loading can be seen on branches. Small bud spacing suggest low vitality sparse open canopy. Good habitat potential.	Canopy remodelling to improve shape. Reduce the end loading of over developed branches by roughly 1/3 to a suitable point. Retrench the canopy in stages to create a smaller canopy.	Low	9.84	304.2
762	Ash	M	16	2			7.5	7.5	7.5	7.5	Poor	10 to 20	B2	600	1	Single stem with buttress shooting. Soil level has been raised over rootzone. Dumped material nearby. Significant epicormic shoots are visible throughout the canopy. Large deadwood can be seen in the outer canopy. High seed retention visible within the canopy. This tree is suffering decline.		Low	7.2	162.9
763	Ash Group x 3	E M	12	2			6.5	6.5	6.5	6.5	Fair	10 to 20	C2	360, 200	2	Single stem with buttress shooting. Soil level has been raised over rootzone. Dumped material nearby. Significant epicormic shoots are visible throughout the canopy. Large deadwood can be seen in the outer canopy. High seed retention visible within the canopy. This tree is suffering decline.		Low	4.94	76.7
764	Ash	M	18	2			6	3	3	8	Decli ning	5 or less	A2	700	1	Significant decay visible on the stem. Woodpecker hole suggests a large volume of decay in the stem. Main western branch collapsed. Branches are predisposed to failure. Retention not thought to be sustainable.	Remove the canopy and retain the stem as habitat. Retain as a 5m pole. ***Moderate risk if occupancy is increased**	Low	8.4	221.7
765	Oak	S M	9	2			3	3	3	3	Good	40 or more	B2	230	1	Small tree with good potential.		Low	2.76	23.9
766	Oak	M	18	2			8.5	8.5	8.5	8.5	Good	40 or more	B2	640	1	Small deadwood can be seen in the outer canopy. Wounding from branch failures can be seen within the canopy. High lifted canopy has left wounding on the stem. An attractive spreading form. Woodpecker hole 9m in eastern canopy.	Formative pruning required to improve main branch architecture. Assess the potential for damage in the main stem at 9m.	Low	7.68	185.3

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							North	South	East	West										
767	Oak	M	16	2			7.5	7.5	7.5	7.5	Good	40 or more	A2	650	1	Ivy has started to develop on the main stem. An attractive tree which has good potential.	Treat Ivy to prevent further growth.	Low	7.8	191.1
768	Oak	M	14	2			8	8	8	8	Fair	40 or more	A2	750	1	Ivy has started to develop on the main stem. An attractive tree which has good potential.	Treat Ivy to prevent further growth.	Low	9	254.5
769	Oak	M	16	2			7.5	7.5	7.5	7.5	Good	40 or more	A2	950	1	Ivy has started to develop on the main stem. An attractive tree which has good potential.	Treat Ivy to prevent further growth.	Low	11.4	408.3
770	Oak	M	14	2			8	8	8	8	Fair	40 or more	A2	800	1	Ivy has started to develop on the main stem. An attractive tree which has good potential.	Treat Ivy to prevent further growth.	Low	9.6	289.5
771	Oak	M	14	4			8	8	8	8	Good	40 or more	A2	700	1	Small deadwood can be seen in the outer canopy.		Low	8.4	221.7
772	Oak	M	14	4			6.5	6.5	6.5	6.5	Fair	20 to 40	B2	580	1	Wounding from branch failures can be seen within the canopy. An attractive overall form.		Low	6.96	152.2
773	Oak	M	16	2			8	8	8	14	Fair	40 or more	A2	1200	1	Small deadwood can be seen in the outer canopy.		Low	14.4	651.4
774	Oak	M	16	2			9	9	9	9	Fair	40 or more	A2	1200	1	Crossing and rubbing main leaders visible throughout the canopy. Hung up branches can be seen within the canopy.		Low	14.4	651.4
775	Ash	M	15	5			4	4	4	4	Poor	10 to 20	C2	120, 350	1	Single stem with a moderate lean with basal shoots. Growing within hedge. Growing close to water. Excavations are visible within the rootzone. Significant quantities of deadwood can be seen within the canopy. A poorly developing tree.		Low	4.44	61.9
776	Ash	O M	8	1			3	3	3	3	Fair	10 to 20	U	100	6	Single stem with basal shoots. Inonotus hispidus – Shaggy Polypore development from dead stump. Good habitat potential.		Low	2.94	27.2

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							North	South	East	West										
777	Oak	M	14	4			6.5	6.5	6.5	6.5	Fair	20 to 40	B2	680	1	Wounding from branch failures can be seen within the canopy. Ivy developing through the canopy. An attractive overall form.	Control the Ivy development.	Low	8.16	209.2
778	Ash	M	18	4			7	7	7	7	Fair	20 to 40	B2	610	1	Single stem biforked below the canopy open union. Canker visible on the main stem. Fruiting bodies of Shaggy Polypore are located on the main stem. Basal shooting suggest decline.		Low	7.32	168.3
779	Ash	E M	16	3			3	5	5	3	Good	40 or more	B2	300, 160	2	Single stem with basal shoots. Growing within hedge. An attractive overall form.	Remove the competing basal shoots.	Low	4.08	52.3
780	Ash	V	7	1			4	4	6	4	Fair	20 to 40	A2	800	1	Single stem with a slight lean with trunk shooting. Large cavity visible within the main stem. The canopy has been reduced (topped) or failed & redeveloped. Epicormic development has created new canopy. Good habitat potential.	Veteranisation required periodically to avoid branch failure.	Low	9.6	289.5
781	Elder	O M	4	0.5			2.5	2.5	2.5	2.5	Fair	10 to 20	C2	90	15	Multiple stemmed close to ground level. Included union with signs of progression down stem.		Low	4.19	55.2
782	Elder	O M	4	0.5			2.5	2.5	2.5	2.5	Fair	20 to 40	B2	90	4	Multiple stemmed close to ground level. Included union with signs of progression down stem.		Low	2.16	14.7
783	Hawthorn Group x 14	M	8	0			3	3	3	3	Good	20 to 40	B3	200	3	An established thicket around pond odd. Willow is beginning to establish within the group. Multiple stemmed close to ground level. Significant included union visible. Growing on a bank. Growing close to water.	Manage periodically to benefit biodiversity.	Low	4.15	54.1
784	Ash	S M	9	3			4	6	4	4	Fair	20 to 40	C2	170	5	Multiple stemmed close to ground level. Crossing and rubbing main leaders visible throughout the canopy. Significant quantities of deadwood can be seen within the canopy.	Formative pruning required to improve main branch architecture.	Low	4.56	65.3

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							North	South	East	West										
785	Ash	O M	9	3			5.5	5.5	5.5	5.5	Poor	10 to 20	A2	600	1	Growing within hedge. Cavity within the buttress can be seen close to ground level. **#Care Required** **Very active Wild Bee colony #** Large deadwood can be seen in the outer canopy. Significant epicormic shoots are visible throughout the canopy. Wounding from branch failures can be seen within the canopy. Good habitat potential.		Low	7.2	162.9
786	Oak	M	18	5			8	10	8	10	Fair	10 to 20	B2	790	1	Growing within hedge. Excavations are visible within the rootzone. Fruiting bodies of Chicken of the Woods. (Letiporus sulphurous) on floor. High lifted canopy has left wounding on the stem. Significant quantities of deadwood can be seen within the canopy. Small bud size indicate low vitality.	Consider rootzone improvement.	Low	9.48	282.3
787	Ash	S M	9	2			4	4	4.5	4	Fair	40 or more	B2	280	1	An attractive tree which has good potential.		Low	3.36	35.5
788	Ash	V	11	3			5	4	6	3	Good	40 or more	A2	620	1	Single stem with a slight lean with trunk shooting. Large cavity visible within the main stem. The canopy has been reduced (topped) or failed & redeveloped. Epicormic development has created new canopy. Good habitat potential.	Veteranisation required periodically to avoid branch failure.	Low	7.44	173.9
789	Oak	M	13	4.5			8	8	8	8	Good	40 or more	A2	550	1	Wounding from branch failures can be seen within the canopy. High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy.		Low	6.6	136.8

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							North	South	East	West										
790	Oak	M	16	2			9.5	9.5	9.5	9.5	Fair	40 or more	B2	750	1	Damage to main roots can be seen. Wounding from branch failures can be seen within the canopy. High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy.		Low	9	254.5
791	Ash	S M	8	3			4.5	4.5	4.5	4.5	Fair	20 to 40	B2	280	2	Biforked close to ground level. Growing within hedge. Developing included union visible.		Low	4.75	70.9
792	Ash	O M	16	4			8	8	8	8	Poor	10 to 20	C2	850	1	Growing within hedge. Ivy has developed and prevented inspection. Cavities are visible within the main branches. Cracks visible in the main branches. Large deadwood can be seen in the outer canopy. A poorly developing tree. Epicormic shooting is high loaded.	Retrench the canopy in stages to create a smaller canopy. Sever Ivy and remove Ivy to allow further inspection.	Low	10.2	326.9
793	Ash	S M	9	3			5	5	5	5	Fair	20 to 40	B2	280	2	Biforked close to ground level. Growing within hedge. Developing included union visible.		Low	4.75	70.9
794	Hybrid Poplar	M	26	4	3	SW	8	10	6	16	Good	20 to 40	B1	1100	1	Significant asymmetry to the canopy. High end loading can be seen on branches. A poorly developing previously suppressed tree. Signs of recently failed partner tree at base (S.E.) suggests possible basal decay.	Canopy Remodelling to improve structure. Or Remove the canopy and retain the stem as habitat. Or Remove and replace with a more appropriate species.	Moderate	13.2	547.4
795	Sycamore	Y	7	1			3.5	3.5	3.5	3.5	Fair	40 or more	B2	200	2	Biforked close to ground level.		Low	3.4	36.3
796	Derelict Orchard	O M	6	1			5	5	5	5	Fair	10 to 20	C3	upto 400	1	Apples & collection of derelict Plums.		Low	4.8	72.4
797	Group x Leyland Cypress 3	M	17	0.25			3	3	3	3	Good	40 or more	B2	490	1	A typical upright group with high potential for growth		Low	5.88	108.6

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TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	No. Stems	Observations / Comments	Recommendations	Risk Assessment	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m^2)
							North	South	East	West										
798	Pear	O M	11	3			3	3	5	3	Poor	10 to 20	C2	400	1	Growing within lawn. Impact damage can be seen on the buttress. Small deadwood can be seen in the outer canopy.		Low	4.8	72.4
799	Pear	O M	11	3			5	5	5	5	Fair	20 to 40	B2	500	1	Growing within lawn. Small deadwood can be seen in the outer canopy.		Low	6	113.1
800	Plum	O M	5	0.5			3	3	3	3	Fair	10 or less	C3	300	1	Single stem with basal shoots that develop around a dead original tree.		Low	3.6	40.7
801	Golden Leyland Cypress Group x 6	M	18	0			2.5	2.5	2.5	2.5	Good	20 to 40	B2	400	1	A typical upright group with high potential for growth		Low	4.8	72.4
802	Weeping Willow	E M	10	2.5			7.5	7.5	7.5	7.5	Fair	20 to 40	B2	400	1	Small deadwood can be seen in the outer canopy.		Low	4.8	72.4
803	Holly	M	6	2			3.5	3.5	3.5	3.5	Fair	40 or more	B2	200	2	A typical rounded form.		Low	3.4	36.3
804	Golden Robinia	S M	6.5	3			3	3	3	3	Dead	5 or less	U	100	1	Single stem with mark lean N.E. Loose in the ground, high water table suspected to have caused root death.	Remove & Replace.	Low	1.2	4.5
805	Silver Birch	E M	11	1.5			5	5	5	5	Fair	10 to 20	C1	330	1	Growing within hard landscaping. Canopy develops close to the building and direct damage could result. Small deadwood can be seen in the outer canopy.	Formative pruning required to improve main branch architecture and clear the nearby roof.	Low	3.96	49.3
806	Sycamore	S M	10	1			3.5	3.5	3.5	3.5	Good	10 or less	U	100	7	Multiple stemmed close to ground level. Growing close to road. Close to wall - Damage Visible. Self-seeded poorly located tree likely to become a problem.	Remove & treat stump to prevent regrowth.	Low	3.18	31.8
807	Ash	M	14	2.5			5	6	4.5	5.5	Good	40 or more	B2	300, 400	1	Biforked close to ground level. Crossing and rubbing branches visible throughout the canopy.		Low	6	113.1

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							North	South	East	West										
808	Sycamore	E M	8	2			2.5	2.5	2.5	2.5	Good	10 or less	U	180, 200	2	Biforked close to ground level. Developing included union visible. Canopy has been reduced (topped) & redeveloped. A poorly developing tree.		Low	3.23	32.8
809	Group x Oak 4	E M	11	1			5	5	5	5	Good	40 or more	B2	upto 550	1	Excavations are visible within the rootzone – close to plough line. Group dominated by eastern tree An attractive group with good potential.	Manage as a single canopy and allow to form single unified canopy.	Low	6.6	136.8
810	Silver Birch x 10 plus Oak	S M	11	2			3.5	3.5	3.5	3.5	Fair	10 to 20	B2	300	1 1	Excavations are visible within the rootzone – close to plough line. An attractive group with good potential. Suppressed by 811 to the north.	Thin out the group to regular centres.	Low	11.94	447.9
811	Crack Willow	M	20	2			9	16	17	10	Fair	20 to 40	U	800, 600, 500	3	Triforked close to ground level. Decay within the buttress can be seen. Included union with signs of progression (Crack) down stem. Stem has a significant lean and appears predisposed to failure. High end loading can be seen on branches.	Canopy remodelling to improve shape and improve habitat worth. Remove the canopy and retain the stem as habitat. High risk of occupancy is to increase.	Low	13.42	565.8
812	Goat Willow	O M	11	2.5			6.5	4	5	4	Fair	10 to 20	C3	270	5	Excavations are visible within the rootzone – close to plough line. An attractive group with good potential. Suppressed by 811 to the north.		Low	7.25	165.1
813	Downy Birch	M	10	2			3	5.5	5.5	3	Fair	20 to 40	B2	380	1	Marked lean self-corrected canopy. Growing as part of a group. Canopy is suppressed by competing neighbouring trees.		Low	4.56	65.3
814	Downy Birch	M	16	2			6	6	6	6	Good	10 to 20	C2	380	2	Biforked close to ground level, beginning to split.	Canopy remodelling to improve shape and improve habitat worth. Remove the canopy and retain the stem as habitat. Moderate risk of occupancy is to increase.	Low	6.44	130.3

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							North	South	East	West										
815	Plantation	M	10	2			4	4	4	4	Fair	20 to 40	B2	Upto 600	1	Birch & Aspen dominate the western and northwestern sections, Sycamore and occasional Elm seen in the eastern section. Well established understorey of Elder & Holly.	Thin out the group to regular centres to improve local growing conditions and internal light levels.	Low	7.2	162.9
816	Ash & Oak	M	18	2			8	8	8	8	Fair	20 to 40	B2	upto 900	1	Trees growing in neighbouring hedgerows		Low	10.8	366.4
817	Group x Ash x 2	O M	18	2			7.5	7.5	7.5	7.5	Fair	10 to 20	C2	550	1	Growing within neighbouring hedgerows		Low	6.6	136.8
818	Crack Willow	O M	18	4			7	3	16	0	Fair	10 or less	U	800	1	Sever lean self corrected canopy. Rootplate has heaved and re-established. A poorly developing tree.	Remove the tree & stump.	Low	9.6	289.5
819	Oak	M	18	3			8	10.5	8	8	Good	40 or more	A2	800	1	Damage to main roots can be seen.		Low	9.6	289.5
820	Oak	M	15	4			6	6	6	6	Fair	20 to 40	B2	750	1	Single stem.		Low	9	254.5
821	Group x Ash 3 plus Oak	M	15	2			5	5	5	5	Fair	20 to 40	B2	350	1	Growing within hedgerow however the southernmost tree is severely declining.		Low	4.2	55.4
822	Ash	O M	16	2			7	7	6	9	Poor	10 or less	C3	390	3	Triforked close to ground level. Growing within hedge. Growing close to water. Significant quantities of deadwood can be seen within the canopy. A poorly developing tree.		Low	8.1	206.1
823	Oak	M	12	3			6	8	6	7	Good	20 to 40	A2	400	1	Growing within hedge. High lifted canopy has left wounding on the stem. Small deadwood can be seen in the outer canopy. Good overall vitality.		Low	4.8	72.4
824	Ash	S M	8	2			3.5	3.5	4.5	2.5	Good	40 or more	B1	190	1	Single stem triforked below the canopy open unions.		Low	2.28	16.3

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							North	South	East	West										
825	Group Elm x 17	S M	14	2			3.5	3.5	3.5	3.5	Dead	5 or less	U	190	1	Growing within the hedge line appear to have died as a result of Dutch Elm Disease.	Remove and dispose of timber to prevent spread. Treat sucker regrowth to prevent future growth.	Low	2.28	16.3
826	Ash	M	16	2			5	7	7	7	Good	10 to 20	C2	440	1	Significant quantities of deadwood can be seen within the canopy Shaggy Polypore suspected. Wounding from branch failures can be seen within the canopy.		Low	5.28	87.6
827	Elm	M	14	3.5			4	4	4	4	Dead	10 or less	U	350	1	Growing within the hedge line appear to have died as a result of Dutch Elm Disease.	Remove and dispose of timber to prevent spread. Treat sucker regrowth to prevent future growth.	Low	4.2	55.4
828	Ash	O M	16	2			7	7	6	9	Poor	10 or less	C3	550	3	Triforked close to ground level. Growing within hedge. Growing close to water. Significant quantities of deadwood can be seen within the canopy. A poorly developing tree.		Low	11.44	411.2
829	Elm	M	14	3.5			4	4	4	4	Dead	10 or less	U	400	1	Growing within the hedge line appear to have died as a result of Dutch Elm Disease.	Remove and dispose of timber to prevent spread. Treat sucker regrowth to prevent future growth.	Low	4.8	72.4
830	Oak	M	18	3			8	10.5	8	8	Good	40 or more	A2	600	1	Damage to main roots can be seen.		Low	7.2	162.9
831	Ash	O M	16	2			7	7	6	9	Poor	10 or less	C3	550	3	Triforked close to ground level. Growing within hedge. Growing close to water. Significant quantities of deadwood can be seen within the canopy. A poorly developing tree.		Low	11.44	411.2
832	Sycamore Birch, Oak	M	13	2			5	5	5	5	Fair	20 to 40	B2	200	1	Young trees developing in a thicket.		Low	2.4	18.1
832	Ash	E M	15	3.5			6.5	6.5	6.5	6.5	Fair	10 to 20	C2	300	1	Single stem with a slight lean. Small diameter deadwood within the canopy. This tree is suffering decline.		Low	3.6	40.7

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							North	South	East	West										
833	Mixed ornamental planting	S M	14	0.25			3	3	3	3	Fair	10 to 20	B2	upto 300	1	Wild Cherry Goat Willow, Silver Birch, Oak, Spruce, Holly Single stem. A dense planting.	Thin out the group to improve light level within.	Low	3.6	40.7
834	Sycamore	S M	9	2			3	3	3	3	Fair	10 to 20	C2	upto 300	3	Multiple stemmed close to ground level. Group developing as a tall screen former hedge allowed to develop.	Consider hedge management due to potential defects in the lower stem.	Low	6.24	122.3
835	Sycamore	M	15	2			7	7	7	7	Fair	10 to 20	C1	320	9	Multiple stemmed close to ground level. with basal shoots. Growing close to fence. Growing within hard landscaping. Close to structure damage likely in the near future.		Low	11.52	416.9
836	Lawson Cypress	S M	5	2			2	2	2	2	Fair	5 or less	B2	180	1	Canopy develops close to the utility. A poorly located tree likely to become a problem.	Maintain at current height.	Low	2.64	21.9
837	Lawson Cypress	S M	5	2			2	2	2	2	Fair	5 or less	B2	180	1	Canopy develops close to the utility. A poorly located tree likely to become a problem.	Maintain at current height.	Low	2.16	14.7
838	Mixed Group	S M	11	1			3	3	3	3	Good	40 or more	B2	upto 220	1	A relatively dense planting Wild Cherry Bird Cherry, Rowan, Beech, Norway Maple, Birch established at close centres.		Low	2.64	21.9
839	Oak	M	15	3			6.5	6.5	6.5	6.5	Good	40 or more	A2	500	1	Single stem. Growing close to fence. Canopy is swamped by neighbouring trees.		Low	6	113.1
840	Black Pine	M	18	3			7	7	7	7	Good	40 or more	A2	660	1	Growing close to fence. A dominant tree.		Low	7.92	197.1
841	Oak	M	15	2			6	3	6	5	Good	20 to 40	C2	390, 200	2	Growing close to fence. Canopy is swamped by neighbouring trees. The tree has a poor form.		Low	5.26	86.9
842	Black Pine	M	18	3			7	7	7	7	Good	40 or more	A2	660	1	Growing close to fence. A dominant tree.		Low	7.92	197.1
843	Leyland Cypress Hedge x 16	E M	14	0			2.5	2.5	2.5	2.5	Fair	10 to 20	C2	320	1	Planted at roughly 1m centres. High potential for growth and liable to become suppressed.	Maintain at current height.	Low	3.84	46.3
844	Black Pine	M	18	3			7	7	7	7	Good	40 or more	A2	520	1	Growing close to fence. A dominant tree.		Low	6.24	122.3

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							North	South	East	West										
845	Black Pine	M	18	3			7	7	7	7	Good	40 or more	A2	640	1	Growing close to fence. A dominant tree.		Low	7.68	185.3
846	Black Pine	M	18	3			7	7	7	7	Good	40 or more	A2	650	1	Growing close to fence. A dominant tree.		Low	7.8	191.1
847	Mixed Group	E M	14	2			3	3	3	3	Good	20 to 40	B2	upto 300	1	Silver Birch Ash, Norway Maple, Alder Growing as part of a group. An attractive group with minimal understory.	Thin out the group to regular centres.	Low	3.6	40.7
848	Norway Maple Oak, Ash, Lime	M	15	2			5	5	5	5	Good	20 to 40	B2	upto 330	1	Closely planted line.	Thin out the group to regular centres of 6m.	Low	3.96	49.3
849	Rowan	E M	10	0.75			2	2	1	4	Fair	10 to 20	C1	200	1	Canopy is swamped by neighbouring trees.		Low	2.4	18.1
850	Horse Chestnut	M	18	3.5	2	NE	8	8	10	10	Good	20 to 40	C2	800	1	Crossing and rubbing main leaders visible throughout the canopy. An attractive spreading form. Lopped from utility. Scaring on stem suggest possible historical bacterial canker.		Low	9.6	289.5
851	Golden Leyland Cypress	E M	14	3			3.5	3.5	3.5	3.5	Fair	20 to 40	C1	490	1	The canopy is suppressing nearby trees. High Potential for growth.	Maintain at or close to current dimensions.	Low	5.88	108.6
852	Crack Willow	M	18	2			4	4	0	11	Fair	10 to 20	A3	1400	1	Triforked close to ground level. Growing close to water. Northeastern leader recently lost, leaving large area of decay – being used by a Goose for Nesting. Significant imbalance and high loading visible in the canopy – unsustainable. Large scale decay visible in the main stem.	Reduce the end loading of branches and consider the establishment of cyclic reduction / pollard/coppice management.	High	15	706.9
853	Crack Willow	M	13	2			12	12	10	11	Fair	10 to 20	A3	1100	1	Triforked close to ground level. Growing close to water. Significant imbalance and high loading visible in the canopy – unsustainable. Large scale decay visible in the main stem.	Reduce the end loading of branches and consider the establishment of cyclic reduction / pollard/coppice management.	Moderate	13.2	547.4

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							North	South	East	West										
854	Crack Willow	V	18	3			8	7.5	14	8	Good	20 to 40	A2	1400	1	Single stem with a significant lean with trunk shooting. Growing close to water. Significant adaptive growth suggests internal decay. Significant loading visible in the canopy – unsustainable. Large scale decay visible in the main stem.	Reduce the end loading of branches and consider the establishment of cyclic reduction / pollard/coppice management.	Moderate	15	706.9
855	Oak	E M	10	2			6	6	3	6.5	Good	10 to 20	B2	400	1	Growing close to water. Small deadwood can be seen in the outer canopy.		Low	4.8	72.4
856	Oak	S M	8	2			4	4	4	4	Good	20 to 40	B2	290	1	Small deadwood can be seen in the outer canopy.		Low	3.48	38
857	Golden Leyland Cypress	E M	14	3			3.5	3.5	3.5	3.5	Fair	20 to 40	C1	490	1	The canopy is suppressing nearby trees. High Potential for growth.	Maintain at or close to current dimensions.	Low	5.88	108.6
858	Sycamore	E M	13	4			5	5	5.5	1	Fair	10 to 20	C2	240	2	Biforked close to ground level with basal shoots. Developing included union visible.		Low	4.07	52
859	Oak	M	16	3			8	8	8	8	Good	40 or more	A2	620	1	Single stem. Growing close to water. Growing on a bank. Minor epicormic shoots are visible within the canopy. An attractive overall form.		Low	7.44	173.9
860	Crack Willow	S M	16	2			7	3	4	7	Good	10 to 20	C3	330, 300	2	Biforked close to ground level. Significant included union visible. Marked lean north west suppressed.		Low	5.35	89.9
861	Oak	E M	12	2			5	5	5	5	Good	40 or more	A2	430	1	Small deadwood can be seen in the outer canopy.		Low	5.16	83.6
862	Sycamore	E M	13	3			5	5	5	5	Good	20 to 40	B2	350	5	Multiple stemmed close to ground level. Small deadwood can be seen in the outer canopy. Seedling Ash at base.		Low	9.4	277.6
863	Wild Cherry Ash, Elm Group x4	M	14	2			3	3	3	3	Good	10 to 20	B2	upto 280	1	Mixed group, growing on a bank. Dead Elm and recently failed tree on floor The result of Dutch Elm Disease.	Thin out the group to regular centres. Remove the Elm and treat to prevent regrowth.	Low	3.36	35.5
864	Silver Birch & Lime group	E M	14	2			4.5	4.5	4.5	4.5	Good	20 to 40	B2	upto 400	1	An attractive young tree with good potential.	Thin out the group to regular centres.	Low	4.8	72.4

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							North	South	East	West										
865	Hungarian Oak	M	9	0			5.5	5.5	5.5	5.5	Fair	40 or more	A1	400	1	An attractive specimen		Low	4.8	72.4
866	Group x Lime 3	S M	9	0.75			4	4	4	4	Good	40 or more	B2	upto 480	1	Single stem.		Low	5.76	104.2
867	Mixed Thorn Group	M	6	0			5.5	5.5	5.5	5.5	Fair	40 or more	B3	upto 400	1	Natural regeneration Hawthorn thicket, good habitat value.		Low	4.8	72.4
868	Leyland Cypress Hedge	E M	14	0.25			3	3	3	3	Poor	10 to 20	C2	upto 380	1	Established in 4 lines. Multiple stemmed close to ground level. Occasional Sycamore & Plum in line. Developing included union visible. A poorly developing Hedge. Suppressing Birch line to south.	Reduce the hedge by 25% & trim the side growth.	Low	4.56	65.3
869	Silver Birch	S M	11	2			2	4.5	3	3	Fair	20 to 40	B2	upto 300	1	Single stems closely planted. Canopy is swamped by neighbouring trees.	Thin out the group to regular centres. Ideally remove and replace G868.	Low	3.6	40.7
870	Plum	S M	7	2			4	4	6	3	Good	10 to 20	C2	240	1	Triforked close to ground level with basal shoots. Developing around dead stem. Canopy is suppressed by competing neighbouring trees. A poorly formed tree with little potential.		Low	2.88	26.1
871	Apple	O M	7	1.5			3.5	3.5	3.5	3.5	Fair	10 to 20	C1	210	1	Single stem with a slight lean. Significant epicormic shoots are visible throughout the canopy.		Low	2.52	20
872	Beech	S M	15	2			5	5	5	5	Good	10 to 20	C3	220	2	Biforked close to ground level. Significant included union visible. The tree has a poor form.	Reduce the co-dominant leader by roughly 1/3 to a suitable point. Or Remove and replace with a more appropriate species.	Low	3.73	43.7
873	Silver Birch Group	S M	14	2			3.5	3.5	3.5	3.5	Fair	20 to 40	B2	upto 240	1	A collection of young trees at close centres	Thin out the group to regular centres.	Low	2.88	26.1

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							North	South	East	West										
874	Golden Leyland Cypress Hedge	E M	8	0			2.5	2.5	2.5	2.5	Fair	10 to 20	C3	300	1	Multiple stemmed close to ground level. Occasional Sycamore established close to the hedge. A poorly developing hedge – browning foliage. Suppressing Birch group to east.	Reduce the hedge by 25% & trim the side growth. Or Remove & Replace.	Low	3.6	40.7
875	Sycamore & Ash	S M	11	2			3	3	3	3	Good	10 to 20	C2	upto 200	1	Closely planted group suppressed by 874 to the north. Not expected to be sustainable.	Thin out the group to regular centres.	Low	2.4	18.1
876	Leyland Cypress Hedge	E M	15	0			3	3	3	3	Fair	10 to 20	C2	300	1	Multiple stemmed close to ground level. Occasional Birch established close to the hedge. Suppressing group to east.	Reduce the hedge by 25% & trim the side growth. Or Remove & Replace.	Low	3.6	40.7
877	Silver Birch Alder, Horse Chestnut Group x 18	M	10	2			3.5	3.5	3.5	3.5	Fair	20 to 40	B2	upto 300	1	A collection of young trees at close centres.	Thin out the group to regular centres.	Low	3.6	40.7
878	Hawthorn	O M	8	2			4	4	4	4	Poor	10 or less	U	310	1	Single stem with a slight lean. Vertical cracking visible on the stem. A poorly developing tree.	Remove the canopy and retain the stem as habitat.	Low	3.72	43.5
879	Horse Chestnut	M	14	1			8	8	8	8	Fair	10 to 20	C3	550	1	Marked lean self corrected canopy. Wounding from branch failures can be seen within the canopy. High end loading can be seen on branches. Branches are predisposed to failure.	Retrench the canopy or consider veteran management.	Low	6.6	136.8
880	Shelterbelt	M	10	2			5	5	5	5	Fair	20 to 40	B2	upto 500	1	A predominantly Horse Chestnut & Aspen screen planting. Occasional Ash, Oak, Silver Birch & Willow with Yew, Elder & Privet understorey, fronted by privet hedge. Vertical lesions indicate historic bacterial canker. Several large limbs within group. A poorly developing group which is declining significant works required.	Undertake a more detailed assessment of the group and instigate woodland management.	High	6	113.1

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							North	South	East	West										
881	Horse Chestnut	M	15	4			5	5	5	5	Dead	5 or less	U	400	1	In addition, partially suppressed Ash 5m to the N.E. A high risk of stem or branch failure.	Remove the canopy and retain the stem as habitat & retain as a 2m pole. or Remove and replace with a more appropriate species.	High	4.8	72.4
882	Horse Chestnut	M	15	4			5	5	5	5	Dead	5 or less	U	400	1	Decline due to bacterial canker. A high risk of stem or branch failure.	Remove the canopy and retain the stem as habitat & retain as a 2m pole. or Remove and replace with a more appropriate species.	High	4.8	72.4
883	Horse Chestnut	M	15	4			5	5	5	5	Dead	5 or less	U	400	1	In addition, partially suppressed and declining to the N.N.E. A high risk of stem or branch failure.	Remove the canopy and retain the stem as habitat & retain as a 2m pole. or Remove and replace with a more appropriate species.	High	4.8	72.4

APPENDIX 3 - TREE SURVEY PLAN

Tree Survey Plan - BA4226TS

A1 Plan Attached

APPENDIX 4 - GENERAL THREAT TO TREES DURING DEVELOPMENT

The following operations are all very damaging to trees, I have included a poster that demonstrates these points, and this might be useful for full circulation:

Compaction of the soil - Compaction will destroy the soil structure by removing the spaces between soil particles preventing the uptake of oxygen and nutrients. Compaction is caused by storage of materials, including bricks, soil, gravel and cement, and even a single vehicle movement will cause damage. Compacted ground will also damage soil drainage, which may then become waterlogged.

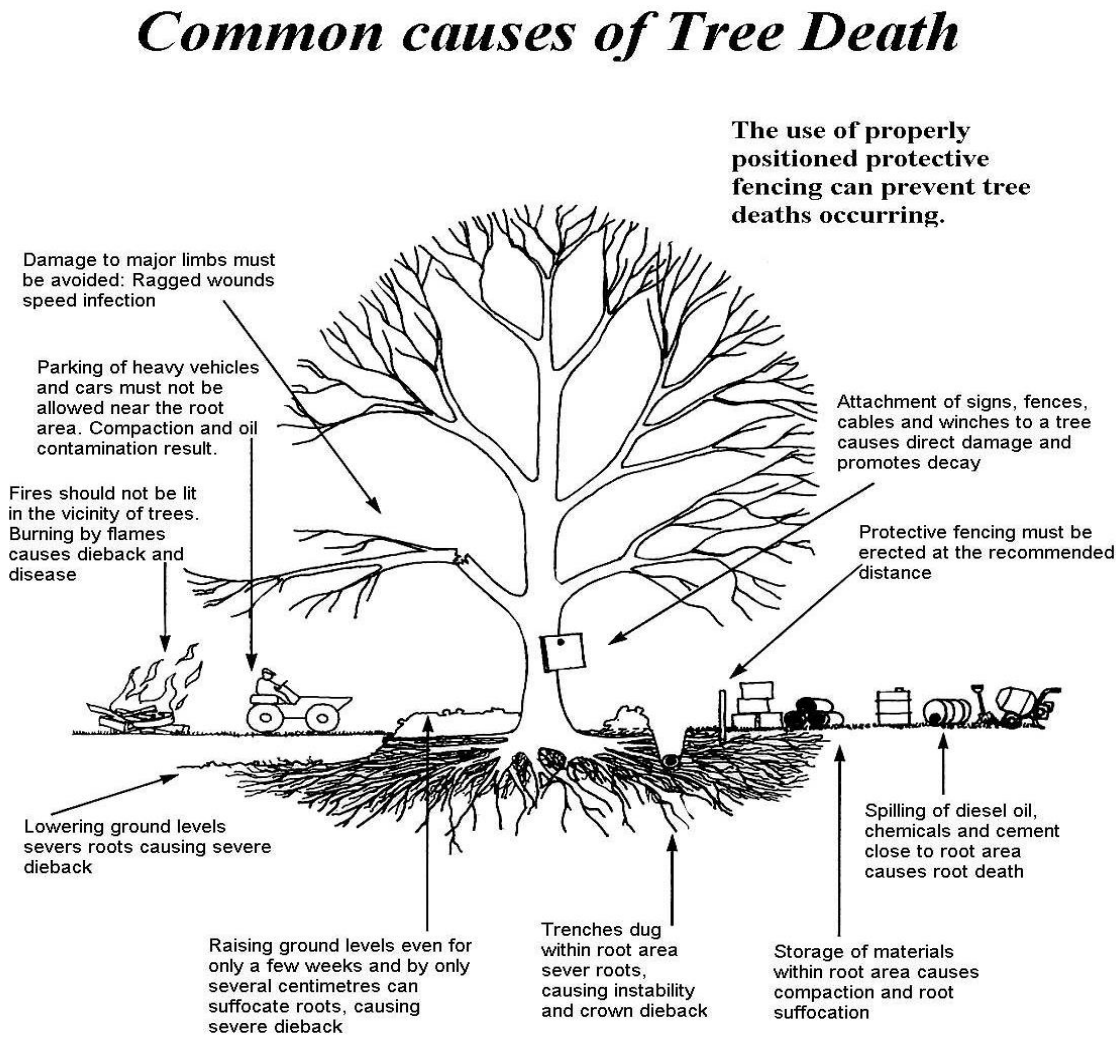
Excavations - any excavations close to the tree are likely to cause root severance. The closer excavations occur to the tree the more severe the damage. Root severance will lead to loss of vigour of the tree, reduce uptake of water and nutrients, allow access for decay organisms and increase likelihood of wind throw.

Ground level changes - both reduction and raising of soil levels will be detrimental even if this is only by a few centimetres. Reducing ground levels will sever roots, and can increase the drainage of a site thereby reducing water availability. Raising ground levels will cause compaction, suffocate roots and damage fibrous roots.

Impact damage - this can be caused by machinery - including torn branches and damage to bark and trunks. This will lead to entry for decay organisms and reduced vigour.

Soil contamination - this can be caused by spillage of oil, fuel and chemicals and mixing cement or other materials. Allow for sloping ground – keeping toxic material downhill from trees and aim to store them 10m from the Protected Zone to allow for leaching through the soil.

Fires - both the intense heat and direct flame will damage the trees causing loss and damage to both major roots and fibrous roots. Intense heat will damage the trees vascular system under the bark even if the bark does not appear burnt.



Barnes & Associates – Independent Arboricultural Consultants

Tree Surveys & Condition Reports	Development Site Tree Reports to BS5837
Tree Health & Safety Reports	Arboricultural Implication Assessments (AIA)
Tree Risk Assessments	Arboricultural Method Statements (AMS)
Tree Population Site Inventories	Construction Exclusion Zone Management
Estate Tree Management	Tree Protection Plan Design
Woodland Management	Tree Valuation & Replacement Costing
Tree Work Specification & Tenders	TPO Objections & Appeals
Insurance & Mortgage Reports	Tree planting Schemes & Landscape Design
Decay Detection & Mapping – Picus	Environmental Design
Windload & Stability Assessments	Orchard Design & Forest Gardens

Professional

Memberships & Registrations

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