Luton Tree Policy and Tree Management Strategy

2021-2030

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Luton

Treework Environmental Practice

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Foreword *(by portfolio holder/Leader/CEO)*

The Luton Tree Policy and Tree Management Strategy provides a framework for the sustainable management of Luton's trees to 2030.

We know that out trees, woodlands and parks have a vital role to play in promoting healthy communities.

We look after large numbers of trees both directly and indirectly, ensuring that their protection and enhancement offer the many benefits they provide our communities now and for future generations to come.

As *Cabinet Member for* X, I am pleased to present the Luton Tree Policy and Tree Management Strategy and would like to thank all of those who have contributed to the development of this important document.

Executive Summary

Set in the context of National, Regional and Local policies, strategies and legislation, the Luton Tree Policy and Tree Management Strategy provides a framework for the sustainable management of Luton's trees to 2030 to ensure that our trees, woodlands and parks continue to play a vital role in promoting healthy communities and helping to deliver our wider environmental, climate change and zero carbon commitments.

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The Strategy and policies set out the strategic vision - an increasingly healthy, diverse, growing and resilient tree population that enhances the lives of all those living, working and visiting Luton now and for future generations and includes the councils aims to ensure that tree related decisions and activities are made in a structured and consistent way and that Luton residents and stakeholders understand how the council resources the management of its tree stock.

It describes how we look after trees on council owned land both directly and indirectly, ensuring wherever possible their protection and enhancement to maximize the many benefits they provide to our communities.

The document provides information about our current tree population including the distribution of species and age class, potential threats from disease and includes targets to increase in the town's tree canopy through retention and protection of existing trees and new planting resourced through maximizing external funding opportunities.

To this end the document includes six key objectives along with key measures that utilize tools including I-tree Eco and the Green Flag Award parks criteria to monitor achievement of canopy targets, quality and action plan targets.

The strategy provides a monetarized value of the Luton council managed tree canopy in relation to the contribution that it makes to the environment and the eco system services provided including carbon storage, air pollution, carbon sequestration and water run off with the total contribution conservatively estimated at £77,230 per annum.

It identifies key priority areas for tree planting to help meet the council's commitment to aiming for a net zero carbon by 2040, including the delivery of a town centre tree planting strategy and priority sites designated as County Wildlife Sites in relation to the habitats provided by their trees and highlights trees of significance such as the veteran tree collection at Stockwood Park.

The strategy describes a proportionate approach to risk management relating to trees including a proactive approach to subsidence and includes a guide to common tree enquiries and the approach taken by the council to nuisance issues with the presumption that healthy trees are only removed as a last resort.

How to use the document

This strategy and policy document is divided into four parts:

Part one – Tree protection, enhancement and resilience

Part one sets out our overall strategic vision and background to the strategy. It also set out our six key objectives, tree canopy cover targets and our approach to public engagement.

Part two – Tree management policies

Part two sets out our 16 policies to ensure our trees are proactively and sustainably managed. It also provides guidance to the public and our partners on tree-related matters and their rights and responsibilities.

Part three – Action plan

The Action Plan set out 16 actions, timescales and responsibilities for helping deliver the first 5 years of the strategy (up to 2025).

Part four – Delivery Guides

Provides step by step guides of how to deliver three key elements of the strategy, a defendable tree management protocol, a daims handling protocol and managing highway trees as well as model answers to commonly asked tree related questions.

1. Introduction

1.1. Scope

1.1.1 This Tree Strategy and Policy document, supported by an action plan, sets out the framework for the sustainable management of trees across the borough of Luton (as well as a number of sites owned and managed by Luton within the administrative area of Central Bedforshire) over the next 10 years. It has been prepared with reference to local, regional and national policies and guidance.

1.1.2 The purpose of this strategy is to ensure:

- that the council's commitment to aiming for a net zero carbon by 2040 is assisted and met.
- that tree related decisions and activities are made in a structured and consistent way across all departments and partners.
- that Luton's residents and stakeholders understand how the council manages its trees and why only certain tree works can be carried out.
- that wherever possible, funding to implement the action plan is in place or funding strategies identified.

1.1.3 Luton Borough Council will hereafter be referred to as "the Council" throughout the document.

1.2 Why a Tree Strategy for Luton?

1.2.1 Luton is a large town with a diverse landscape that has developed over the nineteenth century as the town has expanded across surrounding farmland and absorbed local village centres.

1.2.2 In contrast to the expanding urban development and the evolving transport network, within and around the town there are numerous woodlands, municipal parks, country parks and wildlife areas such as the River Lea corridor, public opens spaces as well as a population of approximately 30,000 street trees, made up of 143 different species and adjacent to areas of high occupancy. Of particularly significance are mature trees within avenues of Victorian origin that align many of the major road networks.

1.2.3 In addition to the older and larger trees Luton has a population of relatively young ornamental trees within residential developments that have been planted since the 1970s.

1.2.4 Trees on council land are managed by the Parks Service, undertaken (according to various arrangements) on behalf of the council department with responsibility e.g. Highways Housing, or in the case of wildlife sites taking into consideration advice from the council's ecologist.

1.2.5 The Council maintains a tree management database, Arbortrack, identifying and auditing the council's tree population.

1.2.6 Over recent years, substantive research has shown the many benefits trees bring to social, economic and environmental well- being, with, for example improvements of local air quality, reduced summer temperatures, reducing 'run off' caused by localized flooding, capturing carbon and improved mental health well- being. With climatic conditions clearly changing and more frequent extreme weather events predicted, protecting and enhancing our existing tree asset and setting targets to enhance the benefits are essential.

1.3 Our Vision - A New Approach

1.3.1 This Strategy sets out how the vision statement below will be delivered over the next 10 years

> ***That we have an increasingly healthy, diverse, growing and resilient tree population that enhance the lives of all those living, working and visiting Luton now and for future generations to come***

1.3.2 Six key objectives, supported by policy statements provide the focus of the strategy.

No.	Key Objective
1	**Ensure the proactive, proportionate management of our trees with the aim of promoting a healthy, resilient tree stock of increasing (ecosystem service) value to maximize the many health and wellbeing benefits it provides.**
2	**Ensure that the health and safety of our people, property and infrastructure are protected through proportionate risk management and pro-active maintenance of the tree stock.**
3	**Ensure that our trees are professionally managed and maintained, undertaking works only when necessary for safety, tree health and structural damage mitigation reasons.**
4	**Protect and manage our ancient and veteran trees.**
5	**Ensure sufficient resources (staff, budget and data) are in place to enable the delivery of Objectives 1-4 above and the actions set out in the action plan.**
6	**Promote and increase a greater sense of community engagement and awareness of the importance of our trees.**
Measure, review and update this strategy (every five years).	

1.4 Measuring Success

1.4.1 The Council will ensure all goals and objectives are only set where a baseline exists and they can be efficiently measured, are meaningful and reported regularly to monitor the progress of the strategy. The key measures are:

1. Tree canopy cover met.
2. To achieve and maintain Green Flag Park status in all 6 District Parks and to manage other sites in compliance with the Green Flag criteria as detailed in the "Raising the Standard Manual"
3. Other Action Plan targets met.

1.4.2 Tree Canopy cover will be measured every 5 years by undertaking a review of the 2017 i-Tree Eco study, which independently estimated the value of ecosystem services provided by 25,198 trees. Protecting and maintaining these trees and increasing the tree stock with a ten year planting programme will form the measurement baseline. The 5 yearly review will monitor the trend to ensure the aims and objectives of the Action plan are on track. (Action Plan target 1).

1.4.3 The 6 District Parks **achieving and maintaining Green Flag Park status** will be monitored annually. All other sites will be managed in compliance with Green Flag criteria as detailed in the 'Raising the Standard' manual (Action Plan targets 2 and 3).

2 Trees provide benefits

2.1.1 The Council recognises that the trees across the borough provide a wide variety of benefits to individuals, visitors, the local community and to society as a whole. As a consequence, the Council accepts, amongst a number of responsibilities in connection with the management of its trees, a commitment to protect and enhance the benefits provided by the tree population as far as possible (Watt, 2011).

2.1.2 Trees are clearly valued by the public for their visual and aesthetic qualities and for their place in both the urban and rural landscape. Trees mark the changing seasons through dramatic autumnal displays and blossom during spring and can have broader historical, heritage and landscape significance. They provide habitat that supports a range of wildlife, itself valued by the public. Trees and urban green spaces soften the built environment. They can provide a sustainable and renewable resource of timber, woodchip biofuel, mulch, charcoal and are a source of composted leaf litter. Management of the urban forest provides a source of local employment.

2.1.3 Trees also provide many less well-known benefits but that are increasingly becoming recognized and valued. Trees offer essential ecosystem services, defined as the many and varied benefits to humans gifted by the natural environment and from healthy ecosystems. Such ecosystems include, for example, forests, grasslands and water bodies. They also include the urban forest, a system containing all the trees, plants and associated animals. These ecosystems, functioning in healthy relationship, offer clean air, extreme weather mitigation and human mental and physical well-being. Collectively, these benefits are known as 'ecosystem services'.

2.1.4 Trees produce oxygen and absorb carbon dioxide and through the annual production of wood, store carbon. These represent a significant contribution to mitigating the effects of climate change. Increasing tree cover will help the council meet its goal to achieve net zero by 2040.

2.1.5 On a local level the influence of urban trees in moderating temperatures offer direct benefits through cooling in the summer and warming in the winter and indirect benefits through reducing fossil fuel use and emissions by positively influencing heating and air-conditioning requirements. Trees filter and absorb pollutants and by offering shade contribute to reducing the incidence of skin cancers. Trees intercept rainfall, reduce surface run-off and have an important role in flood mitigation, particularly in the urban environment.

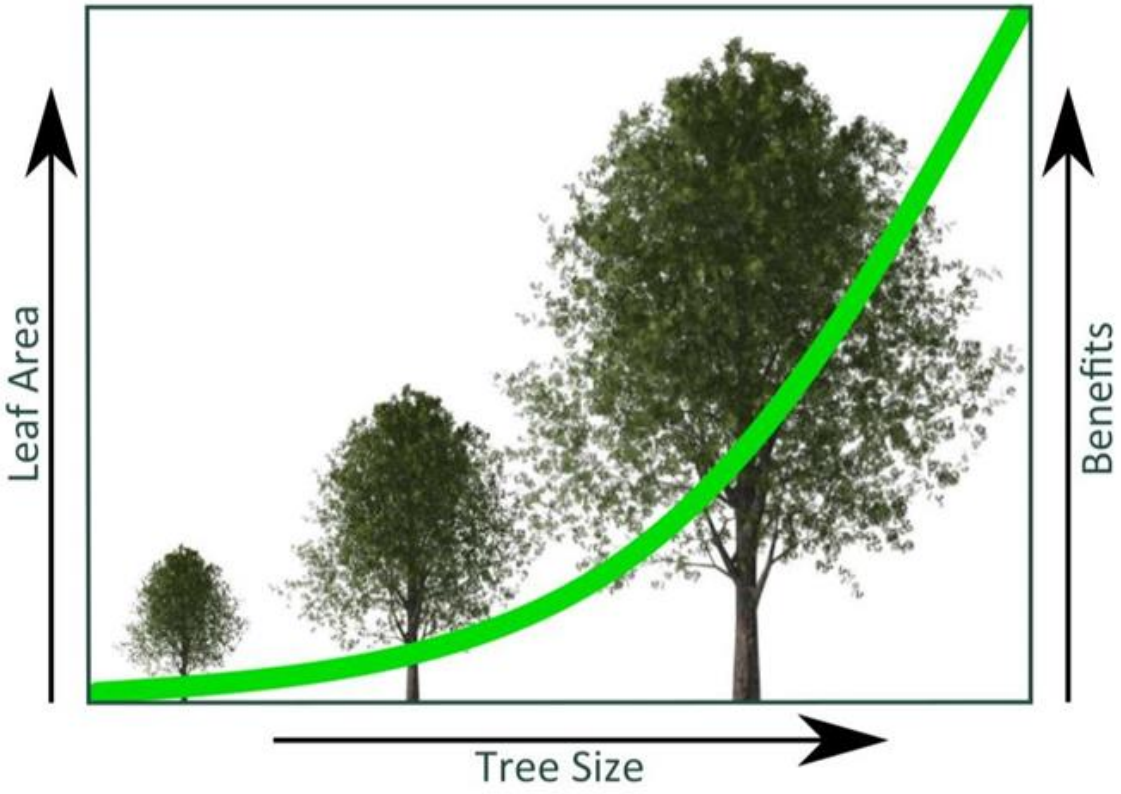
2.1.6 Urban green infrastructure creates desirable environments to live and work in and there is evidence that residential and commercial property values are increased in areas where trees form part of the urban landscape.

2.1.7 Trees are important for general health and wellbeing. They provide key social and psychological benefits and as significant elements of the green infrastructure across the borough have a daily role in the leisure and recreation activities of a community.

2.2 Which trees offer the most benefits

2.2.1 As trees increase in size and age, the benefits they provide increase exponentially. It is therefore of key importance to protect and maintain existing trees, especially where they are old and large. Replacing old trees with new planting is of course essential, but for new trees to replicate the benefits provided by larger trees they would need to be replaced at a rate of 40 to 1, or alternatively wait for 30 to 50 years for their value to increase naturally. Older and larger trees across the council should not be removed unless there are compelling reasons to do so.

Figure 1: The relationship between tree size and leaf area (adapted from Structure and Functions of southern Ontario's Urban Forests, A Kenny, 2001).



2.3 iTree Eco – Our Tree Population and putting a value on the benefits provided by Luton's trees

2.3.1 An i-Tree Eco study (Rogers and Watson, 2017) has estimated the value of ecosystem services provided to the town by 25,198 trees within the public realm. The study was based on inventory data held in the Council's tree survey database but excluded trees within private ownership, woodlands, and trees and groups of trees where incomplete data had been recorded.

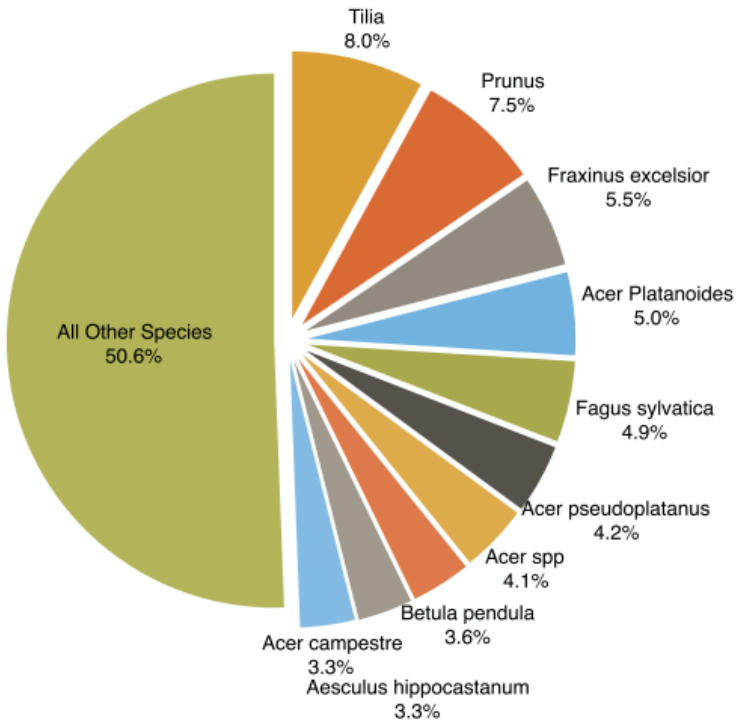
2.3.2 The Council is responsible for a population of trees with a tree canopy cover of 66 hectares, a total replacement value of £38 million and offering ecosystem services conservatively valued at £77,000 annually (as of 2017), or three quarters of a million pounds over the plan period.

Table 1 Headline Figures (i-Tree Eco study, Rogers and Watson, 2017)

Measure	Amounts and Values
Total number of trees measured	25,198
Tree Canopy Cover	66 hectares
Most common species	Lime, Cherry, Ash (143 species recorded)
Replacement Cost	**£38,037,000**
Carbon Storage	11,800 tonnes or £757,271 in value
Pollution Removal	2.5 tonnes annually or £53,751
Carbon sequestration	247 tonnes annually or £15,801
Avoided water run off	5,063 cubic metres annually or £7,678
Total Annual Benefits	**£77,230**

2.3.3 The town was found to have a good diversity of tree species, beneficial in ensuring that the tree population has resilience to environmental stress, pests and diseases and climate change. 143 species were represented in the inventory data.

Figure 2: Tree Species population (i-Tree Eco study, Rogers and Watson, 2017)



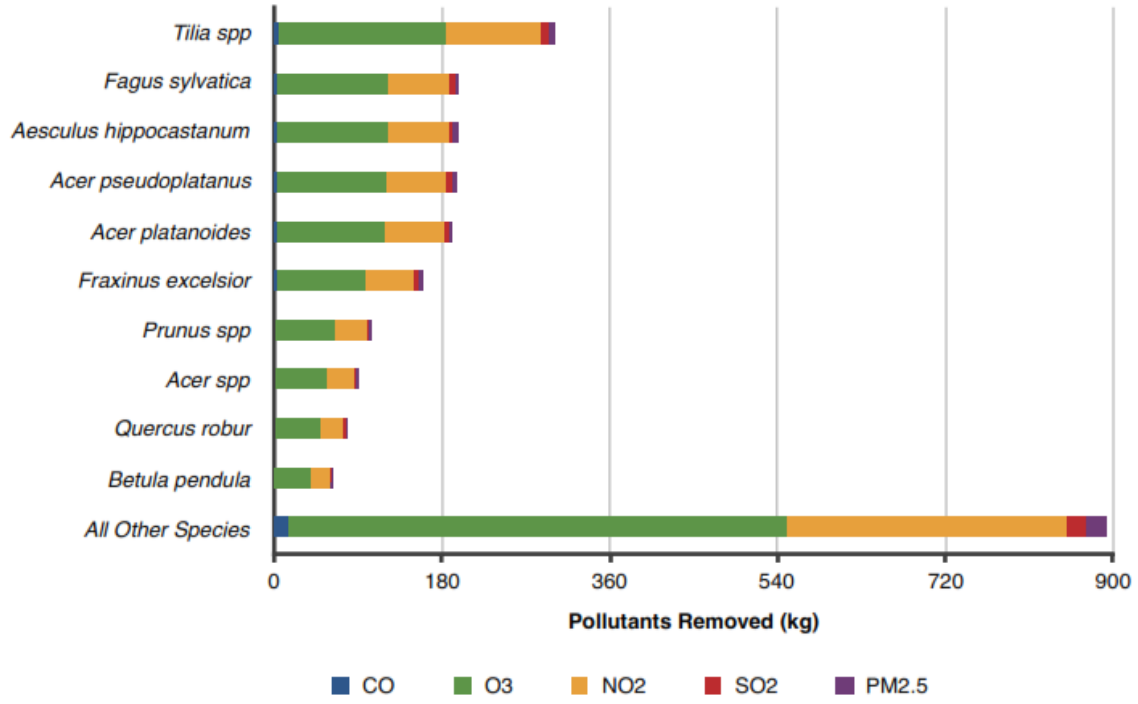
2.3.4 The tree population was found to have a general good size and age diversity, important for a sustainable and diverse tree population to ensure that there are sufficient young trees to replace those at the later life stages. The population was well balanced in the lower size classes, but with less diversity in the larger size classes, stressing the importance of retaining our largest canopy trees and planting new trees to replace them in the future (Action Plan target 8 and 9).

2.3.5 Total leaf surface area for the Council's tree population was estimated at 2,791,800 m^2, influencing the air pollution removal and storm water capture capabilities of the tree population.

2.3.6 Trees regulate urban temperatures and intercept and absorb pollutants through leaf surfaces. Large trees contribute most to capturing pollutants, with Lime (*Tilia*), Beech (*Fagus*) and Horse Chestnut (*Aesculus*) the top three species in Luton, (Figure 3). Whilst trees can produce volatile organic compounds evaporative cooling counters this such that the net effect of trees is to reduce ozone levels. Different species capture different sized pollutant particles therefore species diversity is important for any air quality strategy. An estimated 2.5 tons of pollutants are removed annually by the Council's tree population, equivalent to a value of £53,750. Whilst Lime (*Tilia*) is the most effective, as different species can capture different sizes of particulate matter, it is recommended that a broad range of species should be considered for planting schemes as a part of any air quality strategy.

2.3.7 11,832 tonnes of carbon is stored within the Council's tree population equivalent to a value of £757,270. Trees store and sequester atmospheric carbon by converting it to wood, reducing the concentration of CO^2 in the atmosphere with a resulting beneficial impact on climate change. This represents what could be released if trees were removed or allowed to die and decompose. 247 tonnes of carbon are sequestered annually by Council's trees, equivalent to a value of £15,800.

Figure 3: Pollutants Removed (Kg) by Tree Species (i-Tree Eco study, Rogers and Watson, 2017)



2.3.8 Run-off contributes to flooding and is a source of pollution in water courses. Trees intercept precipitation and roots promote infiltration and these attributes counter the negative effect of hard surfacing on run-off in the urban landscape. The Council's trees provide 5,063 m^3 of run-off reduction annually, equivalent to a value of £7,770

2.4 Capital Asset Valuation for Community Trees (CAVAT) - Putting a value on the benefits

2.4.1 As well as measuring the i-tree value of its tree population as a whole, the Council uses another tree evaluation method, Capital Asset Valuation for Community Trees (CAVAT). CAVAT provides a basis for managing Luton's trees as public assets rather than liabilities. It can be used to value the tree stock as a whole, like itree, but it is used by the council in individual cases, where the value of a single tree needs to be expressed in monetary terms.

2.5 Pest and Disease threats

2.5.1 The damage to our trees from insect pests, fungi and bacteria is significant. Increasing numbers of pests and diseases, particularly those entering the UK from overseas are a serious threat to our trees, with climate change increasing their range. Their impacts have the potential to be devastating to particular species in the tree population.

2.5.2 This strategy recognises these threats and aims to reduce the impacts upon Luton's trees by retaining a wide diversity of tree species, thereby increasing resilience and adhering to strict biosecurity measures (section 4.10) when sourcing new trees.

2.5.3 There are hundreds of pests and diseases that are currently a threat to our trees and in the case of Oak Processionary Moth, a human health hazard too. Of particular concern to Luton's trees are:

- **Ash Dieback** (*Hymenoscyphus fraxineus,* previously *Chalara*). Ash represents 5.5% of our tree population. This disease will be monitored as a part of our regular tree surveying protocol with appropriate remedial action carried out when necessary. The Council will comply with the latest government guidance. New planting schemes will not include ash as part of the species mix.
- **Acute Oak Decline**. Oak represents less than 3% of our tree population. However, it represents a significant proportion of our ancient and veteran trees. This disease will be monitored as a part of our regular tree surveying protocol with appropriate remedial action carried out when necessary. The Council will comply with the latest government guidance.
- **Oak Processionary Moth (OPM)** (*Thaumetopea procesionea*). The caterpillars of OPM are pests of oak trees, they defoliate them, and a hazard to human health, contact with the catapillars' can cause skin rashes, eye irritation and breathing difficulties. OPM is established in most ion London and spreading geographically. This pest will be monitored as a part of our regular tree surveying protocol and if found, or even suspected, reported immediately in compliance with the regulations governing OPM control. Compliance to our biosecurity principles when sourcing trees will help too.
- **Horse Chestnut Bleeding Canker** (*Pseudomonas syringae pathovar asedculi*) Horse chestnut represent 3.3% of our tree population. This disease will be monitored as a part of our regular tree surveying protocol with appropriate remedial action carried out when necessary. The Council will comply with the latest government guidance
- **Horse Chestnut Leaf Miner** (*Cameraria ohridella*) Horse chestnut represent 3.3% of our tree population. Whilst the early brown leaves are unsightly, the health impacts upon the tree are not thought to be terminal.

2.5.4 The above pests and diseases, how to spot and report them and best practice management approaches can be found at the Observatree web pages.

3 Policy Context

3.1.1 With a clear steer contained within a number of National, Regional and Local policies, strategies and legislation, the Council have devised a strategy and set out policy with a focus on local needs and priorities and, at the same time, helps deliver the wider aims of the Country.

3.1.2 The national, regional and local policy documents that have informed this strategy are summarized below.

3.2 National Policy

3.2.1 The Governments 'A Green Future: Our 25 Year Environment Plan', recognizes that 'having more trees in and around our town and cities, close to where people live and work, brings people closer to nature and improves air quality, with consequent positive health impacts'. It also recognizes the special importance of our ancient trees and woodlands.

3.2.2 In helping meet its aspirational target of tree cover across the country of 12% by 2060, a target of planting one million new trees in urban areas in addition to the 11 million trees we will plant across the country has been set by the strategy.

3.2.3 Other notable areas are around improving biosecurity to reduce the threat of new pests and diseases like ash die back entering the country and introducing new requirements to ensure councils properly consult if they are considering removing street trees. The council's approach to publicising tree works can be found in section 4.11 and Action Plan target 15.

3.2.4 The National Planning Policy Framework (NPPF), provides guidance to local authorities when preparing their development plans and in deciding planning applications. It sets out principles for conserving and enhancing the natural environment (Chapter 15 'Conserving and Enhancing the Natural Environment', paragraphs 170-183, 2019)

3.2.5 For the first time, the importance of non - ancient trees and woodlands and the contribution they make to our ecosystem services was recognized at the National level. The policy covering irreplaceable habitats (including ancient woodland and ancient or veteran trees) was enhanced in favour of protection. Wholly exceptional reasons and a suitable compensation strategy are required to justify their loss (exceptional reasons may include, for example, 'infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat'.

3.2.6 Buffer zones distances between ancient woodland and veteran trees are not dealt with in the NPPF, but in Natural England Standing Advice, with a minimum buffer of 15m for ancient woodland (with a recognition of this being dealt with on a case by case basis) and for veteran trees, "A buffer zone at least 15 times larger than the diameter of the tree or 5m from the edge of the canopy, if that's greater".

3.2.7 The role green infrastructure plays in improving air quality and climate change adaptation is recognised with the protection of Open Space within settlements being afforded higher recognition than previously.

3.2.8 The Governments' 25 Year Environment Plan seeks to embed an environmental net gain approach in the planning system. The proposed approach would require developers to assess the potential harm of their plans to habitats and provide an overall improvement to the biodiversity value. If the developer is unable to mitigate or compensate on site, a mandatory payment would be required to go towards habitat improvements elsewhere.

3.2.9 The Town and Country Planning Act 1990 *(Part VIII, section 197)* confers a **duty** on all local authorities to consider trees as a 'material consideration' as a part of the planning decision process. Section 54A and 70 (2) requires local authorities to have regard to the development plan and for tree related applications to be determined in accordance with it. Section 198 confers a power to local authorities to protect trees in the interests of amenity, by making Tree Preservation Orders (TPOs). Section 210 makes the breaching of a TPO a criminal offence. A section 211 requires trees owners with trees in Conservation Areas to notify the local authority of their intention to carry out tree works. Section 215 enables a Local Planning Authority to serve a notice to tidy up land, if its condition is deemed harmful or unsightly to an area. Tree planting is in the scope of works that can be dealt with, providing a tool to improve for example, neglected and dead tree planting schemes.

3.3 Local Policy

3.3.1 Luton's Sustainable Community Strategy 2008-2026 describes the shared vision of how Luton will be in 2026. Key priorities clearly linked to this strategy include, the provision of *'more well designed, safer and accessible open spaces'*; *'successfully adapting and mitigating for climate change'; 'protecting and enhancing the natural and built environment, including our rivers and natural habitats within Luton's green spaces';*

3.3.2 The council has committed to aiming for a net zero carbon in advance of the national target in 2050. Luton's 'Climate Action Plan, Becoming a Carbon Neutral Borough by 2040', sets out the actions it will take, working with residents, businesses and partner organisations to reduce carbon emissions and increase carbon sequestration. Section 6.1 of its Action Plan refers to a targeted and safe increase of tree cover on council owned land and local streets. Section 7.4 aims to encourage people to grow food/pollinators on council land. This could include the planting of fruit trees and orchards. Section 9.1 aims to strengthen partnership working with the Environment Agency and water companies to deliver flood mitigation schemes. Tree planting can form an essential component of such schemes.

3.3.3 Luton's Health and Wellbeing Strategy (2012-2019:2016 Refresh) identifies the promotion of healthy communities as a key component. The council has committed to placing a greater emphasis on the underlying causes of ill health such as the environment and housing. The Local Plan for example, promotes development that is designed, constructed and managed in ways that improve health and promote healthy lifestyles.

3.3.4 The Luton Investment Framework securing £1.5 billion investment, aims for "better health outcomes" and states that "The Council will continue to work with partners and investors to drive improvements to health and wellbeing for local people."

3.3.5 The Investment Framework links to London Luton Airport's development plans and its 395 acre Enterprise Zone and other large scale developments coming forward, including Power Court, a new state of the art stadium, Newlands Park, a mixed -use gateway scheme, Napier Gateway, a 6.9 acre mixed use development, Butterfield, a high quality development in a landscaped environment and the transformation of the Cultural Quarter/Hat District, The Mall, High Town and Marsh Farm. All these projects will require high quality green infrastructure, including tree provision in order to meet the design aspirations of these places and drive improvements to people's health and wellbeing and Luton's pride of place. The existing tree population within the town and the new opportunities for planting have a key role in meeting the commitments of the Investment Framework. The tree strategy provides guidance for considering existing trees and investing in new trees through the planning system in section 4.10.

3.3.6 The adopted Luton Local Plan (2011-2031) sets out the long term strategic spatial planning vision and strategy for the council.

3.3.7 The council's green space and green infrastructure network, of which trees are clearly an essential component, need to be protected and enhanced and recognised as bringing important health and wellbeing benefits (paragraph 2.28)

3.3.8 Strategic Objective 10 aims to improve, protect and enhance the biodiversity of natural areas within the town, including its green spaces.

3.3.9 Policy LLP27 states that '*The Council will work with developers, landowners, and stakeholders and support proposals that safeguard and enhance existing networks of open space (including the District and Neighbourhood Parks identified in the Policies Map) and establish new green infrastructure within the borough'*

3.3.10 Policy LLP28 states that *'The Council will work with partner organisations to positively assess, manage, and designate sites and ecological networks including giving support to development proposals that add to the net stock of wildlife habitats or where they help to deliver a net gain in the conservation and enhancement of such sites'.*

3.3.11 Paragraph 11.56 states that **'trees, shrubs and woodland** provide a range of ecosystem services, such as carbon capture and storage, filtration of airborne pollutants, noise and vibration. They also play an important part in temperature regulation thereby reducing heat island effects. Their role in mitigating climate change and pollution is therefore not insignificant (cumulatively) and should be an early consideration in formulating development proposals'.

3.3.12 Policy LLP28 - Biodiversity and Nature Conservation states that '*all existing habitats and ecological networks will be afforded a level of protection from harm'*. It sets out three tiers of designations, all of which are afforded protection. **'Aged and Veteran trees'** are identified as tier three assets.

3.3.13 The Greenspace Strategy Review 2014 and Green Infrastructure Plan for Luton 2015 recognise that the councils publicly accessible as well as its private Green Space, its parks and gardens, churchyards, cemeteries and allotments are seen as an important indicator of the town's attractiveness and a key indicator for people and business looking to relocate to Luton. Clearly trees form a core element of the character of Luton's parks and gardens.

3.3.14 As well as recognizing their value, the strategy also aims to enhance provision by addressing the deficit in areas with poorer accessibility, equating by 2031 to the equivalent additional strategic provision of just under two new 60 hectare sites, supplemented by district level provision, particularly in the central and western areas of the borough.

3.3.15 The Bedfordshire and Luton Green Infrastructure Plan 2015 a strategically planned and well managed network of green spaces provides existing and new communities with a healthy and attractive environment, attractive places to live and visit, increasing the quality of life.

3.3.16 Development should not be permitted where this would compromise the green infrastructure network but would be encouraged where it delivers critical element of the infrastructure. *Street trees and new planting* are highlighted as critical elements

3.3.17 The Luton Borough Landscape Character Assessment 2014 notes that a small proportion of the landscape of the Luton is protected by 'Area of Outstanding Natural Beauty' (AONB) status, with

other key areas previously protected through local landscape designations; 'Area of Great Landscape Value' (AGLV) and 'Area of Local Landscape Importance' (ALLI). The term landscape does not mean just special or designated landscapes and it does not only apply to the countryside. Landscape can mean a small patch of urban wasteland and urban parks (*Greensland Trust 2014*).

3.3.18 Existing landscapes as well as opportunity areas are identified. Opportunity areas of note with trees as key features or those that may be enhanced through new tree planting and identified in the Landscape Character Assessment and identified in the action plan of this strategy include:

- the Northern Urban Edge
- Bramingham Wood
- Houghton Brook Corridor
- Upper Lea Corridor
- Stockingstone Road Greenspace
- Wigmore
- Southern end of Hart Hill
- Someries Farm
- Stockwood perimeter
- Eastern Fringe, and
- Vauxhall Way.

3.3.19 The Luton Food Plan 2018-22 notes that "Access to green space is associated with a range of improved health outcomes and income related differences in wellbeing are reduced where people have access to green space".

3.3.20 The food plan also places importance on increasing the area of green space available to residents: "Greening the Borough/growing your own This priority seeks to increase access to green space and empower residents to grow their own fruit and vegetables as well as improving the visual impact of Luton.

3.3.21 In fulfilment of Part IV of the Environment Act 1995, the Council identifies Air Quality Management Areas (AQMAs) where current or future air quality is unlikely to meet national air quality objectives, develops Air Quality Action Plans and monitors air pollution, to tackle poor air quality in these areas. Luton's Air Quality Annual Status Report 2018 identifies road traffic as the main source of pollution in the borough with other sources including London Luton Airport and local industry.

3.3.22 The Council monitors the levels of both nitrogen dioxide (NO_2) and particulate matter (PM_{10} & $PM_{2.5}$) within the Borough. This monitoring has consistently shown that particulate matter levels comply with the relevant air quality objectives as set out in the *Air Quality (England) Regulations 2000*. However, the measurements obtained for NO_2 have identified two locations (along the M1 motorway and along the A505 in part of Bury Park and the Town Centre) where the annual mean objective level for NO_2 is (or is likely to be) exceeded. Both locations have been declared as Air Quality Management Areas (AQMAs) and action plans have been prepared to address the exceedances. Luton's Air Quality Plan 2018 action in these two areas. It is recognized that as well as providing particulate dispersion and reduction benefits, some tree species can increase Biogenic Volatile Organic Compound emissions and planting close to high pollution concentration areas, can trap particulates around ground level. Any negative effects have been built into the itree data and consideration of the 'right tree, right place' should be part of the planning of planting schemes.

3.3.23 Measure 21 of the action plan is to assess the benefits of current Town Centre green infrastructure to inform the development of a new Town Centre Planting Scheme with a key performance indicator to **increase the number of trees planted over the number felled**. Measure 21 acknowledges that 'in addition to absorbing CO2 there is a growing body of evidence to show that certain trees, shrubs and hedges can also help reduce levels of airborne pollutants'.

3.3.24 The Town Centre Tree Planting Strategy 2020-2030 identifies **tree planting opportunity sites** to enhance the attractiveness of the Town Centre, and a key element in meeting the commitments of the Investment Framework. The tree planting opportunity sites consist of new locations around the town centre, the reuse of existing, empty tree planting pits and planting opportunities for new developments in the town centre.

3.3.25 The Tree Habitat Strategy 2019 sets out the Council's approach to the management of Luton's trees to provide natural habitat and to maintain, enhance and increase its **tree-based wildlife** and the organisms which depend on that habitat.

3.3.26 Some habitats take a long time to form and so should be considered as 'irreplaceable'. For instance, habitats associated with ancient trees, such as hollow stems with extensive decay, can take centuries to form and these are considered to be 'irreplaceable'. In recognition of 'irreplaceable' nature of such habitats, ancient trees and woodlands are afforded special status in the NPPF as well as the Local Plan, discussed above in paragraphs 3.2.5 and 3.3.11.

3.3.27 The Council has identified the following priority sites, all of which include areas designated as County Wildlife Sites, in relation to their trees:

- Stockwood Park, for its **wood pasture** and **veteran trees**
- Leagrave Park, for its **wet woodland** on Leagrave Common
- Wardown Park, a Grade II Listed park and landscape and a Peoples Park, a rich habitat for bats, associated with its **trees**
- Lewsey Park, and
- Kidney Wood, an **ancient semi-natural woodland** near to Stockwood Park (within the Central Bedfordshire administrative area but owned and managed by Luton Borough Council).

3.3.28 Where resources allow, the strategy sets out actions the council will take to increase awareness, map, safeguard and manage its **ancient and veteran trees** and associated habitat.

3.3.29 Six of Luton's parks have been awarded national Green Flag status:

- Brantwood Park
- Leagrave Park
- Memorial Park
- Peoples Park
- Stockwood Park, and
- Wardown Park.

3.3.30 The award recognizes the best parks and open spaces in the UK, recognized for having excellent facilities, being well managed and maintained, having high safety standards and for engaging the local community.

3.3.31 Trees and woodlands form a significant feature of many of these parks, with ancient and veteran trees forming a key feature at Stockwood Park. The safe and sustainable management of these trees and community engagement with them will help retain Green Flag status of each of the above parks and at priority sites help achieve new Green Flag status sites, a key target of this strategy (section 1.2.1(2) and Action Plan target 3).

4 The Management of Council Owned Trees

4.1.1 The management approach towards the council's trees, its street trees, Housing trees, School trees and trees in its urban parks, country parks, green spaces, cemeteries, church yards, allotments and woodlands, will aim to improve the resilience of the tree population to ensure that the benefits offered by trees across the borough are maintained and sustained over the long-term.

4.1.2 Resilience is desirable because of the numerous pressures placed on tree health and survival from a number of sources. These include the general damage that trees tend to be subjected to within the urban environment and the sub optimal growing conditions often found in built up areas, as well as the effects of climate change and the risks posed from the increasing occurrence of imported tree pests and diseases.

4.1.3 Resilience will be achieved through improving the diversity of the tree populations age structure, to ensure that there are sufficient thriving young trees to replace mature and old trees as they die, decline or become too costly to manage. Tree replacement will be undertaken whilst at the same time recognizing that mature trees provide the greatest benefits, with the implication that the Council will place a management priority on retaining mature trees for as long as possible, subject to sensible cost benefit.

4.1.4 Resilience will also be achieved through improving the diversity of species mix across the tree population. This will reduce the impact of any host-specific pest or disease on the total tree population and will aim to mitigate for the shift in environmental conditions that might be expected due to climate change.

4.1.5 A preference for a diverse species mix will be accompanied by a focus on planting appropriate trees in each location with regard to the tree's resource requirements (soil, water, nutrients), to the tolerance to pollution, shade, heat and other adverse urban conditions, and to the juxtaposition of the tree's morphology with the adjacent urban use, for example crown scale, epicormic shoots and rooting habit.

4.1.6 A diverse species mix has no benefit for the resilience of the tree population (or any other target) if the trees do not thrive in the location planted, or if they conflict with the public in an unacceptable or unmanageable way. The Town Centre Tree Planting Strategy 2020 sets out a detailed task by task methodology for the bio-secure sourcing, planting and aftercare of new trees.

4.2 Managing Risk

4.2.1 Whilst trees provide benefits, the Council recognises that it also has legal duties and responsibilities to consider the risks posed by trees and to manage those risks whilst protecting the benefits provided. Such risks include, as well as tree failure and subsequent injury and property damage, risk such as direct and indirect property damage, infrastructure damage, highway obstruction, visibility issues and human health risks from tree related pests.

4.2.2 A step by step guide setting out the Council's approach is presented in Guide 1.

4.3 Zero risks equal zero benefits

4.3.1 Trees are living organisms and natural structures and may lose branches or fail completely. Such hazards may arise because of structural defects, general growth patterns, tree species characteristic, local environmental or topographical factors or simply due to the occurrence of extreme weather events. Most commonly, structural failure is attributable to a combination of one or more of these factors.

4.3.2 It is not possible to eliminate the risks that arise without also sacrificing the benefits provided by trees. The only way to achieve zero risk from trees is to remove all trees or to prevent any public interaction with them. The council does not accept that the loss in the benefits that would arise from eliminating the risks posed by trees across the borough is an appropriate or desirable objective.

4.4 The level of risk is low

4.4.1 There is overwhelming evidence that, when considered at a national level, the risks posed by trees to members of the public are extremely low, equivalent to the background level of risk usually experienced by the general public during their everyday lives (Ball and Watt, 2009). Consequently the risks posed by trees as a whole can be considered to be broadly acceptable in terms of the Tolerability of Risk Framework (HSE 2001) detailed further in Guide 2. It follows that risks posed by trees are likely to already be adequately controlled through routine management practices (HSE, 2007).

4.4.2 Whilst the risks posed by trees are not necessarily perceived to be low by the public and the media, particularly following an incident, there is no evidence of significant societal concerns[1] regarding tree risk such that these concerns should influence the management strategy that is adopted by the Council for assessing and controlling tree risk (Ball, 2009). Rather than influencing tree risk management directly, societal concerns are recognized as real and are being addressed through targeted communication and consultation to better inform and reassure our residents and other partners that a sound approach to decision making is being exercised across the borough.

4.5 Legal responsibilities

4.5.1 In addition to protecting and preserving the benefits provided by its trees, the Council acknowledges that they have a legal duty to take such reasonable care, to champion its responsibilities as a prudent landowner[2] and to manage risks to a level that can be considered to be as low as reasonably practicable[3].

4.5.2 There is, however, no legislation, approved code of practice or standard to determine, in a prescriptive manner, how the risks posed by trees should be managed.

4.6 Proportionate risk management

4.6.1 The council will aim to exercise a balanced and proportionate management strategy with regard to tree risk through adopting a sensible and common - sense approach to risk management. Safety will be considered to be one of a number of aims in managing the trees within the site, but not the only aim.

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[1] "Societal concerns" is a term used to describe the situation whereby the risk, as perceived by the public is greater than the real or quantitative level of risk such that the public demands a level of regulation or control that could be considered to be grossly disproportionate. This situation may arise due to a lack of information on the part of the public, a degree of inequity of exposure to the risk, a fear or dread towards an unknown or unfamiliar risk, whether the risk is voluntarily accepted or not, or to differing views regarding the level of acceptability of the risk.

[2] Occupiers' Liability Acts 1957 and 1984.

[3] Health and Safety at Work Act 1974

4.6.2 This management strategy will involve attempting to identify the real risks posed by trees, rather than risks that are perceived, but with no quantitative basis. This approach is set out in Guide 2.

4.6.3 The council will aim to allocate only appropriate resources, subject to availability, and in a manner that is proportionate to those risks.

4.7 Highway Trees

4.7.1 Maintaining clearance

4.7.1.2 The Council has a duty to ensure that trees and hedges adjacent to the highway do not obstruct users of the carriageway or footway. As well as physical obstruction to passage, this duty includes maintaining adequate visibility, applies to maintaining clear sightlines, ensuring that road signs are not obscured, and that the efficacy of street lighting is maintained. This duty applies to the maintenance of trees on all Council owned land.

4.7.2 Identifying risks posed to the highway by privately owned trees

4.7.2.1 In addition the Council, may exercise a power to require a private landowner to alleviate obstructions to the highway caused by trees located on their land. The duty regarding maintenance of clearance is set out in section 154 (1) of the Highways Act (1980)

4.7.2.2 The Council also has the power to require a landowner to manage trees that are deemed to pose a high risk to members of the public using the highway as set out in section 154 (2) of the Highways Act (1980).

4.7.2.3 Where a landowner has been served a notice to alleviate an obstruction or to manage a risk and has not done so the Council may, under specific circumstances enter the land to undertake appropriate work and recover expenses from the landowner.

4.7.2.4 These duties will be exercised by the Council's Highway Authority following appropriate advice from an arboricultural specialist.

4.7.3.5 In addition to these legal duties, the Council has identified policy objectives for the transport infrastructure across the borough, set out in the Highway Asset Management Policy and Strategy (2018). The approach that will be taken to manage the network is set out in the Highway Maintenance Operational Manual (2018).

4.7.3 Maintaining surfaces

4.7.3.1 In addition to managing above ground obstructions, the Council has a duty to manage carriageway and footway surfaces to ensure that level differences are maintained at acceptable levels.

4.7.3.2 Management of the disturbance to highway surfaces will be undertaken according to the guidance provided in the Highway Maintenance Operational Manual (2018). Trip hazards will be assessed during routine surveys commissioned by the Highways Department and managed according to a risk-based approach with shorter response times and resources being targeted at mitigating risks within areas of higher use, and where level differences are the greatest.

4.7.3.3 Where tree roots or stems are identified as causing a disturbance to, or distortion of, the carriageway or footway surface, the Council will consider the feasibility of surface repairs (if necessary) as a means to resolve the trip hazard.

4.7.3.4 Alternatively, more involved engineering solutions will be investigated in relation to the costs involved and with reference to the value of the tree implicated in the disturbance. Trees will generally be retained if it is possible to do so, provided level differences can be managed to appropriate levels and the costs (both initial and during long-term maintenance) are not excessive in relation to the value of the tree.

4.7.3.5 Where measures to manage level differences are found not to be feasible or cost effective, such that the only solution is deemed to be tree removal then funds will be made available for tree replacement that will be based on the Capital Asset Valuation of Amenity Trees (CAVAT) value of the tree lost. CAVAT is discussed further in section 2.4.

4.7.4 New highways schemes, dropped kerbs and vehicle crossovers

4.7.4.1 Projects involving the reconfiguration of the highway will consider the potential implications for trees at the earliest possible stage during the project feasibility and design phases. Project design should ensure that trees can be retained wherever possible, in accordance with Policy 1, 4, 10, 11 and 12.

4.7.4.2 The decision-making process that will be followed during the design phase of such projects will adhere to the principles set out in Policy 1. The value of any tree that might be damaged or that might require removal will be fully incorporated into the appraisal of any project. The costs of damaging a tree or removing a tree will be balanced against the costs of redesign or engineering solutions that allow tree retention within the scheme. Trees will be valued according to CAVAT as set out in section 2.4.

4.7.4.3 The consideration and assessment of the potential for a negative impact on adjacent trees, as a result of proposed highways reconfiguration projects will be considered with reference to the most recent BS5837- *Trees in relation to design, demolition and construction - Recommendations*. Advice regarding whether a tree will be negatively impacted by proposals will be provided by an arboricultural specialist and/or expert reviews of new schemes to ensure new planting is appropriate, sustainable and future risk assessed.

4.7.4.4 Highways reconfiguration also includes any application by a member of the public for the installation of a dropped kerb to facilitate a vehicle crossover from a private residence to the public highway where this is adjacent to and might impact a tree.

4.8 Ancient and Veteran trees

4.8.1 Ancient and veteran trees are valued highly by the public for their individual visual, aesthetic qualities, their size, gnarled, often bizarre form and for their great age that tends to inspire awe, reverence and fascination. These trees may be locally distinctive as individual specimens important to the community around them and may be significant within the broader landscape. They can be the visible relics indicating former land use; evidence of ownership related to historic parks or key elements of the history of a designed landscape. They link us culturally and historically to previous land use and previous generations. Occasionally they have significance to specific historical events.

4.8.2 A high proportion of the ancient and veteran trees within Europe are found in the UK, such that there is an international dimension to the responsibility to protecting them.

4.8.3 Of perhaps the greatest significance, ancient and veteran trees support rare, often unique niche habitats, and provide biodiversity involving complex interrelationships between the species that rely on specific environments for their life cycles. Of primary importance is the relationship created

between a tree and fungi as the fungi develop decaying wood habitat within a tree, which has the potential to support endangered saproxylic invertebrates. This habitat significance is discussed in more detail in The Tree Habitat Strategy 2019.

4.8.4 The Council acknowledges the unique contribution made to the community both aesthetically and in terms of biodiversity, by ancient and veteran trees and further recognises the national and international importance of these trees and the ecosystems within which they have developed.

4.8.5 A significant population of ancient and veteran trees are located at Stockwood Park. The park has been designated a County Wildlife Site in recognition of the significance of these trees to biodiversity.

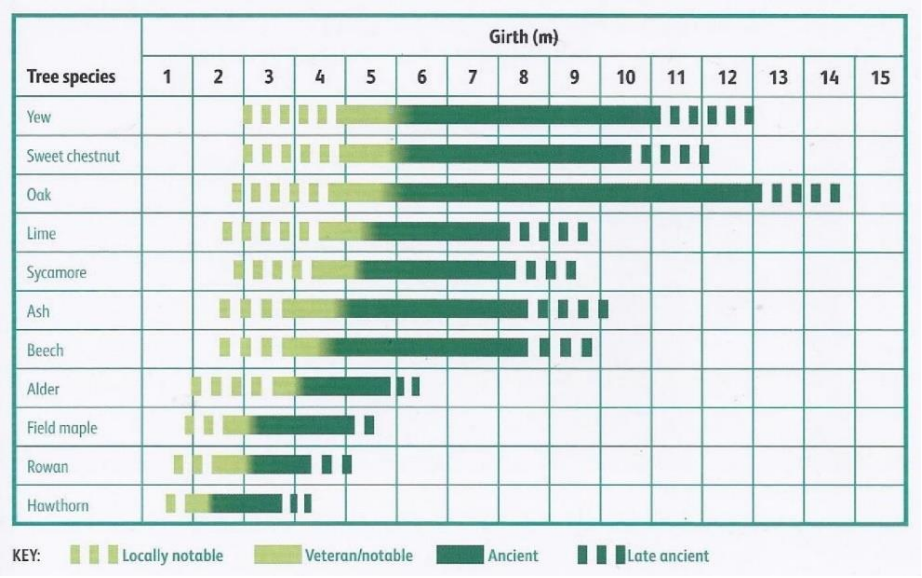
Ancient or veteran?

4.8.6 Ancient trees have the potential to be more valuable than veteran trees due to the length of time that they have supported the rare habitat associated with the typical morphological features present, and this is generally the case. However, given individual and local genetic variability and wide range of growing conditions it is possible for veteran trees to be older than ancient trees even where the trees are of the same species.

4.8.7 It is often not possible to distinguish with any degree of confidence between an ancient and veteran tree in the field. Consequently the distinction should be subordinate to an assessment of the relative quality, variety and volume of the unique habitat supported, to the potential for longevity of the individual and to the context within which it is growing; a population of veteran trees within a diverse habitat is likely to offer greater ecological value than an isolated individual ancient tree .

4.8.8 As detailed in section 3, the National Planning Policy Framework specifically considers ancient woodland and ancient or veteran trees, indicating that planning applications should be refused where the loss or deterioration of such irreplaceable habitats is involved unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Figure 3 Chart of girth in relation to age and developmental classification of trees (Lonsdale, 2013)



4.9.1 Subsidence and direct damage

4.9.1.1 Although most trees co-exist with adjacent structures without detrimental effect, trees can occasionally cause damage to buildings directly by the pressure of their growing roots, stem or aerial crown parts, or indirectly by the action of extracting water from shrinkable clay soils.

4.9.1.2 The number and value of claims related to trees within the town has historically been a small proportion of the total public liability claims processed on behalf of the Council by their liability insurers (Dean, 2013). There are few areas within the town that have soils that are predisposed to subsidence risk with existing trees in a management regime designed to minimise future risk.

4.9.1.3 The Council will take a proactive approach to managing direct or indirect damage to property caused by its trees and will take a cooperative and non-adversarial approach to the handling of claims. However, the Council will aim to ensure that unnecessary tree removal in response to claims is avoided, by requiring that appropriate evidence establishes, on the balance of probabilities, that the tree is the substantive cause of the damage for which a claim has arisen and it will challenge claims not substantiated by sufficient evidence to prove that both damage is indeed occurring and that the tree is the substantive cause.

4.9.1.4 The Council will follow the advice of their insurers in resolving subsidence or direct damage claims and have due regard to the guidance provided by the London Tree Officers Association in the Risk Limitation Strategy (2008) and will manage claims by following the spirit of the processes described in the London Tree Officers Association Joint Mitigation Protocol (2008).

4.9.15 Where the cause of subsidence or direct damage has, on the balance of probabilities, been attributed to a tree, management options for mitigating the damage or the risk of further damage will be considered by the Council on the basis of the cost involved, balanced with the value the tree provides to the community, based upon its CAVAT value. The Council may opt to remove a tree, to prune a tree, or to retain a tree whilst committing to undertake measures to mitigate the damage being caused, or to prevent further or future damage from occurring.

4.9.2 Nuisance

4.9.2.1 Trees can cause nuisance to people or property by dropping leaves, blossom, fruit or other exudations (honey dew or bird droppings), by casting shade, obstructing views and interfering with media reception. Leaves can block guttering and drains. Mature trees can be perceived to be too large or too tall, simply by virtue of their presence and proximity to a living space. Tree crowns encroaching into the air space of a property can cause the owner concerns that have no substantive basis. Some residents may suffer from health conditions that have the potential to be affected by tree pollen, amongst many other contributory factors.

4.9.2.2 These issues are a natural consequence of living near to trees and need to be balanced with the numerous benefits provided by trees within the urban environment. Whilst the council recognises the stress that such issues can cause its residents, tree removal or pruning will not normally be carried out by the Council where the nuisance being caused is considered to be minor, where the nuisance is not proven or demonstrable or can be mitigated by other means. Guide 1 in Part 4 sets out model answers to a number of 'frequently asked questions' and offers answers in relation to such issues.

4.9.2.3 Where nuisance does not cause direct damage but is considered to be significant, genuine and demonstrable then the Council may, under exceptional circumstances, consider undertaking remedial measures. Such situations may arise because the tree causing the nuisance is clearly in an

inappropriate and unsustainable location, has the potential to cause future direct damage, or is of such poor condition or low value that it is not worthy of retention in light of the issue being caused.

4.9.2.4 Where the nuisance can be abated by very minor works that do not adversely affect the tree (for example by removing or reducing a single low limb), then the Council may consider implementing these measures.

4.9.3 Nuisance generating a risk

4.9.3.1 A number of conflicts between trees and infrastructure generate a risk that is not associated with tree failure. Tree crowns may obscure streetlights, road signs, or highway visibility splays. Foliage and branches may obstruct CCTV camera sight lines. Epicormic growth or low crowns may obstruct thoroughfares and encourage pedestrians to seek alternative access routes, exposing themselves to other risks. Stumps and surface roots may cause a trip hazard. Fallen leaves, exudations and bird droppings have the potential to cause a slip hazard.

4.9.3.2 Trees may also be implicated with anti-social behavior activities, and some trees have poisonous berries or seeds creating concern, although in reality having a very low risk of causing harm. The presence of these issues may not be apparent during a tree inspection and decisions regarding management will be taken where these are brought to the attention of the Council as part of the normal enquiries and complaints process, published by the Council

4.9.3.3 Where possible solutions will be sought that do not result in the loss of a tree or that have negative consequences for the health or longevity of a tree. Decisions will be reached subject to consideration of reasonable costs in relation to the benefits offered by the tree and the significance of the nuisance being caused.

4.10 Biosecurity, Tree planting and Aftercare

4.10.1.1 As well as looking after Luton's existing trees, management of the tree population over the long-term will require a planned tree planting programme if the aims of ensuring the borough has an appropriate tree age structure across its population and increasing tree stock value are to be achieved.

4.10.1.2 British Standard 845: Trees from nursery to independence in the landscape, recommendations, acknowledges that a significant proportion of newly planted trees fail to survive to maturity.

4.10.1.3 The Town Centre Tree Planting Strategy 2020 sets out a detailed task by task methodology and audit through species selecting, sourcing from the nursery, transportation, planting and post planting maintenance to ensure new trees thrive, enhance the site and achieve their independence in the landscape.

4.10.1.4 The key to successful tree establishment requires a collaborative and proactive approach. Successful tree establishment not only consists of the physical actions, technical engineering solutions and a robust and audited aftercare regime, but also requires good communication between Tree Managers and suppliers.

4.10.1.5 Over the last decade there has been a significant increase in the frequency and severity of pests and diseases to our trees and plants in the UK. Many pathogens can enter the UK via infected trees and plants as well as timber and packaging products.

4.10.1.6 In order to help the fight against these biosecurity threats, the council will follow the following biosecurity principles, also set out in the ***Town Centre Tree Planting Strategy 2020***:

- ✓ The council recognise the risk posed to the environment from pest and disease and exercise an awareness of all Biosecurity issues.
- ✓ The council will endeavor to comply with the latest recommendations and guidance from DEFRA, the Forestry Commission, the Arboricultural Association and the Horticultural Industry.
- ✓ The council will regularly check DEFRA web site for updates on "At risk plants".
- ✓ The council will ask its clients, Contractors, Landscape Contractors, and Nursery Suppliers to commit to the same Biosecurity principles.
- ✓ The council will endeavor to select species that are not at risk from serious pest and diseases, whilst ensuring that we maintain diversity of plant selection.
- ✓ Where possible, the council will source plants that have been propagated and grown in the UK. This project lead time, enables us every opportunity to select UK trees or trees that has been containerised and grown on in the UK for a minimum of two years

4.10.2 Tree planting programme

4.10.2.1 The tree planting programme will be based on a sound understanding of the number of trees required to maintain an appropriate age structure across the tree population and to meet Action Plan target 1 of increasing the canopy cover by 1 Hectare, to 67 Hectares.

4.10.2.2 The programme will require sufficient and appropriate planting sites to be identified across the borough. The Town Centre Tree Planting Strategy 2020, for example has identified planting sites around the town centre. To ensure the planned long-term benefits become available, new tree planting will be limited to those sites where trees have sufficient space to develop to their true potential taking into account their mature scale, physiological requirements and their potential to cause a nuisance, following the principle of the 'right tree in the right place'.

4.10.2.3 The planting programme will also aim to target areas of the borough where the tree population is currently not as well represented, where the tree population's life stage is disproportionately in the later stages, in areas of the highest pollution and at potential future Green Flag sites.

4.10.2.4 Resilience will be improved by planting a diverse species mix to ensure that large proportions of the population are not at risk from certain host-specific pests and diseases, or to changing environmental conditions linked to climate change.

4.10.2.5 The species mix for the tree planting programme will focus on choosing species that are expected to survive and flourish at the specific planting sites identified and to avoid those most susceptible to disease, for example ash and Horse Chestnut. The Town Centre Tree Planting Strategy 2020 provides a tree species planting palette.

4.11 Publicising Tree Works

4.11.1 The Governments 'A Green Future: Our 25 Year Environment Plan', introduces new

requirements to ensure councils properly consult if they are considering removing street trees.

4.11.2 Outside of the consultation requirements for trees covered by Tree Preservation Orders and trees located in Conservation Areas, discussed in section 5.2, all street trees planned for removal, outside of work required urgently for safety reasons will be identified with a notice, with stakeholders having an opportunity to comment.

4.11.3 Non felling, cyclical tree works will not necessarily be publicised.

5 Trees on Private Land and Development Sites

5.1 Privately owned trees.

5.1.1 In addition to the council's power to serve a notice on the tree owner to make the tree safe where it affects the highway, discussed in section 4.7, the council can also call on the Miscellaneous Provisions Act 1976_ for tree risks posed to non-highway land and its users. Section 215 of the Town and Country Planning Act 1990 can also be applied where poor tree management negatively impacts on the amenity of an area.

5.2 Tree Preservation Orders and Trees in Conservation Areas

5.2.1 Tree Preservation Orders (TPOs) help the council to protect important trees, primarily in the interests of visual amenity and in the interests of the wider community and to have some control over their management. The council will normally protect trees that it considers to be under threat but will also consider protecting trees that are useful or desirable where the threat is less obvious.

5.2.2 A tree protected by a TPO must not be cut down, uprooted, topped, lopped, wilfully damaged or wilfully destroyed without the council's consent. Such an action can be a criminal offence and carry a significant fine.

5.2.3 To find out if a tree is covered by a Tree Preservation Order, please visit the Luton Council webpages.

5.2.4 To carry out work to a protected tree, a planning application must be made via the Luton Council webpages If we grant consent, it will usually carry a time limit and a condition that the work follows best practice as set out in the latest British Standard 3998 tree work. Before making an application, we encourage applicants to contact the council to discuss their plans.

5.2.5 All trees with a stem diameter of 75mm or greater, (measured at 1.5 metres above natural ground level) are protected in a Conservation Area. Anyone intending to carry out any work to a tree in a Conservation Area must notify the council before doing so.

5.2.6 The council then has six weeks in which to make a decision. If there is no objection to the work, then the council will notify the applicant, but if there are concerns that the work may be damaging to the amenity of the area, the council will consider giving the tree full protection by issuing a Tree Preservation Order. Before making a planning application, applicants are encouraged to contact the council to discuss their plans.

5.2.7 The Council maintains a public register of applications to works to trees protected by Tree Preservation Orders and trees situated in Conservation Areas.

5.2.8 To find out if a tree is located within a Conservation Area, please visit the Luton Council webpages.

5.3 Trees on Development Sites

5.3.1 Trees are a material consideration for all types of development, whether it is a major scheme or a householder extension. The council aims to retain the most valuable trees, and for them to be sensitively and sustainably located within a scheme.

5.3.2 Trees can be at risk from the pressures of development. Damage can be sustained to both the above ground and below ground parts of trees. Any failure to fully assess the impact of development at the earliest opportunity could lead to the loss of tree cover and the many benefits we know they provide.

5.3.3 Biodivesity Net Gain is a new approach to development which recognizes habitat and species loss in the UK and attempts to readdress the balance by reversing the decline and enhancing biodiversity provision, requiring developers to demonstrate an increase in habitat value compared to the pre-development baseline. Such enhancing biodiversity features can include new trees, hedges and woodlands.

5.3.4 The National Planning Policy Framework already requires development to demonstrate a net gain. Further, in 2019, the Government announced in its Spring Statement that Net Gain would become mandatory. Defra have since produced s Biodiversity Metric (DEFRA 2.0 calculator).

5.3.5 For major planning applications, submissions will need to demonstrate that:

- The Mitigation Hierarchy has been followed (including proposals for any necessary compensation)
- How the proposal will provide a minimum **10% net gain increase in biodiversity**
- How the proposal will integrate into any wider green infrastructure network.

5.3.6 For minor planning applications, the Government are currently exploring options.

5.3.7 All planning applications potentially affecting trees will be assessed by the council. Before making a planning application, applicants are encouraged to contact the council at the earliest opportunity and engage in pre application discussions.

5.3.8 Where existing trees are potentially impacted by a development proposal, the Council will:

- ✓ require a survey, carried out by an arboriculturist or competent person, identifying each trees position, size, species, assessment category and root protection area (in accordance with the provisions of current British Standard 5837)
- ✓ require an appropriate ecological survey be submitted to benchmark the pre - development biodiversity value for net gain calculations.
- ✓ expect plans for new development to include measures to safeguard trees, and where appropriate make provision for tree planting to enhance the local tree escape.
- ✓ expect major development schemes to include a comprehensive landscaping, tree planting and long- term maintenance and aftercare programme.

- ✓ impose conditions on planning permissions to ensure that adequate protection is given to retained trees and hedgerows during demolition, site clearance and construction (in accordance with current British Standard 5837) and,
- ✓ only where considered appropriate, serve Tree Preservation Orders to prevent damage and ensure the continuing protection of the most valuable trees.

6. Tree Policies

Policy No.	Theme **Policy**	Key Objective	Strategy Section
	The Overarching Vision		
Policy 1	**The Council recognises the value of trees, and will aim to protect, maintain and enhance the benefits they offer.**	**1**	2.1
	A Pro-active approach		
Policy 2	**The Council will pursue a pro-active management approach towards its trees with the aim of promoting a healthy, tree stock, a diverse age structure and increasingly resilient to biological threats.**	**1**	2.1
	A Professional and quantifiable approach		
Policy 3	**Ensure those with a role in delivering this strategy and policy are trained and competent to do so.**	**3**	G2
	A balanced and proportional approach		
Policy 4	**The Council will adopt a balanced and proportional approach to the management of the risks posed by trees, with safety being just one of a number of management considerations.**	**2**	4.6
	Managing damage		
Policy 5	**The Council will, in managing the risk of subsidence and direct damage to property, to minimise the number and cost of claims whilst avoiding unnecessary tree loss, require appropriate evidence to establish the cause of damage and will allocate sufficient resources to review such evidence.**	**2**	4.9.1
	Residents Requests		
Policy 6	**The Council will not normally prune or fell trees to abate issues of nuisance, or perceived nuisance (where the tree does not cause direct or quantifiable damage),where the consequence of the nuisance is considered to be insignificant or where alternatives to tree pruning or removal can mitigate the issue.**	**2**	4.9.2.3

	Nuisance generating Risk		
Policy 7	**The Council will manage non-failure related tree risks resulting in visibility, lighting or access issues and trip and slip hazards in a proactive manner wherever possible as part of a routine and periodic tree inspection regime and through prioritised programmes of work.**	**2 and 3**	4.9.2
	Nuisance generating Risk		
Policy 8	**Where a Council owned tree(s) or woodland are associated with anti- social behavior, and/or criminal activity, or where a perceived increased risk due to obstruction of CCTV cameras is present, measures to alleviate the issue will be implemented.**	**2 and 3**	4.9.3
	Highways		
Policy 9	**The Council will adopt a proactive management approach to ensure that the public highway is maintained without obstruction or interference and that risks posed by Council trees adjacent to the highway are managed in a reasonable and proportionate manner in accordance with Policy 2.**	**1 and 2**	4.7
	Highways		
Policy 10	**Where trees are potentially impacted by vehicle crossover applications, the council's lead Officer will be consulted by the highway department. A site visit may be necessary to make a decision on whether the tree has amenity value and should remain, or whether removal and replacement would be the best and most sustainable solution. Any costs associated with tree removal and replacement of a tree is to be borne by the applicant.**	**1 and 2**	4.7.4
	Maintaining Safe Surfaces		
Policy 11	**The Council will follow a risk-based approach to managing highways level differences, will accept a degree of level difference and will investigate the feasibility and costs of engineering solutions prior to accepting the loss of a tree where its roots or stem are causing a surface distortion or disturbance.**	**3**	4.7.3

	Maintaining Safe Surfaces		
Policy 12	**Decisions regarding measures to manage root disturbance and highways design decisions will be based on a sound understanding of the value of a tree, with the cost of measures directly compared against the CAVAT value of a tree, and compensation based on the CAVAT value of a tree.**	**1 and 2**	4.9.1
	Ancient and Veteran Trees		
Policy 13	**The Council will identify ancient and veteran trees and their environs across the borough and will endeavour to allocate appropriate resources for their sensitive and sustainable management to positively influence the longevity of such trees whilst managing the risks to an appropriate level.**	**4**	4.8
	Tree Planting and Biosecurity		
Policy 14	**The Council will actively seek resources to deliver tree planting, with targets linked to the tree canopy target. Trees will be planted in appropriate locations to allow them to develop to their full potential.**	**3**	4.10.2
	Tree Planting and Biosecurity		
Policy 15	**The Council is committed to promoting and implementing sound biosecurity practices to assist in safeguarding our trees from the introduction and spread of harmful pests and diseases.**	**3**	4.10.1.6
	Planning and Development		
Policy 16	**The Council will not permit development where this would compromise existing trees worthy of retention, particularly those subject to Tree Preservation Orders (TPOs), and where appropriate will ensure that trees are protected either through condition or the making of new TPOs.**	**1**	5.3

7 Funding and The Action Plan 2020-2025

7.1 Funding

7.1.1 The delivery of parts of this strategy will be facilitated and enhanced if additional funding streams are secured.

7.1.2 The Government have grant schemes open to urban tree and woodland proposals, expected to be available across the period of this strategy. Luton have benefited from the urban Tree Challenge funding and will continue to apply for this and other government funding streams.

7.1.3 In addition to the government, there are a number of organisations who provide advice, financial and practical support for planting trees and creating new woodland. The Woodland Trust's MOREwoods scheme for example, is designed to support planting of small woods or scattered plantings covering at least half a hectare (1.25 acres).

7.1.4 The Community Infrastructure Levy (CIL) was introduced as part of the Planning Act 2008 to deliver infrastructure to the local community as part of a new development. Green infrastructure, including the management of woodlands, ancient and veteran trees and new tree planting can all be funded by the levy.

7.1.5 Section 106 agreements can be sought from developers by the council in order to make development acceptable in policy terms. The Planning Department and Parks Service will work together to ensure that the adverse effects of development on the tree stock are fully mitigated.

7.1.6 When a council owned tree is required to be removed to facilitate a development, the Capital Asset Value for Amenity Trees (CAVAT) value of the tree will be required to mitigate the loss, and the money received used to support the planting targets discussed throughout this Strategy.

7.2 The Action Plan (2020-2025)

	Action	Policy	Delivery	External Funding	Lead
1	**Tree Canopy Cover target met** The target is 67 Hectares by 2025 (an uplift of 1Ha on the 2017 (i-tree Eco Study baseline) Linked to Action 9	1,2,12, 14,15	2020-2025	Urban Tree Challenge MOREWoods HLF	Parks Service
2	**Achieve and maintain Green Flag Status in all 6 District Parks** At 6 Parks (2020): Brantwood, Leagrave, Memorial Park, Peoples Park, Stockwood Park, and Wardown Park (2020)	2	2020-2025	N/A	Parks Service
3	**Manage all other sites taking account of green Flag criteria as detailed in the "Raising the Standard" manual**	2	2025	N/A	Parks Service

4	**To gather baseline data to understand the itree value and canopy cover of the borough to meet Action 1 above and measure and set new targets 2025 -20230)**	1,2,12, 14,15	2020-2025	N/A	Parks Service
5	**All tree surveyors to have a minimum National Qualification Framework at Level 3 or be under the supervision of a surveyor qualified at that level.**	3	2021 - ongoing	N/A	Parks Service
6	**All tree surveyors to undertake Quantified Tree Risk Assessment training.**	3	2022 - ongoing	N/A	Parks Service
7	**Adopt CAVAT as a tree evaluation model to be applied when making decisions around unplanned tree removals.**	3	2020	N/A	Parks Service
8	**Actively seek new on and off-site provision of trees from development schemes**	14 16	2020	S106/CIL	Parks/Planning Service
9	**Actively seek funding for new tree planting and community engagement.**	14 16	2020	Urban Tree Challenge MOREWoods HLF	Parks Service
10	**Explore Pre-Application fee funding to contribute to costs of this Action Plan, including tree planting costs**	16	2020-2021	Pre app fees (Developer/ Householder	Parks/Planning Service
11	**Actively seek funding for Ancient and Veteran management and community engagement**	13	2021-2025	HLF	Parks Service
12	**Carry out a feasibility assessment of existing empty tree pits to assist in the canopy cover target**	14 16	2021	N/A	Parks Service
13	**Explore the appetite for signing up to the Joint Mitigation Protocol (JMP)/or following a protocol in the spirit of the JMP**	5	2021	N/A	Parks/Insurance Service
14	**Create a tree management database GIS map layer based on a combination of geological records, sites with a history of tree related subsidence and sites that pose a higher risk to help minimize tree related subsidence or the risk of subsidence.**	5	2021	N/A	Parks/Insurance Service
15	***Adopt a Street Trees Removal Publicity Protocol***	*N/A*	*2020*	*N/A*	*Parks Service*
16	**Ensure Pest and Disease threats are current (referencing material held on Observatree) and communicated via the Luton web pages.**	14	2020-ongoing	N/A	Parks Service

The Guides

Guide 1: Common Tree Enquiries

1. The tree looks dangerous and moves in the wind.

The Council has a qualified tree expert who will inspect a tree following an enquiry or in line with the Tree Risk Management Strategy following routine inspections. Our inspection will determine its condition and safety. Trees have a natural movement in windy conditions with flexing of the trunk and movement of branches being quite a normal response.

2. The tree has not been pruned for a long time. It is too tall and needs to be pruned.

Trees across the borough are regularly assessed and any safety or maintenance related works are reported at this time. The Council does not reduce the height of the trees as a matter of course, as this can stimulate rapid re-growth and/or cause defects in the tree's structure and exacerbate the original reported issue.

The council will routinely prune highways trees to ensure that encroaching branches are pruned where they are obstructing roads and footpaths, masking streetlights, road signs and other street furniture, to maintain vehicular and pedestrian safety on the highway.

3. Tree branches encroaching a garden/boundary

When tree branches or roots encroach on to neighboring land they are legally regarded as a nuisance. Under the terms of law, the tree owner is not obliged to cut back the branches overhanging their neighbors' garden unless damage is being caused. However, the owner of the adjacent land has the legal right and 'abate the nuisance' by cutting the branches or roots encroaching on other property.

Where requests are made to prune trees that overhang a boundary each instance will be assessed on its merits. As a general policy, the council will only undertake work where a tree's branches touch or are very close to a building and as a consequence could cause physical damage.

4. Shading and Blocking Views

Householders have no right to light from across a neighbor's land. Likewise, there is no right to a view, and a view obstructed by the growth of trees cannot legally be regarded as a nuisance. Where requests are made to prune trees to increase light levels, each instance will be assessed on its merits. As a general policy the council will not undertake pruning simply to allow more light to a property, where the trees in question would not otherwise require pruning for other reasons.

An individual's tolerance of shade or their need for light is a subjective and personal matter whilst some people prefer shade there are those that have desire for sunlight. Many people are aware of the ancient and prescriptive right to light, but this only relates to loss of light over a considerable period of time in certain specific circumstances. Where trees are concerned there is no 'right to light'.

5. T.V/Satellite Reception

There is no legal right to television reception. Existing trees on neighbouring land which interfere with television reception, especially with satellite transmissions, are unlikely to be regarded as a nuisance in law. The Council will not carry out tree pruning simply to improve television or satellite reception, where the trees in question would not otherwise require pruning.

In the vast majority of cases, interference can be reduced by an engineering solution such as the relocation of the aerial or by the use of "booster boxes", which often improve the reception significantly.

6. Pollen and Allergies

Whilst some kinds of tree pollen are known to bring on in sufferers the symptoms of hay fever this is not considered justification for either the pruning of Council trees, or their removal.

7. Leaf Fall

The Council does not carry out a public leaf collection service. Although complaints are sometimes received about the problems caused by leaves falling from trees, the loss of leaves from trees in the autumn is part of the natural cycle and cannot be avoided by pruning. The maintenance of gardens and gutters is the responsibility of the landowner and the Council is not obliged to remove leaves that may have fallen from Council owned trees. Where gutters are regularly blocked by fallen leaves gutter guards may be fitted to provide a low maintenance solution.

8 Fruit, berries and nut fall

There are certain locations where fruit trees are not desirable, for example where soft fruit would make the pavement slippery or where anti-social behavior could encourage fruit being thrown at houses or cars. When considering the 'right tree for the right place', the Council takes account of the likelihood of such problems. Equally, where fruit trees are established but where there is a significant, anti-social behaviour problem the Council will consider phased removal and replacement in extreme cases

9 Sap/Honeydew – The tree is making a sticky mess on my car or garden

Honeydew is caused by greenfly (aphids) feeding on the tree, which excrete a sugary sap. Often the honeydew is colonised by a mould, which causes it to go black. This is a particular problem with tree species such as lime and sycamore.

Unfortunately, there is little that can be done to remove the aphid which causes the problem and pruning the tree may only offer temporary relief. Any re-growth is often more likely to be colonised by greenfly thereby potentially increasing the problem. Honeydew is a natural and seasonal problem. Where new trees are planted we choose trees that are less likely to cause this problem. Where honeydew affects cars, warm soapy water will remove the substance, particularly if you wash the car as soon as possible.

10 Bird Droppings

Bird droppings may be a nuisance, but the problem is not considered a sufficient reason to prune or remove a tree. Even when branches are pruned, the bird will often just move to another branch. Nesting birds are protected under the Wildlife and Countryside Act 1981 (and other related wildlife law). Warm soapy water will usually be sufficient to remove droppings.

11 The tree is causing damage to my drains

Tree roots typically enter drains that are already broken or damaged. Trees themselves very rarely break or damage a drain in the first place. Tree roots found in a drain are usually symptomatic of an underlying problem requiring repair of the broken pipe.

Tree roots can cause damage to paving, lawns and the foundations of buildings or walls. Where a neighbors' tree is causing problems, an owner is within their rights to cut back roots to the boundary of their property, unless it is protected by a TPO or is within a Conservation Area. However, one should be aware that undermining the future stability of the tree can lead to future liability for any future damage caused.

12 The Tree is covered in ivy and it's killing it

Ivy is a climbing plant abundant as a groundcover shrub in many rural types of woodland. It has a variety of conservation benefits and forms an integral part of woodland's habitat. In the urban environment there is a need to balance three main considerations for its retention: tree safety, conservation and aesthetics. In some situations, it may be considered unsightly and more importantly can create problems for efficient management by obscuring potential defects and fungal fruiting bodies. It can also increase the weight of a tree's crown and the 'sail' effect during the wet, windier, winter months, when deciduous trees have shed their leaves. As a general policy the council undertakes the removal of ivy from trees only where it is considered necessary to aid visual tree health assessment.

13 I have a big tree near my property. I am worried about the damage the roots may be doing to my house. What should I do?

Tree roots may potentially cause damage to built structures in two ways:

Direct damage – this is caused when the physical expansion of tree roots or stem lifts paving stones or cracks walls etc. Due to the weight of a house no amount of physical expansion will affect it, but garden walls and small structures such as garages or outbuildings might be at risk.

Indirect damage – this can be caused to larger structures such a houses when trees roots grow underneath the foundations, extract the water there causing clay soils to shrink and the structure to subside. If a building has been built on clay soil near an existing tree, and that tree is then removed, the soil may expand which can cause heave (the opposite of subsidence).

Modern building standards mean that the risk to newer buildings tends to be isolated and the council will expect new buildings to be built to industry guidance and therefore they should not subside due to trees that were in existence at the time they were built. Should you believe that trees are the cause

of cracking to a property, you should consult with your building insurers to determine the probable cause.

14 My neighbours have a high hedge. What can I do about it?

The Anti-Social Behaviour Act 2003 (High Hedges) provides for those who feel that a neighbour's hedge is hindering the reasonable enjoyment of their property to submit a formal complaint to the council. The council will then investigate the matter and may, if considered appropriate, serve a notice on the hedge owner requiring them to reduce the hedges height. In most cases, it should be possible for neighbour's to agree on a course of action without a formal complaint being necessary. This is certainly the preferable approach for all concerned. If you are unable to reach agreement with your neighbour, try contacting a local mediation service. The Council will not deal with a complaint until the mediation process has been attempted. Before coming to the council, you should write to your neighbor to let them know what you are going to do.

Guide 2: Tree Management Protocol

G2. 1.1. The tree management database

G2. 1.1.1. At the core of the tree strategy sits the adoption of a management system to record and store data that identifies, locates and describes trees and groups of trees within the tree population. Through this system inspections, risk assessments, remedial work recommendations and a history of management is held for reference and to serve as a clear and transparent record and audit trail of the decisions made when managing the town's trees.

G2. 1.1.2. The Council will maintain digital records describing the tree population within a specialist tree management database. Trees and groups of trees will be recorded on a digital plan in a Geographic Information System (GIS) and this positional data will be linked to the corresponding specialist tree management database record.

G2. 1.2. Formal tree survey

G2. 1.2.1. Identifying trees that need management or consideration will be achieved through undertaking formal, programmed tree inspections undertaken or commissioned by the Council's Arboricultural Supervisor but will also be directed by the general, informal observations made by non-specialist Council staff during the course of their daily activities.

G2.1.2.2. The formal tree survey process will take one of two forms depending on the size, age and condition of the trees, the requirements of management and the level and nature of use adjacent to or beneath the trees. Trees will either be managed as part of an inventory or within areas that are subject to periodic walkover or drive-by inspections.

G2.1.3. Tree inventory

G2.1.3.1. The majority of the trees within the Council's ownership and responsibility will be managed as part of an inventory. An inventory will involve recording all individual trees and groups of trees within an area in the tree management database and plotting the location of these in the GIS.

G2.1.3.2. Holding comprehensive records for all trees within an area as part of an inventory is appropriate where the management of the risk posed by trees towards members of the public or property is one of a number of aims and where the management of nuisance, maintenance and general good arboricultural practice are equally important aim.

G2.1.3.3. Critically, an inventory serves as a long-term management tool for the trees in the population.

G2.1.4. Walkover tree survey

G2.1.4.1. Where the level and nature of use within an area is low, where the trees are small or the potential to cause harm is limited, where recording the trees in an inventory would be prohibitively expensive or where the management objective of inspecting trees is intended to be entirely risk focused then a walkover survey may be undertaken. In a proportion of the circumstances described above no regular inspections may be considered necessary or appropriate. For example, a very rarely visited corner of a country park containing a plantation of small trees may require inspections on a very long interval merely to provide an opportunity to recommend formative pruning or silvicultural thinning operations. If that area is very restricted, by course vegetation or boggy ground, it is perfectly reasonable to exclude the area from any regular inspection regime.

G2.1.4.2. Within an area identified as requiring a walkover survey trees or groups of trees will be recorded in the tree management database where remedial measures have been identified as necessary to reduce risks below a threshold level, or where monitoring, further information or further assessment by a more experienced individual is recommended.

G2.1.5. Informal tree survey

G2.1.5.1. In addition to the formal, structured, planned survey regimes described within this strategy the Council recognises that tree issues can be identified by non-specialist staff undertaking their daily duties, whilst operating within the estate. Staff with specialist arboricultural knowledge will also be travelling within the area and will have the opportunity to make informal observations regarding risk and nuisance issues outside their formal tree inspection activities.

G2.1.5.2. Reports relating to tree issues identified during activities outside the formal tree inspection process will be made through the formal enquiries and complaints procedure operated by the Council and described in Section 5 of the Tree Management Strategy.

G2.1.5.3. Further investigation instigated by the submission of such reports will range from consulting the records for the tree in question held in the tree management database, to the initiation of a specific site visit and inspection to be undertaken by a specialist.

G2.2. Tree inventory

G2.2.1. A long-term management resource

G2.2.1.1. For the majority of trees, groups of trees, hedgerows and small copses, shelterbelts and woodlands a record will be held in the tree management database regardless of whether any immediate works are required to manage risk, as part of the long-term and proactive approach to the management of the tree population that will be adopted in recognition of the value that the Council places on trees. This will allow resources to potentially be allocated to desirable, but non-urgent measures that would be beneficial to the maintenance and development of trees within the tree population.

G2.2.1.2. Tree inventory data will be held in a tree management database and locations will be plotted within a linked GIS.

G2.2.2. Tree data

G2.2.1. The inventory will involve the collection of data, recorded against each tree or group of trees during a survey, to cover a number of specific areas.

- *Unique reference.* Each tree or group will be assigned a unique reference within the database.

- *Ownership or responsibility.* A record or records relating to ownership or responsibility will be held to allow costs relating to work schedules and inspection regimes to be assigned to specific budgets where this is appropriate.

- *Tree Species.* Species will be recorded to assist with identifying a particular tree on site, to aid management decisions where this is species specific, and to inform tree population level assessments such as resilience and diversity.

- *Basic dimensions.* Data relating to height, stem diameter and crown spread will be collected to assist with identifying a particular tree on site and to help to inform management issues or to respond to enquiries without the need for a site visit *i.e.* to consider whether a tree is located within falling distance of a target, or to make an initial assessment of whether a tree overhangs a boundary.

- *Life stage.* Data to establish whether a tree is young, semi-mature or mature will be recorded to assist with identifying a particular tree on site and to inform tree population level assessments such as sustainability.

- *Health or physiological condition.* An assessment of the health of the tree will inform future management approaches as well as tree population level assessments such as resilience.

- *Observations of attributes or defects.* A comprehensive record of the morphological and physiological features of each tree and any defects, whether significant or not, will be recorded to assist with identifying the tree on site and to act as the core data informing management and justifying management decisions.

- *Context.* The nature and level of use around the tree will be recorded to inform risk management and nuisance decisions.

- *Risk assessment.* A formal tree risk assessment will be recorded to inform management decisions where significant defects are noted and where trees are adjacent to an area of use such that there is a potential to cause harm.

- *Recommendations.* Pruning measures deemed necessary to reduce the likelihood of failure of a tree or tree part, whether risk related or to preserve the tree, as well as measures to manage nuisance or pruning simply for good arboricultural practice or general maintenance will be recorded. Similarly measures to improve tree or soil health will be recorded where this is considered desirable.

- *Target date.* Recommendations will be given a target date for completion to assist with prioritisation and decision making in terms of the allocation of resources. Recommendations will be signed-off as completed when work has been delivered.

- *Cost estimate.* Recommendations will be assigned an estimated cost to inform annual budget estimates and assist with long-term planning.

- *Inspection.* Every tree or group record will be assigned a next inspection recommendation to ensure that a cycle of inspections can be maintained throughout the tree population.

G2.2.3. Trees and groups

G2.2.3.1. Trees will be recorded using point data and groups will be recorded as polygon areas in the GIS. The decision to record trees as individual records or collectively within groups will rest with the judgment of the surveyor or consultant undertaking the survey.

G2.2.3.2. The decision will generally be taken to plot a group polygon rather than individual point data where trees have similar characteristics such as age, species, or size or where the management of an area of trees is most appropriately considered on a collective basis. In addition, group polygon data may be appropriate where the density or close proximity of a number of trees would mean that individually plotted tree point data would become too congested for the data to be easily distinguishable on a plan and would therefore become unmanageable within the GIS.

G2.2.3.3. The survey will aim to record all trees within a tree population including young planted trees, natural regeneration and tree stumps, where holding this data is appropriate and useful for the long- term management of the tree population, for example where a re-inspection will be appropriate within a reasonable timescale to reassess the trees, or where there is a need to record a management recommendation.

G2.2.4. Tree inspection and assessment method

G2.2.4.1. Trees will be assessed during an inspection with reference to the principles described by Visual Tree Assessment proposed by Mattheck and Breloer (1994) and according to general industry best practice for tree inspection such as that summarised in Lonsdale (1999) and various other industry reference documents. Such guidance will be followed to assist in identifying potential defects or areas of concern within the crown structure and the root system of a tree. In addition, suspected or observed changes in the circumstances surrounding the tree, such as excavations, level changes or the removal of adjacent trees or structures that may impact on root stability or the loads to which a tree is exposed will be taken into account when making recommendations for possible management approaches.

G2.2.4.2. The significance of these structural and circumstantial observations will also be considered in relation to the physiological condition of the tree. The potential interaction between decay fungi or pests and diseases with a tree of a particular species will be considered in so far as this might influence the rate at which the current situation might change. Critically, the extent of strength loss associated with any defect will be considered within the context of the safety factor expected for the tree (determined by the relationship between load, stem form and material properties).

G2.2.4.3. During the inspection, observations and investigations relating to each tree being assessed will be achieved through the use of binoculars, sounding mallet, trowel and manual probe and will be undertaken from ground level only. Aerial inspection, invasive or other detailed internal decay detection devices will not be employed when assessing trunk or crown condition during the routine

tree survey. Excavations will not be carried out to assist with assessing root condition. Tree or soil samples will not be taken or analysed as part of the tree inspection process during the routine tree survey site visit. However, recommendations to procure such additional information at a subsequent date, to assist with a management decision, may be made as part of the tree inspection process.

G2.2.4.4. In addition to observations relating to the likelihood of failure of the tree or group being assessed, any other issues such as the nuisance caused by tree crowns conflicting with structures, thoroughfares, highways or visibility splays will be noted where these are considered relevant and where the Council has a responsibility to manage these issues.

G2.2.4.5. Where access to inspect a tree or group of trees is impeded, restricted or unsafe, information will be collected as far as feasible given the circumstances, to fulfil the inspection requirement. In these circumstances recommendations to achieve improved access or visibility either through the removal of scrub, debris, vegetation or climbing plants, or through the procurement of keys or access codes (or access permission) to allow a more thorough inspection during a subsequent inspection programme may be specified.

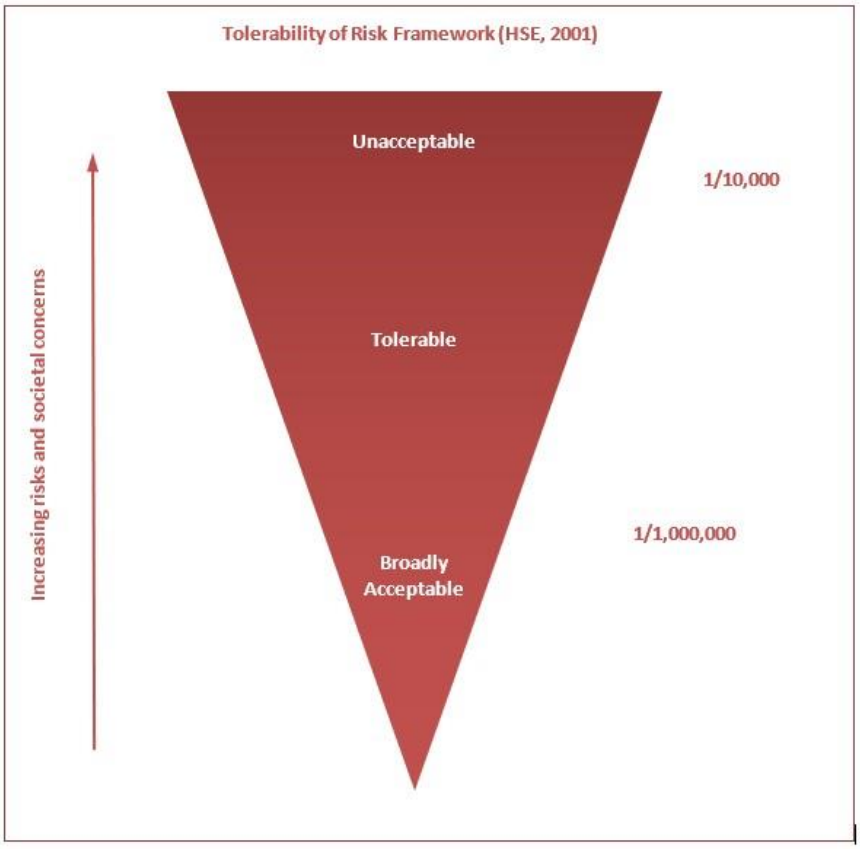
G2.2.5. Risk assessment

G2.2.5.1. Where considered appropriate during the tree inspection, a formal risk assessment will be undertaken to assist with the decision-making process. The risk assessment system employed will consider the likelihood of failure of the tree or tree part, the likelihood of a person or property being present if failure were to occur and the expected consequence in terms of the extent of harm likely to be caused were failure to coincide with the presence of a target. The output of the system employed will be expressed in terms of probability to enable consideration in terms of absolute thresholds for risk, rather than in relative terms, or should refer directly to the HSE guidance on the treatment of risk (HSE, 2001).

G2.2.5.2. A risk of harm that is more likely than 1/10,000 will be considered to be equivalent to an unacceptable level of risk, according to the Tolerability of Risk Framework (HSE, 2001). Measures to reduce such risks will be recommended as a matter of high priority, usually to be dealt with within a short timescale, and outside of any annual, planned or programmed management activities.

G2.2.5.3. A risk of harm that is more likely than 1/1,000,000 and less likely than 1/10,000 will be considered to be equivalent to a tolerable level of risk and measures to reduce such risks will be recommended only if such operations are considered to be cost-effective, provided that such expenditure is not grossly disproportionate to the risks posed so that risks are managed to a level that can be considered to be as low as reasonably practicable[1]. In general, due to the relatively high costs of tree pruning operations, only those risks posed by trees that are greater than 1/100,000 will usually require consideration for an allocation of resources to achieve a measure of risk reduction. Expenditure on reducing tree risk below this level can generally be considered to be grossly disproportionate in relation to the benefits of the risk reduction measures carried out.

[1] As low as reasonably practicable (ALARP). If the benefits in terms of risk reduction are very low when compared to the costs of achieving that level of risk reduction then ths expenditure can be considered to be grossly disproportionate, and justification for not allocating resources can be made. The risks posed would be considered to be at a level that is already as low as is reasonably practicable. The principle is easier to understand where a decision relates to a choice between two actions, where both cannot be funded.



G2.2.5.4. A risk of harm that is less likely then 1/1,000,000 will be considered to be equivalent to a broadly acceptable level of risk and measures to reduce the risk further will l not generally be considered to be appropriate (and would not be considered to be a sensible allocation of Council resources).

G2.2.5.5. For the majority of trees inspected an informal risk assessment will quickly indicate that the risks posed by a tree are broadly acceptable and the formal risk assessment will not be calculated. In these circumstances, records will show that no formal risk assessment was deemed necessary.

G2.2.5.6. A threshold of risk for trees across the Council's tree population that will be broadly applied during formal tree surveys is 1/100,000 on the principle that expenditure beyond this is likely to be grossly disproportionate in terms of the principle of reasonable practicability.

G2.2.6. Recommendations

G2.2.6.1. Specific recommendations relating to tree surgery work or other remedial measures will be recorded against tree or group records during an inspection where considered appropriate to address risk, nuisance, pest and disease control measures, good arboricultural practice or long-term maintenance requirements.

G2.2.6.2. Such recommendations will be assigned a subjective priority generating a target date for completion, to assist with sequencing potentially large work programmes and to enable the Council to maintain control of management budgets. The choice of a priority or target date by a surveyor will be informed by the inspection and any formal quantified risk assessment, where risk is the management issue being addressed. However, where other issues are being considered the surveyor will be required to use their judgment to determine what is reasonable and appropriate, bearing in mind the implications of assigning unnecessary or unjustifiable urgency for work items, upon annual

budget commitments. The surveyor should consider how long it would be reasonable to delay dealing with a particular issue and use this as a basis for recording a priority. There is nothing to prevent work being brought forward should sufficient resources become available to do so.

G2.2.6.3. The following examples serve to illustrate the decision process that might be followed by the surveyor when assigning a priority to recorded work:

- A large limb with a significant defect overhanging a busy highway is assessed to pose an unacceptable level of risk. Remedial measures are commissioned as a matter of urgency, outside of any planned management regime. A target date to deal with the issue is selected by the surveyor, for example, within 1 month, which is then recorded in the database.

- A large limb with a defect and a moderate likelihood of failure overhanging a footpath is assessed to pose a tolerable level of risk greater than 1/100,000. A target date to reduce the risk to an acceptable level within 1 year, for example is recorded.

- A tree crown is noted to be touching the guttering of an adjacent property. Damage is considered moderately likely to occur. A risk assessment determines that the risk of harm is tolerable but below 1/100,000. A target date to prune the crown from the property within, for example, 2 years being recorded. The risk assessment suggests that the work need not be completed in pure risk management terms. However, the subjective priority indicates that other issues related to Council reputation or resources that would be tied up in dealing with an enquiry or complaint determines that the work should be completed.

- A tree crown is noted to be touching the roof of an adjacent property. Damage is not considered likely to occur until the limbs touching the property reach a larger size. A risk assessment is not recorded (risk is considered to be at a broadly acceptable level). A target date to prune the crown from the property within, for example, 3 years is recorded.

- A tree crown obscures a streetlight. The impact on light levels is currently not significant, but is considered likely to become significant within 3 or 4 years. A risk assessment is not recorded (risk of harm from tree failure is not an issue, though other risks related to visibility do apply). A target date to prune the crown from the streetlight within, for example, 3 years is recorded.

- A tree crown obscures a visibility splay at a busy junction. A risk assessment is not recorded (risk of harm from tree failure is not an issue, though other risks related to highway safety do apply).

  The potential consequence, in terms of a road traffic accident, is high. A recommendation to lift the crown of the tree is recorded with a priority of between 1 and 6 months.

- The stem of a young planted tree is constricted by a planting strap. The strap has caused significant damage. A risk assessment is not recorded. A target date to remove the strap within 1 or 2 years is recorded to prevent the inevitable loss of the tree.

- A plantation of semi-mature trees requires a silvicultural thinning operation, to ensure the future development and viability of the group. A risk assessment is not recorded. A target date of between 5 and 10 years is recorded. The work is not likely to get commissioned strictly according to the target date. However, costs are assigned to an operational year to help inform future budgets.

G2.2.6.4. A range of priorities including Immediate, 1 month, 6 months and 1-10 years will be available as options for the surveyor to apply to recommendations being made during a tree inspection.

G2.2.7. Inspection regime

G2.2.7.1. A recommendation to carry out the next inspection within a certain timeframe will be recorded for every tree or group of trees assessed during each inspection. This will ensure that data is available to define a periodic inspection regime regardless of whether any remedial pruning is commissioned for the entire tree population.

G2.2.7.2. The choice of inspection interval will be determined based on the size, age, species and condition of the tree or group of trees in relation to the context within which it is growing. The interval will take into account the requirement for remedial work and the target date that any current work recommendations have been assigned. An appropriate inspection interval will also be influenced by the level and nature of use in the vicinity of the tree and the potential speed with which the condition of the tree might reasonably be expected to change.

G2.2.7.3. Where trees are recorded as part of an inventory an opportunity exists to record an inspection interval tailored to each unique set of circumstances related to an individual tree and to adjust this over time in response to changes in those circumstances. Decisions relating to an appropriate inspection interval will be made by the surveyor whilst on site inspecting the tree in the context of its surroundings, at the point that they are best placed to make such decisions, rather than as a desk-based exercise applying broad zones to define inspection cycles. Inspection cycles defined by zones inevitably results in an inefficient allocation of resources and are only appropriate where no inventory data is available.

G2.2.7.4. The following examples serve to illustrate the decision process that might be followed by the surveyor when assigning a priority to the inspection interval:

- Works to address risk have been recommended with a target date for completion of within 1 year. Whether such works will be commissioned or not will depend on the available annual budget. An inspection interval of 1 year will be recorded to cover the eventuality that this work recommendation is not commissioned as intended.

- The crown of a tree is growing close to an adjacent building. The surveyor anticipates that, given growth rates typical for that species, the crown will begin to conflict with the property within 4 years. An inspection interval of 3 years is recorded to reassess this expectation.

- Alternatively; The crown of a tree is growing close to an adjacent building. The surveyor anticipates that, given growth rates typical for that species, the crown will begin to conflict with the property within 4 years. A work recommendation to prune away from the building with a target date of 4 years is recorded so that costs are assigned to a budget. An inspection interval of 3 years is recorded to cover the eventuality that this work recommendation is not commissioned as intended. The work would potentially be completed earlier than necessary if growth rates are slower than the surveyor expects. The inspection gives the opportunity to postpone the work.

- A mature oak adjacent to a busy highway is noted to have no significant defects within the crown and the root environment suggests that no significant issues are likely. Whilst the level of use adjacent to the tree is high an inspection interval of 3 or 4 years might be appropriate because the likelihood of defects developing rapidly is low. Safety factors for a mature oak with a large diameter are high, so significant defects are required before failure is likely.

- A mature birch adjacent to a busy highway is noted to have no significant defects within the crown and the root environment suggests no significant issues are likely. Decay processes and decline

have the potential to occur at a faster pace for this species. Stem diameter and wood strength are lower than oak in maturity, so safety factors prior to defects being taken into account are also lower. An inspection interval of 2 years might be appropriate.

- A young planted tree adjacent to a busy highway poses a very low level of risk. An inspection interval might be driven by a requirement to consider allocating resources to formative pruning to facilitate highways clearance preemptively before the resulting pruning wounds would become too large. An inspection interval of 5 years might be appropriate.

- A semi-mature tree with a good crown structure and no defects is located within a public park in a low use area. An inspection interval of between 5 and 10 years is recorded, depending on how low the use is considered to be, and whether any formative pruning might be considered appropriate at some point during development. There is no requirement to prescribe a short interval in case a branch is broken in a high wind event. Decisions should be based on an assessment of likelihood not on the basis of simply what is possible.

G2.2.8. Level of training and expertise

G2.2.8.1. Undertaking an inspection of a tree as part of the formal tree survey process requires sufficient and specific knowledge and experience and should be carried out by a member of staff or external contractor that is suitably competent and with an appropriate level of training or experience.

G2.2.8.2. Clearly the level of training and experience appropriate for assessing small trees in low use areas differs from that required to make decisions regarding mature trees adjacent to a busy highway. Where detailed assessment of trees with significant defects are required through the use of devices or instruments further specialist knowledge, training and experience will be required.

G2.2.8.3. The Council will require that those tasked with carrying out an operation will have suitable training and experience. The Council will support in house employees in developing their skills and achieving the certification necessary to ensure that they are judged to be able to undertake the tasks required of them and further will aim to ensure that all staff are comfortable in making the management decisions required of them

G2.2.8.4. The Council operates an Arboricultural Services Framework that includes a range of contractors and consultants who have suitable skills and experience to deliver the arboricultural services required. The Council also support staff in Continued Professional Development to ensure that they are comfortable in making the decisions required of them in managing Luton's tree stock.

G2.3. Walkover tree survey

G2.3.1. Managing tree risk only

G2.3.1.1. Areas under the responsibility of the Council will be identified in the GIS where it is not appropriate or cost-effective to record an inventory survey of trees and groups of trees (see Section 2 Tree inventory). Within these areas a periodic walkover survey will be undertaken.

G2.3.1.2. A walkover survey involves recording trees and groups of trees only where the risks posed are considered to have exceeded a threshold level and where remedial measures are recommended.

G2.3.1.3. Such an approach is appropriate to achieve an efficient and cost-effective survey of large and complex sites where the management of tree risk is the over-riding objective, whilst maintaining a system to record data sufficient to constitute an audit trail in the absence of a full tree inventory.

G2.3.2. Inspection zones

G2.3.2.1. Inventory data is not available for areas assigned to a walkover survey regime. Consequently, an appropriate inspection interval will be defined at an area level through creating inspection zones within the GIS, with an inspection frequency assigned to any trees located within each zone, regardless of the tree's size, age and condition.

G2.3.2.2. Efficiency in the allocation of inspection resources will be achieved, where possible, by breaking up walkover survey areas into individual zones within which the use and tree population are relatively similar. Inevitably there will be some variation within any zone. The inspection interval for each zone will be determined by the most frequent inspection deemed appropriate (*i.e.* based on the combination of the highest level of use and the trees with the greatest potential to cause harm).

G2.3.2.3. How far each walkover area is broken down further into inspection zones will depend on the balance between the efficiency that would be achieved over the long-term in terms of allocating inspection resources and the time and expense required in dividing each area. This process can be ongoing and evolve with subsequent walkover site visits.

G2.3.2.4. It is appropriate that some zones within any area will be assigned no inspection frequency because the level of use is so low, or the trees are so small that it is not possible for the level of risk posed to be high enough to reach a threshold where remedial measures are justified. Whether a walkover survey is required for these areas will be reviewed every 5 years.

G2.3.2.5. Inspection zones with frequencies of between 1 and 5 years will be assigned to all areas within which a walkover survey regime has been determined to be appropriate.

G2.3.2.6. The following example serves to illustrate how inspection zones will be assigned to an area where a walkover survey has been determined to be appropriate:

G2.3.2.7. A country park is considered to have a high level of recreational use by members of the public, but the area is so large that an inventory is not considered a viable or cost-effective management approach. A general management plan exists for the park so a tree inventory has the potential to conflict with the aims of that management plan. Tree risk management responsibilities will be achieved through an annual walkover survey. During the walkover survey it becomes clear that the high recreational use is, in reality, limited to the car park, the visitors centre and a zone several hundred metres from these focal points. The park is therefore broken up into 4 inspection zones - an inspection interval of 1 year around the visitors centre, an inspection interval of 3 years where trees are within falling distance of the footpath around the park, an inspection interval of 5 years for the areas of young woodland with no frequent access containing trees that have a low potential to cause harm and an area of scrub in an inaccessible corner of the park that requires no walkover inspection.

G2.3.3. Site visit records

G2.3.3.1. Tree and group records are recorded in the tree management database only where the risks posed exceed a threshold value. It is possible that no trees will exceed the risk threshold within a particular survey area and consequently a walkover survey may result in no trees or groups being recorded in the tree management database. In such scenario where no trees are recorded, a record that a site visit has been undertaken will need to be maintained either within the tree management database or elsewhere as an audit trail that management commitments have been fulfilled.

G2.3.4. Tree data

G2.3.4.1. Where trees or groups of trees are recorded due the level of risk posed, the same data that is recorded during an inventory will be collected against a tree record in the tree management database as set out is Section 2.2. This data is recorded to enable a contractor to find the tree on a plan and to know what remedial measures have been recommended to manage the risks.

G2.3.5. Walkover survey inspection and assessment method

G2.3.5.1. The proposed survey method involves recording tree data within the tree management database only when a tree or group of trees has been identified as posing a specific level of risk. The approach is appropriate for large areas and consequently is limited by available resources; the time and level of investigation that can reasonably be allocated to the inspection of each individual tree. In general, a walk-over survey will involve a cursory assessment of the majority of trees with the aim that attention is drawn to specific trees that warrant further inspection. The following factors may identify a particular tree or group as warranting closer investigation during the walkover survey:

- Poor crown condition
- Observed fungal fruiting bodies
- Observed adaptive growth or defects
- Changes to the local environment
- Changes to ground conditions
- Evidence of a history of tree failure within the vicinity
- An undefined impression of general characteristics

G2.3.5.2. This approach is necessary and defendable because of the scale of the area being assessed, in relation to the resources available. As a consequence, small trees and trees in remote areas that are generally incapable of posing a high risk can be justifiably excluded from any significant attention from the surveyor, unless they are clearly and imminently about to fail. Similarly, the degree of effort or resources applied to surveying trees where access is restricted, for example by dense undergrowth, or where the trees are obscured by ivy, can also be limited, unless one of the above factors leads this principle to be over-ruled.

G2.3.6. Level of training and expertise

G2.3.6.1. Walkover surveys are difficult, challenging and require a high level of experience, confidence and discipline in focusing only on those trees meeting very specific criteria with regard to the level of risk posed.

G2.3.6.2. The surveyor will need to exercise judgment in how much time it is appropriate to spend investigating certain trees and will need to base such judgments on a sound understanding of risk and probability together with the survey remit, requirements and limitations.

G2.3.6.3. Applying the principles set out in the walkover inspection and survey method to focus time and attention in an appropriate fashion will therefore need to be applied by a competent arboricultural officer or surveyor with experience and a National Qualification Framework of level 3 or above, or in the case of a trainee, under the supervision of a level 3 or above, who is comfortable with the survey method and the framework within which they are being asked to operate.

G2.3.7. Unscheduled Work

G2.3.7.1. During the course of the budget year unusual weather events will inevitably result in unexpected tree failures, that will be reported to the Parks Service through various channels.

G2.3.7.2. Unplanned nuisance issues will arise or be reported and will be directed to the Parks Service through the Council's enquiries and complaints system.

G2.3.7.3. The Highways department will make requests through the Council's enquiries and complaints system for the Parks service to carry out pruning or tree felling operations to deal with highways clearance issues.

G2.3.7.4. Subsidence and damage claims will be communicated to the Parks service either via an insurance claim of through the Council's enquiries and complaints system.

G2.3.7.5. With the exception of the subsidence and direct damage reports these work requests will be considered and actioned on the basis of prioritisation with reference to budget avilability and with reference to the relevant policy and strategy sections of this document.

G2.3.7.6. Requests for unscheduled works will not be actioned where these contradict overriding policy objectives, particularly where the issue is related to one of nuisance.

G2.3.7.7. Requests to carry out unscheduled works will not be actioned where to do so would result in funds being diverted from planned works that warrant a higher priority, or where such works are already within the planned programme of works, or where the issue has already been noted during an inspection where the recommendation is for the issue to be assessed, or dealt with at some planned time in the future.

G2.3.7.8. Reports or claims of subsidence or direct damage will be dealt with according to Policy 5 and the Subsidence and direct damage section.

Guide 3: Subsidence and Direct Damage Handling

G3.1. 1 Proactive Management approach

G3.1.1.1. A proactive approach to managing the risk of subsidence will be implemented according to the recommendations set out in the London Tree Officers Association Risk Limitation Strategy For Tree Root Claims (2008). A similar approach will be applied to the management of direct damage and claims of direct damage to buildings by tree roots, such as the movement of boundary walls, or disturbance to hard surfacing.

G3.1.1.2. The principle aim of the strategy will be to minimise the number and cost of subsidence and direct root damage claims, but to retain trees wherever possible (and where this is cost effective) in recognition of the value and benefits that trees bring to the town. Following this strategy will also put the Council's loss adjusters in the position where they may have the ability to contest claims based on the premise of reasonable care.

G3.1.2. Council owned trees

G3.1.2.1. The Council will record the incidence of subsidence to identify areas within the town that have a high risk of subsidence and where the presence of shrinkable clay soils are predisposed to building movement.

G3.1.2.2. Within these areas trees that pose a high risk of subsidence will be identified, according to species and size (and therefore water demand) as well as to their proximity to buildings, and the vulnerability of buildings to subsidence. Action Plan x aims to identify and map areas with a high risk of subsidence and record, in the tree management database, trees with a management regime designed to reduce the risk of subsidence.

G3.1.2.3. Where the Council has identified an area with a high risk of subsidence a preventative approach will be considered which may include:

- Implementing a cyclical pruning regime to reduce and stabilise the water uptake of high-risk trees in high risk areas, targeted at those trees in areas where there is a history of subsidence and subsidence claims where trees are in proximity to vulnerable buildings.

- Considering the removal and replacement of high risk trees in situations where pruning will not adequately address the subsidence risk, where the tree is in poor condition, or is considered to be low value, or where the ongoing management (of the tree, or of related complaints and claims) is considered likely to be unreasonably costly.

- Replacing trees following the principle of the right tree in the right place to minimise the chance of a recurrence of conflict or issues in the future.

G3.1.2.4. The Council will take prompt action when notified of a potential claim and will work to the spirit of the London Tree Officers Association Joint Mitigation Protocol (2008) to manage the claims processes.

G3.1.2.5. Where claims are received the onus to provide evidence that the tree is the cause of building
movement will fall on the complainant. The Council will carefully scrutinise the evidence provided by the claimant to ensure that the tree is, on the balance of probability, the cause of the building movement. The Council will assess claims received through the Council's formal reporting procedure.

G.3.1.2.6. Where available, sufficient resources will be allocated by the Council, in terms of officer time, to enable confidence that the evidence provided to support a claim is sufficient and to ensure that the evidence eliminates all other factors before attributing the cause of building movement to a tree, as proposed in guidance provided by the Institution of Structural Engineers (2000).

G3.1.3. Privately owned trees

G3.1.3.1. The Council will allocate dedicated resources to assess Tree Preservation Order applications and Conservation Area notifications requesting tree removal or cyclical pruning measures where tree related subsidence or direct damage is claimed.

G3.1.3.2. The same level of scrutiny will be applied to the evidence provided by the tree owner as that required for council owned trees, to establish the cause of building movement to a satisfactory level of confidence.

G3.1.3.3. Applications to prune or fell trees covered by a Tree Preservation Order will not be registered where appropriate and sufficient evidence has not been provided. The following evidence is a statutory requirement to accompany a TPO application:

- *"Subsidence: A report by an engineer or surveyor (to include a description of damage, vegetation, monitoring data, soil, roots and repair proposals) and a report from an arboriculturist to support the tree work proposals.*

- *Other structural damage (e.g. drains, walls and hard surfaces): Written technical evidence from an appropriate expert, including description of damage and possible solutions"*

G3.1.4. Evidence

G3.1.4.1. The level of evidence required to support a claim where council owned trees are believed to be causing damage, or where an application or notification is being made to fell or prune a tree with statutory protection, will be related to a Capital Asset Valuation of Amenity Trees (CAVAT) assessment of the tree in question.

G3.1.4.2. A higher level of evidence will be required to demonstrate that the tree is the cause of damage for those trees considered to have a higher value as set out in the Joint Mitigation Protocol and Risk Limitation Strategy guidance. This will ensure that the level of confidence in reaching decisions about the future management of a tree, is appropriate in the face of the potential loss or damage (through pruning) that would arise.

G3.1.4.3. Investigations to determine causation on the balance of probability relate to determining:

- The nature and degree of the movement of the building.
- Foundation and building design
- The properties of the soil
- The presence and origin of tree roots
- Drainage infrastructure

G3.1.5. Claims handling

G3.1.5.1. The Council will endeavour to manage claims promptly and will operate according to the spirit of the processes described in the London Tree Officers Association Joint Mitigation Protocol (2008).

G3.1.5.2. The protocol sets out how to proceed once a claim is made. The Council will set benchmarked timescales for the process of handling a claim.

G3.1.5.3. Claims will be handled on a non-adversarial basis. Both parties will be afforded an opportunity to state or modify their position at an early stage. The opportunity for both parties to meet informally to resolve disputed cases will be available without prejudice to liability.

G3.1.5.4. Decisions will be based on the evidence provided and appropriate evidence will be required by the Council prior to reaching a decision.

G3.1.5.5. The Council will provide the claimant's insurer with requested information relating to the responsible department and officer, the Council's liability insurer and the assessed value of the tree according to CAVAT (high, medium or low) within a reasonable timeframe to avoid de laying the progress of a claim.

G3.1.5.6. Submission of evidence will be required from the claimant's building insurer within a fixed timeframe or the insurer will be expected to withdraw the case.

G3.1.5.7. Required levels of evidence will relate to the value of the tree.

G3.1.5.8. If agreed, mitigation will be carried out within a reasonable timeframe to prevent further damage to the building.

G3.1.6. Direct damage - roots and stem

G3.1.6.1. The Council will require evidence that tree roots are the cause of direct damage before a decision will be reached regarding the long-term management of a tree. The extent of evidence required that the tree is responsible for the damage will depend on the value of the tree and a process similar to that taken for the consideration of subsidence claims will be followed.

G3.1.6.2. Mitigation for direct damage by roots may be achieved through simply severing the roots at the boundary between council owned land and the privately owned land upon which damage is occurring. The Council will consider whether it is cost-effective to sever roots or to remove a tree that has been shown to be causing direct root damage. Whether measures will be taken by the Council to prevent recurrence of, or the potential for the recurrence of root damage through preventing the growth of roots extending across a boundary will be considered on a cost benefit basis.

G3.1.6.3. Where incremental growth of a tree stem is causing direct damage then appropriate measures that might allow the retention of a tree will be discussed prior to acceptance that tree removal is the only management option.

G3.1.7. Direct damage - crown

G3.1.7.1. The Council will manage trees, in respect of the potential for conflict between above ground parts and adjacent structures, proactively through operating a regime of periodic tree inspections as described in the Tree inventory and Walkover tree survey sections. Where tree crowns or limbs are noted to be conflicting with a structure such that direct damage is considered likely to be caused through either impact during movement in wind events or through progressive annual growth, then remedial measures to prune away from the structure will be specified and recorded during a routine inspection of the tree and will be held as a record within the tree management database.

G3.1.7.2. Remedial works to prevent or mitigate for damage will be prioritised, and works will be completed within a time frame appropriate to the nature, extent and the potential cost of the damage that might be caused in relation to other demands on the resources allocated to managing the tree stock. Remedial work to prevent major damage or to reduce risk will take priority over measures to deal with minor or inconsequential damage.

G3.1.7.3. The Council will only undertake remedial measures to prevent damage and does not make a commitment to maintain any specific clearance or to remove any tree where conflict can be managed adequately through routine inspection and periodic pruning operations.

Guide 4: Managing Highway Trees

G4.1.1 Tees and hedges obstructing the highway

G4.1.1.1. The Council will aim to meet its duty to maintain the highway clear of obstruction and interference by above ground tree parts through operating a proactive, cyclical tree management programme of Council owned trees as described in Section 2 Tree inventory and Section 3 Walkover tree survey. The routine and periodic inspection regime and the resulting scheduled annual works programme, will consider and make recommendations to manage a range of issues including risk of harm to members of the public and damage to property through tree failure, the potential for direct damage to property, general issues of nuisance, and nuisance that has the potential to result in non- failure tree risk, as well as general good tree maintenance practices and the requirement to keep the highway clear.

G4.1.1.2. The tree survey will be administered by the Parks Service with a range of responsibilities and competing demands on resources from a number of areas only one of which is obstruction to the highway.

G4.1.1.3. During the routine tree inspection process maintaining clearance of low tree canopies over carriageways and footways, ensuring clear visibility splays and sightlines, and maintaining unobscured road signs and street lights will be included in the standard considerations for which remedial works may be required. During the tree survey the prioritisation of such works will be treated in the same way as the prioritisation of recommendations to achieve other objectives, such as risk and general nuisance, will be based on sound principles of risk management and will take into account cost effectiveness in the context of limited annual resources.

G4.1.1.4. For example, restoring a visibility splay at a busy junction where the risk of an accident (and the consequences of an accident) are considered to be high will tend to justify action within a short timeframe. Clearance from a streetlight over a busy road is likely to justify less urgency, but might be proposed to be programmed to be achieved sooner than clearance from a streetlight along a minor
road or a light over an infrequently used footpath. Similarly, clearance of a road warning sign might be proposed to be achieved sooner than clearance of an informative sign.

G4.1.2. Highways safety and service inspections

G4.1.2.1. Concurrently to the periodic tree surveys administered by the Parks department, safety and service surveys of the carriageways and footways will be carried out by the Highways department as described in the Highway Maintenance Operational Manual (2018) to meet the requirements set out in the Highway Asset Management Policy and Strategy (2018).

G4.1.2.2. The frequency of inspections carried out by the Highways department across the carriageway and footway network will take a risk- based approach targeting resources at the higher use areas, where the consequence of highway asset failure is the greatest. The survey regime will be carried out according to the carriageway and footway hierarchy defined across the network.

G4.1.2.3. The Highways Department has defined set response times for dealing with various issues dependent on the level of use of the infrastructure (according to the carriageway and footway hierarchy) and the severity of the issue or defect in the highway asset identified during the safety and service survey regime.

G4.1.2.4. Abrupt footway trip hazards caused by tree roots will be assessed by the highway inspector according to risk matrix 1F at Appendix 1 in the Highways Maintenance Operation Manual.

G4.1.2.5. Footway surface level differences will be assessed by the highway inspector according to risk matrix 1J at Appendix 1of the manual.

G4.1.2.6. Traffic signs obscured by vegetation will be assessed by the highway inspector according to risk matrix 1K at Appendix 1of the manual, with remediation of regulatory and warning signs taking priority.

G4.1.2.7. The Parks Service will not necessarily record recommendations during the tree survey with priorities that adhere to the response times and prioritisation set out in the Highway Maintenance Operational Manual. If the level of risk from a highway defect is the same as for a tree defect then the response time should be the same. Incorporating the implications of these risk matrices directly and strictly into the tree management decisions that need to be considered by the tree surveyor would add a degree of complexity and rigidity to what already involves a broad range of considerations and has the potential to conflict with the competing aims of the tree survey.

G4.1.2.8. However, the general principle that higher risks are likely where issues arise on areas of the network classified as higher use will be followed naturally as part of a general risk aware approach to tree inspection.

G4.1.2.9. The general proactive management and maintenance of the tree population carried out by the Parks Service through the day to day operation of the tree survey is likely, over time, to resolve many of the above ground conflicts between trees and the highway infrastructure through the annual, scheduled works packages issued and managed by the Parks Service. These contracts contain a suite of remedial measures designed to resolve issues related to tree failure risk, nuisance as well as conflicts with the highway.

G4.1.2.10. Issues may be identified during the safety and service surveys undertaken by the Highways department that have not been already recorded during the tree survey. this will instigate an inspection by the arboricultural officer and any work required will be prioritised and included into the annual scheduled works package commissioned by the Parks Service.

G4.1.2.11. Where issues have not been picked up and managed as a result of the routine tree survey then the Highways department may request that a tree pruning operation that has been identified during a safety or service survey, be arranged by the Parks Service. The Parks Service will be informed of the request via the formal enquiries and complaints process operated by the Council.

G4.1.3. Management of trees causing surface disturbance

G4.1.3.1. The tree survey will not make recommendations to resolve surface disturbance issues because the remedial measures required relate to resurfacing or engineering operations outside the

expertise of the tree specialist. The identification and resolution of surface disturbance by tree roots will be the responsibility of the Highways department.

G4.1.3.2. Flow Chart 1 at Appendix 1 of the Highway Maintenance Operational Manual sets out the decision-making process that will be followed by the Highways department.

G4.1.3.3. Where roots have damaged surfacing the Highways department will aim to retain trees wherever possible. Surfaces will be repaired where levels can be restored to within acceptable tolerances, where roots do not need to be removed or where root pruning is minimal and is not considered to be likely to harm the tree.

G4.1.3.4. Where engineering solutions can be employed that allow tree retention and avoid root pruning and where the tree offers sufficient value then the additional costs involved will be considered.

G4.1.3.5. The value of a tree will be incorporated formally into the decision-making process using the Capital Asset Valuation of Amenity Trees (CAVAT) system. The costs of engineering solutions will be considered in the context of the potential loss of the CAVAT value of any implicated tree. In this way apparently costly engineering solutions have the potential to become re-evaluated as the cheaper option.

G4.1.3.6. Where advice is required to determine the extent of root pruning that a tree might tolerate the Highways department will contact the Parks Service to consult with an arborcultural specialist. Such engagement will be facilitated through the formal enquiries and complaints process operated by the Council.

G4.1.3.7. Tree removal will only be accepted following consultation with the Parks Service, where root pruning is considered to be an unacceptable solution in relation to the long term viability of the tree, where the loss of the tree is not considered to result in a significant loss of amenity because of the low value of the tree, or where the loss of amenity is less significant due to the high value of other trees in the street.

G4.1.3.8. Where a decision has been reached to remove a tree, then mitigation will be provided in terms of funds that will directly related to the CAVAT value of the tree that is lost.

G4.1.3.9. Arboricultural input will serve to inform the impact, effectiveness and long-term viability or maintenance costs of engineering solutions for resolving level differences in relation to the tree causing the disturbance. A decision will be reached that balances the requirements of the surface, in terms of performance criteria and maintenance costs (whether further disturbance or damage can be expected), with the damage that would be caused to the tree, against the value of the tree.

G4.4.1 New highways schemes, dropped kerbs and vehicle crossovers

G4.4.1.1 Projects involving the reconfiguration of areas of the highway will consider the potential implications for trees at the earliest possible stage during the project feasibility and design phases to ensure that trees are retained wherever this is possible.

G4.4.1.2. To properly facilitate this the Highways department will seek advice from an arboricultural specialist who will be part of the design team considering the feasibility of the project from conception through to final design.

G4.4.1.3. The value of any tree that might be damaged or that might require removal will be fully incorporated into the appraisal of any project and the costs of damaging a tree or removing a tree will be balanced against the costs of redesign or engineering solutions that would allow tree retention within the scheme. The value of a tree considered during the project will be formally calculated using the Capital Asset Valuation of Amenity Trees (CAVAT) system.

G4.4.1.4. The consideration and assessment of the potential for a negative impact on adjacent trees, as a result of proposed highways reconfiguration projects will be treated according to the same processes and principles that are set out in Section 8 Planning and Development. Whether or not such operations require a planning application, the process for assessing the impact on tree health and viability should require reference to BS5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*, and the same considerations that inform whether or not a planning application is granted should apply to decisions related to highways redesign, at least in relation to tree retention or removal.

G4.4.1.5. The decision process that is followed for any highways reconfiguration project will be applied to an application, by a member of the public, for the installation of a dropped kerb to facilitate a vehicle crossover from a private residence to the public highway where this is adjacent to and might have a negative impact on a tree.

G4.4.5. Private trees obstructing the highway

G4.4.5.1. Landowners responsible for trees outside the ownership of the Council will be required to maintain clearance of the highway. Where such trees are noted during safety and service surveys carried out by the Highways department or where they are brought to the attention of the Council then the Highways department will give the landowner notice of the duty to maintain clearance as set out in section 154 (1) of the Highways Act (1980).

G4.4.5.2. The Highways department may liaise with the Parks Service to seek advice on the appropriate remedial measures to request the tree owner to undertake and will do so through the formal enquiries and complaints process operated by the Council.

G4.4.5.3. Where the landowner fails to undertake the requested measures to remove the obstruction within the period required by the Act then the Highways department may carry out the work required and recover expenses from the landowner. The Highways department may liaise with the Parks Service to arrange for the works to be completed where this situation arises.

G4.4.6. Tree risk management

G4.4.6.1.1. The management of risk posed by Council owned trees to users of the highway will be achieved through undertaking a proactive, cyclical inspection regime and an annual prioritised programme of works as described in Section 2 Tree inventory and Section 3 Walkover tree survey.

G4.4.6.1.2. Where trees are brought to the Council's attention that are not within council ownership or responsibility but that pose a level of risk to users of the highway, then the Highways department may give the landowner notice to manage the risk to an acceptable level as set out in section 154 (2) of the Highways Act (1980).

G4.4.6.1.3. The Highways department may liaise with the Parks Service to seek advice on the appropriate remedial measures to request the tree owner to undertake and will do so through the formal enquiries and complaints process operated by the Council.

G4.4.6.1.4. Where the landowner fails to undertake the requested measures to remove the obstruction within the period required by the Act then the Highways department may carry out the work required and recover expenses from the landowner. The Highways department may liaise with the Parks Service to arrange for the works to be completed where this situation arises.

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