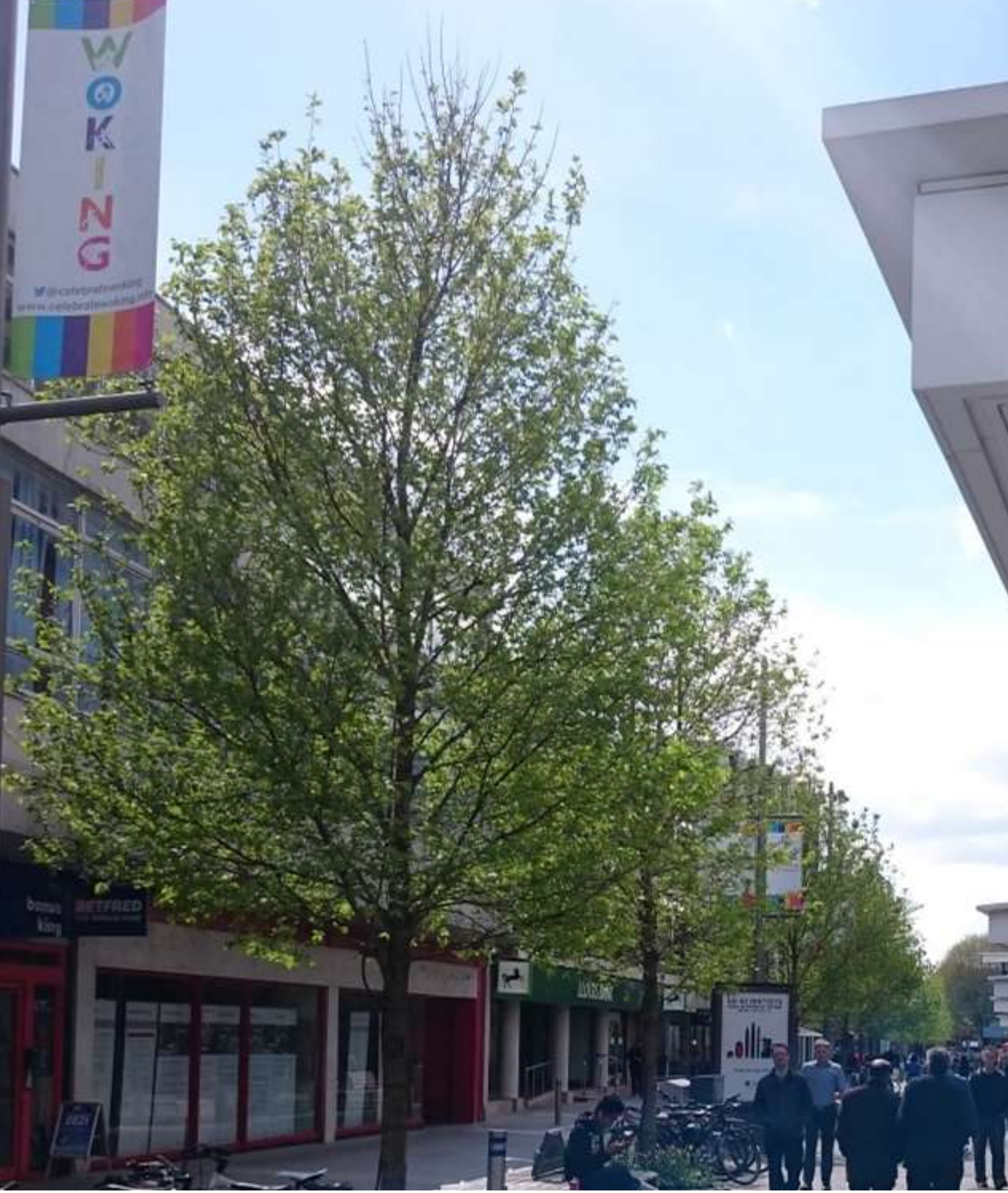


# Woking Borough Council
# Tree strategy

WOKING
BOROUGH COUNCIL

## Executive Summary

Trees are a fundamental part of both the urban and rural environment. The Council is responsible for the protection of trees with over 700 Tree Preservation Orders and 32 Conservation Areas.This strategy aims to provide the reader with an understanding of how we manage trees and woodland in these two very different environments, to support areas of positive health and well being for now, whilst also to allowing future generations to enjoy the positive effects.

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**A Tree Management Policies document is also available, which provides detailed guidance to ensure high quality tree management practice within the Borough**

## 1. Introduction

1.1. This strategy recognises the importance of trees, the many benefits they afford us and the increasingly important role they can play in mitigating the effects of climate change, risks of flooding, the reduction of the urban heat island effect and pollution control.

1.2. The strategy aims to guide future planning for the Borough's tree population and ensure a consistent, high quality approach is taken to tree management across the area. It also provides a broad reference for the management and maintenance of the Borough's tree population both in private and public areas.

1.3. It is designed to provide guidance to those whose activities bring them into contact with trees, to ensure that best practice is followed. This includes contractors, elected members, operational and policy officers, arboriculturalists, landscape designers and property developers.

1.4. The accompanying Tree Management Policies (Appendix 1) highlights issues and management plans associated with both urban and woodland trees. It also encompasses both privately and publicly owned trees, which form part of the wider natural environment.

## 2. Our Vision

2.1. The Government's Department for Communities and Local Government recommend, as good practice for Local Authorities (councils), that they develop and implement a comprehensive tree strategy.

2.2. The Core Strategy (paragraph 5.254) and the Natural Woking Strategy (and its Supporting Information document) both indicate a Tree Strategy will be produced for the Borough, to provide a coherent framework for the development of policies for the management, preservation and enhancement of tree cover, on public and private land.

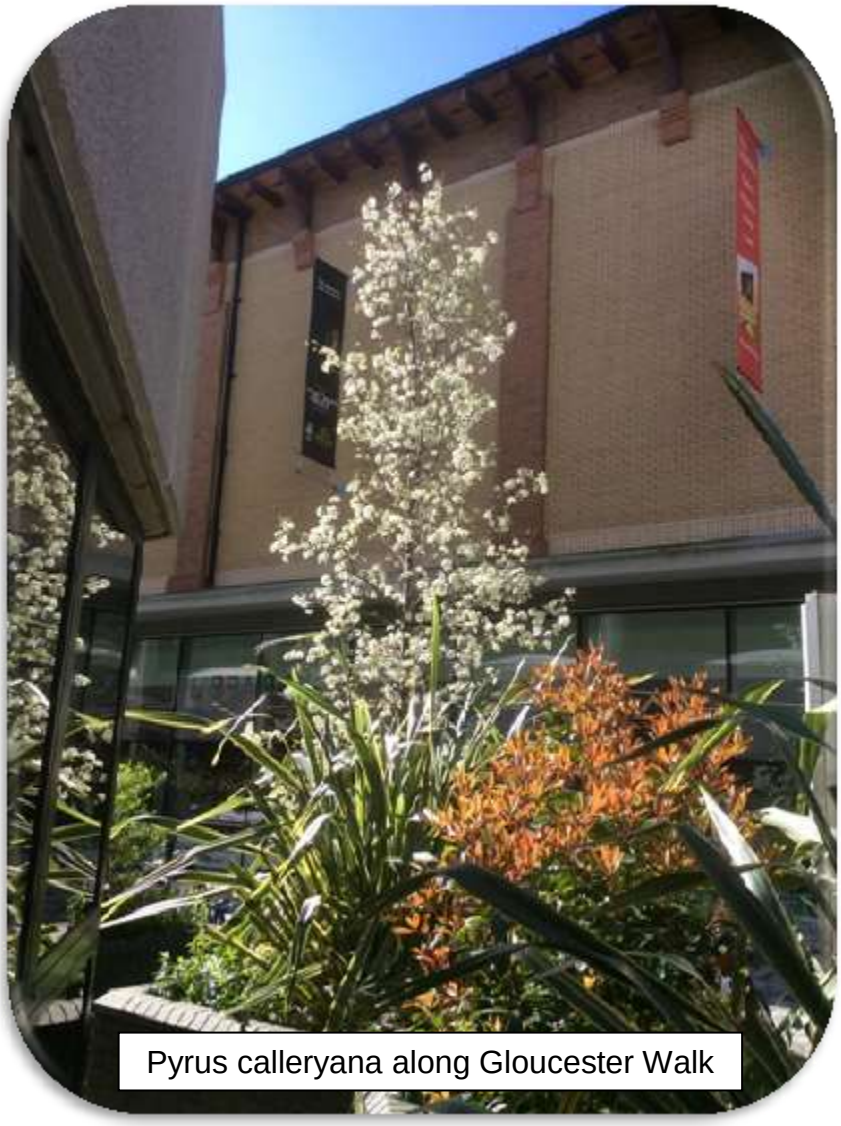
2.3. The Strategy sets out to develop a planned approach to the Councils vision for trees and to support and inform those whose working lives and leisure time come into contact with them. This vision is to increase the leaf area throughout the Borough and broaden the diversity of tree species which play a vital role of achieving the goals of Natural Woking. An increase of trees within the Borough and a broad diversity of trees will increase the biodiversity whilst protecting the trees from the array of current pests and diseases.

2.4.The strategy and its policies supports delivery of the Council's vision and values for a sustainable place which maintains its high quality natural environment. It will also help to deliver key elements of Woking's plans including the Core Strategy (local development plan), Woking 2050 (climate change strategy), and Natural Woking (biodiversity and green infrastructure strategy). Many of the reasons for developing this Tree Strategy are reflected in these documents, emphasising the importance of trees and woodland to achieving the long term vision for a sustainable Woking Borough.

## 3. History & Landscape Character

3.1 The Borough of Woking is synonymous with leafy residential areas. The legacy of its heathland location and unique historical importance as the centre of the country's nursery industry have combined to create a remarkably rich landscape of trees.

3.2 Woking Borough Council prides itself in playing a lead role in conserving the Borough's trees and promoting the highest standards of arboricultural care. However, there are a number of pressures on the Borough's trees, including a strong demand for new development, emerging diseases, and change in climatic conditions.



Pyrus calleryana along Gloucester Walk

## 4. Natural and Built Environment

It has been shown by numerous studies that trees absorb pollutants in our cities with measurable benefits to people's health – such as reducing asthma levels. Yet trees also deliver a whole host of other extraordinary economic, environmental and social benefits. Studies show that where industrial areas and work places include trees, employees are more productive and have a greater sense of job satisfaction (Forestry Commission, 2010)

### The Urban 'Heat Island'

4.1. Urban areas are often warmer than surrounding countryside because of extensive heat absorbing surfaces, such as concrete and tarmac, concentrated heat production and impeded air flow (Arnfield, 2003). This localised urban warming is known as an 'urban heat island'.

4.2. During the 2003 heat wave, a temperature difference between urban and rural areas of up to 10°C was recorded for London (Greater London Authority, 2006).

4.3. The benefit of trees in lowering urban air temperatures through shading and the evaporation of water is recognised in the Heatwave Plan for England 2016.

4.4. In Manchester, the SCORCHIO project predicted that an increase in the area of green space of 10% would reduce the maximum surface temperature by 2.2°C compared to no change in green space. This cooling increases to between 2.4°C and 2.5°C under low and high UKCIP02 climate scenarios. Similar results have been found by modelling projects conducted in Birmingham (BUCCANEER project) and London (LUCID project).

### Climate Change

4.5 Extreme weather impacts as a result of climate change have been, and will continue to be, increasingly severe and frequent (IPCC, 2007). Woking has experienced flooding, drought, snow storms and extreme heat, the consequences of which have impacted people, businesses and the natural and built environment.

4.6 Trees provide essential services in relation to mitigating the effects of climate change on the local environment. The Council utilises the special adaptations made by different tree species by planting the correct tree in the right place. For example, London Plane are fantastic trees at absorbing pollution and are therefore well suited within the urban environment.

4.7 The Borough's tree population helps mitigate the localised effects of climate change by:
• Cooling the urban heat island through the release of water vapour from leaves into the urban environment.
• Reducing the risk of flooding by intercepting rainfall and soaking up excess ground water.
• Lowering CO2 levels through photosynthesis and carbon storage

4.8 It is particularly important that the ability of our natural environment to absorb and store carbon is maintained and maximised. The Climate Change Act 2008 sets out a duty for domestic action to be taken on climate change. This has resulted in the target of ensuring that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline. To achieve this various penalties and incentives will become increasingly challenging

4.9 Furthermore trees can also help us to adapt to climate change by providing protection and soil conditioning. This in turn prevents soil run off and excessive sediment entering our rivers and water courses. Trees offer residents cool shade from intense sun and heat. In addition trees are seen as a renewable source of energy providing biomass for local heat and energy production.

4.10 Future planning is essential in building our resilience to climate change. There is a lag of 20-100 years between planting trees and benefitting fully from their amenities, so we must be careful to preserve existing trees and plant new trees strategically to provide maximum resilience to climate change in the future.

## Particulate Pollution

4.11. Trees also filter atmospheric particulate pollution (fine dusts and particles).

4.12. Fine particulate pollutants (often referred to as PM-10) can reach the lower regions of the respiratory tract and – where found in excessive concentrations - can lead to severe human health issues, both immediate and long term, especially on the young, elderly or those with asthma or other respiratory other problems. The Air Quality Standards Regulations 2010 enforce strict limits upon a wide range of pollutants.

4.13. Studies have shown that even low densities of trees surrounding pollution sources (e.g. industrial centres or roads) can prevent the dispersal of many pollutants (USDA Forest Service, 2013)

## Flood Alleviation

4.14. Trees can make an important and positive contribution to flood control. Their canopies intercept heavy rain fall which reduces run off and soil erosion, whilst roots hold soil structures together and slowly absorb water, releasing back into the environment through transpiration.

4.15. Research by the University of Manchester has shown that by increasing tree canopy cover in urban areas by 10% reduces surface water run-off by almost 6%.

## Ecology and Biodiversity

4.16. Trees, both living and dead, form an essential part of our local ecosystems.

4.17. In the urban environment trees help provide a visual counterbalance to the man made environment and form an important link to nature for wildlife and people.

4.18. Trees are a key component in maintaining and increasing the biodiversity of local sites, whether as sporadic specimens and stands within open habitats or in woodland environments. Trees provide shelter, nesting and opportunities for gathering food for a variety of animal and bird species.

4.19. Native and naturalised trees are an important part of many of our locally distinct habitats and have the capacity to support a wide range of species. Non indigenous and exotic tree species have also been shown to provide biodiversity benefits. A diverse tree stock is important to ensure a robust tree population that has resistance and adaptability to potential climate change and increasing exposure to exotic pests and diseases. Non indigenous tree species are often better suited to the harsh conditions of urban planting.

4.20. As trees age their biodiversity value often increases, as they are colonised by more species over time and develop more habitat niches. A mature oak for example can sustain habitats for thousands of different species of flora and fauna.

4.21. Woking is fortunate to retain a number of veteran trees, particularly oak trees throughout the Borough. Veteran trees may also be referred to as notable or ancient; they form an important part of our cultural heritage and cannot be replaced for centuries once lost. Numerous species form specific relationships with veteran trees and they are invaluable and should be protected strongly. This view is backed up by the National Planning Policy Framework.

4.22. Some habitats require very specific and sensitive tree management to ensure that they are maintained appropriately. For example, heathlands, which have very specific needs in order for them to maintain the flora and fauna found within them.

## 5. Current and Future Challenges

### Threats

5.1. Many trees have beneficial associations with fungi, invertebrates and other organisms. The presence of a particular tree species is often critical to the survival of a particular species of flora or fauna. For example, the dormouse is an animal which thrives in areas of hazel coppice and so preserving the UK's coppice woodland is of vital importance.

5.2. New pathogens are sometimes inadvertently introduced from abroad, some with devastating consequences such as Dutch Elm disease (Ophiostroma nuvo ulmi) in the 1960's and 1970's. Outbreaks of new pest and diseases are increasing due to the global movement of goods and materials, despite stringent controls.

5.3. The Council uses industry guidance on best practice to manage and reduce the risks of introducing alien parasites, fungi and pathogens to its tree stock, this is referred to as bio-security. Our Tree Officer's realise bio-security is paramount in ensuring the viability of Wokings future tree stock, with recommendations of possible species to replant being carefully considered against current threats species are facing.

5.4. Urban trees are under pressure as the demand for residential and commercial developments increases.

5.5. People's tolerance of proximity to trees can decrease because of expectations of light and freedom from shade and perceived danger. (BS5837:2012)

5.6. Urban public open space is a precious commodity and some uses are not conducive with retention of trees alternative locations will be sourced to increase the canopy cover throughout the borough.

### Future Threats

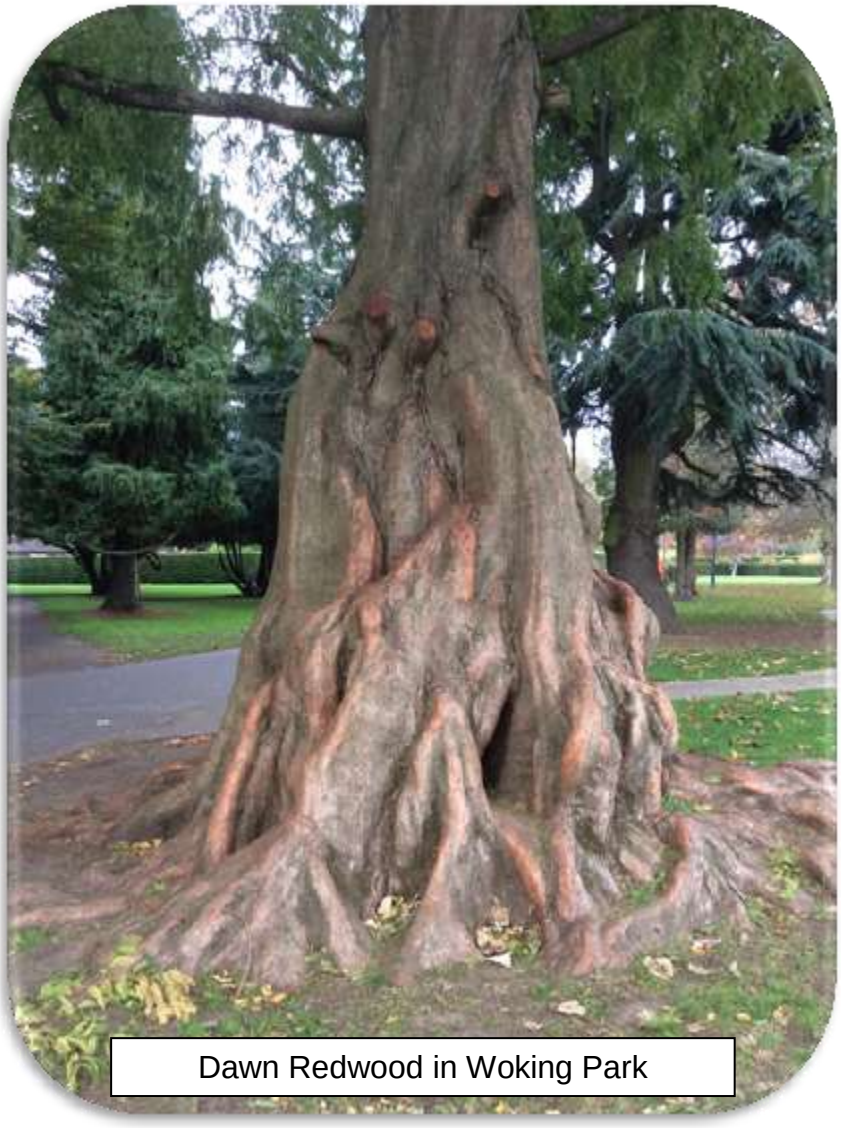
This section outlines current pests and diseases which may affect the Boroughs trees. Some are more prevalent than others, however the council is aware that these may at some point enter our trees and will advise members of the public should the need arise.

- Phytophthora ramorum – A bacterial infection thought to be carried through water.
- Asian Longhorn Beetle – An invertebrate pest, that bores into the tree.
- Oak Processionary Moth- An invertebrate pest that has the potential to cause harm to humans and damage trees
- Ash Die-Back – A fungal infection which leads to the eventual death and decline in the host tree.
- Sweet Chestnut blight – A fungal infection causing bark death, which results in tree failure

## 6. Economic Value

6.1. The economic benefits of trees are well evidenced, the 2005 report by CABE Space ‘Does Money Grow on Trees?’ brought together findings both nationally and internationally which gave financial values to both green space and trees within urban environments. For example several studies show that property values are higher in areas with mature trees or those overlooking well kept parks and open spaces.

6.2. Mature trees add both character and monetary value to new developments and to replace like with like would cost thousands of pounds or be unachievable outside the long term. These valuations can be calculated through modelling systems such as iTree, Helliwell, and CAVAT



Dawn Redwood in Woking Park

## 7. Health and Social Value

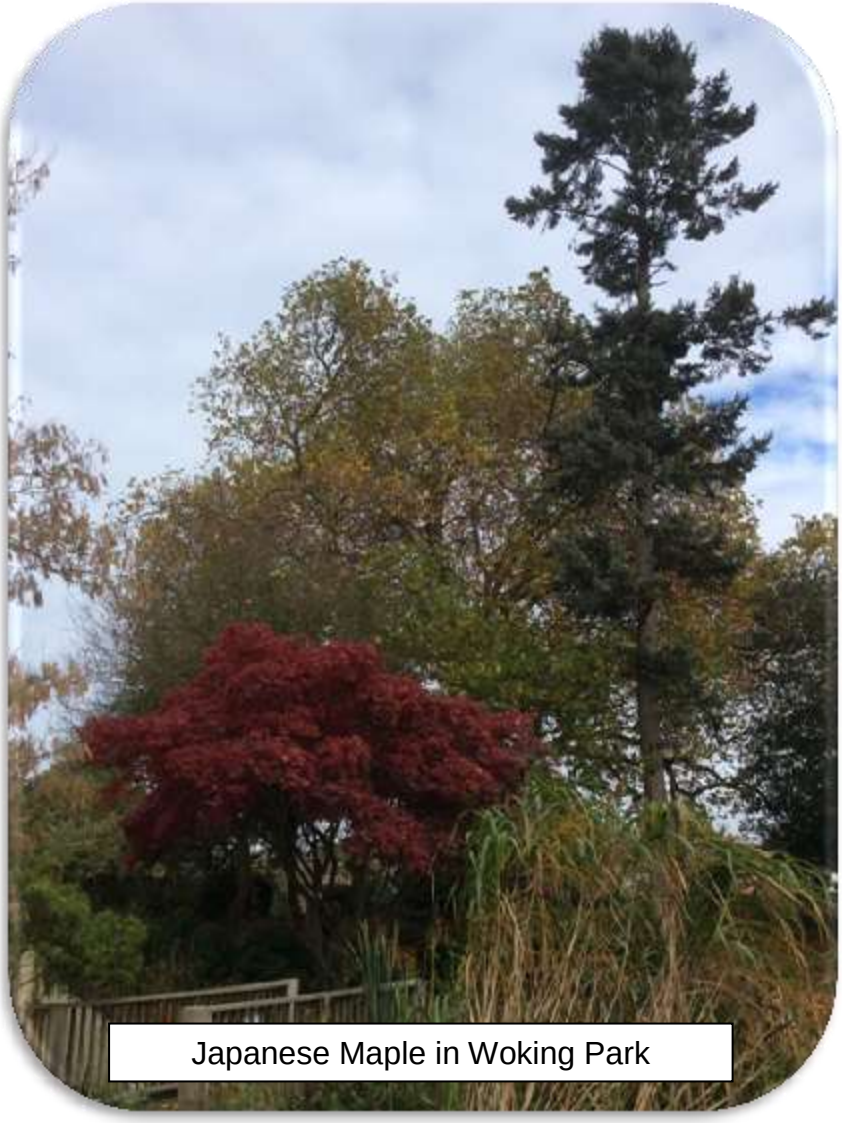
7.1. In terms of health, trees provide a range of benefits.

7.2. Trees improve quality of life and sense of wellbeing and have been found to reduce stress. For example, research has shown that a view with trees and nature can speed the recovery of hospital patients (Ulrich, 1984).

7.3. People of all ages can derive great pleasure from trees, whether it is through planting and growing them in their own gardens; appreciating the change of seasons with flowers foliage, fruit and bark, climbing them, walking through woods and natural landscapes as well as enjoying well planted and tended parks.

7.4. Studies have shown:

7.4.1 Short term exposure to nature has an immediate salutary effect, with data showing a 7% higher happiness rating for those in natural areas compared to urban (calculated using both a self scoring system of participants and outside analysis), (Hartig et al 1991)



Japanese Maple in Woking Park

## 8. Trees and the Law

8.1. Trees of importance, as determined by the TEMPO process (see paragraph 9.5), will be designated a Tree Preservation Order under the Town and Country Planning (Tree Preservation) (England) Regulations 2012. The council will do this to preserve those trees of crucial importance to the character, environment or biodiversity of an area.

8.2. Trees are also protected by virtue of other forms of legislation that cover specific species, habitats and landscapes. This has been reinforced through the Conservation of Habitats and Species (Amendment) Regulations 2012. Also see Conservation Areas in paragraph 9.7.

8.3. For specific wildlife species, legislation can be found in Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010). Any habitats listed as Sites of Special Scientific Interest (SSSI) (of which there are several within Woking Borough) are protected under the Habitats Directive 1992, and are subject to strict regulation and monitoring.

8.4. A useful example is that of UK bat species which often nest in trees. Three quarters of British bat species are known to roost in trees. The law prohibits intentionally or recklessly disturbing a bat in its roost or deliberately disturbing a group of bats, causing damage or destroying a bat roosting place (even if bats are not occupying the roost at the time) or intentionally or recklessly obstructing access to a bat roost. Penalties on conviction include the maximum fine of
£5,000 per incident or per bat (with some roosts containing several hundred bats). Other protected species will make use of wooded environments, especially for protection during the winter.

## 9. Planning Control and Planning Policy in Relation to Trees

### Tree Preservation Order

A TPO aims to prevent the unauthorised removal of a tree or trees and also helps control any work carried out to them as well as securing replacement planting. The TPO is not intended to prevent reasonable management.

9.1. The planting and preservation of trees for amenity has been a recognised part of planning law since the 1940s. Local Planning Authorities have powers to protect existing trees and secure replacement planting when protected trees are removed.

9.2. Central Government has provided guidance on the making of Tree Preservation Orders (TPOs). This is currently set out in Planning Practice Guidance accompanying the National Planning Policy Framework.

9.3. Usually TPOs are used to protect trees on private property, although they can be used on public property as well.

9.4. Works to protected trees can be granted with conditions, including replacement planting if a protected tree is needed to be felled. Consent can also be refused if a proposal to fell is assessed as not in the best interests of retaining the tree for the wider benefit of the community. Proposals for inappropriate pruning can also be denied.

9.5 TEMPO is designed as a field guide to decision-making, as such, it stands as a record that a systematic assessment has been undertaken.
TEMPO considers all of the relevant factors in the TPO decision-making chain.
TEMPO is a three-part system:
Part 1 is the Amenity Assessment
Part 2 is the Expediency Assessment
Part 3 is the Decision Guide

### Conservation Areas

9.6. Woking currently has 32 separate conservation areas. Conservation Areas are designated (under the Town and Country Planning Act 1990) to preserve or enhance the character of historic areas and provide protection to buildings and associated landscapes including trees.

9.7. Conservation area regulations protect trees above a size of 7.5 cm diameter at breast height where the trees are not already covered by a TPO. Notification is required to undertake work to such trees and the Local Authority has the options of agreeing the proposed work or to make a new TPO.

Further guidance is contained on the Council's website.

## Development Sites

9.8. One of the Local Authorities' aims in assessing planning development proposal applications is to ensure that attractive and valuable landscape features, including high quality trees, are retained as part of any development proposal and that sufficient land is made available for new landscaping.

9.9. Developments within the Woking area need to take account of policies within both the Core Strategy and Development Management Policies document. Specifically; CS7 Biodiversity and Nature Conservation; CS24 Woking's Landscape and Townscape; and DM2 Trees and Landscaping. Core Strategy - http://www.woking2027.info/corestrategy

9.10. Development can have a significant negative impact on trees. A Professional Arboriculturalist should be used to assess the impact of a proposed development on existing trees, following the technical guidance in BS5837 (2012) 'Trees in Relation to Demolition, Design and Construction.' This process will identify significant trees and the constraints that they impose, which in turn will inform the design.

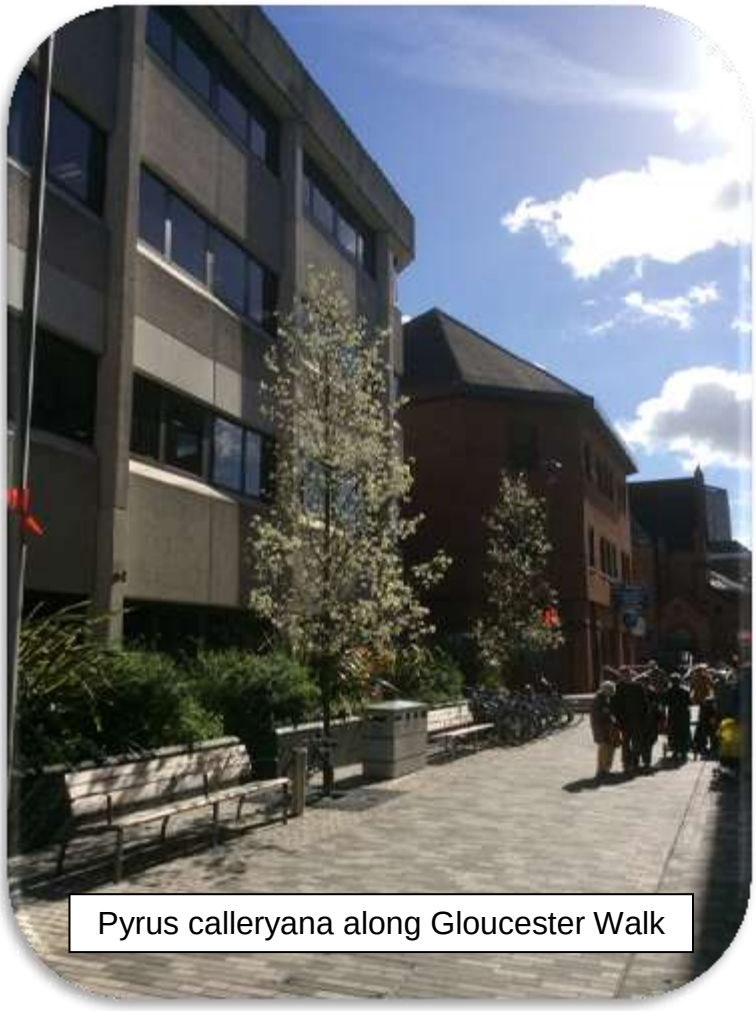
9.11. Typically for any planning application where there are trees on or adjacent to the proposed site, applicants should provide a tree survey, arboricultural implications assessment and an arboricultural method statement, this will include a tree protection plan. The arboriculturist should also be able to provide details of protection and mitigation measures for the development. In cases where trees are directly affected this will be required at the application stage.

## 10. Landscaping

10.1 Great landscaping can enhance any new development and is an important way of improving future tree stock, not only by increasing the numbers of trees but also the species mix and age range. Careful tree species selection can help a new development contribute to the preservation of the Borough's landscape character and local biodiversity.

10.2 Where appropriate there should be an emphasis on planting broad canopy species as opposed to ornamental trees, as this will have positive impact on the heat island effect and flooding. Planting within hard surfaced area should make use of under ground structures to ensure sufficient rooting environments for species selected. These can in turn be utilised in relation to SUDs calculations.

10.3. The Council's Development management document, adopted by the Council in October 2016 includes a section on landscaping in the context of new development.



Pyrus calleryana along Gloucester Walk

## 11. Future Actions

11.1 Increase replacement/new planting in highway verges, where possible choosing broad canopy species. Creating green corridors linking community green spaces and identifying ‘Feature tree’ planting sites, A site at the end of a Road that has high public amenity value, especially useful when verges in small roads aren’t wide enough or in landmark positions throughout the borough, perhaps sponsored by Local businesses.

11.2 To increase diversity and age structure to cope with climate change and the increasing threat of pest and disease, to reduce the heat island effect and to help slow down water run off and the impact that has on flooding.

11.3 Implementing new tree planting in Woking Park, through the establishment of an arboretum containing a range of interesting tree species.

11. 4 To increase species and age diversity of tree stock and stimulate the public interest in trees showing the wide variety of tree species available to the public. Furthermore we look to encourage residents to plant trees which are perhaps more unusual, creating a legacy for future generations to enjoy.

11.5 Creating mulched areas under the canopies of trees to the drip line within the park by removing the grass and ground vegetation surrounding and incorporating seasoned wood chip and compost to create a 150mm spherical bed to help combat compaction and provide great amounts of plant nutrition.

11.6 To improve drainage which in turn will reduce the increasing decline of the mature tree stock and provide a beneficial environment for new planting within the park. A strong example model has been implemented to great effect at Kew Gardens.

11.7 To develop itree or similar programs to ascertain the value of Woking’s tree stock giving the Council a base line to truly assess the value that trees provide to the Borough. In relation to air quality protectors, traffic calming, pollution absorption, climate change mitigators, and health and well being enhancers as well as the impact on property valuation.

11.8 Utilise volunteer groups to undertake regular pest and disease surveys e.g. observatree.org.uk

11.9 Use CAVAT (**Capital Asset Value for Amenity Trees)** to value the loss of quality trees on development sites securing funds from developers for the loss of trees on Development sites using 106 agreements for woodland enhancement works and tree planting throughout the borough

11.10 To ensure that all Council owned trees are surveyed and recorded on a Tree management system that is available to both the Councils contracted Partners and Council officers, providing historic management information including photographs and details of enquiries from the public. This will be implemented in a digital format allowing for easier access to both officers and Partners.

| Objective | Actions | Time Frame | Responsibility | Progress |
|---|---|---|---|---|
| **Increase Replacement/new Planting on Highway Verges** | Create green corridors using (where possible) broad canopy species | Review Annually | Arboricultural Team | Once a tree is removed a replacement should be provided within the next planting season |
| **Increase Diversity, Age Structure and diseases resistant species** | Plant using a mix of species both native and exotic | Review Annually | Arboricultural Team | Liaising with local nurseries and Serco to plant appropriate tree species |
| **Establishment of an Arboretum in Woking Park** | Planting of a range of interesting tree species other than those found on Highways | 1-5 years | Green Spaces Development Officer and the Arboricultural Team | |
| **Encourage the planting of different tree species** | When a tree is removed under a TPO or CA, the LPA should look to encourage the planting of a range of suitable tree species considering space available | Review Annually | Arboricultural Team | Continuing replanting appropriate tree species during the application process |
| **Reduce compaction and increase nutrient levels within Woking Park** | Introduce mulching areas around the base of newly planted trees. | 1-4 years | Arboricultural Team | |

| | | | |
|---|---|---|---|
| **Improve Drainage within the Park** | To coincide with the objectives set out with Mulching | 1-4 years | Arboricultural Team |
| **Woking Tree Stock Valuation** | Use a product to measure the worth of the Boroughs trees. | 1-3 years | Arboricultural Team |
| **Observe pest and Diseases** | Appropriate CPD for employees and utilise volunteer groups to undertake regular pest and disease surveys | 1-2 years | Arboricultural Team |
| **Evaluate the Loss of Quality Trees** | Utilise CAVAT to value the loss of trees | Review Annually | Arboricultural Team |
| **Appropriate surveying of council owned trees** | Installing of PSS on mobile devices and desktop computers | 1 year | Arboricultural Team and IT |

Prepared by the Council's Arboricultural Team

For more information, contact
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