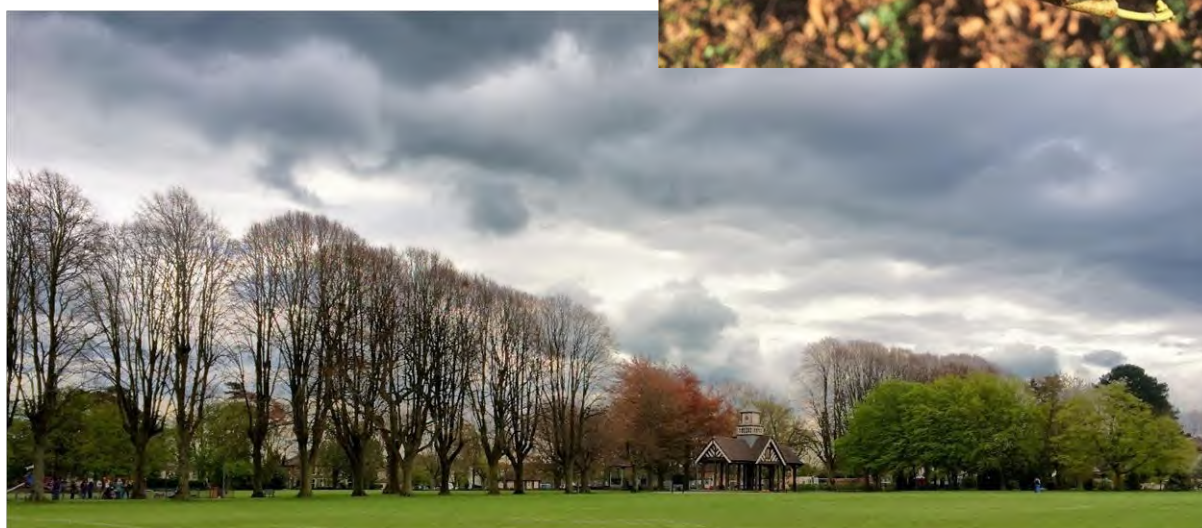


# Tree Asset Management Plan

2018



# **SOUTH GLOUCESTERSHIRE COUNCIL TREE ASSET MANAGEMENT PLAN**

## **CONTENTS:**

### **1: INTRODUCTION**

- 1.1 The purpose of this Plan
- 1.2 What tree asset management means for us
  - 1.2.1 What is South Gloucestershire's tree asset?
  - 1.2.2 The value of the tree asset

### **2: TREE ASSET MANAGEMENT PLAN AIMS AND OBJECTIVES**

- 2.1 Our Aims
- 2.2 Our Vision
- 2.3 Our Objectives
- 2.4 Drivers and Constraints for tree management
  - 2.4.1 Drivers for tree management
  - 2.4.2 Constraints for tree management
- 2.5 Improving the tree asset in South Gloucestershire
  - 2.5.1 Responding to climate change
  - 2.5.2 Enhancing our landscapes
  - 2.5.3 An approach for South Gloucestershire

### **3: TREE ASSET MANAGEMENT PRACTICES AND PROCESSES**

- 3.1 Managing and maintaining the council's existing tree asset and meeting our legal obligations
  - 3.1.1 Trees and the public highway
  - 3.1.2 Responding to severe weather events
  - 3.1.3 Tree risk management
  - 3.1.4 Trees within schools
  - 3.1.5 Tree-related enquiries from the public
  - 3.1.6 Undertaking work to Council-owned trees
  - 3.1.7 New tree planting and replacing trees
  - 3.1.8 Managing and improving our woodland asset

- 3.2 Protecting and administering the tree asset in South Gloucestershire
  - 3.2.1 Tree Preservation Orders (TPOs)
  - 3.2.2 Conservation Areas
  - 3.2.3 Dead and dangerous trees
  - 3.2.4 Penalties for unauthorised work
  - 3.2.5 Grants for work to protected trees
  - 3.2.6 Development and trees
  - 3.2.7 Conditions of planning consent and S106

## 4: FURTHER INFORMATION

### 1 INTRODUCTION

#### 1.1 THE PURPOSE OF THIS PLAN

The Council is directly responsible for many thousands of trees growing along our highway verges, in our parks, open spaces and woodlands. The Council also has responsibilities in respect of trees owned by others, such as privately owned trees that may be a danger to the public, protected trees and trees affected by development.

The purpose of this Plan is to:

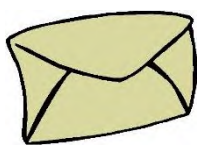
- describe how we manage the tree assets along our highways and within our public spaces, and how we will respond to requests from the public to carry out work to them.
- set out how we will maximize the value of our tree assets, and aim to increase tree cover to respond to climate change, improve biodiversity and enhance our landscapes;

This Tree Asset Management Plan follows the objectives and policies of the Council's Highways Asset Management Framework and Strategy 2015, which has been endorsed by the Planning, Transportation and Strategic Environment Committee.

We will deliver our service to all residents of South Gloucestershire in accordance with the South Gloucestershire Council Equality and Diversity Policy.

The Plan will be reviewed every 3 years to measure achievements and respond to new challenges and opportunities.

Further advice and information about trees in South Gloucestershire is available at <http://www.southglos.gov.uk/environment-and-planning/conservation/trees-and-hedges/>



### Key Messages

- Throughout the document you will see Key Message boxes. These summarise key points from each section.
- This Plan includes a number of specific 'Practices', which are akin to day-to-day operational policies which the tree management team will adhere to and apply when assessing and making decisions relating to the management of trees within the District. These Practices are numbered, and appear in boxes.

## 1.2 WHAT TREE ASSET MANAGEMENT MEANS FOR US

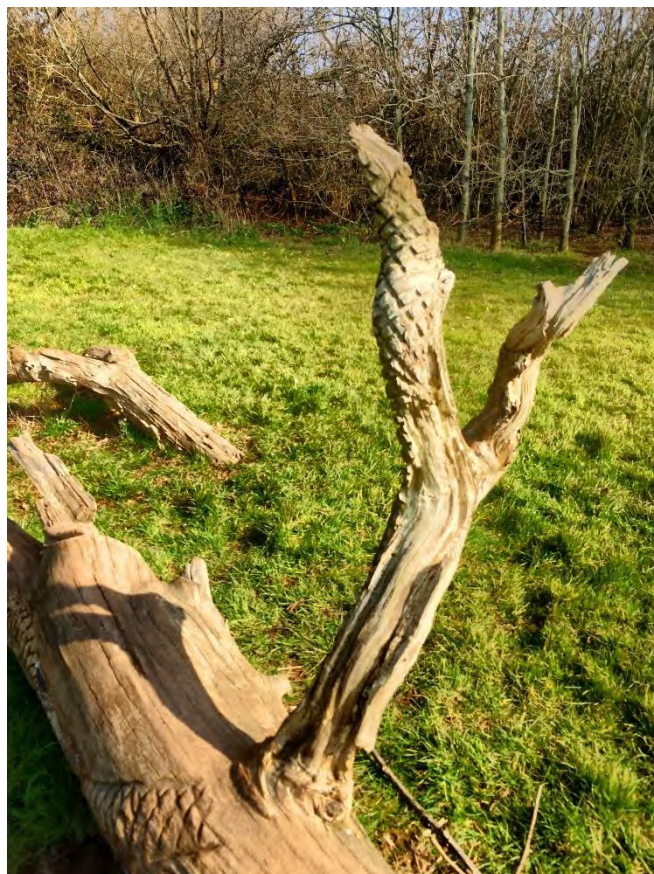
### 1.2.1 What is South Gloucestershire's tree asset?

The existing tree cover in South Gloucestershire is approximately 11% of the whole area of the district. Our trees would cover an area about five and a half times the size of the town of Yate and 18 times the size of the town of Thornbury. South Gloucestershire Council-owned trees make up approximately 45% of all tree cover with 55% of tree cover in third party ownership.

Many of our trees have historically grown along our older highways, or have been more recently planted along the verges of more modern roads. Trees are also one



of the primary features of our public parks and open spaces, and of course our woodlands. For trees on land directly owned or managed by the Council, we can take decisions on their management, monitor their condition and plant new trees to maintain and increase their value as an asset.



*Figure 1: Tree carving at  
Pomphrey Hill open space,  
Mangotsfield.*

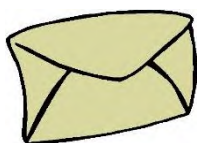
Even trees in the ‘private’ realm, such as gardens, farmland and woodland and development sites have **public amenity value** – they can be enjoyed by the public, connect habitats for wildlife and have an important role in pollution removal and climate change adaptation. For this reason, the Council has powers and duties to influence and intervene in decisions relating to their management, protection and enhancement.

### 1.2.2 The value of the tree asset

Trees are unique amongst assets because they increase in value over time, rather than decrease in value. But like all assets they can require management to maintain their value in a safe and acceptable condition.

Trees provide us with a wide range of direct and indirect environmental, social and economic benefits <sup>1</sup>. For example:

- Trees maintain and strengthen our **environment** by cooling the air and shading us from heat, improving air quality by removing pollutants, providing a home to wildlife and increasing biodiversity, intercepting rainfall to reduce flooding.
- Trees improve **society** and our **communities** because we enjoy their aesthetic value and give us a sense of place. Trees and green spaces encourage us outside for recreation and exercise. And by removing pollution trees can help lower the incidence of asthma.
- Trees bring **economic** benefits, such as increasing property values. They are less expensive to maintain than other types of green space such as grassland, and if carefully managed woodlands can provide wood and timber products for sale.



### Key Messages

- The Council has direct management of tree assets on its own land, and powers to protect and influence the management of privately-owned trees.
- Tree assets are unique because they increase in value over time, and the benefits they provide also increase.

---

<sup>1</sup> Forestry Commission England have produced a useful summary 'The Case for Trees' available to download at <http://www.forestry.gov.uk/forestry/infd-87yek2>. See also Forest Research, 2010, 'Benefits of green infrastructure', Report by Forest Research. Forest Research, Farnham, available to download at <http://www.forestry.gov.uk/fr/infd-8a9a2w>

## **2 TREE ASSET MANAGEMENT PLAN - AIM AND OBJECTIVES**

### **2.1 OUR AIMS**

The overall aim of this Tree Asset Management Plan is to protect the existing tree asset through appropriate management; meet our legal obligations around tree risk and safety, and; maintain and encourage biodiversity. It also aims to respond to climate change and enhance the landscapes of South Gloucestershire by increasing tree cover on public and private land.

### **2.2 OUR VISION**

Our vision for the district's tree asset is a healthy and valued tree population which is recognized for its strategic importance in helping us respond to climate change, and which grows to achieve tree cover of 15% on public and private land across the district by 2060.



*Figure 2: Meeting our strategic goals through our own operational asset management and by influencing others*

Our Vision and Aims for the people and trees of South Gloucestershire will be achieved in two distinct realms. The first is through our own operational asset management of highways, open spaces, trees and woodlands. In this respect the Council can work directly within and across teams, and within available resources, to deliver the strategic goals. The second realm is through collaborating with, influencing and supporting others, such as private land and property owners, businesses, other public and not-for-profit organisations, as well as community groups and projects. Figure 2 above gives examples of how the Council can work within these two areas.

## 2.3 OUR OBJECTIVES



**We will achieve our Vision and Aims by:**

**Improving the tree asset in South Gloucestershire**

- Recognising trees as valuable assets by recording and communicating the significant aesthetic, ecological, social, cultural and historic benefits that South Gloucestershire's trees provide;
- Championing the value of our trees in improving our health by encouraging the use of open spaces for play, exercise recreation and active lifestyles, and in absorbing airborne pollutants.
- Maintaining and improving tree cover through annual tree planting within both rural and urban areas, including public realm and principle highways, and by encouraging appropriate tree planting on new developments and land owned by other parties;
- Encouraging the conservation, positive management and the appropriate planting of trees and woodlands in the villages, towns and countryside through the help of voluntary groups;
- Wherever possible, planting a replacement tree nearby or elsewhere when a tree under our management has to be felled.

**Managing and maintaining the Council's existing tree asset and meeting our legal obligations**

- Meeting our legal obligations as a tree owner around tree safety and property damage, as well as our other statutory responsibilities and policies as Local Highways Authority and Local Planning Authority;
- Increasing value for money through reasonable risk management, by moving towards a defensible proactive tree risk management programme of inspection.
- After considering each case carefully, undertaking works to our own trees only if they are dead, dying, diseased or dangerous, or may become so, and carrying out such work according to good arboricultural practice;
- Being clear about how tree management decisions are made to keep our customers well informed.

**Protecting and administering the tree asset in South Gloucestershire**

- Safeguarding trees subject to Tree Preservation Orders (TPOs) and creating new TPOs, including in conservation areas where it is beneficial to do so;
- Ensuring existing trees on or adjacent to development sites are fully considered at the earliest stage in the design process and according to the Council's Core Strategy and policies, and are adequately protected during construction and after in accordance with current standards and guidance;
- Initiating legal action when unauthorised tree work has been undertaken or where breach of planning consent has occurred;
- Promoting the importance of trees and woodlands in shaping the distinctive local character and appearance of the district's urban and rural landscapes by educating, effectively communicating and engaging with the local community.

*This Plan includes a number of specific 'Practices', which are akin to day-to-day operational policies which the tree management team will adhere to and apply when assessing and making decisions relating to the management of trees within the District.*

## 2.4 DRIVERS AND CONSTRAINTS FOR TREE MANAGEMENT

### 2.4.1 Drivers for tree management

#### **Climate change**

Climate change means increased risk of floods, droughts and heat waves. For the Council the major impacts will be an increased need to protect people and their private property, as well as the increased cost of managing and maintaining our public assets, such as highways surfaces, buildings and open spaces. Trees can help to mitigate climate change by absorbing and temporarily locking-up carbon dioxide, thereby reducing overall greenhouse gas levels in the atmosphere. Trees can also help us adapt the urban environment to the effects of climate change by providing shade to cool surfaces and buildings, and by slowing the flow of water to help reduce the risk of flooding. These are examples of how trees can provide

‘resilience’ to the effects of climate change which can be highly cost-effective when compared to other options.



## Health

The entire population of South Gloucestershire is affected by the environment in which they live, work or otherwise spend time in. The Council’s Joint Strategic Needs Assessment (JSNA) <sup>2</sup> is concerned with wider social and environmental factors that have an impact on people’s health and wellbeing. It recognises that the environment in which people live affects their health both directly, for example through air pollution and also indirectly through its impact on behaviour, for example facilitating active travel to encourage physical activity. Creating a physical environment in which people can lead healthier lives is a hugely significant factor in reducing health inequalities <sup>3</sup>.

---

<sup>2</sup> Available at <http://edocs.southglos.gov.uk/completejsna/>

<sup>3</sup> Marmot, M. (2010) ‘*Fair Society Healthy Lives*’, <http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review>

Poor air quality can have a significant effect on people's health, particularly those with heart and/or respiratory conditions. Air pollutants can arise from a variety of sources, including transport, industry and the commercial and domestic sectors. The main source of air pollution in South Gloucestershire is road traffic. Gaseous pollutants like Nitrogen dioxide, Sulphur dioxide and Ozone irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases. Trees can have a positive impact on air quality because they can absorb these pollutants. Fine particles of pollution are carried into the lungs where they can cause inflammation and a worsening of heart and lung diseases. Trees help by trapping these particles on their leaves to be washed away when it rains.

Air quality monitoring has shown that the national limit for nitrogen dioxide has been exceeded in three areas: Staple Hill crossroads, Kingswood Regent Street and Cribbs Causeway M4 roundabout J17. The Council's Air Quality Action Plan (AQAP) aims to encourage tree and shrub planting through the planning process and within urban designs to help combat pollution in these areas.

Studies have shown that the presence of trees and green spaces has been strongly linked to an increase in healthy activities of those who live near them. For example, a study of school children's mode of transport to school found a correlation between the presence of street trees and an increase in school children walking to school, and attributed this to the increased shade and aesthetic value that trees provide. Another study found that access to green areas and gardens reduced stress and lowered the likelihood of obesity, especially in those aged below 25<sup>4</sup>.

## Biodiversity

The South Gloucestershire Biodiversity Action Plan (BAP) aims to contribute towards safeguarding and benefiting the species and habitats making up the Plan and to provide an identity and focus for nature conservation work throughout South Gloucestershire. It includes action plans for seven habitats, including broadleaf woodland and orchards, as well as seven national priority species and eight locally significant and vulnerable species, including Wild Service Tree (*Sorbus torminalis*).

---

<sup>4</sup> Dye, P. (2013) 'More trees for a better community? A study of tree canopy cover in South Gloucestershire and its relationship to socio-economic well-being.' BSc Dissertation, University of Central Lancashire.



Trees and new tree and woodland planting can strengthen and extend habitats for wildlife and improve connectivity between them. Sympathetic tree, woodland and hedgerow management, such as retaining deadwood, thinning even-aged woodland canopies, coppicing and laying hedges also provides more diverse habitats which are otherwise being lost.



*Figure 4: Wild Service Tree (Sorbus torminalis) is identified as a locally significant and vulnerable species in the South Gloucestershire Biodiversity Action Plan.*

## 2.4.2 Constraints for tree management

### Climate change

The changing climate will impact the existing tree population, and may limit what tree species can be planted. Drier and warmer summers will result in increasingly severe soil moisture deficits which will reduce tree growth. Wetter autumn and winter periods may reduce tree stability and increase the risk of 'wind-throw'. The incidence and severity of tree disease and pest outbreaks will increase because warmer climate and, particularly, warmer winters will allow tree pests and pathogens to extend their range. These things may lead to a depletion of our existing tree asset, and increase the cost of managing trees. Tree planting projects



in the future must consider species more carefully; they should be able to withstand changed climatic conditions and resist the changing pathogens that may flourish in more favourable weather conditions.



*Figure 5: Apple tree  
(Malus domestica),  
inundated within the  
River Frome flood plain*

### **Limitations to planting**

Roads, pavements and verges are often the location of utility operators' distribution cabling, pipe work, plant and equipment, as well as the council's own street furniture, traffic signs and street lighting. Tree roots can cause damage to underground services, and foliage can block light and visibility above ground. Utility operators have guidelines on the distance they require between new trees and their equipment. Despite clear industry guidance, mature trees can be damaged when new services are installed or existing services replaced, and their amenity value reduced or destroyed. These factors lead to significant limitations to tree planting and replacement within some of the communities most in need of greening and pollution reduction.

The cumulative effect of lack of planting opportunities, damage to existing trees and tree removals is a dwindling over time of the tree population within urban centres. Engineering solutions to reduce conflict are generally expensive, and their use often relies on occasional capital project funds or external funding sources.

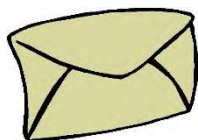
### **New pests and diseases**

As global trade has increased, so has the arrival of new pests and diseases. Climate change may also play a role now and in the future, by moving the range of pests and diseases northwards because of milder, wetter winters. New tree pests and diseases, such as Emerald Ash Borer, Oak Processionary Moth, Chalara Ash Dieback, Massaria Plane Canker and Horse Chestnut Bleeding Canker, threaten the health of amenity trees and woodlands, the ecosystems which they support and our access to and enjoyment of them <sup>5</sup>.

It is important that the Council work with national bodies such as DEFRA and Forest Research to be up to date on new and existing threats, vigilant to investigate new reports and pass these on to government agencies and in responding to government advice in dealing with new arrivals and outbreaks.

### **The Council Savings Programme**

Like all local authorities, the Council faces tough financial challenges as government austerity measures continue. The reduction in available resources will mean fewer services with a focus on our core activities, and a more efficient council which seeks better value for money. Business development will also be a key opportunity. We will seek new potential markets for our services, where we can offer value for money and be profitable within the resources we have. The expertise of the Council's Arboricultural team is likely to be a potential source of income, and the currently under-utilised wood-fuel resource of our woodlands might provide an income while continuing to manage our woodlands sustainably and even improving biodiversity within them.



#### **Key Messages**

- The tree asset is increasingly under threat from climate change and new diseases, and maintaining and

---

<sup>5</sup> The latest research and advice on recent and potential pest and diseases of trees is available at <http://www.forestry.gov.uk/pestsanddiseases>

increasing tree cover in urban areas can be technically difficult.

- Trees will prove increasingly strategically-important in the future in building resilience to climate change; protecting other assets by shading and cooling them, reducing pollution, reducing flood risk and protecting biodiversity.

## 2.5 IMPROVING THE TREE ASSET IN SOUTH GLOUCESTERSHIRE

One of the four broad themes of the South Gloucestershire Council 'Council Plan 2016-2020' aims to *'enhance our natural and built environment, develop low-carbon, health promoting, integrated communities with a strong sense of place connected by well-planned transport networks.'* Maintaining and improving the quantity and quality of our public and private tree asset can contribute to fulfilling this aim.

### **Why increase tree canopy cover? - the evidence base**

Tree canopy cover, as a significant contributor to Green Infrastructure, has been shown to have a positive correlation with wellbeing. Studies show that where tree canopy cover increases there are higher house prices, less crime, faster hospital recovery rates, fewer cases of asthma, more frequent participation in outdoor exercise, more cohesive communities, calmer people, higher educational achievements, increased economy, happier shoppers and cleaner air <sup>6</sup>. Tree canopy cover can also be linked directly to monetary savings. A recent iTree study

---

<sup>6</sup> Forest Research, 2010, **Benefits of green infrastructure**. Report by Forest Research. Forest Research, Farnham, available to download at <http://www.forestry.gov.uk/fr/inf-d-8a9a2w>

of London's trees showed that the capital's trees provide a total of £133m in benefits every year <sup>7</sup>.

South Gloucestershire has approximately 11% tree cover, with 9% tree cover in its unparished urban area <sup>8</sup>. This is around the average for towns in the South East (11.8%) and South West (11.1%) <sup>9</sup>. The annual number of new trees planted by South Gloucestershire Council is considered by officers to be currently low in comparison to other local authorities.

### 2.5.1 Responding to climate change

The 2009 Forestry Commission report '*Combating Climate Change: a role for UK forests*' (the Read Report) <sup>10</sup> examined the potential of the UK's trees and woodlands to mitigate and adapt to our changing climate. Woodlands planted since 1990, coupled to an enhanced woodland creation programme of 23,000 ha per year over the next 40 years, could, by the 2050s, be delivering annual emissions abatement equivalent to 10% of total greenhouse gas emissions at that time. Such a programme would represent a 4% change in land cover.

The Independent Panel on Forestry's Final Report in 2012 <sup>11</sup> recommends an increase of 5% of England's woodland cover taking it from 10% to 15% by 2060.

Since trees take many years to mature, action taken now may only prove their worth in 50–100 years' time and must be appropriate for both the current and future climates. A move towards planned woodland creation and management is therefore required.

---

<sup>7</sup> 'Valuing London's Urban Forest - Results of the London iTree Eco Project' available to download at <http://www.forestry.gov.uk/london-itree>

<sup>8</sup> See Appendix 4 for a summary of the methodology used to assess tree canopy cover in South Gloucestershire.

<sup>99</sup> Britt, C. & Johnston, M. (2008) *Trees in Towns II - A New Survey of Urban Trees in England and Their Condition and Management*. Department for Communities and Local Government: London.

<sup>10</sup> The report forms part of the UK response to the Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report published in 2007. The 'synthesis report' is available to download free of charge at <http://www.forestry.gov.uk/readreport>

<sup>11</sup> Available to download free of charge at <https://www.gov.uk/government/publications/independent-panel-on-forestry-final-report>

## 2.5.2 Enhancing our landscapes

South Gloucestershire Council's Landscape Character Assessment (LCA) Supplementary Planning Document was revised to incorporate biodiversity considerations and was adopted by the Council in 2 November 2014. It provides a statement of the character of South Gloucestershire's landscapes, their distinctive attributes and features, together with an assessment of the changes that are taking place in the landscape and strategic guidance to help steer future evolution.

For each distinctive landscape character area, the LCA provides a 'landscape strategy'; strategic guidance for the future evolution of each character area. Of the 21 distinctive landscape areas identified in the LCA, 17 have recommended actions within their landscape strategies relating to restoration or enhancement of tree and/or woodland cover.



*Figure 12: Horse Chestnut trees (Aesculus hippocastanum) in Page Park, Staple Hill.*

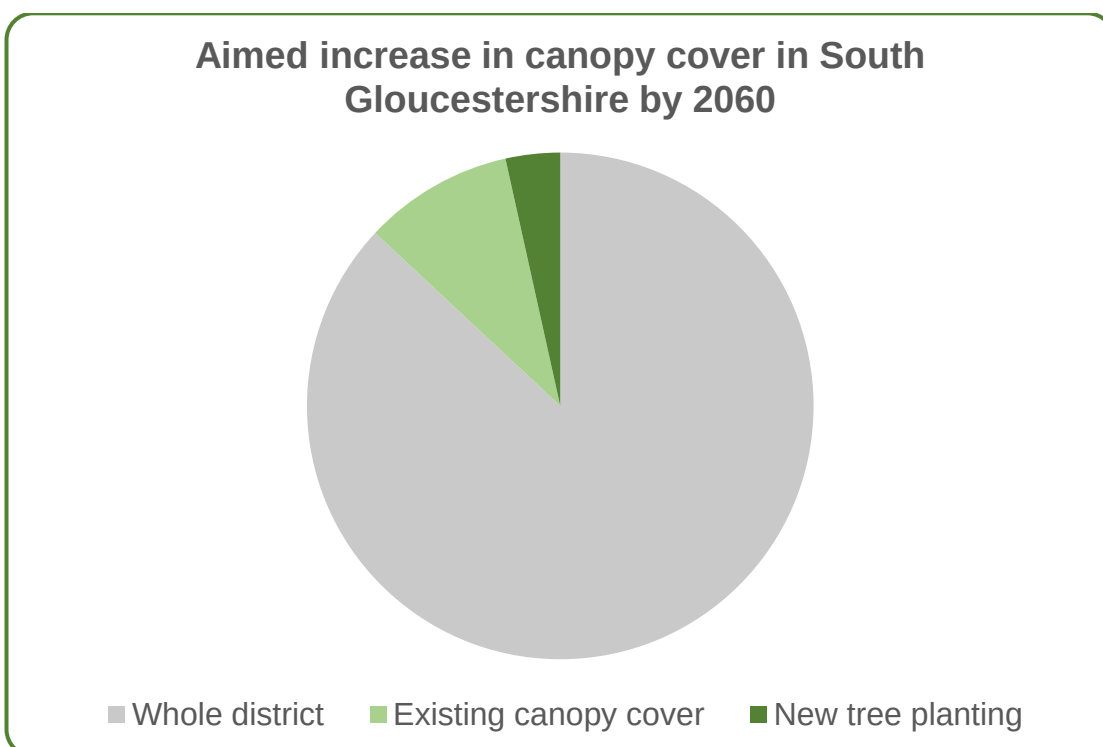
## 2.5.3 An approach for South Gloucestershire



Our aim is to promote and encourage an increase of tree canopy cover in South Gloucestershire towards 15% by 2050. We can influence this directly on South Gloucestershire Council land by increasing the number of trees planted and by planting species with a larger mature size. We can still influence planting on private land through partnerships, the use of Tree Preservation Orders and by influencing good quality design on development sites in line with the Council's Local Plan.

South Gloucestershire has approximately 11% tree cover, with 9% tree cover in its unparished urban area. We will aim to increase tree cover by 4% (as calculated in the Read Report, 2009) which would achieve the Independent Panel on Forestry's recommended target of 15%.

Within the district, a 4% increase in tree cover represents an area of approximately 2,146 ha; or approximately 214,640 new trees. In turn this represents 40 ha of new tree planting for each parish. (For comparison Overs Court Woodland in Siston parish, planted by the Forestry Commission and Forest of Avon over several years, is just over 80 hectares).



*Figure 13: The aimed increase in canopy cover in South Gloucestershire by 2060.*

Table 1 below shows a list of possible barriers to the aim of increasing tree canopy cover and mitigation measures to overcome the barriers.

| Barrier                                                                                               | Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diseases such as Ash Dieback, Canker Stain of Plane, Sweet Chestnut Blight, and <i>Phytophthora</i> . | <ul style="list-style-type: none"> <li>• A robust replacement planting programme of resistant species.</li> <li>• Working in partnership with groups such as Forest of Avon to implement planting schemes.</li> <li>• Best practice tree management.</li> </ul>                                                                                                                                                                                    |
| Competition for land such as development and highway schemes.                                         | <ul style="list-style-type: none"> <li>• The use of Tree Preservation Orders</li> <li>• Introducing a minimum tree planting quota policy on development sites, or possibly off-site on council-owned land.</li> <li>• The tree department being involved and advising on planning applications and Highways schemes.</li> <li>• Engage with businesses and their corporate responsibility policies to seek tree planting contributions.</li> </ul> |
| Lack of awareness of the importance of trees.                                                         | <ul style="list-style-type: none"> <li>• I-Tree survey commissioned for the district to identify the contribution trees make to the district.</li> <li>• Promote the SGC Tree Strategy.</li> <li>• Engage the community on tree issues.</li> </ul>                                                                                                                                                                                                 |

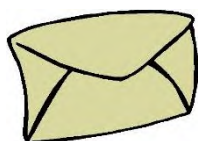
Table 1: Threats and mitigation measures

Tree planting should include native and non-native, orchard trees, street trees, hedgerows, individuals, copse and woods. A minimum 50% of new trees should be large-growing species.

New trees can be planted on Council land which includes public open space, highway verges, school grounds (with a shade measure included) and other sites. Other public land and private land should be included with preference given to tree planting in river catchment, flood risk areas, on accessible land or land visible to the public.

In 2015 the Council's Open Spaces team carried out an audit which highlighted 1,745 Council-owned open spaces which could support tree planting. Some of these sites are able to accommodate mini-woodland plantings (100+ trees) which could be delivered by working with partner organisations to access external funding. Other sites which can accommodate between one and 20 standard trees would require more detailed scoping and consultation, with planting and maintenance costs being proportionately higher.

Achieving the objective of increasing canopy cover will require strategic working between the Council's teams to identify opportunities on publicly-owned land, private and development sites, and to engage with the public, community groups, private landowners and developers. It is hoped that this work can gather increasing support and momentum in the coming years.



### Key Messages

- The need for an increase in tree cover has been identified at a national level by Government, and at the local level in South Gloucestershire Council's adopted Landscape Character Assessment.
- Our aim is to promote and encourage an increase in appropriate tree cover on public and private land towards 15% as an average across the district by 2060.

- Tree planting opportunities exist on the council's own land - 1,745 Council-owned open spaces which could support tree planting have been identified.
- Strategic working with other landowners and stakeholders should be supported at all levels, to help meet the Council Plan 2016-2020 aim to *'enhance our natural and built environment, develop low-carbon, health promoting, integrated communities with a strong sense of place connected by well-planned transport networks.'*

### 3 TREE ASSET MANAGEMENT PRACTICES AND PROCESSES

### 3.1 MANAGING AND MAINTAINING THE COUNCIL'S EXISTING TREE ASSET AND MEETING OUR LEGAL OBLIGATIONS

We will maintain our tree asset by:

- proactively inspecting and risk-assessing our trees in our busiest sites first, followed by other sites as resources allow;
- inspecting trees we own and about which residents have expressed concern, although we are unlikely to undertake tree surgery work for reasons of shade, interference with TV or satellite signals, blocked views, overhanging gardens or any other non-legal reason;
- felling or pruning trees which are dead, dying or dangerous as a quickly as possible;
- promptly responding to any insurance claim relating to one of our trees once we have thoroughly examined the circumstances;
- removing branches which obstruct free passage of roads and pavements or cause a danger, and clearing street lights, traffic signs and signals, sightlines and crossings when a problem is reported;
- following best practice in managing our trees, and capturing and storing our tree asset and risk management data in our tree management database to provide a robust record;
- wherever possible, planting a new tree nearby when one of ours has to be felled.

The top priority for tree management is public safety. We carry out regular risk assessments of trees that we own. This tells us where harm is most likely to occur and helps us decide what we need to do to keep people and property beneath our trees reasonably safe. We prioritise our surveys, dealing firstly with trees in busier areas, such as highways and parks. We also survey trees in many of our schools. We target any time we have left at the remaining sites we own.

#### 3.1.1 Trees and the public highway

*Practice 1: The Council will maintain the highways infrastructure in a safe and useable condition by managing vegetation which might obstruct it or interfere with its proper functioning. This will include implementing our proactive Tree Risk*



*Management Plan, responding to reports of obstructions and requiring private land owners to cut back or otherwise remedy their trees and vegetation.*

The Council's duty ensure that trees do not interfere with pedestrians or road users is carried out under the Highways Act 1980. South Gloucestershire Council is the Highways Authority for the district with a duty to maintain the highways infrastructure in a safe and useable condition by removing danger and managing use, as well as minimising disruption caused to traffic by works on the highway.

We therefore have responsibility to ensure that highway trees are surveyed and managed to current industry best practice and in accordance with the Highways Act 1980.



*Figure 6: Highway tree failure resulting from high winds, on Freezing Hill Lane,*

- **Well-maintained footways**

Root growth from street trees can cause damage to the surface of footways, particularly in urban areas. Tree stems of larger trees can also partially obstruct footways. The Council's inspectors apply a standard approach in assessing risk from trip hazards and footway obstructions. However, the Council will draw a

balance between keeping the public highway clear of obstruction for the safe use of pedestrians, and the retention of trees for positive amenity benefit <sup>12</sup>.

- **Section 96 Highways Act 1980**

Section 96 of the Highways Act 1980 empowers the highway authority to plant trees in highways maintainable at public expense and to do anything expedient for the maintenance or protection of trees.

- **Section 154 Highways Act 1980**

Under the Highways Act (as amended) responsibility for trees, hedges and shrubs that adjoin the public highway are the responsibility of the owner. The landowner is required to make sure that vegetation from their property does not:

- overhang the pavement/road so as to obstruct pedestrians or vehicles;
- pose an unreasonable health and safety risk to pedestrians or vehicles;
- obstruct or interfere with traffic signals, road signs, or the light from a street light;
- block drivers' or pedestrians' sightlines, view or crossings.

Where we identify an issue, we will advise the land owner or occupier. If the owner/occupier does not take corrective action within a reasonable and specified time limit we may issue a formal notice under Section 154 of the Act for the work to be undertaken. If the notice is not complied with we may carry out the work and recoup our cost of doing so from the owner. In all cases we will try to liaise constructively from the outset and offer advice.

To provide adequate clearance from the highway we will follow accepted best practice to achieve:

---

<sup>12</sup> The guidance in 'Well-maintained Highways – Code of Practice for Highway Maintenance' recommends that: *'A risk assessment should therefore be undertaken with specialist arboricultural advice on the most appropriate course of action, if possible to avoid harm to the tree. In these circumstances, it may be difficult for authorities to reconcile their responsibilities for surface regularity, with wider environmental considerations and a reduced standard of regularity may be acceptable.'* (para. 9.6.4) Roads Liaison Group, (2005), Well-maintained Highways – Code of Practice for Highway Maintenance, TSO. <http://www.ukroadsliaisongroup.org/>

- for pedestrians, a minimum vertical headroom of 2.3m for pedestrians;
  - for carriageway and a distance of 0.45, immediately adjacent to it, a minimum vertical headroom of 5.2m.
- 
- **Dropped kerb (vehicular access)**

*Practice 2: New dropped kerbs and cross-overs will only be permitted if they will not adversely affect nearby trees.*

From time to time we receive requests for the installation of dropped kerbs to enable vehicles to be driven off the highway, often across the verge or pavement and onto the owner's land. Very often this is a straight-forward process carried out to a specification that is provided by the Council's Highway Inspector.

If there are trees near to the proposed dropped kerb access, an assessment needs to be made to establish whether it is possible to carry out the installation without causing serious damage to the tree's root system.

If it is not felt that the cross-over can be installed without severely compromising the structural integrity of the trees nearby, the request will be refused.

### **3.1.2 Responding to severe weather incidents**

The Council has in place its Street Care Incident Plan. The Plan details the operational response by Street Care to adverse weather situations within South Gloucestershire, which includes extreme wind events which may cause tree failures and disruption to the transport network.

### **3.1.3 Tree Risk Management**

- *Practice 3: Trees owned or managed by South Gloucestershire Council will be inspected and assessed for risk through a rolling programme in accordance with the Council's Tree Risk Management Plan (see Appendix 1) and according to available resources. Control measures will be taken to reduce risk to an acceptable level, and our tree asset and risk management data will be retained in our tree management database to provide a robust record.*

Tree surveys will be undertaken to meet our duty of care. The Council's trees will be inspected in line with the Tree Risk Management Plan (Appendix 1) which implements the National Tree Safety Group guidance 'Common Sense Risk Management of Trees', published December 2011<sup>13</sup>. Priority will be given to areas with the highest use areas, which are Council-maintained highways, schools<sup>14</sup>, parks and other open spaces and children's play areas. Available resources thereafter will be targeted at the remaining sites we own or manage, such as neighbourhood open spaces, outdoor sports facilities, woodlands, footpaths, conservation areas and green corridors.

A report of a dangerous tree may be received from any of a wide range of sources, and is treated as an emergency, and usually relates to a tree or branch which has fallen during a severe weather event, but might relate to other aspects of tree condition. Our response procedure is shown in Appendix 2.

---

<sup>13</sup> Tree Safety Group (2011) Common Sense Risk Management of Trees. Forestry Commission, Edinburgh.

Available to download at <http://www.forestry.gov.uk/publications>

<sup>14</sup> This relates only to schools which have opted-in to the Council's tree survey service.



*Figure 7: South Gloucestershire Council tree surgeons pruning a Beech tree (*Fagus sylvatica*) at Warmley House.*

The Council manages the annual risk of death or significant harm from trees within the Health & Safety Executive's 'Tolerability of Risk Framework', by assessing risk and recommending control measures that reduce that risk as low as reasonably practicable, and below the 1 in 10,000 threshold of Tolerable Risk. The Tree Risk Management Plan adopts the Quantified Tree Risk Assessment methodology to assess the risk of harm from trees, which includes a formal inspection, with detailed inspections carried out as necessary.

Any remedial tree surgery work required will be carried out in line with the Council's Arboricultural Services Framework.

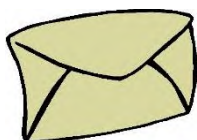
Our tree management database will be used to capture and store tree asset data (such as location, height, condition) as well as our assessment of risk and the remedial tree surgery work carried out. Data collected can be analysed and collated to give a history of inspection and works. This will become invaluable for insurance cases where proof of management is required. In addition, the data collected allows management decisions and predictions to be made that will improve the delivery of the Arboricultural service.

#### **3.1.4 Trees within schools**



*Practice 4: For those schools which have chosen to opt-in to the Council's tree safety management service, Community Services will carry out a health and safety survey of school trees every four years, highlighting recommendations for works and identifying priorities. This will be carried out in accordance with the Council's Tree Risk Management Plan (see Appendix 1). All high priority works will then be arranged on behalf of the School by Community Services. The remaining priorities will be brought to the attention of the school to undertake or instruct Community Services to arrange, as they see fit.*

Decisions regarding the general management of existing trees and the planting of new trees remain with the school Managers. However, the Council's Arboricultural Officers will seek to provide whatever advice they are able to help secure a healthy and growing population of trees within the grounds of South Gloucestershire's schools.



#### Key Messages

- Meeting the Council's 'duty of care' around tree safety risk assessment and management, and maintaining a safe and unobstructed highway network, are our top priorities.
- The Council's Tree Risk Management Plan (Appendix 1) seeks to implement the guidance of the National Tree Safety Group. We manage the annual risk of death or significant harm from trees within the Health & Safety Executive's 'Tolerability of Risk Framework' by assessing risk in a prioritised way, and undertaking control measures that reduce the risk to below the 1 in 10,000 threshold of Tolerable Risk, and 'as low as reasonably practicable'.

### 3.1.5 Tree-related enquiries from the public

*Practice 5: The Council will only undertake work to its own trees at the request of a third party if a tree is dead, dying, diseased or dangerous or will soon become so, or if otherwise required by law.*

In 2015 the Council received around 2,000 enquiries from the public relating to trees under our management, of which just over 210 were treated as emergencies.

Protecting and enhancing the environment, combined with limited resources means that decisions must be made on the priority of work we carry out to our trees. Work to a tree identified as being hazardous will be treated as a priority. Other urgent work includes trees that are dead, dying or dangerous, trees implicated in legal claims or which are obstructing the highway.

Non urgent work includes work to trees to prevent future problems, such as them becoming hazardous or to continue previous management techniques such as pollarding.

Any other requests for non-essential work to our trees will be considered on a case-by-case basis, but will be at our discretion. We are not legally obliged to prune or fell trees to increase light levels or improve a view, to respond to tree debris such as fruit, leaves, seed or honeydew, to improve TV reception, or because of a fear that a tree is too large.

- **Overhanging vegetation**

*Practice 6: Although the Council aims to be a considerate neighbour, we are unlikely to fell or prune our trees for the reason that they are encroaching over a boundary, unless causing an actionable nuisance. We will, however, consider each request and advise a neighbour what options may be available to them.*

Tree owners have no legal obligation to prune back any vegetation overhanging neighbouring properties and this also applies to Local Authorities. We will prune back overhang to abate an 'actionable' nuisance – a nuisance in legal, not common usage i.e. where actual damage to property is occurring.

- **Right to light**

*Practice 7: The Council will not fell or prune a tree to increase the light levels to a property or to reduce shade to a garden.*

A common complaint with regard to trees in the built environment is the effect they have on loss of light to properties and the shade they cast onto gardens.

In most cases it is very rare that the tree is the only obstruction to light. Often there are built structures nearby which contribute to the shading, or the house may be north facing. Pruning for light is often counter-productive and costly, as the trees will require re-pruning at regular intervals. Any unnecessary pruning is invasive and the resultant wound may invite decay and weaken the tree. With most tree species, pruning results in vigorous re-growth which can result in an even greater level of shading and higher ongoing maintenance costs for the Council. For these reasons careful consideration will always be given to the reasons for undertaking tree work and where thought inappropriate, works will not be undertaken. It should be pointed out that there is no automatic legal right to light as far as broadleaf trees are concerned, as they are slow growing and therefore do not make an instant impact to light loss.

- **Television and satellite reception**

*Practice 8: The Council will not fell or prune trees for the reason that they are interfering with television or satellite signals.*

Trees can have an adverse effect on television and satellite receptions. This is worse when the trees are in full leaf, or when there is heavy rain or strong winds. In the winter, when broadleaf trees have lost their leaves, the effect the trees have on TV and satellite reception is reduced.

Often, a problem can be rectified by repositioning the aerial or satellite dish. Where this is not possible, there are booster devices available which can improve the efficacy of aerials. These options are far less destructive, and less expensive than the pruning or felling of trees.

The TV licence is a permit to operate a television receiver. It does not guarantee a reception. However, help and advice can be sought from BBC Reception Advice.<sup>15</sup>

---

<sup>15</sup> BBC Reception Advice, Television Centre, Wood Lane, London, W12 7RJ. Tel: 0870 0100 123 (national call rate). <http://www.bbc.co.uk/reception/>

- **Minor nuisances**

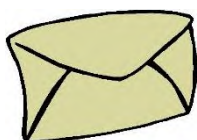
*Practice 9: The Council will not fell or prune Council-owned trees to alleviate problems caused by minor natural processes and phenomena.*

Trees are living organisms that provide many benefits, but there are a number of natural processes and phenomena that are sometimes considered a nuisance. These problems would include leaf, blossom, fruit and seed fall, bird droppings, insects and honeydew.

- **Tree Related Insurance Claims**

*Practice 10: The Council will not fell or prune trees solely for the reason that landscape structures (i.e. driveways, footways, patios, lawns, etc.) are being disrupted. The Council will only remove or prune Council-owned trees that are proven, on the balance of probabilities and through sufficient investigations as prescribed in the Claims Procedure, to be causing damage to built structures if it is the most appropriate solution. Alleged tree root damage insurance claims will be dealt with using the Subsidence Claim Procedure in Appendix 3.*

A common cause of concern for homeowners is the potential for trees to cause structural damage to property. The relationship between trees and structures is complex. The arboricultural section has a procedure for processing claims that assesses the tree's worth and, consequently, the level of information required to support the claim. This is laid out in Appendix 3.



## Key Messages

- The Council receives many tree-related enquiries from the public each year, such as our trees overhanging boundaries, shading or reducing light or interfering with TV reception.
- Although all enquiries will be assessed by a tree officer, in many cases we have no legal duty nor the financial resource to carry out remedial work. Therefore, our policy is that we will only undertake work to its own trees at the request of a third party if a tree is dead, dying, diseased or dangerous or will soon become so, or if otherwise required by law.

### 3.1.6 Undertaking work to Council-owned trees

- **Quality of Works**

*Practice 11: The Council will endeavour to maintain high standards of tree work by ensuring that all tree works are properly specified and that works are carried out to British Standard BS3998: 2010 Tree work - Recommendations. Quality of work and compliance with the Council's specification will be monitored by the Council's Arboricultural Officers.*

It is essential that a high standard of tree work is achieved, so that the existing tree stock can be maintained in a reasonable condition. Poorly pruned Council-owned trees can not only send out a negative message but may also reduce the life expectancy of a tree, possibly even leading to the tree becoming hazardous.

Tree surgery is specialised and skilled work. Contractors and staff involved in this work are required to be suitably qualified to ensure that all work is carried out to the appropriate industry best practices and standards. Contractors engaged to undertake works to Council trees will be vetted for competence and certification, and have appropriate insurance cover.

We employ a range of local arboricultural contractors for tree surgery and planting work through the Council's Arboricultural Services Framework Agreement 2012.

- **Consultations/notifications**

*Practice 12: When undertaking significant tree work schemes, other than routine maintenance or emergency works, we will consult and/or notify local residents, Councillors and other interested groups who we believe will be affected by the work. Where possible, we will give four weeks' notice the form of letters, emails and/or public signs, and consider the opinions of the local community.*

People care about what is happening to the trees around them, so it is important for us to keep interested parties informed as to what is happening and give them an opportunity to comment.

- **Street works notices**

*Practice 13: When tree works are to be undertaken adjacent to a highway, which will require temporary control or restriction of traffic and pedestrians, a street works notice will be submitted to our highways department.*

South Gloucestershire Council, as the highway authority, is responsible for maintaining roadside trees to ensure safe passageway for road users. However, the New Roads and Street Works Act 1991 creates a duty for the Council to co-ordinate street works: in the interests of safety and to minimise inconvenience to all street users. Our own need to carry out tree work will be co-ordinated with other street works, of all types, being carried out on our highways.

- **Tree valuation**

*Practice 14: Where it is appropriate to place a monetary value on a South Gloucestershire Council tree, the CAVAT system will be used.*



We view our tree resource as being a considerable asset to South Gloucestershire and its residents. In order to facilitate management decisions on trees it is possible to assign a monetary value to these assets. This enables the Council to negotiate mitigation for tree removal on development sites or compensation for tree damage by third parties. It also informs decisions on tree management as well as determining the level of investigation required on potential subsidence claims where Council trees are implicated.

Capital Asset Valuation for Amenity Trees (CAVAT) is a nationally recognised and widely used system to put a financial value on publicly owned trees <sup>16</sup>.

### 3.1.7 New tree planting and replacing trees

*Practice 15: When a tree on South Gloucestershire Council land is felled we will endeavour to replant with a tree of suitable species and size at the most appropriate site in the locality. Should this not be achievable then an alternative site will be sought.*

In order to maintain a healthy, diverse and continuous canopy cover it is necessary to undertake proactive and appropriate tree planting on a South Gloucestershire wide strategic basis. Throughout the year we will identify sites appropriate for tree planting with a view to planting during November to March.

From time to time we must remove a tree for reasons of health and safety or because it is causing property damage. However, trees need to be replaced or the number of trees and tree cover in South Gloucestershire will continuously decline. Replanting trees is essential to at least maintain if not increase urban tree numbers.

The size and scale of the planting should reflect the planting site as well as the tree or trees being replaced. For example, on large, open sites it may be more suitable to plant a greater number of small whips rather than a larger tree. Alternatively, where a specimen tree is to be replaced, an extra heavy standard tree may be the most appropriate size in order to achieve the instant impact required. Where necessary we will plant trees with guards to protect against damage by vandalism,

---

<sup>16</sup> <http://www.cavattv.org/index.html>

mowers, strimmers, mammals and livestock. We will endeavour to water each newly planted tree during long periods of dry weather, and adjust the tree ties as the tree grows to allow for its increasing girth. When the trees are well established, the stakes and guards will be removed to prevent constraints to healthy growth.

It is not always possible to replace trees in the same location, and where a group of trees is removed it may not be possible to replace with the same number of trees. In these situations, we will endeavour to replant at the nearest suitable site.

Prior to any planting, a service search will be undertaken to ensure no trees are planted within the minimum allowed distances of underground and overhead services. Consultations with adjacent residents, Ward and Parish Councillors, friends' groups and relevant Council departments, where appropriate, will be carried out to ensure that the planting is welcomed and does not conflict with existing or proposed projects.

In particular, when assessing potential planting locations near to highways, we will take into account the need to maintain or improve highway safety. Locations or tree species will not be chosen which would in the future obstruct or interfere with traffic signals, road signs, or the light from a street light, or block drivers' or pedestrians' sightlines, view or crossings.

- **Community involvement**

*Practice 16: The arboricultural officers will continue to engage with stakeholders that wish to promote appropriate tree planting and management.*

Community participation is encouraged, and will be guided by the arboricultural expertise of the South Gloucestershire Council arboricultural officers. All tree planting is carried out in accordance with the South Gloucestershire Council tree planting specification. The majority of trees that contribute to the landscape of South Gloucestershire are in private ownership. Through engaging and encouraging sustainable tree management and planting on private land we hope to be able to maintain and enhance the current tree stock.

- **External funding**

*Practice 17: South Gloucestershire Council will seek external funding for tree planting projects across the district, working in partnership with other organisations where possible.*

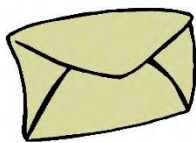
There is currently external funding and resource available to the council and community groups that will enable the Council to at least maintain its current level of planting. Countryside Stewardship grants are available for woodland creation or improvement, tree health support, or to prepare woodland management plans. Other examples are the Landfill Communities Fund via Entrust, Woodland Trust tree packs for communities and schools, Heritage Lottery Fund and the Big Lottery Fund. The Forest of Avon Trust have delivered tree planting projects with grant funding from the Council, and the Council's new Member Awarded Funding scheme for voluntary groups, charities, and Town & Parish Councils is currently being developed.

- **Dedicated Trees**

*Practice 18: When a request for a memorial tree on South Gloucestershire Council land is received, we will liaise closely with the customer to find a suitable location and discuss appropriate tree species. The cost of the tree and for planting and guarding it will be dependent on the type of tree and location chosen.*

South Gloucestershire Council has an annual tree planting programme to which can be incorporated – for a fee - any request for a memorial tree.

Plaques or any other type of signage do not lend themselves to the surrounding environment, and can create an obstruction to maintenance vehicles such as mowers and strimmers. Experience has shown that plaques can also attract vandals whose actions often prove distressing for the relatives of the person commemorated. For these reasons they will not be permitted. Where the deceased is interred in a South Gloucestershire Council cemetery and space is available, a plaque may be placed next to a newly planted memorial tree.



### Key Messages

- The Council will continue to set a high standard of consultation, decision-making and tree surgery when carrying out work to our own trees, and will continue to use a range of local tree surgery contractors who have agreed to supply these services under the Council's Arboricultural Services Framework Agreement 2012.
- Maintaining a healthy, growing and diverse tree asset within the District means being strategic and innovative about new tree planting opportunities by working with other Council teams and external groups and bodies.
- We will replace trees we have to fell and afford them good quality after-care, as well as encourage and support others' tree planting projects.

#### 3.1.8 Managing and improving our woodland asset

*Practice 19: Our woodlands will be managed so as to meet the objectives laid out in their individual management plans and surveys. The Council will work with other agencies to gain external funding where available.*

South Gloucestershire Council has varying levels of responsibility for approximately 120 hectares of woodland of differing age and quality throughout the district. The largest and most visited woodland sites are:

- Avon Valley Woodlands – Hencliffe and Bickley Woods
- Savages Wood, Webbs Wood and Sherbournes Brake in Bradley Stoke
- Britannia Woods and Lincombe Barn in Downend
- Chill Wood in Iron Acton
- Ridge Wood in Chipping Sodbury
- Filnore Woods in Thornbury

- Gorse Covert and Blakeney Road in Patchway
  - Willsbridge Mill, Willsbridge
  - Magpie Bottom, Hanham
  - Frome Valley in Frenchay
  - Swineford
  - Sims Hill, Filton
  - Warmley Forest Park
  - Streamside Walk, Thornbury
  - Westerleigh Common
  - Gover Road, Hanham
- 
- **Management and Surveys**

Conservation and recreation management of the Council-owned woodlands is planned and undertaken by the Council's Open Spaces team, with the support of the Tree Team where reactive work is required. Where management plans have been produced, works have been undertaken sporadically according to varying priorities of other necessary open space works. However, some specific aims have been established and are implemented year on year. For example, within the Avon Valley woodlands Japanese Knotweed and Himalayan Balsam five-year control programmes have been implemented.

Further, we have also been undertaking some more localised surveys within the woodlands themselves and where prescriptive work programmes have been produced, works have been carried out as a result.



*Figure 8: A local chainsaw carver sculpting the trunk of a felled Horse Chestnut tree (*Aesculus hippocastanum*) for*

- **Future Management**

Conservation and recreation management of the Council-owned woodlands will continue to be planned and enhanced by the Council's Open Spaces team within available resources. The Tree Team will support this work wherever required.

We are looking at the possibility of working with the Forestry Commission (FC), the Forest of Avon Trust and a not-for-profit wood fuel organisation to achieve the optimum output from our woodlands. This may be in the form of timber production, but could also be the increased promotion of woodlands as an educational resource.

There is a possibility of obtaining grant funding from the FC for the production of long term management plans. These can be drawn up to meet various objectives, including conservation, education and timber/fuel production. The implementation of the management plan could be carried out by contractors that would sign up to a contract or licence agreement and timber and wood by-products would be sold to the wood fuel company. This company process the wood into chips and it is sold on to fuel wood-fuelled boilers in the district, for example at the Council's Badminton Road offices and at certain schools.





## 3.2 PROTECTING AND ADMINISTERING THE TREE ASSET IN SOUTH GLOUCESTERSHIRE

Privately-owned trees form a significant proportion of South Gloucestershire's urban forest. The Council has some control over this part of the tree resource through Planning legislation. As the Local Planning Authority the Council's duty to protect trees is carried out under:

- The Town and Country Planning Act 1990 (as amended);
- Town and Country Planning (Tree Preservation) (England) Regulations 2012.

### 3.2.1 Tree Preservation Orders (TPOs)

*Practice 20: The Council will secure the protection of trees through the timely and accurate making and confirmation of Tree Preservation Orders and maintain the TPO register. We will examine, evaluate and determine all applications for works to protected trees and notices of proposed works to trees in Conservation Areas, including site inspections, in accordance with the council's planning policies and within statutory or council approved timescales.*

Tree Preservation Orders (TPOs) are made by the Council as the Local Planning Authority, in the interests of amenity to give legal protection against a tree being cut down, topped, lopped, uprooted, wilfully damaged or wilfully destroyed. South Gloucestershire Council have over 780 active TPOs which primarily protect privately-owned trees under threat, and which we administer and keep under review. It is an offence to cut any part of a tree which is the subject of a TPO including cutting the roots, without first obtaining consent from the Council. It is also an offence to cause or permit another to harm a protected tree.<sup>17</sup>

When deciding whether to make a TPO, the Council follows government guidance, which includes assessing the amenity of the tree (taking into account such factors

---

<sup>17</sup> Full guidance on the protected tree procedures is available at  
<http://planningguidance.communities.gov.uk/blog/guidance/tree-preservation-orders/>

as visibility, individual impact and wider impact) as well as the degree to which a tree may be under threat.

The Council will notify all those persons interested in the land affected by the Order when making it, and allow at least 28 days for representations. We are required to consider all representations and objections before deciding whether or not to confirm the Order, either with or without modifications.

The Council determine approximately 240 applications to work on protected trees and conservation area notifications each year. Making an application is free of charge. A decision may take up to eight weeks.

Where a protected tree is given our consent to be removed, we will require a replacement tree as a condition of our consent, so that tree cover and amenity is maintained. A replacement tree will be automatically protected under the existing TPO.



*Figure 9: Woodland Beech tree (Fagus sylvatica) protected within a woodland Tree Preservation Order.*

### 3.2.2 Conservation areas

A conservation area is defined as “an area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance”. The Council has created 30 conservation areas to ensure their natural features, cultural heritage or biota are safeguarded. The Council have a statutory power to exercise a degree of control over work to trees within conservation areas.

Anyone wishing to carry out works to trees in conservation areas (excluding those which are subject to a TPO), is required to give the Council six weeks’ notice of their intention to do so, providing specific information about the planned works. This is a Section 211 Notice. The Notice gives the Council an opportunity to consider whether a TPO should be made in respect of the tree so we can protect it.

### 3.2.3 Dead and dangerous trees

*Practice 21: Where a protected tree is removed because it is dead or dangerous the Council will require a replacement tree unless there are exceptional circumstances.*

**Dangerous trees** must be dealt with promptly to reduce the risk of harm to people or property. In the case of a tree protected by a TPO the Council’s consent is not required to cut down or carry out work to a tree *‘to the extent that such works are urgently necessary to remove an immediate risk of serious harm’*. For a dangerous tree within a conservation area the requirement to give the Council six weeks’ notice does not apply. Tree owners or their agents must give written notice to the authority as soon as practicable after that work becomes necessary. Work should only be carried out to the extent that it is necessary to remove the risk.



*Figure 10: Shaggy  
Bracket fungus  
(Inonotus hispidus) on  
an Ash tree in Yate.*

If the danger is not immediate the tree does not come within the meaning of the exception. The onus is on the tree owner and/or person carrying out work under these exceptions to be able to show that a tree was dead or that the works were urgently necessary to remove an immediate risk of serious harm. The Council may decide to take legal action if it believes that the exception was falsely applied.

Anyone proposing to carry out works to a **dead tree** protected by a TPO or within a conservation area is required to give the Council at least five working days' notice of their intention to carry out the works (a 'five-day Notice'). The Council's consent for such work is not required. The exceptions allow removal of dead branches from a living tree without prior notice or consent.

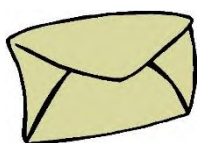
#### 3.2.4 Penalties for unauthorised work

*Practice 22: Where the Council believe unauthorised work to a tree protected by a TPO or within a conservation area has taken place, or an exemption from the protected tree procedures has been falsely claimed, we will investigate fully and may decide to take legal action.*

South Gloucestershire Council have brought a number of successful prosecutions over the years against unauthorised work and damage to protected trees; the most recent being in January 2016. Penalties for carrying out unauthorised works to a

tree that is the subject of a TPO or a tree growing in a conservation area are the same.

A Magistrates' Court may impose a fine of up to £20,000 on a person convicted of deliberately destroying such a tree or damaging it in a manner likely to destroy it and up to £2,500 where unauthorised work is carried out to a tree in a way that is not likely to destroy it. In setting a fine, a Court is also required to take account of any financial benefit which an offender has gained or is likely to gain as a consequence of the offence.



### Key Messages

- Making and administering Tree Preservation Orders (TPOs), and deciding applications to carry out work to trees protected by TPOs or within conservation areas is a statutory duty of the Council. The procedures help protect significant trees which are under threat or pressure.
- Our decisions are made according to our planning policies and within statutory or council approved timescales.
- Investigating unauthorised tree work, and taking enforcement action where appropriate, demonstrates our robust protection of the wider district tree asset.

#### 3.2.5 Grants for work to protected trees

The Council have a grant scheme to assist owners of trees covered by a tree preservation order (TPO) or within a conservation area, to undertake works to that tree.



The grants are discretionary and in principle work to trees affected by development will not be eligible. The grants are available for remedial tree works only, not for felling or the removal of deadwood. The grant covers the cost of approved works up to 50% and to a maximum of £75 per tree and £500 per application.

### 3.2.6 Development and trees

*Practice 23: The trees of South Gloucestershire will be protected and tree cover increased across the district by applying policies CS1 High Quality Design, CS2 Green Infrastructure, CS9 Managing the Environment and Heritage within the Council's Core Strategy, and policy PSP3 Trees and Woodland of the Policies Sites and Places Plan (DPD) in determining planning applications.*

Policy PSP3 Trees and Woodland of the Policies Sites and Places Plan (DPD) states:

*“Development which would result in the loss of, or damage (directly or indirectly) to, existing mature or ancient woodland, veteran trees, ancient or species-rich hedgerows will not be permitted.*

*Where tree loss or damage is essential to allow for development, replacement trees of an appropriate species should be provided.*

*Elsewhere, development should, where appropriate, include:*

- *the protection of trees and additional tree planting in accordance with Core Strategy Policy CS1;*
- *new planting schemes that retain and integrate healthy, mature trees and hedgerows, and include native species, which are, where possible, locally sourced.*

*In urban areas, proposals for development which include tree planting along arterial roads, within car parks (where appropriate) and public realm areas, will be given considerable weight.*

*In rural areas proposals, which support increased tree cover in line with the Landscape Character Assessment SPD, will be given considerable weight. Steps will be taken to ensure that Council-owned trees on or beside development sites are afforded the full protection laid down under industry best practice.”*

The Town and Country Planning Act 1990 creates a duty of local authorities to ensure that in granting planning permission, adequate provision is made to protect and plant trees through the use of Tree Preservation Orders (TPOs) and planning conditions.



*Figure 11: A Pendunculate Oak tree (Quercus robur) protected and retained to enhance residential development in Mangotsfield.*

The potential effect of development on trees, whether statutorily protected or not, is a material consideration that is taken into account in dealing with planning applications. British Standard 5837: 2012 Trees in relation to design, demolition and construction (The Standard) describes how trees should be taken into account in designing a scheme and protected during and following the construction phase.

Applicants are expected to be able to demonstrate that they have adequately considered trees from the outset of their development concept, and are strongly recommended to seek advice from a suitably qualified arboriculturalist.

When considering a planning application, South Gloucestershire Council will take into account how the development proposal relates to trees, for example:

- The quality and health of trees and their prominence in the local landscape, role in screening and noise reduction and contribution to local biodiversity;
- The appropriateness and impact of and justification for proposed tree removals, and the adequacy and suitability of mitigation measures where appropriate;
- The distance between retained trees and proposed buildings, including allowance for future canopy and root growth;
- The relationships between the positions of trees and proposed windows for light, and in relation to gardens, driveways and buildings;
- Potential future conflict with end use of the site, such as future management and accessibility, aphid honeydew, canopy density and tree debris;
- The potential for future conflict, taking into account tree species selection and future expected growth, between the landscaping scheme and other design aspects such as a lighting scheme, traffic signs and signals, pavements and crossings, and drivers' sightlines and views <sup>18</sup>.
- The working and access space needed for the construction of the proposed development, and the infrastructure requirements in relation to trees, e.g. underground and above ground services, highway safety and visibility splays, etc.;
- The adequacy of tree protection measures.

*Practice 24: South Gloucestershire Council will make TPOs where important trees are threatened by development and/or it appears that trees and their appropriate retention might not be given proper consideration from the outset of a development concept.*

The aim of the Council in carefully considering trees is to ensure that their retention of trees is appropriate and sustainable in the long term, and are seen as assets within the end use of a site.

---

<sup>18</sup> It is important to make sure that lighting levels are retained through the life of the street and schemes. See the Council's Street Lighting – Planning Requirements 2016 guidance.

Where the Council consider important trees to be under threat from development, or that they might not be given proper consideration through the planning process, we may decide to make a TPO to protect tree(s) in the interest of public amenity. A TPO may be served prior to or on receipt of an application or subsequently. The making of a TPO before or on receipt of an application is aimed at encouraging a developers' project team to properly consider tree retention during the planning process, and the Order may be modified before confirmation.

Further guidance is available in the Council's 'Trees on Development Sites' Supplementary Planning Guidance.

### **3.2.7 Conditions of planning consent and S106**

The Council may impose a condition on a planning permission or an obligation secured through a S106 agreement or an undertaking to ensure the protection of existing trees, including those subject to Tree Preservation Orders. Conditions may be attached to require the retention of a tree, the means of protection during development or the provision of a new tree. Accompanying section 106 agreements may be used to secure obligations for example planting of additional trees or a financial contribution towards this.

## 4 FURTHER INFORMATION

Further advice and information about trees in South Gloucestershire is available at <http://www.southglos.gov.uk/environment-and-planning/conservation/trees-and-hedges/>

Forestry Commission England have produced a useful summary '**The Case for Trees**' available to download at <http://www.forestry.gov.uk/forestry/infd-87yek2>

The emerging **Charter for Trees, Woods and People** is set to become an important emerging national document. Its ambition is to place trees at the centre of national decision making, and back at the heart of our lives and communities. <https://treecharter.uk/>

The **Trees and Design Action Group (TDAG)** is a charitable trust promoting the role of the urban forest throughout the United Kingdom. <http://www.tdag.org.uk/>

The latest research and advice on recent and potential **pest and diseases of trees** is available at <http://www.forestry.gov.uk/pestsanddiseases>

**MANAGING AND MAINTAINING THE COUNCIL'S EXISTING TREE ASSET AND MEETING OUR  
LEGAL OBLIGATIONS**

BS3998: 2010 Tree work – recommendations. BSI Standards Ltd.

<http://www.bsigroup.com/en-GB/>

BS5837: 2012 Trees in relation to design, demolition and construction – recommendations.

BSI Standards Ltd. <http://www.bsigroup.com/en-GB/>

CAVAT (Capital Asset Valuation for Amenity Trees) is a nationally recognised system to express the public amenity value of urban trees in monetary terms.

<http://www.cavattv.org/index.html>

South Gloucestershire Council Street Lighting Policy 2014.

<http://www.southglos.gov.uk/transport-and-streets/streets/road-and-traffic-management-information/lighting-street-lights/street-lighting-policy/>

Roads Liaison Group, (2005), Well-maintained Highways – Code of Practice for Highway Maintenance, TSO. London (2<sup>nd</sup> edn.) <http://www.ukroadsliaisongroup.org/>

National Tree Safety Group (2011) Common Sense Risk Management of Trees. Forestry Commission, Edinburgh. Available to download free of charge at

<http://www.forestry.gov.uk/publications>

## PROTECTING AND ADMINISTERING THE TREE ASSET IN SOUTH GLOUCESTERSHIRE

Full guidance on the **protected tree procedures** is available at

<http://planningguidance.communities.gov.uk/blog/guidance/tree-preservation-orders/>

The **South Gloucestershire 2026 Sustainable Community Strategy 2012** has been put together and will be monitored by the South Gloucestershire Partnership which is made up of private, public, voluntary and community groups who work with communities to identify and tackle key long, medium and short-term local issues.



<http://www.southglos.gov.uk/council-and-democracy/localism/sustainable-community-strategy/>

The **Council Plan 2016-2020** sets out our plans for achieving the best for our residents and their communities. <http://edocs.southglos.gov.uk/councilplan/>

The **South Gloucestershire Climate Change Strategy 2012-2015** is a strategy framework and supporting action plans which set out the Council's plans for delivering the transition to a low carbon South Gloucestershire and an energy system that is more secure.

<http://www.southglos.gov.uk/environment/climate-change/climate-change-strategy/>

### **South Gloucestershire Local Development Framework**

The Local Development Framework (LDF) comprises a series of policy documents, separately prepared, that together set out the planning strategy for South Gloucestershire. The following documents make up the LDF:

**Core Strategy.** The Core Strategy 2006-2027 is the key planning policy document for South Gloucestershire, setting out the general location of development, its type and scale, as well as protecting what is valued about the area. <http://www.southglos.gov.uk/environment-and-planning/planning/planning-local-plans/core-strategy-2006-2027/>

**Policies, Site and Places Plan (DPD).** Policies Sites and Places Plan (PSP plan) is the final document which will complete the South Gloucestershire local plan. The PSP plan will set out new planning policies for South Gloucestershire. <http://www.southglos.gov.uk/environment-and-planning/planning/planning-local-plans/policies-sites-places-dpd/policies-sites-and-places-dpd/>

### **IMPROVING THE TREE ASSET IN SOUTH GLOUCESTERSHIRE**

Forest Research, 2010, **Benefits of green infrastructure**. Report by Forest Research. Forest Research, Farnham, available to download at <http://www.forestry.gov.uk/fr/infd-8a9a2w>

Commission for Architecture and the Built Environment (CABE), 2010, **Urban Green Nation – building the evidence base**, London, available to download at <http://www.designcouncil.org.uk/resources/report/urban-green-nation>

Treeconomics London, 2015, **Valuing London's Urban Forest - Results of the London iTree Eco Project** available to download at <http://www.forestry.gov.uk/london-itree>

Britt, C. & Johnston, M., 2008, **Trees in Towns II - A New Survey of Urban Trees in England and Their Condition and Management**. Department for Communities and Local Government: London.

The 2009 Forestry Commission report '*Combating Climate Change: a role for UK forests*' (**the Read Report**) examined the potential of the UK's trees and woodlands to mitigate and adapt to our changing climate. The 'synthesis report' is available to download free of charge at <http://www.forestry.gov.uk/readreport>

The **Independent Panel on Forestry** was convened to advise government on the future direction of forestry and woodland policy in England, and on the role of the Forestry Commission in implementing it. Available to download at <https://www.gov.uk/government/publications/independent-panel-on-forestry-final-report>

Government forestry policy is set out in Defra's and Forestry Commission England's **Forestry and Woodland Policy Statement 2013**, which incorporated the Government's response to the Panel's Final Report. <http://www.forestry.gov.uk/forestry/infd-7t9b67>

# APPENDICES

## Tree Asset Management Plan

**Appendix 1: South Gloucestershire Council Tree Risk Management Plan**

**Appendix 2: Emergency Tree Response Procedure**

**Appendix 3: Subsidence Claim Procedure**

**Appendix 4: Calculating tree canopy cover in South Gloucestershire**

## Appendix 1: South Gloucestershire Council Tree Risk Management Plan

### 1. SUMMARY

1.1 This Tree Risk Management Plan explains how South Gloucestershire Council will meet its legal duty and responsibilities in the management of our trees. We will:

- Use the Quantified Tree Risk Assessment (QTRA) method to assess the risk from our trees.
- Identify the areas in the district that have a high level of use, and carry out inspections of trees growing there at a frequency informed by the initial and subsequent inspections.
- Carry out remedial work to trees to reduce the risk to acceptable levels according the Health & Safety Executive's guidance.
- Record our tree risk management decisions, so that we can demonstrate we are acting reasonably according to our legal 'duty of care' and the public's expectations.

### 2. INTRODUCTION

2.1 The Council is responsible for many thousands of trees which grow along our highway verges, in our public parks and open spaces and in our woodlands. They provide us with a wide range of direct and indirect environmental, social and economic benefits, such as cooling the air and shading us from heat, improving air quality by removing pollutants, providing a home to wildlife and increasing biodiversity, and intercepting rainfall to reduce flooding<sup>1</sup>.

---

<sup>1</sup> Forestry Commission England have produced a useful summary 'The Case for Trees' available to download at <http://www.forestry.gov.uk/forestry/infd-87yek2>

- 2.2 Trees are living organisms that can grow to a large size. They can be damaged by the weather and weakened by pests and diseases. They can fall over or branches can fall to the ground. Where people, traffic or structures are nearby there is the potential for injury or damage, and so as tree owner we are expected to keep this risk at a reasonable level.
- 2.3 **It is important to remember, however, that the Council cannot, and is not expected to, guarantee that a tree is safe. We have only to take reasonable care such as could be expected of the reasonable and prudent landowner. Doing more would cause an unacceptable loss of the many benefits trees provide.**
- 2.4 The Health and Safety Executive (HSE) concludes that the risk of being struck and killed by a falling tree is 'extremely low'<sup>2</sup>. The purpose of this plan is to show that we have a process in place for considering the risk from our trees which is proportionate to this level of risk.

### 3. OUR LEGAL RESPONSIBILITIES FOR TREE SAFETY

- 3.1 *The council seeks to allocate its finite resources to ensure it reasonably meets its duty of care and other legal responsibilities by demonstrating a defendable, proactive tree management regime.*
- 3.2 Like any landowner, the Council has a duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property<sup>3</sup>.
- 3.3 As an employer, the Council has a duty to ensure, 'so far as is reasonably practicable', that employees, contractors and members of the public are not put at

---

<sup>2</sup> Sector Information Minute 01/2007/05 'Management of the risk from falling trees', HSE, 2005  
(Guidance for HSE Inspectors and local authority enforcement officers)

<sup>3</sup> The Occupiers' Liability Act 1957 & 1984.



risk<sup>4</sup>. We are also required to “make a suitable and sufficient assessment of the risks to the health and safety of persons not in his employment arising out of or in connection with the conduct by him of his undertaking”<sup>5</sup>. This requires us to undertake a risk assessment of the tree stock on our land.

3.4 Therefore, it is our fundamental responsibility, in taking reasonable care as a reasonable and prudent landowner, to consider the risks posed by our trees. The HSE states that: “for trees in a frequently visited zone, a system for periodic, proactive checks is appropriate”<sup>6</sup>.

3.5 Should harm occur, it is for the Courts to decide whether or not the Council has discharged its duty of care. In reaching its decision, a Court will ask whether or not we have taken a reasonable and proportionate approach to the management of tree safety.

#### 4. THE NATIONAL TREE SAFETY GROUP

4.1 *This tree risk management plan seeks to implement the new National Tree Safety Group guidance ‘Common Sense Risk Management of Trees’, published December 2011.*

4.2 The National Tree Safety Group (NTSG)<sup>7</sup> was convened in August 2007 to develop a nationally-recognised approach to tree safety management and to provide guidance that is proportionate to the actual risks from trees.

4.3 The NTSG released its guidance ‘Common Sense Risk Management of Trees’<sup>8</sup> in

---

<sup>4</sup> The Health and Safety at Work etc. Act 1974

<sup>5</sup> The Management of Health and Safety at Work Regulations 1999

<sup>6</sup> Health and Safety Executive (2007). Management of the risk from falling trees. HSE Sector Information Minute, SIM 01/2007/05.

<sup>7</sup> <http://www.forestry.gov.uk/forestry/INFD-7T6BPP>

<sup>8</sup> The full NTSG document ‘Common Sense Risk Management of Trees’ is summarised in the ‘Landowner Summary’ document produced by NTSG. Both are available to download free of charge at <http://www.forestry.gov.uk/forestry/INFD-7T6BPP>

December 2011. This is the first national guidance on tree risk management available to tree owners, and followed extensive industry and government consultation.

4.4 The NTSG's guidance states that tree owners should take a balanced and proportionate approach to tree management that forms the basis of a tree safety strategy which covers three essential aspects:

- Zoning: appreciating tree stock in relation to people or property
- Tree inspection: assessing obvious tree defects
- Managing risk at an acceptable level: identifying, prioritising and undertaking safety work according to level of risk.

4.5 The NTSG's guidance requires that areas of land are defined according to levels of use, prioritising the most used areas. High use zones are areas used by many people every day, such as busy roads, other well-used routes, car parks and children's playgrounds, or where property may be affected. Trees in areas of high public use require an inspection regime. Trees in areas with low public use require less frequent inspection. The risk of death or serious injury from trees in infrequently-used areas is so low that it is reasonable that these should receive no formal inspection or visual check. However, owners may need to respond to any reports of problems.

## 5. MANAGING RISK AT AN ACCEPTABLE LEVEL – RISK TOLERABILITY

5.1 *This tree risk management plan seeks to balance the generally very low risk of harm from trees with the many benefits that trees bring to the community, and the desire to avoid unnecessary tree loss. The Council will manage the annual risk of death or significant harm from trees within the Health & Safety Executive's 'Tolerability of Risk Framework', by assessing risk and recommending control measures that reduce that risk as low as reasonably practicable, and below the 1 in 10,000 threshold of Tolerable Risk.*

- 5.2 When assessing a tree, owners and managers need to judge whether the management measures they adopt will fulfil society's reasonable expectations and therefore their legal obligations.
- 5.3 People are exposed to risks throughout their daily lives, and we each make decisions whether those risks are acceptable to us. We might decide to find a safer place to cross the road, make a change to our lifestyle to improve our health, or enjoy the thrill of rock-climbing or skiing.
- 5.4 The HSE advises that each year between 5 and 6 people in the UK are killed when trees fall on them. The HSE concludes that the risk of being struck and killed by a falling tree is extremely low.
- 5.5 The National Tree Safety Group (NTSG) have identified that the overall estimated risk of death per year from falling or fallen trees and branches in the UK is about 1 in 10 million, whereas the annual risk of death in a road accident is about 1 in 16,800. So far as non-fatal injuries in the UK are concerned, the number of A&E cases attributable to being struck by trees (about 55 a year) is exceedingly small compared with the roughly 2.9 million leisure-related A&E cases per year, such as footballs (262,000) and children's swings (10,900).
- 5.6 If the Council tried to achieve absolute safety from trees, the loss of trees would be unacceptable to the community. Therefore, the NTSG guidance advises that the reasonable approach of a tree owner is to balance risk from trees with their many benefits by using a broad threshold of 'acceptable risk'. **The HSE propose that "For members of the public who have a risk imposed on them 'in the wider interest' HSE would set this limit at 1/10,000 per annum"<sup>9</sup>.**
- 5.7 The HSE have developed the Tolerability of Risk Framework which has been incorporated into the NTSG guidance. Risks above 1/10,000 per annum are unacceptable, and risk should be controlled. Risks between 1/10,000 and 1/1,000,000 per annum are tolerable, but should be managed 'as low as reasonably

---

<sup>9</sup> Health and Safety Executive (2007). Management of the risk from falling trees. HSE Sector Information Minute, SIM 01/2007/05. (Guidance for HSE Inspectors and Local Authority enforcement officers).

practicable' (ALARP). Risks above 1/1,000,000 are broadly acceptable and require no further action.

- 5.8 The threshold can be considered on a case-by-case basis. For example, for a tree of low or insignificant value, risk control measures might be implemented at a risk lower than 1 in 10,000. A tree of very high landscape, cultural or biodiversity value might justify a risk greater than 1 in 10,000.

## 6. QUANTIFIED TREE RISK ASSESSMENT

- 6.1 *This tree risk management plan adopts the Quantified Tree Risk Assessment methodology to assess the risk of harm from trees, which includes a formal inspection, with detailed inspections carried out as necessary.*

- 6.2 Quantified Tree Risk Assessment (QTRA©) is a probabilistic method of assessing the risk of harm posed by trees. Its output is a combined measure of the likelihood and the consequence of tree failure considered in terms of the loss, within the coming year, of a human life, something of comparable value or a proportion of that.

- 6.3 The QTRA methodology<sup>10</sup> applies established risk management principles in a robust way, and is based in part on published academic research, guidance from the Health and Safety Executive and other government bodies, and UK government statistics<sup>11</sup>.

- 6.4 In summary, the tree inspector assesses three aspects of risk: the target (who or what might be harmed), the size of the part that might fall (impact potential), and the likelihood of that failure.

- 6.5 The 'targets' (people and property) onto which a tree could fail is assessed first, and quantified within broad ranges. For example, these could be the frequency of pedestrians along a footpath, or vehicles along a road. This 'target range' allows us

---

<sup>10</sup> See QTRA Practice Note V4.02 (Nov 2011) for a more detailed explanation of the methodology, available at <http://www.qtra.co.uk/cms/index.php?section=25>

<sup>11</sup> For bibliography, see documents at <http://www.qtra.co.uk/cms/index.php?section=26>

to decide whether or not and to what degree of rigour a survey or inspection of the trees is required.

- 6.6 If necessary, the Visual Tree Assessment (VTA) process described by Mattheck & Breloer<sup>12</sup> is then used to identify if a tree displays any defects which might lead to failure. The VTA method is widely published, including by Lonsdale<sup>13</sup>, and used by UK arboricultural professionals.
- 6.7 If a significant defect is observed, the size of the part that would fall (impact potential) is assessed, and then the probability of failure occurring is estimated.
- 6.8 The three values derived from the assessment are combined to calculate the probability of significant harm occurring.
- 6.9 The system recognises that trees cannot be labelled simply as 'safe' or 'unsafe'. Instead, QTRA quantifies the risk of significant harm from tree failure, so that the degree of uncertainty around future tree failure can be maintained within the HSE's limits of tolerable and broadly acceptable risk.

## **7. INSPECTION ZONES**

### **7.1 Zone analysis**

- 7.1.1 The focus of QTRA on land use directs the council to dealing firstly with trees in busier areas and according to the value of who or what might be harmed or damaged. This initial 'target' analysis is achieved by placing sites within common categories of target value and occupation. Such 'zoning' of people and property is the first step recommended in the evolving national guidance<sup>14</sup>. The following list identifies the order in which inspections of our trees will be carried out.

---

<sup>12</sup> Mattheck, C. and Breloer, H. (1994) *The Body Language of Trees: A handbook for failure analysis*. The Stationery Office, London.

<sup>13</sup> Lonsdale, D. (1999) *Principles of Tree Hazard Assessment and Management*, Forestry Commission, The Stationery Office, London

<sup>14</sup> <http://www.forestry.gov.uk/website/forestry.nsf/byunique/infid-7t6bs5>

- 7.1.2 In meeting the guidance of the NTSG, the Council must 'zone' the District. This means identifying how frequency of use of our sites, where the potential for harm is greatest, and assessing tree risk in these areas first before moving down to less frequented sites.
- 7.1.3 Our zoning exercise tells us that transport routes need to be assessed first and according to traffic volume data. A high priority will also be given to school sites, because children are considered more vulnerable and less skilled than adults at recognising risk<sup>15</sup>. At same time our busiest parks will be surveyed. Available resources will then be targeted at the remaining sites we own.
- 7.1.4 The order in which we will assess our sites is:
- 1) **Transport routes** – These are our most used sites, and are used all but the most extreme weather conditions. We have many trees in falling distance of carriageways, and tree failure has a high likelihood of causing harm because of the speed of impact. Structural and health defects are more likely in highways trees because of a historic lack of detection and intervention. Traffic census data is used to prioritise roads so that the busier routes can be surveyed first.
  - 2) **Schools and their forecourts** – The community expects children and vulnerable adults to be a safety priority. Young children have a lower ability than most adults to recognise risk from trees and avoid unacceptable risks. Regular checks and reporting of risks by on-site staff, and ongoing tree management, mean that many of the most common and obvious tree defects (such as branches broken in strong winds) are usually quickly dealt with. More visually subtle defects such as internal decay may be easily missed by staff. All schools are prioritised equally, but inclusion in the council's inspection regime is the decision of the school's management.
  - 3) **Formal Parks and Public Gardens and children's play spaces** – At these sites tree are usually a key feature and attraction for visitors. At these sites a good deal of management is likely to have been carried out over the years. Like

---

<sup>15</sup> This relates only to schools that have signed up to the council's tree management service.

schools, identification and reporting of more obvious risks is likely to be good. This might be done by the public, council officers, grounds maintenance staff and Friends' groups. The probability of harm from tree failure may still be high, and people may spend extended lengths of time beneath trees in good weather.

**4) Neighbourhood open spaces, outdoor sports facilities and play spaces – prioritised equally.**

**5) Woodlands, conservation areas & green corridors.**

## **8. INSPECTION REGIME**

### **8.1 Inspection and assessment**

8.1.1 The Health and Safety Executive states that: *"Given the large number of trees in public spaces across the country, control measures that involve inspecting and recording every tree would appear to be grossly disproportionate to the risk."*<sup>16</sup>

8.1.2 Instead, the Council's Tree Officer team will apply the QTRA methodology, summarized below. This allows us to determine whether the relationship between targets and trees, and the condition of the trees, warrants assessment individually or as groups.

8.1.3 It is critical to the defendability of this tree risk management plan that all Officers carrying out tree inspections and QTRA risk assessments must be (and currently are) licensed and competent users of the QTRA system. Officers will also have a Level 3 professional arboricultural qualification as a minimum (such as BTEC National Diploma or Technician's Certificate in Arboriculture). They will also have relevant professional work experience, and take part in Continuing Professional Development (CPD) through membership of a relevant professional body, such as the Arboricultural Association.

---

<sup>16</sup> Sector Information Minute 01/2007/05 'Management of the risk from falling trees', HSE, 2005  
[www.hse.gov.uk/foi/internalops/sectors/ag\\_food/1\\_07\\_05.pdf](http://www.hse.gov.uk/foi/internalops/sectors/ag_food/1_07_05.pdf)



- 8.1.4 Where, on occasion, a tree management decision is beyond the expertise or professional experience of the Council's Tree Officer team, the required expertise must be sought from an external arboricultural consultant. Independent external advice might also be desirable when a tree management decision will be contentious.

## 8.2 Walk-over and drive-by surveys

- 8.2.1 Inspections and surveys will be carried out by the council's trained, competent and qualified Tree Officers. Following the most recent revision of the QTRA methodology, each identified zone will be the subject of a 'walk-over' or 'drive-by' survey, at a frequency to be determined following the initial and subsequent assessments to identify the type of tree population and its relationship with significant targets.
- 8.2.2 The QTRA methodology allows the inspecting officer to establish whether or not, and at what degree of rigor the assessment of trees is required. Where data on frequency of people or value of property is not readily available, or is only available at a cost which is disproportionate to the risk, the judgment of the competent inspecting officer is considered to be the most reasonably practicable approach.
- 8.2.3 Trees identified as posing an 'unacceptable' risk of harm will be recorded and may require an 'individual tree risk survey'. Alternatively, where an inventory of trees is also the desired outcome of an inspection, all trees may be recorded individually.

## 8.3 Individual tree risk surveys

- 8.3.1 The individual tree survey will inform management options to reduce the 'risk of harm' to within acceptable limits. Risks approaching and exceeding 1 in 10,000 will be considered for remedial action. The individual survey will use the Visual Tree Assessment (VTA) process described by Mattheck & Breloer<sup>17</sup>.

---

<sup>17</sup> Mattheck, C. and Breloer, H. (1994) *The Body Language of Trees: A handbook for failure analysis*. The Stationery Office, London.

8.3.2 In summary, VTA proceeds in three phases:

- 1) Visual assessment for signs and symptoms of defects and vitality, from the ground and using binoculars as an aid if necessary. If there are no signs of a problem, then the investigation ends.
- 2) If symptoms lead the inspector to suspect a hidden defect, its presence or absence is confirmed by examination. Mallet and probe are standard tools to assist in the detection and assessment of defects. A further climbing aerial inspection might be required.
- 3) If an internal decay defect is suspected or confirmed and has potential to present a significant risk of harm, internal decay investigation techniques such as Resistograph or Picus Tomograph may be carried out to help inform the risk assessment.

8.3.3 The information gathered during the inspection(s) are then used to complete the QTRA risk assessment, which together are used to reach an intervention decision.

## **9. DOCUMENTATION**

9.1 The identified target zones, survey dates and data (including the risk of significant harm), and records of remedial work carried out, will be recorded within the tree management system.

9.1.1 The Council's tree management database will be used in the field and office to capture and store the tree asset data (such as location, height, condition), the inspection date, the QTRA risk assessment and any intervention decision.

9.1.2 The database is the record that this Plan has been implemented, and will allow the Council to defend claims of liability.

## **10. PROPORTIONATE INTERVENTION**

10.1 Intervention decisions will be made where the probability of harm from trees has been assessed, and exceeds an acceptable limit. Examples of intervention include:

removing the 'target' (such as redirecting a path or fencing off access); carrying out tree pruning work; felling a tree. In particular, modification of targets will be considered first where intervention could otherwise significantly degrade the value of trees

10.2 The HSE suggests that an appropriate limit for a risk imposed on the public should be set at 1 in 10,000 per annum.

- Risks above 1/10,000 per annum are unacceptable, and intervention must take place.
- Risks between 1/10,000 and 1/1,000,000 per annum are tolerable. Intervention will only take place when the risk is not 'as low as reasonably practicable' (ALARP). This depends on a calculation of whether the projected cost of intervention would be grossly disproportionate to the risk, when considered in addition to the tree-related benefits that will be lost and the risks to tree workers from implementing the risk control measure.
- Risks above 1/1,000,000 are broadly acceptable and no intervention will take place.

10.3 Where an unacceptable risk is identified for tree(s) owned or managed by the Council, one of the following actions will be taken by the Tree Officer team:

- In an emergency the public will be isolated from imminent hazards and remedial work carried out urgently.
- High risks will be remedied as soon as practicable.
- Lower-risks will be addressed as part of a planned schedule of work for the road or site which will allow for other restrictions on working at the site, such as access arrangements, weather conditions and intervention priorities elsewhere.
- In all cases, completion of the work will be confirmed with the contractor and recorded.

10.4 All tree works will be specified and carried out in accordance with BS3998 British Standard Recommendations for Tree Work (2010) (and any subsequent revisions). The quality of work and compliance with the Council's specification will be monitored by the Council's Tree Officers.

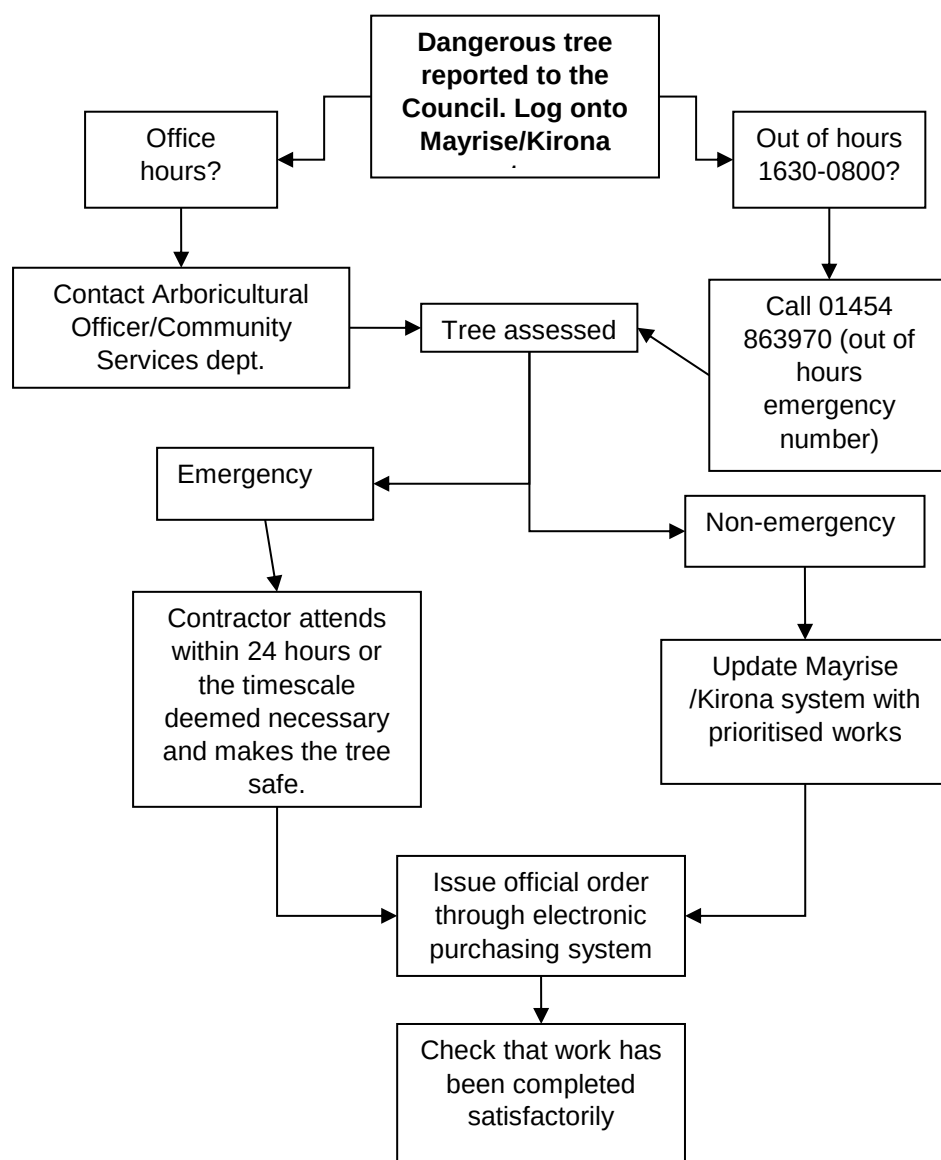
## **11. MONITORING AND REVIEW**

- 11.1 A frequency for tree inspection and risk assessment has not yet been imposed or specified in English law. Instead, the frequency of reassessment will be determined by the initial and subsequent assessments on a site by site basis.
- 11.2 The process will be monitored during Tree Officer team meetings and issues discussed and resolved as necessary.

## Appendix 2: Emergency Tree Response Procedure

When a tree is found to be in a dangerous condition, action to assess and/or remove this hazard will be taken within 24 hours.

The process to facilitate these emergency works is as follows:



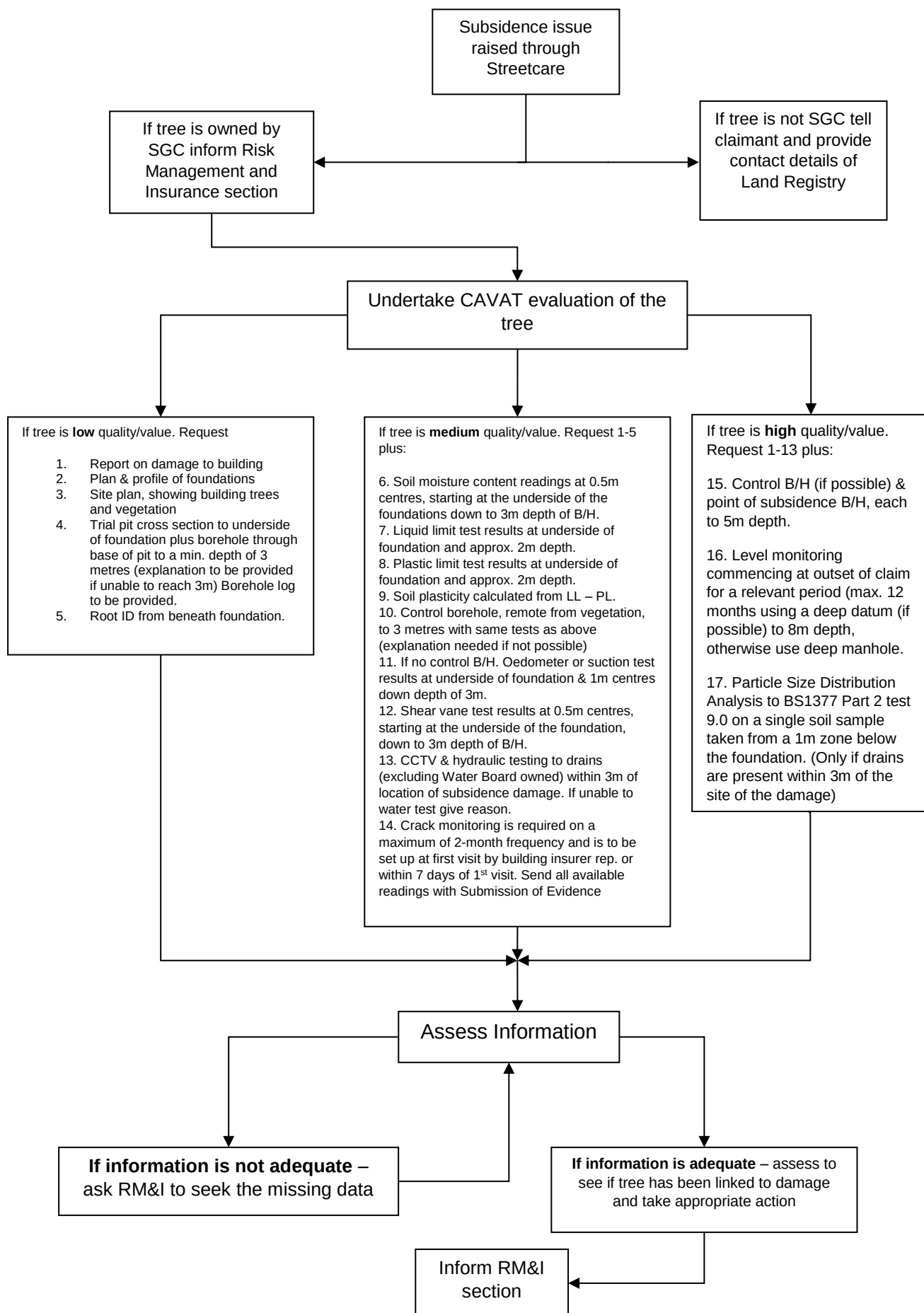
## Appendix 3: Subsidence Claim Procedure

This procedure is based on the Joint Mitigation Protocol (JMP) <sup>18</sup>. The JMP was created by the London Tree Officers Association as a procedure for claims of alleged indirect damage to structures from a Local Authority tree. It aims to ensure that before the commencement of any proceedings:

- Contact and exchange of information are encouraged before action is considered
- Improved quality evidence and information is presented in support of the claim
- Both parties have provided sufficient clear evidence and information regarding their position on the matter
- Each party has had the opportunity to consider the evidence and information
- Each party can accept or reject the claim or each other's position at the earliest possible stage
- Each party can modify its own position at the earliest possible stage
- The time period between notification and completion of co-operation or rejection of the claim is reduced
- The issue of tree removal/reduction/replanting is completed on a non-adversarial and ecologically friendly basis
- There is an opportunity for both parties to meet informally without prejudice to liability and resolve disputed cases

---

<sup>18</sup> <http://ltoa.org.uk/resources/joint-mitigation-protocol>





## Appendix 4: Calculating tree canopy cover in South Gloucestershire

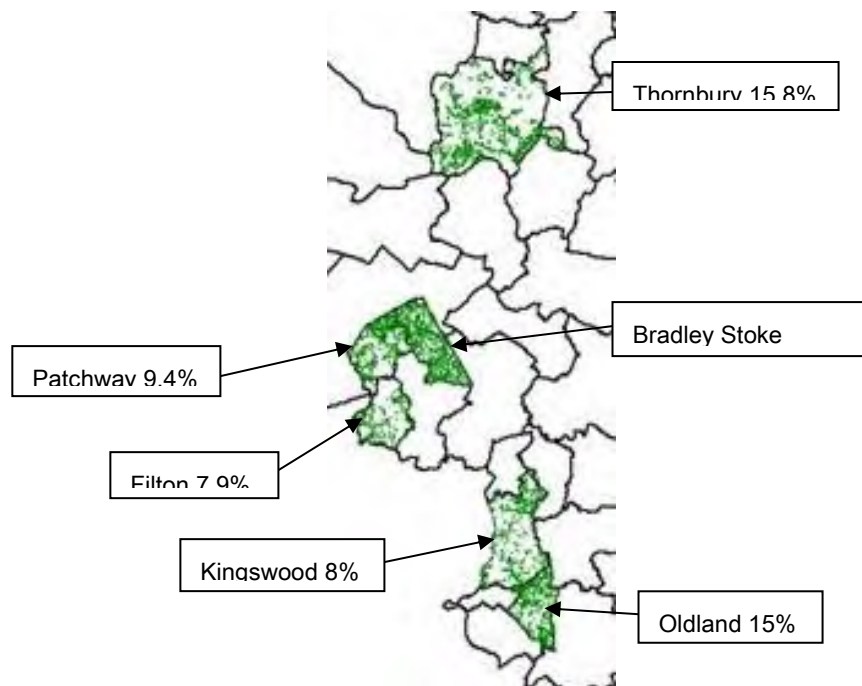
The tree canopy cover for South Gloucestershire was calculated in February 2013 using a Geographic Information System (GIS) with aerial photography.

Six parishes were chosen based upon visible existing tree densities (three with high density, and three with low density). These were Thornbury, Bradley Stoke, Oldland, Kingswood, Filton and Patchway.

A workspace was produced and all the tree canopies within the chosen areas were measured. This was achieved by drawing polygons around the perimeter of the tree canopies (*Figure 1*) and calculating the area of these polygons in square metres. The resulting canopy cover was then calculated as a percentage of the area of the Parish and the results are shown in Figure 2.



*Figure 1: Aerial image of Bradley Stoke with canopy cover mapped*



*Figure 2: The 6 parishes showing percentage of tree canopy cover.*

In the interests of attaining greater accuracy with data extrapolation, the six parishes were further sub-divided into Lower Super Output Areas (LSOAs), which are used for statistical purposes and are based on population densities of 2500. The mean tree canopy cover percentage of these 66 LSOAs was  $11.2\% \pm 0.6\text{SE}$  with a median of 9.6%.