COVENTREE

A tree for every citizen

Coventry City Council

Coventry Urban Forestry Strategy 2022 -2032

Foreword

This is Coventry's first tree strategy and is a real milestone for its trees; setting the scene for the City's management, care and development of its urban forest going into the future and certainly for the next 10 years covered by the strategy.

Coventry is particularly blessed with a large and extensive tree canopy. In fact, it can be argued that this canopy characterises the City. The Council is responsible for the management of over 45,000 individual trees in parks, highways and other greenspaces and an estimated 200,000 woodland trees.

The importance of trees is becoming increasingly recognised not least through global changes which are and will affect everyone on the planet.

- Tree are important in our efforts to combat climate change capturing CO2 and releasing oxygen
- They help keep the air in our city clean by absorbing pollutants
- They help keep our streets cool and provide shade from ultraviolet light
- They hold water on their surface helping with flood alleviation
- They provide a valuable food and habitat resource supporting countless birds , animals and invertebrates
- Trees are great for peoples health and well-being and for bringing people together
- They also have an economic value, provide a potential and sustainable source of energy but they also increase property values

There are of course many other values and the list could go on. These values have been well recognized by the Council which has committ ed along with our partners to an ambitious plan to plant **360,000 trees** for every member of Coventry's populati on over the life of the strategy. A Tree for Every Citi zen.

This strategy represents our plan to ensure that the City's tree stock is looked aft er well; reducing risk, increasing tree numbers, protecting and revering our veteran trees and providing a diverse and sustainable tree stock for future generati ons to enjoy. The tree strategy will help focus our limited resources where it really matters and work eff ectively with partners and stakeholders to achieve the overall aims.

Foreword

We are delighted to introduce our city's first ever tree strategy.

We are so proud of our green city, and as a Council we work hard to protect our wonderful trees and green spaces. This policy is the next step in that vital work. It is incredible to think of the many thousands and thousands of trees in our city, and this strategy tells of the ways we will protect them and the many reasons why we must do so – from improving air quality, to preventing flooding and improving the quality of life for all.

But we want to do more. And as part of this strategy we are pledging, along with our partners, to plant a tree for every citizen – a total of 360,000 new trees.

That would make such a difference to us all – and to the generations to come.

Our urban forest covers streets and parks, schools, cemeteries, housing estates, private gardens and more. Sometimes it is easy to walk past trees that have been there for years and not even notice them – but we would miss them so much if they were gone. In recent months our city has undergone vast changes. We have welcomed new attractions and unveiled a new-look city centre. We have improved our roads and seen businesses grow.

Our trees and greenery are built into each area of that work.

They help our mental wellbeing, support wildlife, clean our air, cool our city and so much more. They are things of beauty, a living part of our city and we must look after them all – from the ancient oaks of Kenilworth Road and Coombe Abbey to the trees that honour the Fallen at our War Memorial Park and the newest saplings. In many of the challenges that face us today, and the ones to come in the years ahead, our trees can help us, and they need to be considered as we continue to build the Coventry of the future.

We can all play a part in that work and ensure our urban forest continues to grow and spread its protective branches across our city. We are very proud of this strategy and would like to thank all those responsible for creating it and those who work to keep Coventry a green and beautiful place.

Cllr Hetherton

Cllr Khan

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Executive Summary

Coventry Urban Forestry Strategy

Trees characterise and make Coventry's streetscapes and urban landscapes more joyful, liveable and resilient to extreme weather. However, trees are still immensely undervalued. The crucial role trees and the urban forest play in our increasingly urbanised lives has been eroded, mainly due to the challenge to define and quantify their value.

A new perspective on the benefits of our urban forest, expressed in a way that all can understand is required to promote a catalyst for change. In our modern society a common language is money, so there are advantages to equate the asset benefits of the urban forest and the multi-functions it performs in £s to present its natural capital. Representing in £s the tangible emotional and health benefits of the urban forest; the role it plays in our natural ecosystem; and how trees support the economy of Coventry will be a step towards ensuring trees are at the heart of planning and decision-making.

The scale and effectiveness of these benefits are directly related to the way we manage the urban forest as a resource and decision making to shape its future. Progress is being made. Internationally the `First World Forum on Urban Trees'[1] was held in Mantova, Italy in November 2018; and nationally, the value of the urban forest and green infrastructure (GI) is recognised through the Government's National Planning Policy Framework 2012 (NPPF) and Natural Environment White Paper (driven by data from the National Ecosystem Assessment (NEA)). The Department of Health's plan for improved physical activity 'Be active be healthy – a plan for getting the nation moving'[2], the public mental health framework 'New Horizons: flourishing people, connected communities'[3] and the Marmot report 'Fair society, healthy lives'[4] all acknowledge the role of green space and trees.

Masses of evidence is available regarding the multiple benefits that GI and the urban forest can deliver when sensitively planned, designed and managed in new or retrofitted urban environments; such as providing sustainable transport links, improving recovery of hospital patients, and mitigating the effects of climate change. But in the UK (although there is environmental legislation for the protection of biodiversity and urban green spaces by regulating planning, contamination and conservation, e.g. the Wildlife and Countryside Act 1981, Environmental Protection Act 1990 and the Planning Act 2008) there is no legislation for the requirement of green spaces or the urban forest. There is momentum with a series of PostNotes produced by the Houses of Parliament[5] and a number of NGOs including the RSPB[6] and The Wildlife Trust[7] have proposed the adoption of a Nature and Wellbeing Act for the protection of green spaces as a public health strategy.

To commence the dialogue towards a better understanding of the specific values of the urban forest in Coventry, consultation has been undertaken with those who have a specific interest in trees located on local authority land; and amassed relevant information cross-referenced for further evidence basing if required by the reader. Projects and case studies have been provided to inform the framework for future policies. Statistics are generally not specific to Coventry as local analysis has not been undertaken, but the report presents value in a quantified format that can be applied to our urban forests. In brief this evidence has been collated with the aim to:

> "protect, promote, sustain and enhance our urban forest and to recognise its contribution towards the character, appearance and economy of Coventry for the benefit of all those who live, work and visit the area."

Introduction

Why have an Urban Forest Strategy?

Having a strategy will enable all concerned to guide the future of the urban forest and achieve the goal of planting **360,000 trees** over the next 10 years.

The urban forest encompasses both private and public land. It includes private gardens, streets, housing estates, public parks, schools, cemeteries, small woodlands and semi natural ancient woodland. It is important to have an Urban Forest Strategy so that everyone involved can understand how the urban forest will be planned, managed and protected for future years. For the purpose of this Strategy, we are concerned with the parts of the urban forest that can be directly managed and influenced by Coventry City Council (CCC).

The urban forest as a fundamental part of GI[8,9] physically stretches across administrative and operational boundaries. It is recognised that effective planning and management of the urban forest is best across authorities like CCC and beyond. The Habitat Biodiversity Audit (HBA) undertaken by Warwickshire Wildlife Trust spans Coventry as well as six Warwickshire Local Authorities. Partner strategic planning and delivery undertaken by local authorities is seen as best practice. Coventry shares a common vision for the best use of authority land, recognising that the urban forest provides character and beauty as well as multi-functionality through the ecosystem services it supports.

The Department for Communities and the Local Government in 2008 published `Trees in Towns II'[10] which recommended local authorities produce a framework for taking a strategic view on the status and health of the urban forest by creating a tree strategy. With the priorities for local authority spending under constant pressure and review, an Urban Forestry Strategy is critical to enable the long term benefits and resource requirements to be identified alongside of the priorities of the wider CCC policy context. In Coventry, urban trees play a crucial role in the delivery of the City Centre Area Action Plan (CCAAP)[11], which aims to ensure that the 'city centre will continue to be developed and regenerated to ensure it is a truly world class city centre, leading in design, sustainability and culture'.

It must be recognised that the multi-functionality of the urban forest will evolve through time alongside pressures placed on its very being as urban infrastructure expands and climate change takes its toll. The dense urban environment of Coventry provides limited opportunities for urban green space, with the ring road acting as a major constraint in terms of severing the city's GI, resulting in its urban forest becoming isolated and peripheral. Due to these pressures and constraints, the Urban Forest Strategy needs to be flexible over the long term.

Through the process of developing this Strategy, a vision has been defined with the aim of developing a common understanding of how our urban trees provide 1) tangible emotional and health benefits; 2) supports our natural ecosystem; and 3) energises the economy of Coventry.

Format, Structure and Content

Managing, planning and protecting the urban forest is complex. There are many people from all walks of life who are directly or indirectly concerned with and benefit from the urban forest. The Strategy has therefore been presented in an accessible format with different layers of detail to service a wide range of readers and stakeholders. The format is deliberately brief and targeted at getting large amounts of information across in accessible style. Where possible, technical information has been kept to a minimum but is referenced using endnotes so that the reader can be signposted to more detailed information. The Urban Forestry Strategy has a direct relationship with the wider policy framework. Different audiences will use the Strategy in various ways.

The Value of the Urban Forest

What does one Urban Tree Provide?

1 - Aids reduction of airborne pollution
2 - Mitigates urban heat island effect
3 - Mitigates urban flooding and wind turbulence
4 - Benefits biodiversity and wildlife
5 - Provides health and wellbeing benefits
6 - Adds economic value and investment
7 - Enhances landscape character and interest

What is the Urban Forest?

Trees give us the very air we breathe. With every breath comes life itself. Sounds obvious doesn't it?

> "The urban forest is the ecosystem containing all of the trees, plants and associated animals in the urban environment, both in and around the city[12]."

However, recent research and polls have shown that people have become disconnected with our relationship with trees and the natural environment. For example, in a recent poll conducted by One Poll for Trees for Cities, 18% of respondents think that WiFi is more important than trees and 24% don't know where conkers come from. The importance of trees in society should not be underestimated and the urban forest needs to flourish.

Coventry's Urban Forest

9,864ha CCC area
360,000 CCC population
24 parks
17 woodlands
44,000 individual trees
200,000 trees in open spaces
15% canopy cover

Demonstrating Value

The value of trees and the urban forest cannot be underestimated. But how can we demonstrate the value of our urban forests? What do urban trees provide and why are their presence in our 21st Century streets and urban centres crucial? The Urban Forestry Strategy focuses on three interrelated themes.

Trees for Health and Wellbeing: a 'state of complete physical, mental and social well-being and not merely the absence of disease' (WHO, 2010).

Trees for Ecosystem Services: the 'benefits provided by ecosystems that contribute to making human life both possible and worth living'[13] which are broken down as products or goods such as food and water; and non-material benefits or services such as recreation.

Trees as Natural Capital: the set of 'environmental assets that may provide benefits to humanity' (Defra, 2017).

The themes sit at the heart of the Strategy and are used as the basis to reinforce future actions and policies.

Health and Wellbeing

Social Value

Social exclusion is manifesting as a key problem in the 21st century, and particular groups in our society are vulnerable such as people with disabilities, ethnic minorities, our senior citizens, and those with economic disadvantage. But there is a lot of evidence[14] that the urban forest and green spaces provide opportunities for many positive social interactions in the local community, encouraging people to get outdoors, meet up, talk, exercise and engage with culture and play.

> "Urban green space is increasingly recognised as enabling city residents to live healthier, happier lives. - World Health Organisation, 2016"

Providing opportunities for getting people together improves social wellbeing, and develops attachment to our neighbourhoods. 83% more individuals engage in social activity in green spaces as opposed to sparsely vegetated or concreted landscapes, encouraging community cohesion[15]. As a consequence, this can lower crime levels[16], shown particularly in areas of deprivation[17,18] building stronger and more resilient communities. Even reported domestic violence levels have been evidenced lower in greener neighbourhoods.

Many people are passionate about trees, and volunteer a lifetime of hours to support the management and maintenance of our urban forest. Friends Groups have popped up across Coventry associated with local parks, organising a schedule of activities and community awareness events. Our "tree ambassadors", the Coventry Tree Warden Network (CTWN)[19] are often seen as the "eyes" for the local authorities regarding the health of trees, their protection, campaigning and raising the profile of tree value with local residents. The Council's Park Rangers have an active role in community engagement and articulating the value of the urban forest through every project they undertake.

Outdoor volunteering is also related to physical activity and self-reported health and depressive symptoms, especially among mid-life volunteers[20]. Without our incredible volunteers, Coventry would not be as recognisable as a "green" urban landscape that we want to live, work and play in.

Trees and Our Heritage

Our urban trees also play an important role in remembrance and heritage, contributing to a sense of place and enabling reflection and reminiscence. Coventry has numerous records of Ancient and Veteran Trees which many of us are fascinated with, reflecting the value we place on the heritage of our trees and landscapes. At Coombe Country Park, there is a large concentration of Veteran and Ancient Trees, including a Common Lime and several Oaks with over 5m girth which are over 300 years old, and four of Britain's largest True Service Trees.

Many sources of information and advice exist on Ancient and Veteran Trees, such as collated data by The Woodland Trust's Ancient Tree Forum through the `Ancient Tree Hunt' which aims to promote conservation and appreciation of Britain's internationally important old trees[21]. The Conservation Foundation and Ancient Yew Group have been promoting a `UK Yew Guardian Project' which aims to record the largest Yews of Britain[22].

Veteran and Ancient Trees and Woodlands warrant special protection and management, with data collected in accordance with Natural England's Specialist Survey Method (SSM).

Memorial trees also form an important part of the heritage of the urban forest, and provide special opportunities for contemplation and support for families and friends. At War Memorial Park, Centenary Field, there are 800 memorial trees dedicated to those who lost their lives in conflict. The 'Missing Faces' Lottery-funded project has connected photographs of the 264 people killed during WW1 with a memorial plaque and tree in the park. This has been driven by local historian,

Trevor Harkin and the Friends of War Memorial Park.

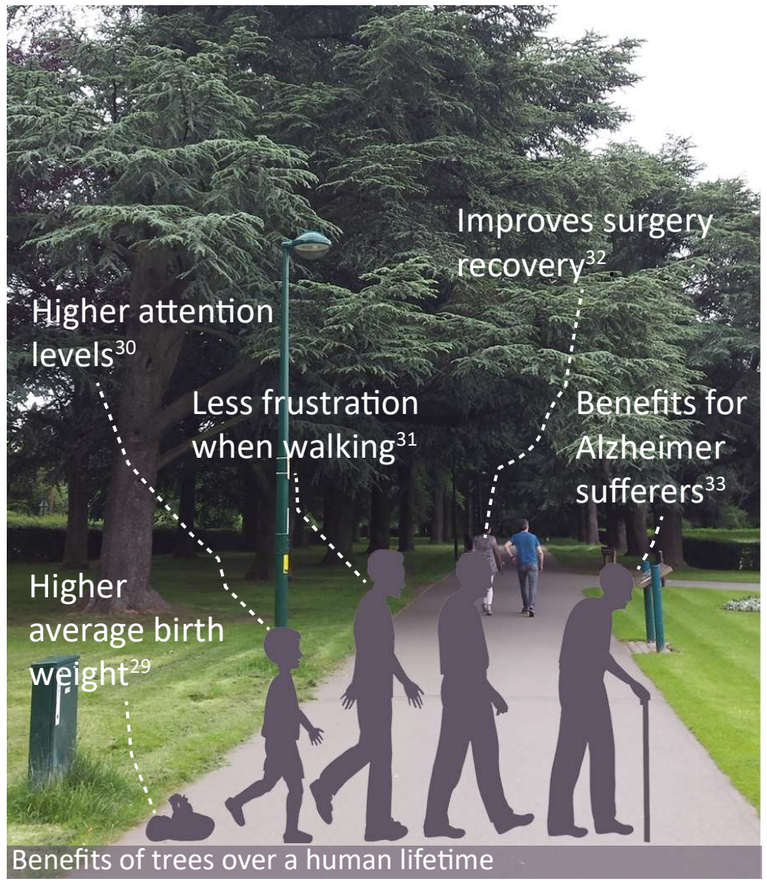
Trees and Public Health

As more responsibility has been placed on local authorities, through the Health and Social Care Act 2012 to improve public health and reduce health inequalities, our urban forests could be the medication required.

There is growing evidence to suggest that physical and mental health can be improved with greater access to green space and trees. Contact with trees and nature impacts positively on public health from birth to death, with a correlation between those living closest to greener areas and reduced levels of mortality and obesity (and related illnesses). In Japan, Shinrin-yoku or "spending more time with trees" has been a national health programme since 1982. This "forest bathing" has scientifically been proven to improve well-being[23]. Trees emit oils called Phytoncides which boost our immune system, which are shown to lower heart disease and blood pressure plus reducing stress hormones.

In London, for the most deprived groups of our communities, the number of deaths are halved in areas with the greenest space[4]. It must though be recognised health inequalities are the result of complex interactions between physical, social and economic environments, and not just income.

The quality and scale of our urban forest, such as the density of tree canopy in an urban park affects restorative recovery[24]. Larger spaces of urban forest such as parks may contribute more positive health impacts than small neighbourhood spaces[25]. It has been evidenced that the larger the park or green space, the greater the observed health benefits[26,27], though attention to the character and quality of the space and urban forest is important[28].



Benefits of trees over a human lifetime

Trees and Mental Health

Urban forests can help improve mental well-being by encouraging social activity and interaction.

In today's high tech, urbanized societies, stress is one of the most important factors contributing to ill health[34]. In the UK, people who live within 500 metres of accessible green space are 24% more likely to meet 30 minutes of exercise levels of physical activity[35,36] with the added benefits of meeting others[37]. People exercising outdoors, or in "escape facilities" such as urban forests[38], report higher feelings of wellbeing, and lower feelings of stress or anxiety, than those doing the same activity indoors.

The impact of the urban forest on our mental health has been equated in the capital: London's 'parks are estimated to avoid £370m of costs incurred each year as a result of mental health'[39]. Urban trees and the landscapes in which they grow can reduce isolation, important for all but in particular new parents and their children and senior citizens. Social cohesion can in turn reduce stress and depression[40] and indirectly boost social wellbeing[41].

> "Neighbourhood social ties and support networks are stronger around greener neighbourhood spaces.[42]"

Trees and Ecotherapy

The urban forest plays a vital role in recovery from operations or emotional trauma.

Managing mental illness or recovering from operations, can now be prescribed through eco-therapy[43] and green prescribing[44], and the urban forest needs to be recognised as playing a huge role in this. There is evidence that some indicators of psychological stress, including blood pressure and heart rate, are reduced when people are exposed to visual and auditory stimuli associated with nature[45,46]. Views of trees can reduce the amount of analgesics needed by patients post-surgery and the number of days in hospital[47] which is important when planning tree planting of new hospitals, respite centres and care homes.

'90% of people who took part in MIND green exercise activities said that the combination of nature and exercise is most important in determining how they feel'[48]. There is emerging evidence that engaging with the urban forest and green spaces benefits those living with conditions such as attention deficit disorder (ADD), depression and dementia[49], by improving cognitive functioning and reducing anxiety. Children with ADD experienced fewer problems if they had access to green space for play and the "greener" the setting, the less severe their symptoms[50].

Trees and Active People

The urban forest is the Natural Health Service.

Physical and mental illnesses associated with sedentary urban lifestyles are an increasing economic and social burden and inactivity is the 'fourth largest risk factor for mortality globally' (WHO, 2010). If an urban space is welcoming and attractive, which our urban trees contribute to, then people are more encouraged to exercise. Campaigns such as #parkrun and #thisgirlcan, social media and fitness apps has seen the rise of our tree-lined streets and urban parks being used in this way. In Birmingham, the 'Be Active' project made a further step with voucher incentives, redeemable at high-street shops, to increase physical activity[51]. The "Magic Mile" in Longford Park is promoted as 'cycle, skate, run, jog, walk, crawl, however you wish' and happens every month. The "Green Gym" run by the Trust for Conservation Volunteers helps people to take exercise outdoors while participating in activities that improve the environment such as maintaining our urban forests or allotments. 9 out of 10 participants with poor mental or physical health show an improvement within seven months[52]. 'Green gyms' are now available throughout Coventry.

Longford Park

Trees and Air Pollution

Globally, air pollution is the biggest environmental risk to health and trees can provide a solution in reducing this threat. Where you live, how you commute and where you work are all key factors in levels of exposure to pollution.

> "Government estimates suggest that 40,000 deaths per year are attributed to air pollution[53]."

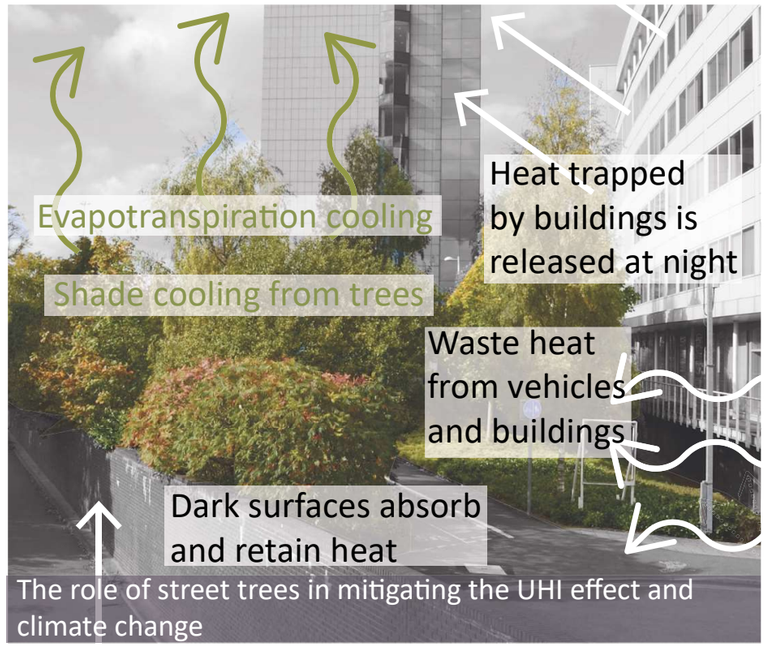
A 2007 report by Asthma UK and the Heart of Birmingham Primary Care Trust, highlighted Birmingham as having the highest hospital admissions for asthma in the UK and tackling air pollution has since become a priority issue for the city[54]. Air pollution is generally highest in deprived urban areas[55] with exposure to high concentrations proven to exacerbate respiratory problems, heart disease and cancer[56]. Street trees have been associated with a lower prevalence of asthma in children[57] and their contributing role in alleviating poor air quality needs to be recognised to direct the planning and design of our cities and towns[58].

Policy EM7 Air Quality: 1. Development proposals will require the submission of an air quality assessment, as they may lead to a significant deterioration in local air quality resulting in unacceptable effects on human health, local amenity or the natural environment.

Trees and Climate Change

The urban forest can help us adapt to the effects of climate change. Trees have a cooling effect in our town and cities; creating shade and reducing air temperatures through evaporation.
The built forms and hard surfacing of our cities and towns store heat and contribute to the urban heat island effect. Heat waves during the summer pose significant health risks to urban populations[59]. During the 2003 heat wave, a temperature difference between urban and rural areas of up to 10°C was recorded for London[60] and estimates suggest that 40% of the 600 excess deaths in London were due to the urban heat island effect. Trees can provide a solution in regulating urban temperatures and making our streets a more comfortable place to live.

Policy EM1 Planning for Climate Change: 1. All development is required to be designed to be resilient to, and adapt to the future impacts of climate change, through the inclusion of the following adaptation measures: b) optimising the use of multi-functional green infrastructure, including tree planting for urban cooling, local flood risk management and shading.



The role of street trees in mitigating the UHI effect and climate change

Trees and Land Contamination

Trees can combat land contamination and make our soils clean again.

In 2008, the Forestry Commission recognised the economic costs associated with hospital admissions and premature deaths due to contaminated land at £85.2 million[61]. Tree planting on previously developed land to remediate contaminants, has been proven to reduce the health risk to those in contact with contaminated urban spaces.

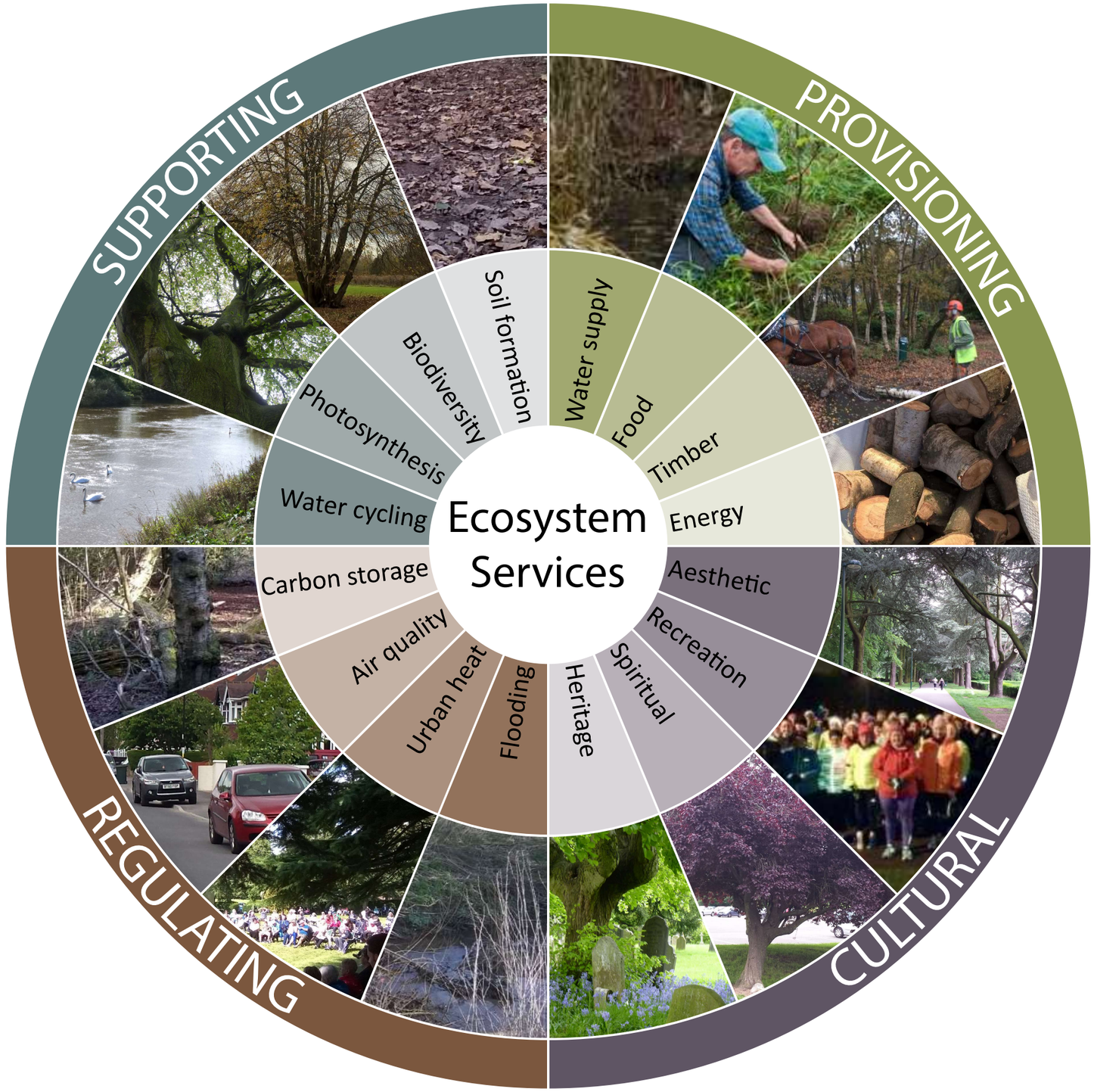
Ecosystem Services

Trees for Ecosystem Services

The urban forest provides a vast range of benefits contributing to food production, air purification, amenity value and flood management.

There is now a global understanding on the links of human well-being and nature via the Intergovermental Platform on Biodiversity and Ecosystem Services. The UK NEA analysed the natural environment including the urban forest in terms of the benefits it provides for society and economic prosperity. The UK NEA found that health, wellbeing and economic productivity of the country depended on the range of services provided by ecosystems and their constituent parts, such as water, soil, nutrients and organisms.

But for the urban forest to perform these tasks effectively the i-Tree Eco project `Valuing London's Urban Forest'[62] revealed that 'there needs to be trees of all shapes and sizes and the right proportions to ensure that benefits can be continued to be delivered for future Londoners'. i-Tree Eco can pick out if there is sufficient succession, a requirement for more tree planting or if there is an over reliance of over mature trees.

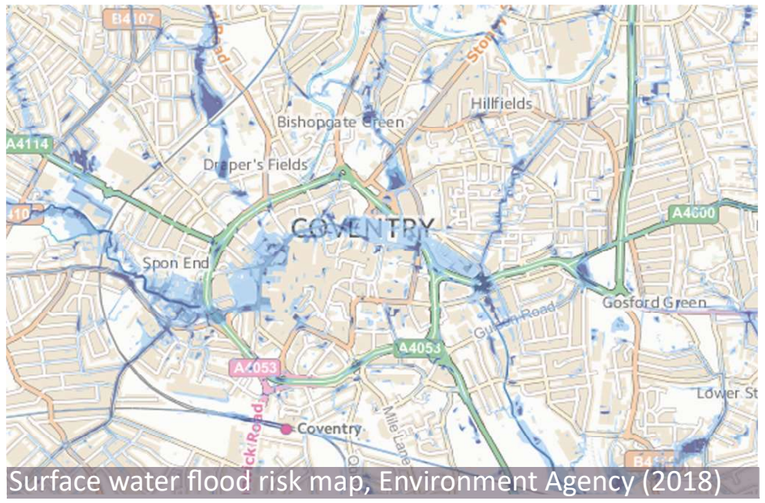


Trees and Storm Water Management

In recent years flooding has become prevalent in urban areas and as a society we need to be more resilient as the effects of climate change become more apparent in our everyday lives.

Flooding in urban areas is estimated to cost a minimum of £270 million per year in England and Wales, with two thirds of the homes affected in the floods of 2007 due to surface water[63,64].

Surface water flooding happens when rainfall runs off land and buildings at such a rate that it is unable to drain away in streams, rivers, drains or sewers. Urban trees can play a pivotal role in counteracting this. Our streets and urban spaces generally have a high coverage of impermeable surfaces which prevents surface water from soaking into the ground, increasing the risk of flooding and pollution from heavy rainfall[65]. If the urban forest is designed as part of and to compliment permeable paving, with swales, rain gardens and green roofs within a Sustainable Drainage System (SuDS) to mimic natural drainage, rainfall can be intercepted by trees, their root systems promote infiltration and water storage in the soil and prevent “grey” drainage systems becoming overwhelmed during storm events[66]. All developments in Coventry must apply SuDS and should ensure that surface water runoff is managed as close to its source as possible. Natural England has also highlighted the use of urban forestry in wetlands and floodplains to act as buffers to protect urban areas from flooding and pollution[67].



Surface water flood risk map, Environment Agency (2018)

Trees and Water Quality

Trees are nature’s water filter.

Improving water quality is crucial to healthy life. Urban forestry can help reduce the high speed of runoff, collect pollutants and detritus from urban surfaces, and reduce infiltration of precipitation, ensuring the quality of water is as good as it can be flowing through an urban catchment.

The EU’s Water Framework Directive establishes targets for ensure water quality in our environment. In many urban areas throughout the UK these targets are being missed. The incorporation of natural SuDS with existing and planned developments is one effective and environmental friendly way of improving water quality. Increasing woodland cover also has a benefit. For example in north Nottinghamshire the establishment of a new Community Forest over 24 years increased tree cover threefold and reduced annual recharge and runoff by 11%[68].

Trees and Noise Pollution

Trees help to mask noise.

In Coventry, sources of noise from the airport, motorway network and the industrial areas are all sources of environmental pollution that can be reduced by effective planting of trees.

The proliferation of prolonged exposure to high levels of noise can cause anxiety, stress and hearing loss. The reduction of noise pollution (sometimes called abatement) can be achieved by well planned and designed tree planting. Evidence from Forest Research suggests that planting “noise buffers” composed of trees and shrubs can reduce noise by five to ten decibels for every 30m width of woodland, especially sharp tones, and this reduces noise to the human ear by approximately 50%. To achieve this effect, the species and the planting design must be chosen carefully.

Trees, Carbon Storage and Sequestration

Trees lock up carbon from the atmosphere and help reduce the effects of global warming.

The urban forest can help mitigate climate change by sequestering, or hiding away, atmospheric carbon as part of the carbon cycle. Tree stems, branches and roots can store carbon for decades or even centuries, equating to several tons of atmospheric carbon dioxide being absorbed over the lifetime of a single tree.

> "One large tree can absorb 150kg of carbon dioxide per year, as well as filtering airborne pollutants."

In London an estimated 2,367,000 tonnes (approximately 15t/ha) of carbon is stored in London's trees with an estimated value of £147 million[59]. The number of trees present, their species and mass can affect carbon sequestration and Oak as a species stores the most carbon in the urban forest, as larger trees store more carbon in their tissues.

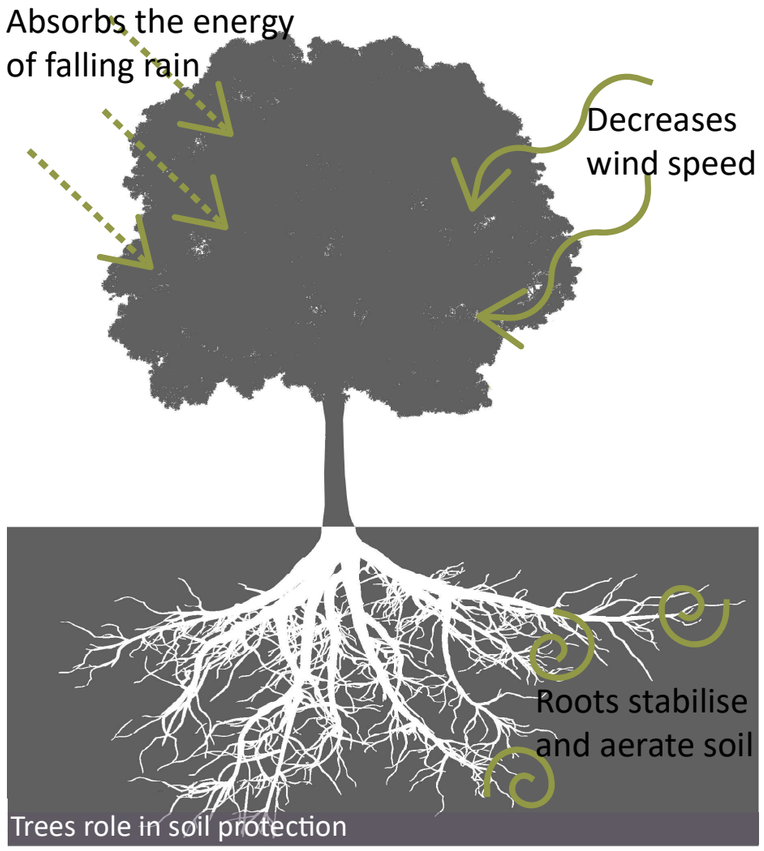
Trees and Food Production

Trees play a huge part in the drive for urban gardening, Forest gardening[69] and local food production, whether this is on allotments, community gardens or orchards. The 'Feeding Coventry Steering Group' seeks to increase access to healthy food, provide food-related educational and business opportunities, combat food proverty and reconnect communities with their local food suppliers. Joining local communities with these urban agriculture and local food assets within the urban forest, via footpaths and cycleways can encourage reconnection to the natural world further.

Trees and Soil Protection

Trees are vital for soil health. Trees and their roots aerate the soil and prevent erosion and compaction.

Wind and rain are two of the main forces that erode bare soil. Trees reduce the effect of erosive forces using their root systems and foliage. Tree roots create a network of flexible tendrils that help stabilise the soil around the tree and hold it in place. The leaves and branches of trees create a flexible screen that reduces the force of wind and rain in the surrounding area. Tree foliage intercepts falling rain water and reduces the force it exerts when it hits the ground. Rain water caught in a tree's foliage is channelled over the stems and down the trunk until it soaks into the soil. Groups of trees planted together can act as wind breaks and prevent soil being carried away in the wind.



Trees role in soil protection

Trees and Air Pollution Alleviation

Air pollution from vehicles and industrial processes has an impact on our health and air temperatures.

Urban air pollution predominantly comes from traffic emissions. Urban trees can alleviate air pollution directly by trapping and removing fine particulate matter[70] and indirectly by reducing air temperatures. The strength of the effect[71] of filtrating pollutants depends on many factors e.g. weather, the pollution concentration, extent of tree cover, leaf area, species and quality of vegetation[72]. The structure of large trees and their rough surfaces cause interception of particulate matter (of less than 10 microns diameter) by disrupting wind flow. Therefore the uptake of SO2, NOx and ozone is higher in broadleaved species than conifers, but conifers capture larger amounts of PM10 than broadleaved trees due to the larger total surface area of needles, giving conifers larger filtering capacity than broadleaved trees[73]. Trees also provide a surface area for capture between 2 to 12 times the area of land they cover.

As a consequence, urban planning needs to consider a combination of parklands, buildings, street trees, and gardens to create a rough surface of differing heights, to create essential turbulence, increasing mixing, and pollutant dispersion[74]. In the West Midlands, a study has suggested that doubling tree cover across the region would reduce the concentration of fine PM10 by 25% and could prevent 140 air pollution related deaths in the region each year[75,76], supporting proposals for planting new urban woodlands.

But can urban trees make pollution worse at a street level? In some circumstances this can be the case, but always the best way to improve air quality is to remove the emission sources – road traffic - rather than the tree. Natural chemicals produced by the tree called volatile organic compounds can on very hot days with strong sunlight mix with pollution to form ozone, which at street level, is a pollutant with negative health impacts[77]. For a significant health impact this would require millions of trees and take several hours. This effect is large-scale and the ozone formation occurs hundreds of miles away from the original source. Dense avenues of street trees with large interconnected canopies can trap air at street level if the pollution source is located within this zone[78], but most importantly if the source is located outside, the tree canopies will create locally cleaner air. Therefore green corridors need to be master planned across cities to reduce pedestrian exposure to pollution by providing alternative routes[79] and acting as a green barrier, increasing the pathway between pollution source and receptor, and speeding up the mixing and remediation of pollutant concentration[78].

Trees and the Urban Heat Island

Trees are nature's air conditioners.

Well planned and designed urban places and spaces with trees are crucial for reducing the long term effects of climate change.

Urban areas in Coventry experience elevated temperatures compared with rural areas, because the urban fabric, e.g. tarmac and concrete, absorb and retain heat[80]. Climate change projections suggest a trend towards elevated temperatures, but urban forestry has an important role to play in cooling air temperatures through the evaporation of water[81,82], shading[83], and the conversion of solar radiation to latent heat. Through modelling it is possible to determine the cooling effect of the urban forest and associated green space e.g. in Birmingham (BUCCANEER project[84]). Trees can cool cities by between 2°C and 8°C and when planted near buildings, can cut air conditioning use down by 30%, and reduce heat energy consumption by 20-50% (UN Urban Forestry Office).


Street trees in road's central reservation

Trees and Traffic Calming

Traffic and trees can work together to make our streets safer and more distinctive.

Well designed streets and urban areas with carefully positioned trees can have a positive effect on slowing traffic and making spaces more pleasant for pedestrians and motorists. Carefully positioned trees can frame and segregate pedestrian areas and subconsciously inform vehicle drivers. Improving sightlines and helping to slow down cars in urban settings can be used as an alternative to bollards and speed bumps or to reinforce their presence and enhance the role of a central reservation.

Trees and Distinctive Design

Coventry's "leafy character" is synonymous with its rich and mature treescape and creates a distinctive environment.

Successful urban forestry embraced by the local community, which relates to the landscape character and heritage of the locality, can contribute to the local sense of place.

Trees shade buildings, shield from winter winds and regulate temperatures through evapo-transpiration, influencing the energy consumption to heat and cool the building. In the summer, trees reduce building energy consumption, but in the winter months can either increase or decrease building energy use, depending on the location of trees around the building.

Street trees present aesthetic qualities to our urban spaces; provide distinctive landmarks and can evoke memories, which are particularly important for the sensory development of young children and recognition for seniors suffering from dementia. Streetscapes can be injected with vibrancy, beauty and light when trees have been planted, making them distinctive places, and as a consequence can be a catalyst for regeneration and enhance house prices (when compared with similar streets without trees and investment). The visual appearance and attractiveness of towns and cities has been found to be strongly influenced by the provision of green space[85]. Distinctive trees can potentially result in a boom in tourism, stimulating job opportunities as a result.

Natural Capital

Trees as Natural Capital

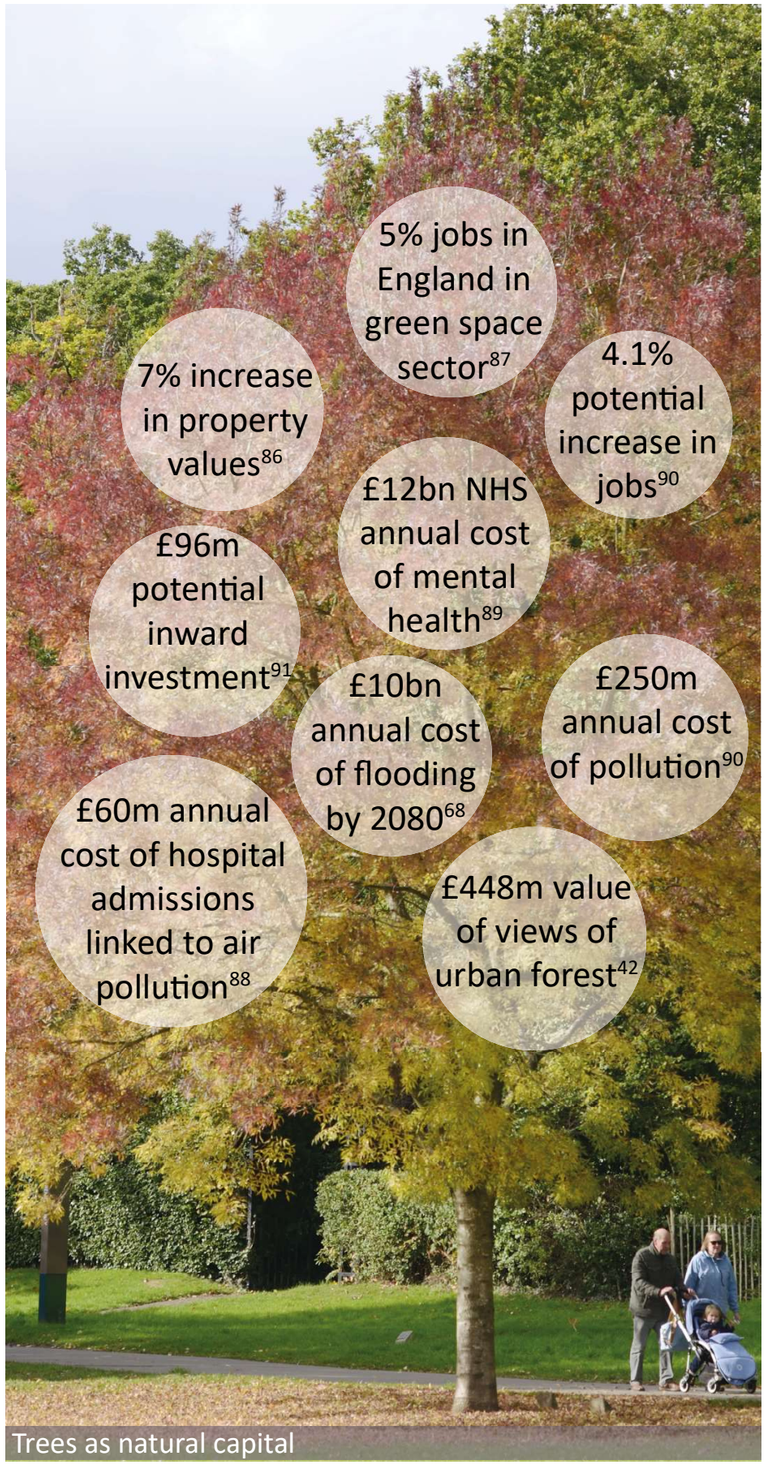
Trees of course do have social and environmental benefits. However, the urban forest as an assets, also has direct financial benefits. This is often called natural capital.

> "Natural capital refers to the set of 'environmental assets that may provide benefits to humanity' (Defra, 2017)."

The significant contribution of GI including urban forestry to growth, jobs, health and social welfare, climate change, disaster mitigation, and agricultural and environmental policy was recognised by the European Commission in May 2013[92]. Determining monetary values regarding the tree stock as a component of green infrastructure is vital to support the case for sustained investment of the urban forest.

Across the UK a lot of research has been undertaken, including the `Value of London's Parks and Green Space' by Vivid Economics who calculated for every '£1 spent by the Local Authority and their partners on public parks, Londoners enjoyed at least £27 in value' and that 'Londoner's avoid £950m/year in health costs due to public parks'[35]. The restorative benefits[93] of green space come at no direct cost to the user whereas other forms of relaxation e.g. medical treatment or yoga, usually do. Just a 10% increase in adult physical activity, which can be in the urban forest would benefit England by £500 million per annum[94].

Living with views of the urban forest or having views of broadleaved woodland on journeys were estimated to be valued at around £448 million at 2007–08 house prices, or £15.7 million per year[88]. To demonstrate the value of our urban forests in Coventry, it would be beneficial to express a monetary value of the multiple benefits provided by the urban forest as a resource to help decision-makers manage the urban tree stock as a whole.



Trees as natural capital

Trees and the Local Economy

Trees can have a direct influence on Coventry's economy.

The value of good quality and accessible urban forestry on local economic regeneration can be quantified through inward investment and changes in employment (FTE jobs created); land and property values; new business start ups; and land and property prices. When the National Forest was created, the number of local jobs increased by 4.1% and local regeneration attracted £96 million of investment[93]. If, for example a new urban forest was created in or near Coventry it can be argued that inward investment would follow and be beneficial. Natural England has argued that green infrastructure and urban forestry can provide a competitive advantage to urban centres at a local scale[95,96]. So what happens?

Trees and the Financial Balance Sheet

Trees and the urban forest can be quantified as financial assets.

There are various digital technologies that help us assess the benefits of the urban forest or a single urban tree, which will in turn direct management choices. The Forestry Commission's `Street Tree Valuation System'[97] compares three of these digital tools: CAVAT, i-Tree and Helliwell.

CAVAT or Capital Asset Value for Amenity Trees is a tool which can be used to express the public amenity value of urban trees in monetary terms. It is used for the calculation of compensation by CCC when a planning decision is being made which involves the potential loss of a significant tree. Or, if a tree has been damaged, CAVAT can be used for evidencing, at levels agreed between local authorities and insurance companies. It provides a method for managing trees as public assets or Asset Value Management for Trees (AVMT) rather than liabilities, based on a depreciated replacement cost approach. 'CAVAT takes into account the contribution of location, relative contribution to amenity, social value and appropriateness, as well as an assessment of functionality and life expectancy'. AVMT can be effectively used to demonstrate benefits of the urban forest and provide an argument to safeguard the budget for planting and management. CAVAT can be used as part of an i-Tree assessment to provide the "structural" value of a tree population. (See CAVAT: Trees and Development Guidelines paragraph SPD)

i-Tree Eco[98] is recommended for use by communities to strengthen forestry management. It standardises field data from randomly located sites across the whole of the authority area combined with local hourly pollution statistics and meteorological data to provide a picture of the ecosystem services supported by the urban forest. It can be used through i-Tree Canopy to measure overall tree canopy or urban forest cover, which can be one way of assessing the extent of tree cover over an area. It can also be used to determine Gross Leaf Area and species dominance[99].

Helliwell is based on expert judgement and focuses on valuing the visual amenity of a tree, independent both of the cost of originally growing the tree and of the potential replacement cost. An historic tree of great beauty may have grown at no cost, without human intervention; while an expensive street tree could be inappropriately located. Helliwell focuses on evaluation of the relative contribution the urban tree brings to the visual quality of the landscape.

Longford Park

Coventry and the Urban Forest

Case Studies

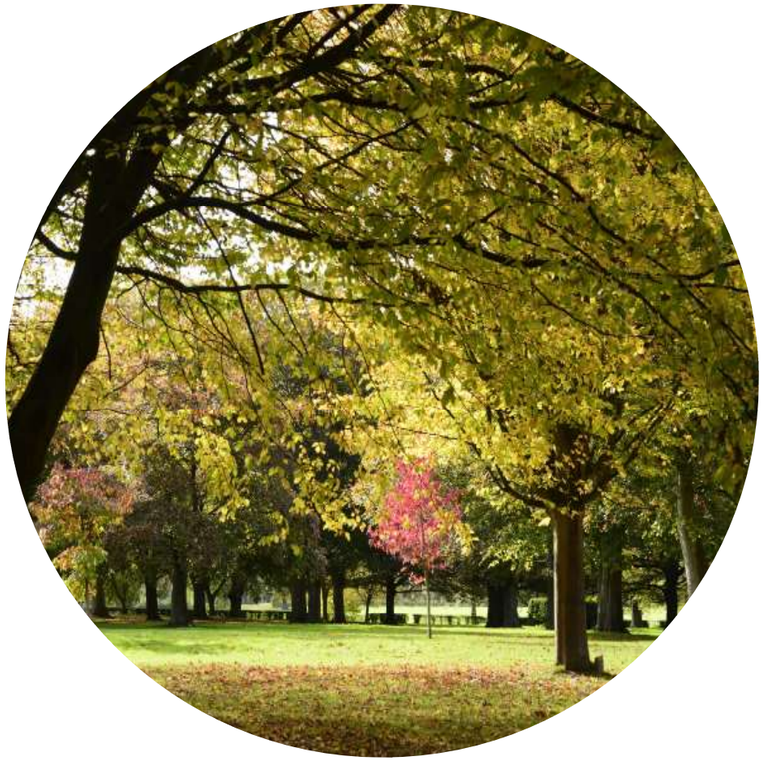
The urban forest of Coventry forms the backbone of the places where we live, work and play. As part of the preparation of the new urban forestry strategy for Coventry we have consulted with stakeholders, CCC officers and looked in detail at the issues affecting how we currently plan, manage and maintain trees and the urban forest. To help inform our thinking, we have developed series of case studies that reflect just a snapshot of the current issues facing urban forest in Coventry.

Kenilworth Road

- Oaks are a significant landscape feature along Kenilworth Road.
- Form part of a Conservation Area, designated in 1968.
- Part of a wider woodland network, including Wainbody Wood and Stivichall Common.

London Road Cemetery

- Grade I listed Historic Park and Garden, designed by Joseph Paxton and opened in 1847.
- £2m Heritage Lottery Fund restoration project of the arboretum cemetery in partnership with Historic Coventry Trust.



War Memorial Park

- Centerary Fields and Green Flag Park status.
- Lottery-funded project, including tree trail around the park's memorial trees.
- Community and recreational importance, including fitness trail, Parkrun, and Friends Group.

Longford Park

- The city's largest park, and has a Green Flag Park status.
- Community and recreational importance, including the 'Magic Mile' activity trail and the Friends of Longford Park community group.
- Under urban pressures within the north of the city.

Tile Hill Wood

- 29ha Site of Special Scientific Interest
- Woodland Management Plan conservation activities being carried out by CCC and volunteers, including dead hedging and tree thinning.

Vision

A dynamic, living and breathing urban forest that enriches and sustains our natural environment; contributing positive and tangible benefits for the health and well being of the people and the economy of Coventry.

Challenges and Opportunities

Our research and engagement with stakeholders has identified several long-term challenges that we need to address. However there are also new and emerging opportunities that we need to embrace over the coming years. These challenges and opportunities can be summarised as follows.

1 £ Funding

2 Planning

3 Maintaining

4 Protecting

5 Promoting

6 Sustaining

Funding the Urban Forest

Historically the majority of funding for the urban forest in the UK comes from the public sector - 70% from local authorities and 15% from Central Government and the EU[100].

> "Nationally, a reduction in central government grants to local authorities has led to a 10.5% decrease in spending on green spaces and the urban forest between 2010/11 and 2012/13[101]."

Across Coventry, Lottery grants, WREN funding bids, ERDF and fundraising events have been successful in raising capital, but these opportunities aren't sustainable, often one-off or small short-term grants and not for securing the long-term cost of management[102]. As a result, the lack of funding has consistently been raised as the main constraint for improving the urban forest and GI, both in its creation and maintenance. In the longer term, funding the urban forest will require longer term financial planning and securing investment in the urban forest asset from a range of sources. Now opportunities should focus on the following issues and opportunities.

Planning gain- Investment in the long term strategic planning of the urban forest should seek to maximise planning gain via s106 agreements and the Community Infrastructure Levy (CIL). CIL was developed in 2017 in Coventry and will be a means of securing investment in the urban forest, but this demand must compete with other provisions for welfare and amenity.

Regeneration and Business Improvement Districts (BIDs)- Tree planting opportunities and retrofitting existing grey infrastructure arise through BIDs or economic regeneration whereby businesses, local government and agencies work together to deliver local business-led aspirations. The `Greening for Growth' project (2010) in London's Victoria BID identified the potential for 1.25ha of new GI, 1.7ha of enhancements to existing GI and suitable space for 25ha of green roofs[103]. Coventry's BID[104], which aims to 'promote, develop and boost the city centre to make it a great place to work and visit' could provide a sustainable option for contributing to the urban forest in the longer term.

Investment in the urban forest- With a mass of evidence revealing the role of urban trees affecting the nation's health and wellbeing, the current urban forestry budgets for creation, management and maintenance is a small leaf in the Autumn fall when compared to the costs that have been identified eating up the NHS and Social Care budgets which access to the urban forest could address as health savings. Coventry City Council is encouraging local residents to be more

active in their daily lives by providing a new integrated healthy lifestyles services, called Healthy Lifestyles Coventry[105].

Planning the Urban Forest

Planning and designing development within the context of the urban forest is vital.

To assist in planning urban forests, local authorities around the UK have adopted the principles behind `Trees in the Townscape – A Guide for Decision Makers'[106] produced by the Trees and Design Action Group (TDAG) in 2012. The NPPF 2012 recommends all local authorities set out a strategic approach to the 'creation, protection, enhancement and management of Green Infrastructure' including urban forests but only a few local authorities have achieved embedding a `GI Approach' into their local strategies[9]. Birmingham, for example has included spatial plans of additional GI sites[107].

CCAAP proposes a series of policies which touch Coventry's urban forest, and which are supported by the Infrastructure Development Plan under 'Physical, Social and Green Infrastructure' now appended to the Local Plan. Policies relevant to this Strategy include:

CC1 Development Strategy: 'The city centre will continue to be developed and regenerated to ensure that it is a truly world class city centre, leading in design, sustainability and culture'. This will be delivered by the provision of a 'connected public realm including public squares and green spaces, easily accessible through the creation of desirable and legible pedestrian routes'; and 'providing an attractive and safe environment for pedestrians, cyclists and motorists'.

CC8 Green and Blue Infrastructure: 'A high quality and well-connected network of green and blue infrastructure assets has the potential to make the city centre a more attractive proposition for external investors and local people'. The retention of trees that contribute towards public amenity forms part of this aim.

CCC has identified that new connected green spaces are required to maximise the cumulative benefits of GI and the urban forest. How these plans are delivered will be part of a revised 'Green Spaces Strategy' (2018). In addition, the 'Warwickshire, Coventry and Solihull Green Infrastructure (2016)' has been developed at a sub-regional level as an effective tool for planning and evidence base for planning policies and strategies.

As trees take more than a life time to mature, and the loss of mature tree stock have particular repercussions in the value of the urban forest, future planning for planting is essential to accommodate best practice and consider how best to deliver the multiple benefits of the urban forest. The following issues will need to be considered.

Planning for tree planting- To ensure Coventry retains existing tree cover levels, planting needs to be continually assessed, opportunities scoped, designed effectively and tree planting undertaken in accordance with best practice. CCC will need to consider revisions to supplementary planning guidance and detailed technical notes.

Working with developers- One of the most significant threats to our urban forest is new development and Coventry has a high demand on land resource. Effective partnerships and adopting innovation is key in successfully delivering environmentally sympathetic managed growth across Coventry's already pressurised urban environment. The maintenance, development and conservation of Coventry's tree stock is important in ensuring that Coventry remains a great place to work and live, supporting Coventry's future.

Coventry's Green Infrastructure Study (2008)[108] suggested a set of GI standards for greater levels of sustainability within new developments, including:

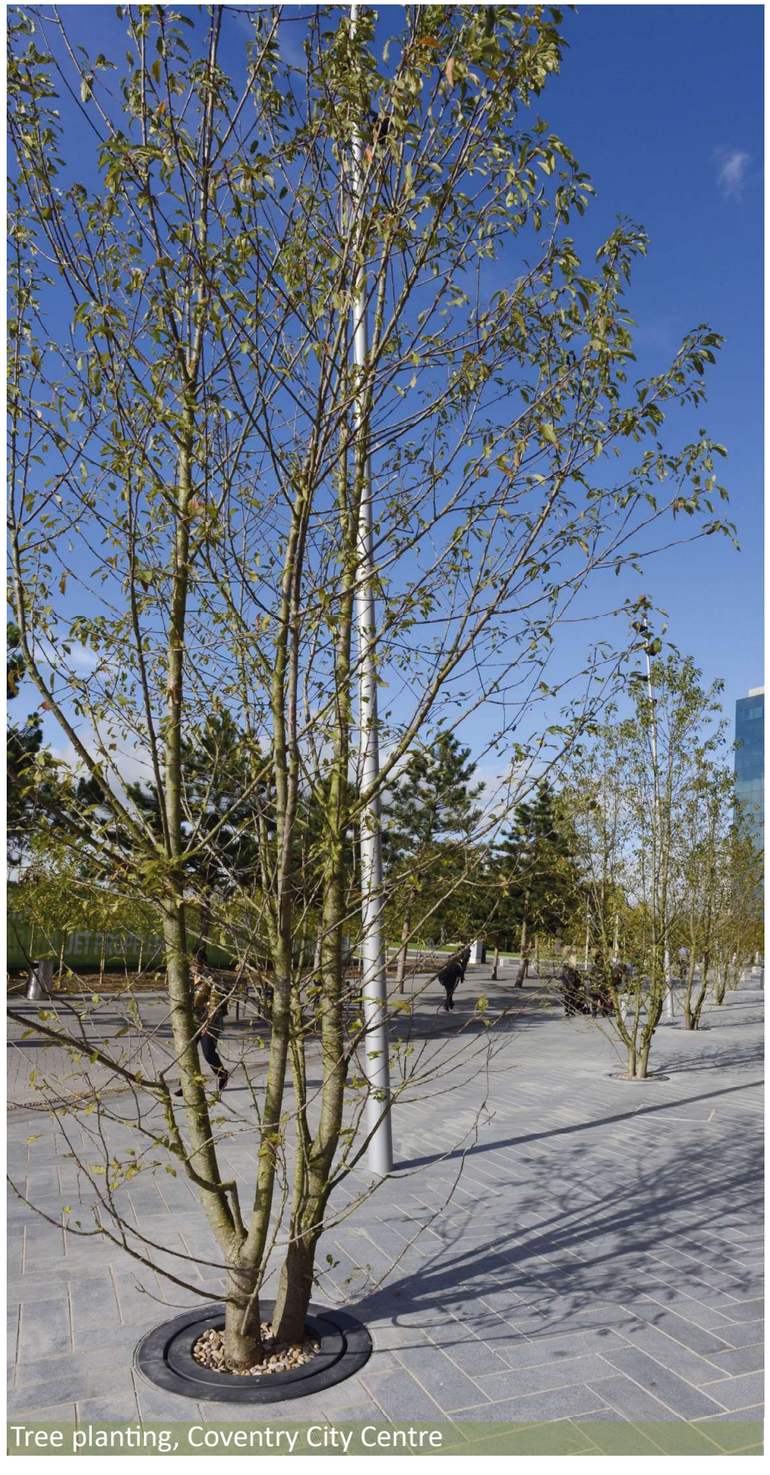
- GI should be considered in the same manner as any other form of infrastructure servicing new development, and should be an essential component of all developments;
- New GI associated with development should connect into site level and local green space networks which should in turn connect into the city-wide network;
- All developments should include GI elements, including SuDS, urban trees and green roofs, which deliver multiple sustainable benefits to the urban environment through their natural processes.

The Planners at CCC frequently receive inadequate plans from developers, often with trees being retained which are unsuitable for the proposal or new buildings not considering the existing tree stock on the site. Communication is the key to convey to the developer that any planning guidance involving trees will be to the minimum standard as described in `BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations', which also describes minimum tree protection standards. A tree survey needs to be undertaken by the developer to BS5837: 2012 to understand the condition and habit of the trees on site and to be able to calculate the Root Protection Area (RPA) to ensure proper protection from indirect and direct damage.

Loadbearing on trees also needs to be taken into consideration by developers and Planners, including reference to BS1377: Part 9 Soils for civil engineering purposes, Department for Transport earthworks guidance[109], and long term monitoring protocols[110].

Partnership working with private landowners- The greatest proportion of our urban forest is privately owned, and care of the tree obviously varies vastly. When dealing with enquiries from private landowners, CCC will refer them to the correct direction of advice and best practice from the industry. Policies and future actions will need to consider how CCC continues to engage with private landowners for the development of the urban forest.

Enhancing biodiversity- Trees make up a significant and highly visible component of Coventry's biodiversity, with Tree Protection Orders (TPOs) and listings designated for their biodiversity value. They include ancient semi-natural and secondary native woodland, wood pasture, parkland, scrub, and individual Ancient and Veteran Trees. Many priority species protected by the Wildlife and Countryside Act 1981 (as amended) including bats, common dormouse, barn owl and stag beetle are directly associated with certain tree species for habitats and food, such as Black Poplar, which is a biodiversity priority species. Many insects



Tree planting, Coventry City Centre

specialise in their feeding preference on just a few tree species, whilst others are generalists that benefit from multiple tree species. In England native Willows, Oaks and Birches support the most varied insect herbivore species; Beetles are better supported by Scots Pine. Generally non-native trees are associated with fewer species than native trees as they 'have had less time to form associations with native organisms'[111].

It can though be seen where tree diversity is limited in urban areas that some non-native trees such as Sycamore support a large quantity of biomass, providing a valuable food source for birds. Some native tree species form few insect herbivore associations due to a high level of tree defence mechanisms eg. Yew[112]. Pollinating insects hosted by trees provide essential ecosystem services in urban areas of Coventry by pollinating flowers and producing food. Trees offer an important source of pollen at particular times of year when other sources are unavailable.

The HBA has been undertaken by Warwickshire Wildlife Trust in partnership with the six Warwickshire local authorities including Coventry since 1995. Their remit is to survey every field and boundary to provide up-to-date biodiversity data, which is mapped in GIS. This process is continually ongoing, data is updated annually, making the HBA the longest continual survey of this kind, which is crucial as the data is used in decision making regarding the spatial planning and development control of the urban forest. Phase 1 Habitats Surveys provide data on urban forest change, land use pressures and feeds policy and decision making on GI, ecological connectivity and biodiversity offsetting.

The Warwickshire Wildlife Sites Project is now part of the HBA Partnership, which is responsible for Local Wildlife Site selection which covers some of our urban forest. A detailed Phase 2 Habitat Survey is undertaken against a set of national criteria called the `Green Book'. The designation of Local Wildlife Sites is considered by a panel of experts which includes an officer from CCC.

> "The biodiversity value of urban trees when seen as a collective and in association with other elements of GI is a functioning ecosystem providing habitats for many species in hostile urban environments."

The UK Biodiversity Action Plan (UKBAP) established a native woodland habitat creation target of 134,500ha by 2015[113]. The new UKBAP habitat 'Open Mosaic Habitat on Previously Developed Land' is concentrated in urban and peri-urban areas, which is an important habitat for many rare or threatened and protected invertebrates, plants and birds on unique soil conditions. The urban forest can be planned to increase these populations. Some species harbouring within the urban forest are invasive and require careful management.

Important for planning Coventry's urban forest, it is known that species population size is also directly linked to the size of available habitat area e.g. the biodiversity benefits of massing the urban forest was demonstrated by bird species richness[114], and most 10-35 ha parks will contain all the birds recorded in any urban area of that region. Therefore, removal of an area of urban forest in Coventry or a line of street trees could impact on the movement of species, which use urban trees and GI as 'stepping stones' of habitat, enabling longer-distance movement for some species[115]. For instance, it has been demonstrated that managed roundabouts and road verges planted with suitable trees support a wide variety of plants and insects[116]. Warwickshire Wildlife Trust's Lottery-funded 'Dunsmmore Living Landscape'[117] scheme, seeks to restore important wildlife habitats and corridors in the areas lying between east Coventry, Rugby and north Leamington. In the future, policies and actions need to consider long term management plans for biodiversity within the urban forest. CCAAP Policy CC8 'Green and Blue Infrastructure' recognises that there needs to be a strategic overview of greenspace to support local biodiversity networks, and that urban forestry is integral to this.

Planning for climate change- Extreme and more frequent weather events are expected in the future[118], and infrastructure will need to resist these predicted changes, which is not

considered extensively in current Local Development Plans.

The NPPF 2012, the UK Climate Change Risk Assessment 2012 and the subsequent National Adaptation Programme 2013 all recognise the role of urban GI and forest in climate change adaptation. The BiFOR: Birmingham Institute of Forest Research, is researching the evidence case for forests as part of One Planet Living, and is currently researching how forests will respond to the future prediction of CO2 increase[119]. This data will provide an important argument for enhancing our urban forest in Coventry. Even modest increases in tree canopy can reduce the urban heat island effect and build resilience to climate change through evapo-transpiration and shading, as well as improving air quality. An attractive urban forest, as promoted by CCAAP Policy CC1 Development Strategy 'to provide an attractive and safe environment for pedestrians and cyclists', can also encourage active travel which will further mitigate air pollution. The role trees play in alleviating the effects of climate change needs to be recognised and provision made available to plan for new tree planting.

Well-informed decision making is therefore required on the design of buildings, infrastructure, open space provision and tree species selection in response to the effects of climate change. TDAG guidance needs to be integral to all decision making[120].

Planning to alleviate air pollution- Street trees have been associated with a lower prevalence of asthma in children. Designated Natural Health Improvement Zones (NHIZ) is one of the initiatives endorsed in the `2011-15 Health Protection Agency Strategy' to tackle this challenge. NHIZs are centred on those areas most affected by air pollution (Air Quality Management Areas), and, within these areas, trees and green walls planted facilitate the trapping of pollutants by foliage. CCAAP Policy CC1 aims to 'combat poor air quality and other pollutants' and urban forestry needs to be highlighted a key solution. Grey Friars Green has now been identified as an 'Air Management Area'. CCAAP Policy CC8 regarding 'Green and Blue Infrastructure' recognises that a key source of pollution in Coventry is the city's ring road, and ideas for "greening" the route, such as vertical planting schemes and tree planting, are currently being explored.

The urban forest in Coventry has a direct role to play in alleviating air pollution and specific technical guidance will need to be developed to address this increasingly concerning issue.

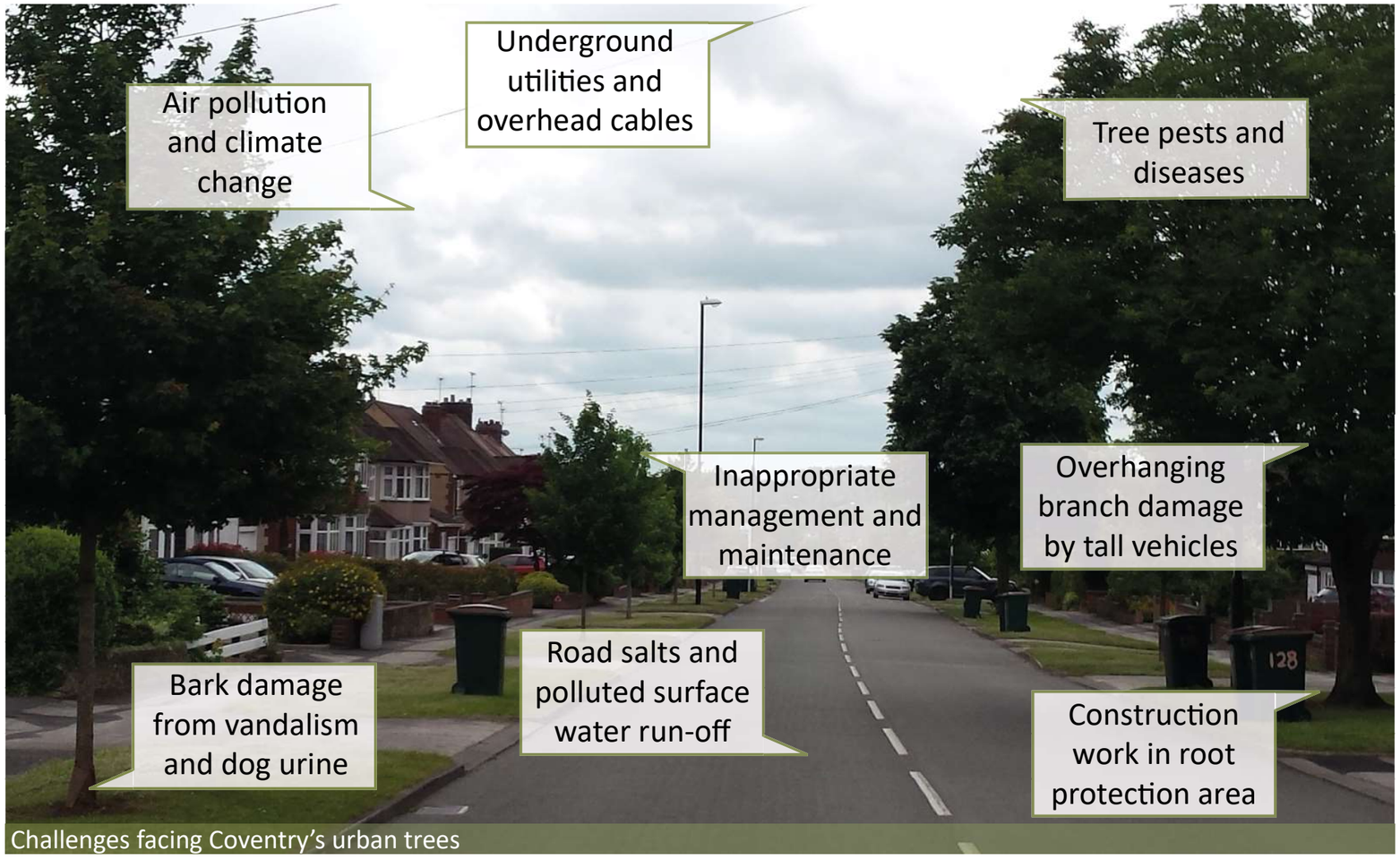
Maintaining the Urban Forest

CCC is continually looking at ways to effectively cost save through maintenance, in order to provide better value for money. With increasing financial constraints placed on CCC to manage the urban forest, the public and private sector both need to seriously consider investment targets.

Local community support or 'buy-in' to their urban forest assists in moderating long-term financial and managerial costs. But is maintenance of the urban forest essential to maximise its benefits? While well-maintained green spaces can improve mental health, overgrown vegetation can have a negative impact by increasing the fear of crime although these overgrown spaces may be better for biodiversity. Some infrastructure such as green roofs, walls and rain gardens require minimal maintenance once installed. For other types of infrastructure, such as green spaces, the cost of maintenance can be higher – through mowing, weeding and watering. These costs often fall to local authorities and have been the focus of budget cuts in recent years. GI includes a wide range of infrastructure types, so generalisations regarding the cost of implementation and maintenance are difficult to make. Maintenance may increase long-term jobs in the local community, but alternative sources of funding are required to cover these costs. Design that is sensitive to maintenance costs can improve the sustainability of a project by minimising this budget. The following issues and challenges for long term management and maintenance of the urban forest need to be considered.

Tree inspections and risk assessments- Inspections based on Visual Tree Assessment (VTA) form the basis of pro-active maintenance regimes for all CCC owned trees. CCC's approach to tree inspection and hazard evaluation is set out in its Tree Risk Management of Parks, Open Spaces and Woodlands policy (TRM). GIS is used to collect and manage the tree data, in conjunction with a specific tree asset management system. In light of emerging case law, CCC will need to further consider specific policy and resource implications for cyclical visual tree inspections.

Tree pruning- Inappropriate or poor pruning of trees can have long term financial and safety impacts. CCC will not top or prune trees inappropriately. However, the programme of street tree pruning that pollards many trees in the highways across Coventry annually has to continue. This work is necessary for the City Council to satisfy its liabilities towards subsisdence risk. In the long term, the City Council has an aspiration to replace all these trees with more suitable species that will see an end to this type of pruning.



Challenges facing Coventry's urban trees

Street trees- CCC takes responsibility of all the street trees on Coventry's highways. Specific policies and procedures, including TRM for inspections and proactive maintenance will be adopted as part of this Strategy.

Parks and public open space- All trees in the principal parks have been surveyed and recorded in the tree asset management system, with the resulting health and safety actions undertaken.

New planting- It is recognised that new trees require specific maintenance during the initial establishment phase to ensure that they thrive, and to avoid costly maintenance issues and health and safety concerns in the future. For street trees, this is becoming more of a challenge and it is important in these environments where trees have been removed due to highway operations that replacement planting is undertaken the following planting season to ensure continuity of tree heritage of that street. Clear policies and

procedures need to be adopted to ensure the correct establishment of trees within the urban forest.

Woodland trees- CCC own and actively manage over 200ha of mature woodland within the city boundary. 100ha of these are ancient and semi-natural woodland or replanted ancient woodland sites. All CCC woodlands have Management Plans that are under review.

Protecting the Urban Forest

Our urban trees have to be tough to survive, in particular our street trees which have to fight for survival.

Coventry already has a range of protection measures for trees but we need to communicate the benefits of trees as well as enforcing legal protection. Challenges for future consideration will include the following issues.

Current policies- Policies for tree protection should embrace the lifecycle that an individual tree endures to thrive and survive, and the value it contributes to the urban forest as a whole. Our urban forest now shapes our local landscape character and is a legacy left to us by Victorian, Edwardian and pre-war designers. Coventry's Local Development Plan (LDP) recognises that trees make 'a valuable contribution to the city's green landscape'.

Policy GE3 'Biodiversity, Geological, Landscape and Archaeological Conservation' states:

- Sites of Special Scientific Interest (SSSIs), Local Nature Reserves (LNRs), Ancient Woodlands, Local Wildlife and Geological Sites will be protected and enhanced. Proposals for development on other sites, having biodiversity or geological conservation value, will be permitted provided that they protect, enhance and/or restore habitat biodiversity.
- Biodiversity will be encouraged particularly in areas of deficiency, in areas of development and sustainable urban extensions, and along wildlife corridors. Opportunities will be sought to restore or recreate habitats, or enhance the linkage between them, as part of the strategic framework for green infrastructure. Protected Species, and species and habitats identified in the Local Biodiversity Action Plan (LBAP), will be protected and conserved through a buffer or movement to alternative habitat. Identified important landscape features, including Historic Environment assets, trees protected by preservation orders, individual and groups of ancient trees, ancient and newly-planted woodlands, ancient hedgerows and heritage assets of value to the locality, will be protected against loss or damage. In the case of archaeological remains, all practical measures must be taken for their assessment and recording in accordance with Policy HE2 [...] In order to restore good levels of biodiversity across the Warwickshire, Coventry and Solihull sub-region, it is important to have urban areas that are permeable for wildlife, with havens for wildlife through the city and connected corridors linking sites [...]

CCAAP Policy GE4 'Tree Protection' states:

- 'Development proposals will be positively considered provided a) there is no unacceptable loss of, or damage to, existing trees or woodlands during or as a result of development, any loss should be supported by a tree survey; b) trees not to be retained as a result of the development are replaced with new trees as part of a well-designed landscape scheme; and c) existing trees worthy of retention are sympathetically incorporated into the overall design of the scheme including all necessary measures taken to ensure their continued protection and survival during construction';
- 'Development proposals that seek to remove trees that are subjection to protection, without justification, will not be permitted'.

Compensatory measures are identified in Policy GE4 to prevent the removal of trees as

far as possible, but when loss is unavoidable 'compensatory provision of new trees should be proposed as part of a well-designed landscape scheme or within other areas of green space within the local community. This will ideally be within 400m of the site [...] All replacement trees should be of an appropriate type and status to reflect those which have been lost'. If a tree is subject to protection as part of an Ancient Woodland or through a TPO, then trees should be 'retained for the value they add to the visual amenity of the area'.

Current and future policies will need to be reviewed and adopted to meet future challenges.

Loss of trees- Sometimes for the right reasons, a tree does need to be felled. But when is loss unavoidable and who makes this decision? Many members of the public have raised this question after tree felling within the distinctive streetscapes of other UK urban areas. Planning Services at CCC are responsible for enforcing and monitoring statutory protection of trees on private land, and rely on the technical support of the Tree Preservation Officer, with assistance from the Urban Forestry Officers. With increasing pressures on our resources in Coventry, with house building, new infrastructure and attracting new business, a strong policy is required on enforcing protection and compensation, and an increase in awareness amongst professionals, residents and developers.

CCC's LDP states that 'in exceptional circumstances where the benefits of development are considered to outweigh the benefits of preserving the protected tree, development will be permitted subject to adequate compensatory provision being made'.

There are opportunities to provide suitable compensation measures when a tree is lost. Either replacement trees, or a financial contribution equivalent to the value of the removed tree(s). How this is calculated is using appropriate assessment provided by the draft `Trees & Development Guidelines for Coventry: Supplementary Planning Document (July 2018)'[121] and agreed between the Developer and CCC using methods such as CAVAT calculating the value of a single tree.

Tree protection orders (TPOs)- CCC has a statutory duty to protect the urban forest by administering TPOs and designating Conservation Areas. This proactive use of TPOs as a tool to sustain the urban forest and protect from the urban pressures it faces, places a responsibility on the land owner to request permission from the Council prior to any tree works.

Policy HE2 'Conservation and Heritage Assets' states that 'In order to sustain the historic character, sense of place, environmental quality and local distinctiveness of Coventry, development proposals will be supported where they conserve and, where appropriate enhance those aspects of the historic environment, which are recognised as being of special historic, archaeological, architectural, artisic, landscape or townscape significance'.

Ancient Trees, Veteran Trees, and Ancient Woodlands- Although Ash is the most common tree species within Coventry, few really old Ashes exist; many by 150 years are hollow due to a decline in tree health and prone to wind-blow of their crowns[23]. A significant number of Ancient Trees exist across Coventry. English Oak (Quercus robur) dominate the Ancient Tree listings, with 382 specimens (currently known) with girths of 5 metres-plus, judged to be at least 250 years old with many in the former historic Arden parkland or within ancient hedgerows.

Policy HE2 'Conservation and Heritage Assets' states that 'All development proposals should aim to sustain and reinforce the special character and conserve the following distinctive historic elements of Coventry [including] the wider Arden rural environment on the fringe of the city comprising field systems, ancient woodlands and commons developed over the centuries...'

Princethorpe Woodlands includes 20 woodlands, covers 618ha and represents more than 10% of


Ancient Oak tree, Cannon Hill

the whole of Warwickshire's ancient woodland. The Local BAP for Warwickshire, Coventry and Solihull identifies Princethorpe Woodlands as 'the most significant cluster of ancient woodlands in Warwickshire' which are connected by ecologically valuable networks of hedgerows. Princethorpe Woodlands is now part of a Lottery-funded Dunsmore Living Landscapes scheme[122], which has the following aim: 'to restore important wildlife habitats in the areas lying between east Coventry, Rugby and north Leamington and reconnect people with these special places'.

Future policies and actions will need to address the long term custodianship of Ancient and Veteran Trees and the Ancient Woodlands of Coventry.

Promoting the Urban Forest

How do you get the public and potential developers to become more aware about the importance of the urban forest in Coventry? Positive news stories are a challenge to gain the interest of the press, but aiming high in a strategic vision is something that Coventry needs to do. For example CCC undertake social media campaigns regarding parks eg #loveparks but not specifically the urban forest, and deal with twitter threads, humour and engagement in different ways. Coventry's stories are amassed in a generic #LoveCoventry twitter feed, as well as more recently #CityofCulture2021. Coventry's successful City of Culture 2021 bid presents an opportunity to demonstrate Coventry's culture and heritage, and the role that its urban forest plays in that.

The challenge we need to embrace is how CCC translate the community's increasing awareness of the urban forest into a long-term, meaningful engagement at a local level, particularly with people's time being even more pressurised. CTWN are proactive crucial groups of volunteers who are trained, act as the "eyes" for the Council, provide advice and undertake tree planting. However, it is important that they do not undertake work which is beyond their duties and liabilities. Tree Wardens work in partnership with the Council, the Tree Council and Conservation Volunteers to research and empower their local communities to take on practical projects relating to the urban forest. Several also sit on their respective Parish Councils or other organisations and can therefore be seen as the connection between the local authority and the Council, and a key voice for the urban forest.

As we have discussed, there are a wide range of bodies including universities, government agencies, the third sector, companies and other organisations with a focus on trees in urban landscapes working in Coventry, such as CTWN, WWT, The Woodland Trust, TDAG and Trees for Cities, who have knowledge, experience

and expertise about urban trees which could be beneficial to CCC. There is also a wealth of evidence from research emerging all the time about the wider benefits of trees and GI, as referred to in this Strategy, which could be used to benefit and inform the way that CCC maintains, manages and develops Coventry's urban forest.

CCC should utilise this knowledge and expertise in conjunction with that already in-house from directorates across the Council and delivery bodies to bring together a joint independent-led group which can be called on for advice and knowledge, which could be called the Coventry Urban Forest Group.

Promoting and raising the profile of the urban forest will be key to the successful implementation of the Strategy.

Community engagement work by CCC

Sustaining the Urban Forest

A resilient and sustainable urban forest is based on various factors, such as a wide ranging tree size and species distribution, directed by rigorous management strategies and policy and planting more than felling. This is important to enable the urban forest to deliver the benefits described in the values sections outlined above. One of the prime objectives of Coventry's urban forestry management should be to facilitate sustainability and resilience through population diversity. A healthy tree population, for example, can ensure more carbon is stored than released, as long as the amount sequestered by healthy trees is greater than the emission of carbon from the decomposition of dead trees.

For example, large mature trees offer unique ecological roles not offered by smaller and younger trees, therefore the optimum level of trees of this stature needs to be maintained, and thus protected. It is important to calculate the number of trees required to restock their mature neighbours to ensure the urban forest is inherently resilient. New planting must be in excess to take into account tree mortality of new stock.

For Coventry's more mature tree stock, Biodiversity Management Action Plans for `Wood-pasture', `Old Parkland' & `Veteran Trees' have been written[123]; and 'Ancient and other veteran trees: A guide to good management'[124] is also full of information. Future policies and plans will need to consider the following challenges and opportunities.

Optimising the urban forest- "Ideal" tree populations have been adopted in certain cities such as Toronto to inform management of the urban forest with the aim of creating a resilient urban forest. Mapping the existing tree population structure and comparing it with "ideal" tree population structures can help identify the number and type of tree stock needed to fill the gap. This provides powerful data for policy and demonstrates the funding and resources required to achieve this optimum urban forest. But numbers of trees are not the only crunch data, as leaf area and tree canopy cover is the driving force behind tree benefits.

When leaf area and tree canopy cover is calculated through an i-Tree type assessment and combined with abundance of a certain tree species a "dominance value" can be determined regarding the benefits they can bring. In London, for example, Apple trees are the "third most populous tree" but "ranked 8th for species importance".

Diversity of tree species- Diversity in the urban forest has two main components: the number of species present plus the genetic diversity of the individual species present. Diversity of both native and non-native trees is crucial in reducing the potential impact from threats such as pests and diseases and climate change; and enhances the capacity of the tree population to deliver ecosystem services. The selection of tree species will be crucial for long term diversity and this should form part of detailed technical advice promoted by CCC.


Till Hill Wood

Planting more, felling less- As well as species diversity, the principle of planting more than felling or removal of trees needs to be endorsed. Systems will need to be adopted to determine metrics and targets for planting.

Pest and pathogens- Pest and diseases are a serious threat to the biosecurity of our urban forests. With an Ash dominant urban forest there are concerns about Chalara Dieback of Ash (Hymenoscyphus fraxineus) which has been identified in Coventry. The University of Birmingham through BiFOR is currently researching the resilience of trees to pests and diseases including resilience of imported diseases/pests and has found that climate change is altering the range of pests and diseases likely to affect the UK[125]. The outbreak of pests and diseases is supported by the importation of trees, particularly large landscape trees, and the increasing volume of packaging materials used in international trade. Tree populations dominated by a few species are more vulnerable to the threat with `Dutch Elm Disease' for example, causing the death of approximately 30 million Elm trees in the UK.

CCC have recognised that action must be taken to limit pests and diseases as incidence, spread and severity of an outbreak varies according to tree health, management and young tree procurement policies, as well as the weather and tree species. Action plans which set out how to deal with largescale outbreaks of pests and diseases, such as Ash dieback, will need to meet with Government advice.

The Landscape Institute's Technical Note 4 (2017)[126], identifies the following main pests and diseases affecting the UK's trees: Hymenoscyphus fraxineus (ash); Sweet chesnut blight; Bleeding canker (horse chestnut); Massaria (London plane); Phytophthora; Asian longhorn beetle; Oak processionary moth; Acute oak decline. There are other pests and diseases which have not yet arrived in the UK, but have the potential to do so, including Emerald ash borer; Xylella fastidiosa; Japanese beetle; and Citrus longhorn beetle.

Future policies and procedures will need to consider how pest and diseases are addressed and controlled in the future.

Managing different interests- Across Coventry we have significant swathes of mature urban forest. However these very same trees we have been demonstrating the value of can for some residents and businesses be a source of frustration. This generally happens when the particular tree significantly contributes to the local public realm and landscape character, but provides challenges to those nearby.

Managing potential conflicts can be resolved through effective communication and proactive maintenance. In the future, promoting good management and the need for trees should be a priority.

Themes and Key Actions

To achieve the vision of the urban forestry strategy we plan to develop and implement a detailed service plan each year. Specifi c tasks for the service plan will be informed by the following themes and key actions.

War Memorial Park

Planning: Ensuring we have robust and relevant urban forest policies and technical guidance to facilitate high quality design and development

OBJECTIVE

Ensure that planning policy and planning decisions take account of trees and the urban forestry strategy.

ACTIONS

- Create better links between the Urban Forestry Team and the Planning Team to form a working group.
- Maximise opportunities to link current Local Plan policies on green infrastructure to the urban forestry strategy when responding to applications as a consultee.
- Ensure urban forestry considered where this is applicable.
- Consider where / if policy needs revising and updating and integrate into the local plan review as appropriate.
- Consult urban forestry team where applicable.
- Training to ensure planning teams are aware of the strategy and how it links to planning policies (existing and emerging).

OBJECTIVE

Utilise technical guidance for tree diversity, species selection and planting establishment for development.

ACTIONS

- Ensure the adopted trees SPD is utilised to support planning decision making.

OBJECTIVE

Influencing planning policy to consider the urban forest as a mechanism to mitigate climate change and air pollution.

ACTIONS

- Using GIS data and other mapping, identify air pollution hotspots and opportunities to tackle climate change.
- Consider where / if policy needs revising and updating and integrate into the local plan review as appropriate.
- Review current tree canopy cover and determine potential areas for tree planting.
- Prepare a technical assessment framework using tools such as tree economics to identify potential tree planting areas e.g. soil type and utility constraints etc.

Protection: Putting biodiversity and the health of trees at the heart of all our work

OBJECTIVE

Using the existing GI guidance to plan mass tree planting, where possible and in consultation with all relevant departments.

ACTIONS

- Undertaken field surveys to determine suitability for tree planting using technical assessment framework.
- Prepare plans and proposal for tree planting. Negotiate with land owners as required. Implement planting.

OBJECTIVE

Review and developing technical guidance for the urban forest and protected species such as birds and bats.

ACTIONS

- Work with other organisations such as Bat Conservation Trust to improve habitat retention methods and working practices.
- Prepare and adopt technical guidance.

OBJECTIVE

Developing technical guidance for unavoidable tree loss.

ACTIONS

- Benchmark and review tree loss policies with other local authorities.
- Prepare and adopt technical guidance for CCC tree management.

OBJECTIVE

Developing protocols for 'offsetting' within the urban forest of Coventry.

ACTIONS

- Work with ecology and planning colleagues to promote locally adopted offsetting practices in line with the biodiversity offsetting SPD. (due to be adopted in 2022).
- Keep data to inform KPIs.

Procedures: Ensuring we have appropriate operational plans and processes that are regularly monitored and reviewed

OBJECTIVE

Enhancing the biodiversity of the urban forest using long term quantifiable measures.

ACTIONS

- Undertake baseline assessment of trees and biodiversity value in Coventry. Establish as series of controls for ongoing monitoring.
- Undertake monitoring of control points to demonstrate measurable improvements.

OBJECTIVE

Include biosecurity considerations in procurement policies and site management to prevent the transmission of pests and diseases.

ACTIONS

- Prepare and adopt procurement policy for trees.

OBJECTIVE

Setting realistic, measurable and quantifiable targets to ensure net tree planting gain.

ACTIONS

- Plant 360,000 trees, one for every Coventry Citizen by 2031.
- Develop and adopt tree establishment/ maintenance procedures for net gain.

OBJECTIVE

Developing a set of Key Performance Indicators for the urban forest.

ACTIONS

- Review current KPIs. Determine direct KPIs i.e. under the control of Council and indirect KPIs i.e. reliant on external factors e.g. health improvements.

OBJECTIVE

Creating annual service plans with specific actions and deliverables.

OBJECTIVE

Reviewing all our inspection and maintenance regimes to ensure legal compliance.

ACTIONS

- Undertake review of legal requirements and responsibilities.

Procedures: Ensuring we have appropriate operational plans and processes that are regularly monitored and reviewed

OBJECTIVE

Creating policies and contingency plans to control outbreaks of pests and diseases.

ACTIONS

- Undertake mapping of current affected trees and wooded areas.
- Develop and adopt pest and diseases control protocols and measures.

OBJECTIVE

Review operational procedures in relation to customer enquiries.

ACTIONS

- Work with customer services team to review and develop the processes for responding to general enquiries.

OBJECTIVE

Developing operational policies for 'right tree, right place'.

ACTIONS

- Improve CCC Tree Management web pages to include information on species selection.

OBJECTIVE

Reviewing programmed street tree maintenance.

ACTIONS

- Review current programmed maintenance schedule and adjust to make any possible improvements and efficiencies.
- Remove and replace current pollarded street trees, where there is a benefit to the area and the local residents.

Projects: Developing and creating long term projects for the management and enhancement of the urban forest in Coventry

OBJECTIVE

Explore the potential funding accessible from HS2 grants and other external funders, to maximise income for tree planting.

ACTIONS

- Apply for grant funding on as many projects as possible, if other internal funding is not available.
- Forge partnership with Trees for Cities for long term tree planting projects.

OBJECTIVE

Working to create new volunteer opportunities in the urban forest.

ACTIONS

- Work with partners such as park friends groups and rangers to develop volunteer involvement.
- Develop and resource a volunteer training programme and provide opportunities for life long learning.

OBJECTIVE

Continuing to implement planting projects and maximising external funding.

ACTIONS

- Identified potential stakeholder community groups linked to areas of tree planting.
- Establish links to all Community Groups to coordinate and promote tree planting in all areas, focused by the Tree planting Strategy.

OBJECTIVE

Integrating with existing GI, open space and tree strategies and policies.

ACTIONS

- Review current policy actions. Report on joint working and progress.

Prosperity: Making the link with the urban forest and natural capital for sustainable economic regeneration

OBJECTIVE

Quantifying the urban forest asset in Coventry.

ACTIONS

- Using GIS data and other mapping tools, map current canopy and typologies of tree and woodland cover. Undertake iTree Eco study.

OBJECTIVE

Explore developing a natural capital ethos to managing trees.

ACTIONS

- Understand and quantify financial value of trees in Coventry. iTree study. Consider adopting as KPIs.

OBJECTIVE

Understanding and quantifying how the urban forest in Coventry can reduce air pollution and the impacts of climate change.

ACTIONS

- Working with Air Quality improvement projects to map and quantify urban forestry and areas of high air pollution and opportunities to mitigate climate change. Target tree planting in areas of high demand.

Promotion: Having a presence and getting the message across to all our stakeholders and customers

OBJECTIVE

Launching the Urban Forestry Strategy.

ACTIONS

- Promote via web page and social media. Hold a launch event once Urban Forestry Strategy adopted.

OBJECTIVE

Review our current media presence.

ACTIONS

- Ensure media presence. Maximise the number of press releases each year. Promote work through social media etc.

OBJECTIVE

Developing user friendly information to signpost customers about the value of trees and responsible management.

ACTIONS

- Prepare specific web page for strategy and provide links to other resources.

Partnerships: Building on existing and facilitating new working relationships for the benefit of the urban forest in Coventry

OBJECTIVE

Agreeing protocols for working with private landowners.

ACTIONS

- Review current practices and procedures. Develop arrangements for assisting and also dealing with private landowners.

OBJECTIVE

Developing cross boundary partnerships to create and develop high level urban forest strategies.

ACTIONS

- Review and consider how we work with neighbouring authorities.

OBJECTIVE

Consider offering our expertise and knowledge as paid service to other organisations, if resources allow.

ACTIONS

- Review potential for income generation from other service areas. Undertake market analysis and prepare a business case.

OBJECTIVE

Supporting and develop working relationships with all community volunteer groups.

ACTIONS

- Review current practices and procedures. Develop arrangements for assisting and also dealing with private landowners.

OBJECTIVE

Collaborating with other neighbouring authorities and sharing best practice.

ACTIONS

- Co create Officer Forum and meet regularly to share best practice.

Profile: Having a presence and influencing colleagues, stakeholders and professional networks in decision making

OBJECTIVE

Telling our work colleagues about the Urban Forestry Strategy.

ACTIONS

- In conjunction with Urban Forestry Strategy Group(below).

OBJECTIVE

Making connections with health organisations to promote the value of the urban forest.

ACTIONS

- In conjunction with Urban Forestry Strategy Group(below).

OBJECTIVE

Explore making connections with other West Midlands organisations such as Sustainability West Midlands.

ACTIONS

- Review potential organisation partnerships.

OBJECTIVE

Being advocates and supporting professional bodies to drive the industry and celebrate the benefits of the urban forest.

ACTIONS

- Ensure that Tree Officers are supported with professional development, mentoring and training.

Pioneering: Using technology and new ways of working to create innovation and efficient working

OBJECTIVE

Investing in technology to create a more responsive and efficient service delivery.

ACTIONS

- Review current technology needs and improve where needed.

OBJECTIVE

Developing a Coventry Urban Forestry Strategy Group across all service areas.

ACTIONS

- Hold regular meetings with Council Officers from other departments.
- Undertake skills audit of existing tree officers, rangers and volunteers.

OBJECTIVE

Investing in people to develop technical and management skills in the urban forest.

ACTIONS

- Prepare and implement an annual training programme.

Key Performance Indicators 2021-2031

Year number	0	1		2		3		4		5		6		7		8		9		10			
Period	2020	2021/22		2022/23		2023/24		2024/25		2025/26		2026/27		2027/28		2028/29		2029/30		2030/31			
	Baseline	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Total Target	Total Actual
	0	2000	0	13,000	0	15,000	0	20,000	0	30,000	0	30,000	0	50,000	0	50,000	0	75,000	0	75,000	0	360,000	0
	15	15	15	15	0	15	0	15	0	18	0	18	0	18	0	18	0	19	0	20	0	20%	0%
	0	2000	0	3000	0	5000	0	5000	0	10,000	0	10,000	0	15,000	0	20,000	0	20,000	0	20,000	0	110,000	0
	0	100	0	100	0	200	0	200	0	200	0	300	0	300	0	500	0	500	0	500	0	2900	0
	0	n/a	n/a	75	0	n/a	n/a	n/a	n/a	80	n/a	n/a	n/a	n/a	n/a	85	0	n/a	n/a	n/a	n/a	85%	0%
	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	5	0	5	0	5	0	5	0	10	0	10	0	15	0	15	0	15	0	15	0	100	0

No of Trees - Total number of individual trees planted per annum.

% Canopy Cover - Percentage (%) of tree canopy cover within Coventry.

External Income - Total value (£) of external funding and private income secured per annum.

Volunteer Hours - Total number of volunteer hours per annum in relation to tree planting and management.

Customer Satisfaction - Percentage (%) of local residents stating satisfied or very satisfied with tree service as part of triennial.

Complaints - No of complaints related to trees owned and maintained by Coventry City Council.

Community Tree Planting - Total number of community tree planting days per annum e.g. school or friends groups.

Achieving Success

This Urban Forestry Strategy will be continually reviewed and updated during the next 10 years. To achieve success we need to build on the foundations and principles set out in the document.

The role of the urban forest in addressing the challenges faced by Coventry in the 21st century cannot be underestimated. Alongside GI, the requirement of urban forestry, articulated in this document, should be an adopted vision that permeates every level of the planning and design process, whatever the scale. This can be achieved over a period of time through CCC core policies, their approach to development, and embedded in strategies and local plans to drive future funding opportunities. This Urban Forestry Strategy and GI need to be recognised and work hand in hand. With adopted CCC Development Plans extending to 2028, the influence on policy is limited, but we must not hesitate on communicating the value of trees and lobbying for change to those in the position to change policies at time of reconsideration

Having a greater understanding of the services and benefits our urban forests provide to inform future management and investment priorities, requires collaboration between the local community, CCC, neighbouring local authorities, scientific and environmental experts, NGOs and developers. CCC need to take on a proactive approach to championing the urban forest, presenting its role as an integral part of a vibrant future for Coventry and Warwickshire. The urban forest must be planned, delivered and managed effectively; supported through innovation and a creative appetite to secure funding to sustain it through capital and revenue generation. Working with the complexity of the many interactions of the urban forest as a resource, whilst maximising its natural capital, the Urban Forestry Strategy must be placed at the heart of an integrated approach to GI, and this way will unlock the potential of the urban forest vision for Coventry for a sustainable lifestyle, alongside thriving landscapes, habitats and effective ecosystem services.

There is growing evidence that returns on urban forestry investment are high, with investing in green space proven to improve a region's image; helping to attract and retain high value industries, new business start-ups, entrepreneurs and workers, all of which are crucial to support a thriving economy in Coventry. The role of investing in GI and urban forests to reduce unemployment and increase 'Gross Value Added' needs to be succinctly conveyed as the UK leaves the deepest recession since 1930s, particularly in competing in international markets to attract overseas companies to bring high quality investment to the UK. In addition, investment in our urban tree stock helps to meet the requirements of the UK Sustainable Development Strategy (Defra, 2005). CCC policy makers need to explore new sustainable models for funding and financing the urban forest.

With a multi-age urban tree stock, which is responding to changing urban and climatic conditions, we need to be equipped with the expertise and methods of best practice to better understand how to implement appropriate management, monitoring and planting regimes in these fast changing environments. i-Tree software is one such way to establish changes in our tree canopy cover over time in comparison with the current situation.

We face multiple urban challenges, both today and into the future. As a major component of GI, trees are widely recognised as making a significant contribution towards ameliorating some of these issues. However, trees can only deliver their many long term benefits if appropriate species are selected for a given location.

Enhancing and effectively maintaining Coventry's urban forest has considerable public and policy support, but unless we express a monetary value of the multiple benefits provided by the multi-functionality of the urban forest, it will not receive the recognition it deserves. Generally people are unaware of the vast array of benefits urban trees provide expressed as ecosystem services and

these need to be at the forefront of any decision making process on service delivery. We are aware that low income areas generally have fewer urban trees and poorer quality green spaces compared with more affluent areas across Coventry and this needs to be rectified. The community need to fully engage with the creation and decision making of the management of the existing urban forest to ensure its success and healthy future. Empowering local communities to take responsibility of Coventry's urban forest, and directing how we use and play in this resource can result in local benefits such as community cohesion and inclusion, and reduce incidence of vandalism and crime, minimising management costs.

This Strategy therefore sets out the rationale and framework for nurturing the urban forest for future generations.

Greyfriars Green, Coventry

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