



Tree Strategy

2020 – 2025

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1. Introduction – New Forest District Council

The New Forest District Council manages one of the largest districts in the country and covers an area of approximately 250 square miles with a population of over 170,000 people. It is predominantly rural in nature and is made up of a diverse range of land types ranging from chalk downland, heavily populated flood plains, coastal landscapes, mud flats, salt marshes and low-lying river valleys, which in turn support a diverse range of trees and wildlife.

The Council is in an unusual position as a landowner responsible for land surrounding, and within, the New Forest National Park (including SSSI and Ramsar sites), an area of international importance for biodiversity, particularly associated with trees and woodlands. Council land (and trees) has an important role in connecting habitats with wildlife corridors, buffering impacts on sites of importance and it is essential that the management of green infrastructure reflects its surrounding areas.

In the towns and villages, approximately 80% of trees are in private ownership which reflects the wider situation across the country. Space is often very restricted, and it can be difficult to establish new trees on public land. There is significant pressure on existing trees due to the activities of people and conflicts of interest. The residential population of the district has more than doubled since 1950 (Source: Growing Better Together NFDC). As an example of the increasing landholdings, currently we manage 93ha of public open space this is set to increase by a further 160ha over the next decade.

There is a strong legacy of tree cover within the district. The Council is responsible for many important trees in key locations which provide essential benefits to local people and visitors. While there is no specific information available relating to overall tree cover within the District, The National Forest Inventory noted 22,401 ha (hectares) of woodland within the New forest area representing 29.7% woodland cover; of this more than 70% is broadleaved.

New Forest District Council (NFDC) is responsible for a range of treed areas approximately 5200 housing properties, open spaces, car parks, Sites of alternative natural green spaces (SANGS), woodlands, Leisure centres and cemeteries and was one of the first Councils in the UK to initiate a woodland burial scheme.

2. The Purpose of the Tree Strategy

NFDC has produced this tree strategy to promote, enhance and protect all trees growing on any and all land owned or managed by NFDC, and the areas surrounding. To provide a framework for decision making, ensuring a consistent approach is taken to tree management across all the Council's different departmental business units.

This Strategy will demonstrate that NFDC proactively manages its trees in conjunction with best practice and relevant policies, and will set out how, why and when trees will be managed, and will ensure that there is continuity of tree management throughout New Forest District Council. This includes council officers, planning officers, councillors, policy makers, landscape professionals and property developers.

This document will require to work with any future Action Plans for pest and disease, tree replacements, or invasive plant species. This document will work with the NFDC Climate Action Plan, underneath the overarching NFDC Corporate Plan.

Closely aligned to the Tree Strategy will sit the emerging Supplementary Planning Document (SPD). This will set out developers' responsibilities regarding existing and new trees within planning applications.

This updated strategy will aim to build on the achievements and progress made in the 2014 document. Many of the policies and action points will remain unchanged as are ongoing, or still to be actioned.

This document will also give a snapshot of the current state of the NFDC tree stock along with the identification of areas of concern to allow the implementation of a proportionate response. It will set out the importance of trees to the people who live, work and visit the New Forest District.

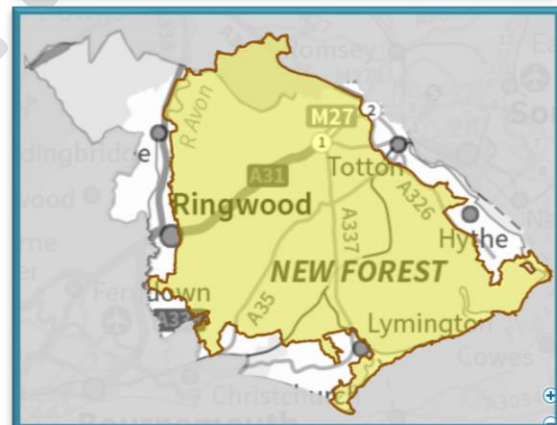
NFDC's trees and woodlands have the capacity to both improve the quality of life for New Forest residents and make a significant contribution towards the Council's environmental targets and aspirations. This strategy recognises the importance of trees, the benefits they provide and the increasingly important role they can play in mitigating the effects of climate change, flood amelioration and pollution control.

3. Scope

This strategy relates to the management of NFDC's owned tree stock (including trees forming hedges) on land for which it is responsible, and also private trees within the surrounding areas.

Set out below is an overview of responsibility for tree related issues.

- The NFDC Open Spaces Corporate Tree Team are responsible for all matters relating to trees on NFDC land and provides a tree management and advisory service to a range of local Parish and Town Councils and other groups responsible for trees. This strategy does not specifically relate to those arrangements, however, the principles set out in this document are generally applied in the delivery of this service.
- The NFDC Planning Tree Team administer the planning related tree services within the New Forest District area.
- The NFDC Planning Department deal with enquiries relating to the Local Government (Miscellaneous Provisions) Act 1976 Section 23 & 24, in relation to dangerous trees in private ownership and enquiries relating to High Hedges (Anti-Social Behaviour Act 2003 Part 8).
- Within the New Forest National Park Tree Preservation Orders, Conservation Areas, Hedgerow Regulations and planning applications relating to trees is administered by the New Forest National Park Authority (NFNPA) (email: trees@newforestnpa.gov.uk. Telephone no. 01590 646600).
- Outside the National Park but within NFDC boundaries Tree Preservation Orders, Conservation Areas, Hedgerow Regulations and planning applications relating to trees is administered by the NFDC planning.
- Trees growing on land which forms part of the adopted highway are the responsibility of the Highways Authority, Hampshire County Council. (Telephone no. 0300 555 1375 Website: www.hants.gov.uk).
- Forestry England are responsible for the management of 13,533 hectares of publicly owned forest and woodland on Crown land within the New Forest area (Telephone no. 0300 067 4960 Email: southern.reception@forestry.gov.uk).
- Forestry Commission administers the Government's forestry regulations, the delivery of key grants and provides independent advice (including to local authorities, for example on the likely impact of development on woodland etc).



The NFDC Tree Teams are happy to give brief informal advice relating to the management of private trees. However private tree owner disputes are directed to the Citizen Advise Bureau or advised or to seek private solicitors. Private tree owners in need of tree works are directed to the Arboricultural Association's list of approved contractors and consultants (www.trees.org.uk).

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4. Policy Context

4.1. International

The 1992 Rio Summit resulted in a declaration on the environment and climate change and stated that the protection of the environment must be an integral part of the development process. The summit also produced 'Agenda 21' which outlined the importance of trees and woodlands in relation to benefits to individuals and communities.

In the wake of the 1992 Rio Summit, conventions were established relating to climate change, biodiversity and the management and conservation of trees and forests.



4.2. National

The 2005 UK Strategy for Sustainable Development underpins the requirement to carefully manage natural resources and restrict damaging practices. Specific reference is made to the importance of trees and woodland. A key principle of the strategy is described as:

“Respecting the limits of the planet’s environment, resources and biodiversity – to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations” (<http://sd.defra.gov.uk/what/principles/>).

In 2007 Defra published a ‘Strategy for England’s Trees Woods and Forests’. This document outlined the Government’s aims for the UK’s trees and woodlands as follows:

- Maximise the environmental, economic and social benefits of trees.
- Ensure that trees and woodlands are ‘resilient to the impact of climate change’.
- To protect and enhance the environmental resources (of water, air, soil and biodiversity) along with the amenity and cultural values of trees.
- Increase the influence of trees on the quality of life of people in the UK.
- Develop and promote new markets for sustainable woodland products and ecosystem services.

The Climate Change Act (2008) requires local authorities to promote measures which can help mitigate the effects of climate change which includes the maintenance of existing trees and new tree planting. The Government has published a Natural Environment White Paper, “The Natural Choice: Securing the Value of Nature (2011)”, which sets the case for a robust and interconnected system of ecosystems and networks. It further outlines the importance of trees and woodlands in the UK and sets out goals to increase tree and woodland cover in both urban and rural areas, enhancing the benefits trees can provide, improving the management of trees and the resilience of the UK tree resource to current and future threats.

The 2011 UK Natural Ecosystem Assessment reinforced the principle that a robust natural environment is the key basis for sustained growth benefitting local businesses and people.

The Natural Environment and Rural Communities Act (2006) requires public authorities to conserve biodiversity and restore and enhance habitats.

The National Planning Policy Framework (2012) contains a number of key clauses with relevance to the landscape and trees.

There is specific reference to requirements in relation to:

- Building a strong economy
- Design
- Promoting healthy communities
- Climate change and flooding
- Natural environment

All of which involve the protection and enhancement of green infrastructure and the natural environment of which trees are an integral and essential component.

There is also a requirement to prepare and adopt a Local Plan including reference to enhancing the natural environment, sustainability, landscape character and health and wellbeing, along with a duty to co-operate

across administrative boundaries to achieve objectives.

The Government Forestry and Woodlands Policy Statement (2013) advises that Community Infrastructure Levy and Section 106 agreements can fund green infrastructure, including trees and woodlands, in order to ensure development is sustainable. “New and better managed woodland also has a role in making our rural and urban landscapes more resilient to the effects of climate change.”

In 2019 government announced it would mandate net gains for biodiversity in the upcoming Environment Bill. Biodiversity Net Gain requires developers to ensure habitats for wildlife are enhanced and left in a measurably better state than they were pre-development. They must assess the type of habitat and its condition before submitting plans, and then demonstrate how they are improving biodiversity, such as through the creation of green corridors, planting more trees, or forming local nature spaces.ail

4.3. Local

The New Forest District Council Corporate Plan 2020-2024 outlines the overarching commitments and vision for the council. It sets out how these objectives and corporate priorities will be addresses within each portfolio area. Relevant to this Tree Strategy are the commitments to tackle the accelerating impact of climate change; responding pro-actively to environmental challenges; maintaining the unique and special qualities of the environment; protecting the special character of the New Forest; improving health and wellbeing and economic prosperity for the area both now and for the future.

Planning and Infrastructure:

Priorities include using contributions to deliver projects that mitigate the impact of development on the natural environment and delivering positive environmental outcomes for the district. Committing to deliver a range of green infrastructure projects funded through developer contributions that enhance the special qualities of the environment. Key activities include ensuring that all development within the district is resilient to climate change and creates healthy environments for our residents to live in.

Environment and Regulatory Services:

Priorities include taking actions that address the impact of climate change locally and working with others to protect and enhance our natural environment. Key activities include responding to future challenges through the development of this new Tree Strategy 2020-2024. Recognising concern over the accelerating impact of climate change, habitat erosion and wildlife loss, actions to protect and improve our environment will be at the heart of all decisions. Whilst environmental risks to health will also be prioritised to improve air quality.

This tree Strategy seeks to support these commitments and will set out specific actions to contribute to the vision and key activities.

The New Forest District (outside the National Park) Core Strategy was adopted on 26 October 2009. It covers the areas of the District outside the New Forest National Park and is a key part of the new Local Development Framework. The Core Strategy provides the broad planning strategy for the area up to 2026. Some of the saved policies in the adopted Local Plan have been replaced by policies in the Core Strategy. NFDC Core Strategy objectives which are related to trees and associated benefits include:

- “5.8.2 Minimise the impact of local factors contributing to climate change. Assess the implications on the plan area of climate change and develop appropriate local responses that minimise any harmful local impacts.”
- “5.8.7 Promote a positive future for rural areas securing their economic prosperity and environmental and social wellbeing.”

- “5.8.8 Promote and safeguard biodiversity, protection and enhancement of wildlife and landscape quality.”
- “Promote public education and understanding of the care and quiet enjoyment of the natural environment.”

Policies CS1 and CS2 relate to landscape, ecology and the quality of the environment. Policy CS3 sets out that:

- “Measures will be taken, working with other partners to secure the enhancement, restoration and creation of biodiversity, including measures to adapt to the consequences of climate change.”
- “encouraging land management practices that restore or enhance sites of biodiversity value and which create new sites.”
- “retaining and enhancing the green infrastructure networks within settlements.”

Policy CS6 relating to flood risk refers to an aim to reduce surface water run-off and increase flood resilience and resistance, traits which trees are proven to provide.

Section 6.7 sets out a commitment to provide ‘places for gentle exercise and leisure activities – essential towards maintaining a full and healthy lifestyle – including pleasant places to stroll or walk the dog’.

- “6.7.9 Improving the quality of existing open spaces”.
- “6.7.11 Preserving and enhancing green infrastructure - with specific reference to trees and woodlands in relation to public amenity, health, biodiversity and sustainability.”

This brings opportunities for innovative and strategically planned tree and woodland enhancement. It is essential that trees and woodlands are recognised as an essential part of the design and fabric of growth.

In 2008 the Changing Lives Partnership produced ‘Future Matters, The Sustainable Community Strategy for the New Forest District’. This document sets out a vision for a ‘thriving New Forest where people, the environment and the economy provide an exceptional quality of life’. The strategy aims to engender a stronger sense of place, with a greater recognition of the value of green space and biodiversity.

Objectives include increasing the sustainable management of woodlands, increasing and protecting areas of green space, reducing the impacts of flooding and higher temperatures associated with climate change, ensuring that plants grow that are adapted to the climate and increasing local community involvement. These aims mirror the objectives of the tree strategy to maximise the benefits associated with trees for the District.

4.4. Conclusion

The policies and guidance detailed illustrates the recognised importance of trees and woodlands from an international to a local level. This tree strategy is envisaged to tie in with the aims of other Council policies and strategies (reflecting wider regional, national and international objectives) in promoting and improving green infrastructure of which trees are a principal component.



New Forest National Park

5. Overview of Tree and Woodland Benefits

It is generally accepted that trees are attractive features within our towns, villages and countryside which contribute significantly to the character of the New Forest District area. Beyond purely visual features, trees provide many other benefits which are often overlooked.

5.1. Economic Benefits

Research, guidance and experience show that people prefer to live, work and play in green leafy environments which can in turn lead to economic benefits.

Industrial areas and employment sites with natural green space can have more productive employees and there is research evidence of increased footfall in shopping areas and tourist attractions with trees. Companies are attracted to locations that offer well-designed, well-managed public places and these in turn attract customers, employees and services (Woolley, et al., 2003). These effects can increase levels of investment in these areas. Well-planned improvements to public green spaces in town centres can boost commercial trading by up to 40%. (Commission for Architecture and the Built Environment, 2009)

The very presence of trees can add from 6-18% to the value of property while the value of undeveloped land-which can provide mature trees can be increased by 27% (Wolf 1998 and London Tree Officer's Association).

Trees can reduce fuel costs for heating and cooling our homes, providing shade in the summer and protecting buildings from cooling winds in the winter. Akbari (2002) states that 'Urban tree planting can account for a 25% reduction in net cooling and heating energy usage in urban landscapes.

With the onset of global warming and the potential for an increase in temperatures the value of shade provided by trees is likely to increase, reducing the risk of skin cancers from the harmful ultra-violet rays. Shade provided by trees is claimed to lower temperatures by 8 degrees (Simson 2008). The work of Gill et al (2007) indicates that retail sales suffer when there is only a minor increase in temperatures (0.3%).

Providing parking with shade from trees not only keeps the interior of your car cool it also stops the UV rays from damaging windscreen coatings and degrading rubber tyres and windscreen wipers. Parking cars in the full sun can also evaporate the expensive fuel from your tank.

5.2. Flood Prevention

Research shows that broadleaf trees located in urban/suburban areas can reduce the rate in which rainwater reaches ground level by some 20 %. This rainwater is held within the canopy and branch structure of the trees. This is particularly important in areas where interconnected hard surfaces are being constructed such as roads, roofs and footpaths.

Surface water runoff and flooding is seen on a variety of sites, the most common of which are urban areas where the movement of water is restricted by the construction of impervious surfaces resulting in drainage systems becoming overwhelmed. This results in forming puddles, pools or temporary flows that can lead to extensive flooding in the built environment.

Stovin et al (2008) suggests that urban trees help to intercept and store rainfall, reducing soil erosion and 'run-off' by buffering the impact of raindrops on the soil. Flooding in urban areas currently costs the UK

over £270 million annually with related significant impacts on water quality and the environment associated with over run drainage systems.

Current climate change forecasts indicate an increased likelihood for storm water events; 'Winters will become wetter with more days of rain and greater volume of precipitation. This can lead to an increased flood risk by up to 200%' (Forestry Commission 2010) and trees are likely to become increasingly important as a cost-effective contribution to Sustainable Urban Drainage Solutions (SUDS).

Trees also improve drainage to ground surfaces through enabling water infiltration down through an uncompact soil environment while taking in water through the root system either to be used or re-released through evapotranspiration.

The root systems of trees play a significant role in reducing soil erosion by binding soil together and reducing the displacement of the soils surface.



Cedar tree adjacent building

5.3. Social Benefits

Ulrich (1998) suggests that the presence of trees in hospital grounds can significantly improve recovery times.

The work of Hartig et al (2003) indicates that “trees and woods can have a restorative and therapeutic effect on the mind”.

People who live within 500m of accessible green space are 24% more likely to meet recommended levels of physical activity. (Coombes et. al.)

Encouraging outdoor activity and recreation, with associated improvements in health and wellbeing. Access to woodland is not only important for health benefits through exercise but also makes visitors feel ‘happy’, ‘relaxed’ and ‘close to nature’ (Coles & Bussey, 2000)

From the above physical and psychological benefits, it follows that there would also be a significant reduction in the cost of health care provision, giving a considerable saving to the public purse. Community involvement initiatives aimed at improving urban green spaces is an important and cost-effective opportunity to improve wellness, and for local people to input into transforming their neighbourhoods and improve their quality of life. (Commission for Architecture and the Built Environment, 2010)

Kuo and Sullivan (2001) found that levels of crime were lower in areas where trees featured in the landscape.

Street trees can have a beneficial impact on traffic, giving the impression of road narrowing which can help to slow traffic, reducing driver stress and also in some cases acting as a barrier between pedestrians and cars. Also working to buffer us from the noise dust and light pollutions of busy roads.

Trees and woodlands have a measurable impact on air quality by absorbing pollutants such as sulphur dioxide and ozone, intercepting harmful particulates from smoke, pollen and dust, and releasing oxygen through photosynthesis, reducing the incidence of diseases exacerbated by air borne pollutants. (The Centre for Sustainable Healthcare, 2019). Tiwary et al (2009) suggests that: “trees provide a surface area for capture (of pollution) that can be between 2 and 12 times the area of land they cover”.

Researchers at Columbia University (US) found asthma rates among children aged four and five fell by a quarter for every additional 343 trees per square kilometer. (Lovasi et al.)

When one considers the Government estimate that 24,000 people in the UK suffer a premature death due to air pollution (NWDA 2007) (BBC news report on 07/03/13 increased this figure to 26,000) and that hospital admissions linked to air quality could cost as much as £60 million a year (Sustainable Development Commission 2008), the real worth of trees in relation to air quality and health is reinforced.

Gill et al (2007) suggests that a 10% increase in urban tree cover and green space will offset predicted rises in temperature due to global warming.

Shaw et al (2007) argued that more large trees are required due to the greater associated benefits they provide.

5.4. Environmental Benefits

Trees can help sequester or absorb carbon, storing it in the form of wood. Many tree work contractors

(including NFDC's corporate tree contractor) process their arisings to supply wood fuel/biomass as a renewable alternative to fossil fuels.

Carbon is also stored in woodland soils. Poorly planned and managed woodland can severely degrade soil and water resources, increasing vulnerability to climate change. Good management seeks to maintain and enhance the natural protective functions of woodland and the benefits they provide for society, including carbon sequestration, clean water and a reduced flood risk.

Trees provide essential habitat to a wide range of species and can act as a major feature of 'green corridors', particularly in urban areas, providing essential links and transport routes to a range of wildlife. Trees give feeding, nesting and roosting sites for many species of flora and fauna.

The work of Brown and Kodric-Brown (1977) suggests that species in poor quality environments can be supported by neighbouring habitats of higher quality if there is a sufficient avenue of connection. Trees play an important part in this process, providing a link between urban green spaces.

Trees provide a large range of important regulating ecosystem services and contribute towards the sustainable future of the district. More detailed discussion of these services can be found in 8.2 Ecosystem Services.

Trees have a significant role to play in mitigating the affects of a changing climate. This is explored more in 8. Climate Change.

5.5. Cultural Benefits

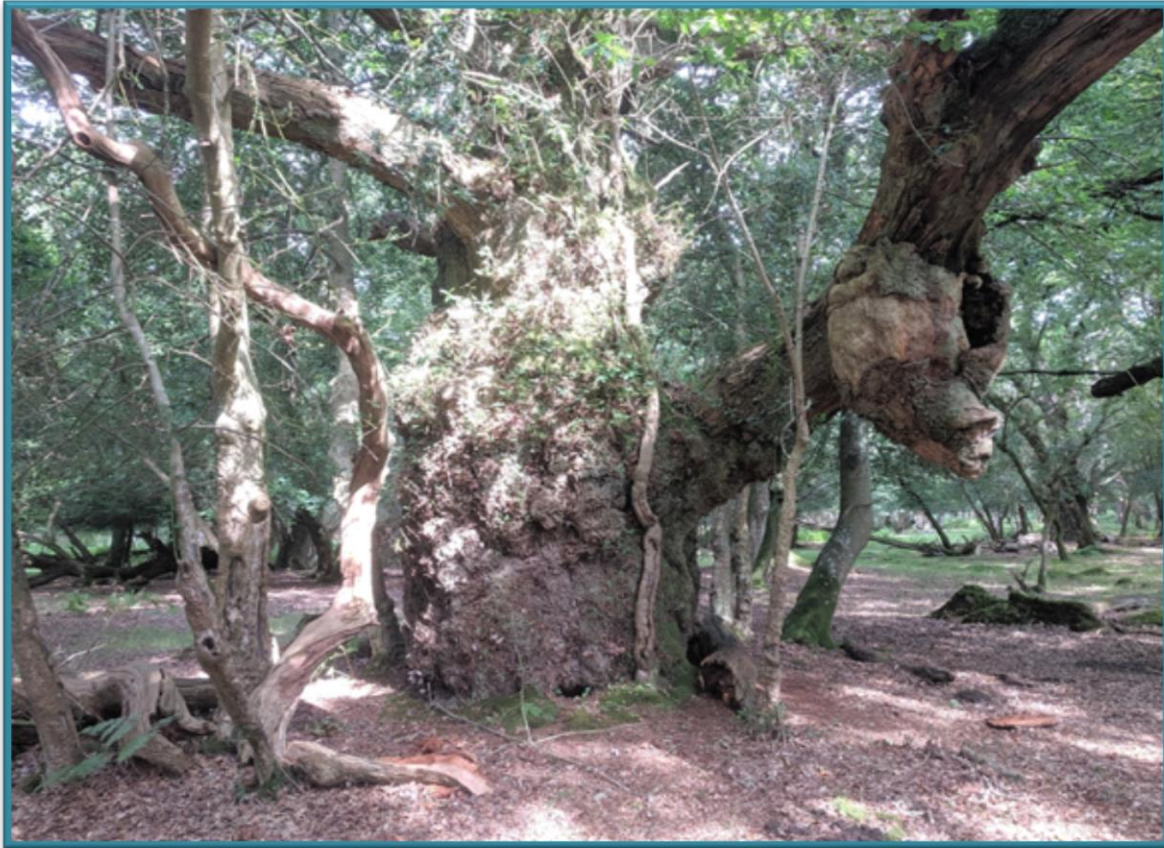
Trees make an important contribution to the character and identity the local area.

Trees can provide a sense of scale and a sense of time in developed landscapes, they can mark the passing of the seasons and stimulate interest with displays of flowers fruit, leaf colour and form.

Kim and Kaplan's (2004) work indicates that green space and natural features can play a significant role in increasing the bond that local people have with their locality and their neighbours.

Newton (2007) states 'Trees bring people together. They contribute to a sense of place and play an important role in fostering social cohesion and reducing negative social behaviours'.

It is important to note that larger species of tree tend to provide correspondingly greater benefits and yet despite this there has been a general trend in the UK to remove larger mature trees and replace them with smaller tree species (if at all) due to competition for space and concerns over safety and nuisance as highlighted by the UK Urban Canopy Initiative and the government publication 'Trees in Towns II' (Britt and Johnston 2008). This process has been described as 'urban deforestation'.



'The Gritnam Oak' Ancient tree

6. Management of Trees

6.1. Council Owned Trees

This section deals with trees owned or managed by NFDC. It contains a snapshot of the tree stock, discussion of the challenges facing NFDC trees and contains action points to address these. An explanation of the general working practices of the NFDC Corporate Tree Department is included, along with guidance on common enquiries about trees made to the department.

6.1.1. NFDC Trees: The Current Situation in 2020

NFDC is responsible for a wide variety of trees growing on NFDC land on a range of sites.

NFDC currently has more than 21,000 assets (trees larger than 30cm diameter at breast height), recorded on its tree specific management system.

(This number should be treated with caution as it reflects only those trees which are specifically recorded and certainly substantially underestimates the total number trees, particularly smaller individuals and trees within large groups. A total estimated figure is currently approaching 92,000 trees).

This information has been collected over the past 15 years via an ongoing survey of Council owned trees, recording data on a tree specific electronic database. Currently, NFDC are half-way through a proactive 4-year survey of all trees on all NFDC land to address previous inconsistencies in the data.

Table 1 illustrates the species of trees which are recorded as individuals or groups of single species. (Mixed groups of trees are not included). Other species with recorded representation lower than 100 is also not included, therefore the table refers to approximately 3 fifths (46470) of recorded NFDC trees. It is not an exact record of the specific numbers of individual species but gives a useful indication of the general distribution.

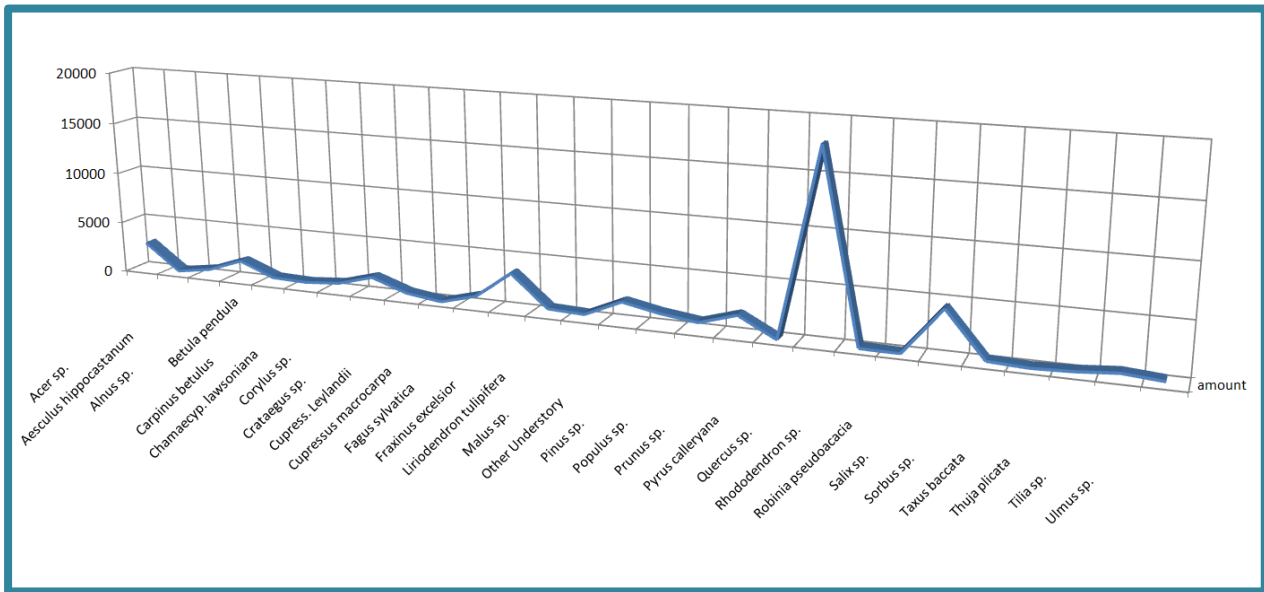


Table 1

This information illustrates that there is a principle reliance on species such as willow, birch, sycamore, ash and English oak which is likely to reflect the wider situation in the local area.

Oak (*Quercus robur*) is present in numbers three times greater than other dominant species. This situation varies from the general picture of tree species distribution in England as established by the Government's 'Trees in Towns II' (Britt and Johnston 2008) report. Across the country 'small' broadleaf trees were most common (42%) and Leyland cypress and hawthorn were the two most frequent species. This suggests that NFDC has strong assets of large broadleaf trees reflecting its less urbanised character.

Oaks are very important ecologically. In 1961 Over 400 different types of invertebrates were recorded associated with the species (Southwood 1961). Oak biodiversity work led by Dr Ruth Mitchell has shed new light; In total 2300 species were listed. 38 bird species, 229 bryophytes, 108 fungi, 1178 invertebrates, 716 lichens and 31 mammals. Bacteria and other micro-organisms that are associated with oak are not included in this, so the true number of species that use oak trees, although unknown, is much greater. Oak provides a higher biodiversity value than any other native tree and hosts more insects than any other tree species in the UK.



Mature oak tree adjacent NFDC properties

Oak is also an iconic tree of the New Forest area which is specifically suited,

integrated and adapted to local conditions and ecology. Older or larger trees are likely to provide a proportionately higher contribution than younger and smaller trees due to their greater mass and higher volume of habitat features.

Several issues can affect this species in the UK, including Acute Oak Decline, and the oak processionary moth (*Thaumetopoea processionea*) (with implications for human health).

Over reliance on a single species is problematic due to the threat of pests and disease with a changing climate among the other factors which could significantly impact upon the tree population.

Ash (*Fraxinus excelsior*) make up approximately 5% of recorded NFDC trees and this species is an important feature in woodlands, gardens and open spaces. This species is considered important for dead wood invertebrates and is the second most important native tree for lichens, filling a niche left by the demise of elm trees due to Dutch elm disease.

Unfortunately, Ash trees are currently now under threat from the fungus *Chalara fraxinea* / *Hymenoscyphus pseudoalbidus* (Ash Dieback). This disease will affect a large proportion of ash trees in the UK and significant tree loss and decline is expected. NFDC Corporate tree officers have instigated an Ash Dieback Action Plan to address the ongoing management of Ash (add link here).

Many self-seeded trees develop in hedgerows, woodlands and open spaces and make an important contribution to the district. This 'natural regeneration' is a useful (and free) alternative to tree planting when trees develop in appropriate locations. This species can cause problems where it establishes in inappropriate locations such as adjacent to fencing or walls with a high potential for future damage as the tree increases in size.

Sycamore (*Acer pseudoplatanus*) is also well renowned for its ability to regenerate in areas of open ground. This species is not considered to be native but naturalised, and as such is of value to biodiversity. It supports a range of epiphytes, herbivores and ground flora, comparable to those of many native species (Binggeli, 1993; Peterken, 2001). Flowering in midsummer when limited numbers of other tree species are, it provides an important source of nectar and pollen. This species can require control where it develops in inappropriate locations or where it suppresses the development of other important trees. Sycamore may become an increasingly important feature if local ash populations are significantly affected by Ash Dieback.

Willow (particularly *Salix caprea*) and birch (*Betula pendula*) are 'pioneer' native trees which readily colonise areas of open ground and support an important range of associated flora and fauna including many species of moths, butterflies and bees. These species have relatively short life spans (typically less than 70 years) and generally do not reach equivalent size of other trees such as oak and ash. They form an important feature across the district and as they regenerate freely they are an excellent source of 'free' trees.

This table illustrates the typical ages of recorded NFDC trees and highlights the low number of young and established trees. This may in part be due to a lack of reporting for these age classes but is also likely to be attributable to a lack of planting historically. These younger trees will be the mature and veteran trees of the future.

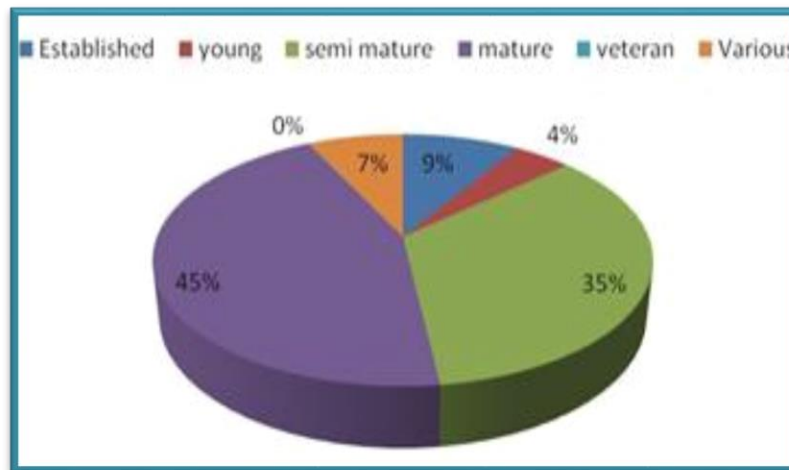


Table 2

Across the county mature trees are far less common (only 17%), however, there are typically twice as many young trees recorded (14%). NFDC must work towards having an increasingly uneven aged profile of trees with a greater balance across age ranges, increasing the number of young, established trees and those trees with veteran features to ensure that there is a continuity of tree cover and habitat for the future.

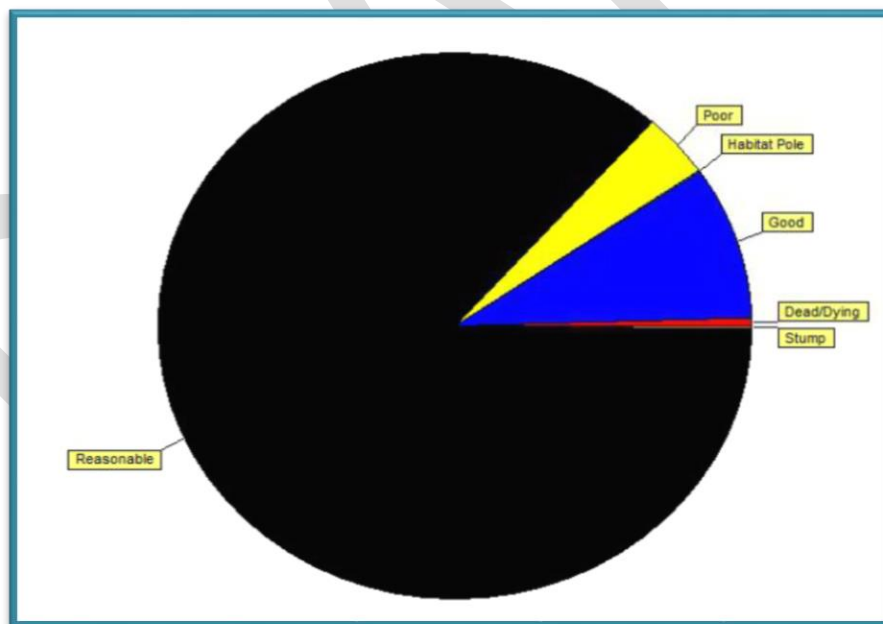


Table 3

This table illustrates that the majority of NFDC trees are classified as being in reasonable or good condition (91%). This is undoubtedly positive and appears to improve upon the average situation for local authority trees in England (only 70% classified as 'good' as opposed to 'poor, dying or dead'). This data is likely to reflect a bias against recording trees of all conditions in low risk areas, however, the information can be used to monitor the situation going forward to identify developing trends and direct the allocation of resources where required.

6.1.2. Key Issues Affecting NFDC Trees

Some of the problems which affect the NFDC tree stock are outlined below. These issues are based on the experiences of the Tree Team over recent years and present the challenges for the management of Council trees. NFDC will take steps to address these issues over the next 5 years when a review will be carried out to identify progress, areas for improvement, and new developments which require attention.

A Gradual Decline of Tree Cover for NFDC and trees throughout the authority

This is predominantly due to:

- Sanctioned removal of inappropriate, damaged or dangerous trees and trees causing damage as part of the Council's ongoing management of the tree stock.
 - To help mitigate this NFDC have adopted a two for one replant policy for every sanctioned tree removal. (see 6.1.11 Tree Planting, for more detail)
- Ongoing pressure to remove trees which cause a perceived nuisance (seasonal blocked light/leaf fall/fruit etc)
 - NFDC Corporate tree team will not remove trees for illegitimate or spurious reasons as defined within this Policy (see 6.1.4 Tree Works Policy).
 - The policy has been strengthened to provide a robust decision making tool for NFDC Tree Officers.
 - NFDC operate a green waste collection service to aid with the clearance of leaf fall that residents can utilise.
- The unsanctioned removal or damage of trees, with a historic failing to consistently provide a robust response.
 - The Corporate Tree Team have strengthened the response to damaged or removed trees and will seek full reimbursement for the costs of replacing damaged or felled trees under NFDC ownership. Approved valuation methods may also be applied, such as CAVAT, and the trees value pre-damage/removal may be sought.
- A lack of replanting and new planting historically.
 - Political and public support and demand for new tree planting is growing daily due in part to the high media attention given to environmental issues. Many planting requests are received by the Corporate Tree Department and is an encouraging sign of change. within this strategy NFDC will provide resource to accomplish this shared ambition by replanting 2 trees for every council owned tree that is lost.
- A historic focus on reactive risk management to the detriment of a broader plan of proactive management of the Council's trees.
 - The Corporate Tree Team have instigated a 4 year cyclical survey and maintenance programme in addition to the zone based survey schedule.
- The unsanctioned removal of trees for new developments, new housing, additional parking bays/driveways, footpaths and roads by separate internal NFDC departments.
 - The Corporate Tree Team have developed a sign off sheet which must be approved and signed before any works are undertaken near trees. The Corporate Tree Team being the final decision maker in all cases will ensure consistency in management.
- Unauthorised removal of trees by tenants.
 - The corporate tree department will seek full replacement and aftercare costs for two replacement trees for each one removed, any any remedial tree work required in the case of damage.
- Disproportionate pressure to remove trees due to concerns about safety, direct and indirect

structural damage to property.

- NFDC Corporate Tree Officers carry out proactive surveys of all NFDC's trees, as well as additional ad hoc visits when required. Trees will not be removed unless they fall within the correct criteria to pose a health and safety risk. This will be determined using the Visual Tree Assessment (VTA) method by qualified staff (see NFDC Risk Strategy for more information).
- Historic planting and lapsed maintenance of hedges in housing property gardens (i.e. Leyland Cypress) which then become overgrown, costly and difficult to manage in the long term, now requiring removal.
 - NFDC will look to replace any hedging removed with suitable alternative native species.



Poorly maintained evergreen hedge

Woodland Management

- Proactive and strategic woodland management (including the formation of management plans) to maximise the potential of individual sites.
 - NFDC will seek to formulate UK Forestry Standard compliant woodland management plans, that when actioned may then give access to grant funding
- A history of fly tipping of household, building and green waste in woodland sites, causing damage to trees, increasing risk of injury to woodland users, soil contamination, degrading the sites and public enjoyment of them. Resources for effective enforcement for fly-tipping offences, has been a contributing factor to litter and waste becoming widespread around the perimeter of nearly all woodlands that border residential properties. Plastic pollution has recognised long-term effects on ecological process.
 - The corporate tree team will formally contact residents, and pass details to the NFDC Open Space Enforcement Department where applicable
 - Resource for litter picking contracts will be explored
 - All NFDC departments with responsibility for the land where flytipping is found will be informed so they may carry out their duty to keep the site generally clear of litter



Litter in NFDC woodland

- Invasive species such as *Rhododendron ponticum* supressing more beneficial native species in woodland areas, resulting in a loss of biodiversity
 - Previous efforts to control rhododendron have been made in certain NFDC areas with great success, however this has been understandably restricted by the sheer scale of the task, This strategy aims to remove 10% rhododendron cover each and every year. Woodland management plans will be devised to remedy this. Parish councils' woodlands suffer from Rhododendron colonisation to a severe degree, and NFDC aspire to offer guidance and support to enable them to resolve this. (See biodiversity section)
- Access to outside funding/resources for management projects
 - Tree Officers will seek to establish written sustainable woodland management plans in accordance with the UK Forestry Standard from which grant funding could be applied for.
- Involvement of local communities in woodland sites, and engagement with volunteer or other groups
 - NFDC has a formal Corporate Health & Safety Policy, Appendix A (5) Corporate Health & Safety Policy and Arrangements document. Volunteers are specified within this document, section 1.2.
 - Woodland volunteer engagement is in its early stages and procedures are underway by the Corporate tree team to enable future volunteers.
- Tree care and new planting
 - Due to the predicted impact associated with Ash dieback on tree numbers, sufficient resource for planting will be made available., NFDC will also offer support for Parish Councils.



Supplemental woodland planting on the outskirts of Netley View

Tree Health

- Over representation of individual tree species and age classes show a lack of diversity, affecting resilience with a potential increased susceptibility to pests and disease and the impacts of a changing climate.
 - Diversify species mix within new planting schemes, and increase planting to address age class.
- Pests and diseases pose an increasing risk to the health of all trees and woodlands.
 - See Pest & Disease Section 6.1.17
- Climate change may bring conditions which are not suitable for long term tree health for all species. Bringing extreme weather conditions with very dry summers and very wet stormy winters.
 - See Climate Change Section 8
- Following best practice to minimise and mitigate the impact of development and infrastructure works including damage to trees, soils and roots.
 - See Private Trees Section 7 for information on Development and Trees
- Lawnmower and strimmer damage to tree roots and stems. Wounds to roots and stems can provide an entry point for decay fungi. The likelihood of the development of dysfunction or decay increases where wounding is regularly repeated over time. This is of increased significance for older trees which are less able to respond to injury.
 - Use of guarding around newly planted trees, retrofitted where necessary. Give training to mower operators. Leave unmown swathes around trees in certain locations
- Car parking and mowing on verges and grass areas in Council housing estates. Vehicles driving and parking on the soil can significantly damage soil structure via compaction which can reduce available water, air and nutrients for tree growth and lead to decline. Tree roots and stems can also be damaged where parking occurs next to trees with long term implications for tree health. These activities also reduce the viability of future planting schemes by damaging the soil and obstructing areas of green space.
 - Bunds will be constructed to restrict vehicle access, specifically to protect trees from damage.

6.1.3. Trees and Risk

The very low risk of harm associated with trees can sometimes cause disproportionate public concern. Trees are dynamic living structures which are often of great size and which move and react to the wind. Furthermore, tree failures and instances of fatalities associated with trees are often subject to a high degree of public attention further engendering a high perception of risk.

The HSE suggests that the risk from trees falls into its lowest category of risk; the Broadly Acceptable Region on the Tolerability of Risk Framework ('Reducing Risks, Protecting People' 2001). Despite this, tree owners have a duty of care under Common Law (the torts of negligence and nuisance), The Occupiers Liability Acts (1957 & 1984) and the Health and Safety at Work Act 1974, to take reasonable steps to prevent foreseeable harm to people or property.

This duty of care can be reasonably fulfilled by undertaking a regular assessment of trees which pose a significant risk due to their location and condition. Remedial works can then be carried out as required. NFDC will manage the low risk posed by its trees as part of its wider management of the tree stock and in line with current best practice. The specific approach is outlined in the separate Tree Risk Management Strategy (attached Appendix 2).

Often the desire of members of the public to want to reduce trees to a certain height or size can in fact make trees more unsafe in the long term. Resulting in structural weaknesses such as a proliferation of dense regrowth with weakly formed branch attachments, and opening entry points for decay, pests and diseases that they would not have been exposed to.



Wood sculpture in Marchwood

6.1.4. Tree Works Policy

NFDC will adopt a consistent and sustainable approach to tree work following the principles of best practice (BS 3998: 2010 - Tree Work Recommendations) to meet its duty of care and maximise the benefits of trees under its ownership.

- Remedial works will be undertaken where trees are likely to cause reasonably foreseeable damage to property or injury to people and where any alternative options are inappropriate.
- In compliance with the Highways Act 1980 tree works will also take place to provide suitable clearances of roads and footpaths (typically a clearance of 5.2m of roads and 2.3m of footpaths) to prevent obstruction and to clear sightlines.
- Where tree branches restrict the reasonable use of gardens, branches will be lifted to provide a suitable clearance (typically of 3m).
- Where trees are touching or nearly touching property with the potential to cause damage before the next inspection date they will be pruned back to achieve a suitable clearance (generally 1-2m).
- During proactive survey and reactive site visits NFDC will consider the long-term suitability of trees and where appropriate may remove trees which are not suited to long term retention (at the discretion of the Corporate Tree Team and applying the principles of good tree management). This will involve a consideration of trees (both age and species) in the context of the resilience and long-term viability of the Council's tree stock in the local area and the amenity value they provide.
- NFDC recognises the important contribution garden hedgerows make to wildlife, alongside other benefits such as screening and buffering. Hedges in housing properties which haven't been managed historically, may be formalised where the condition of the hedge allows, and tenants agree to undertake ongoing future maintenance. Where this is not feasible hedges may be removed and replaced with more suitable species or as a last resort, alternatives such as fencing. Hedge work is carried out by the Grounds Maintenance Team. Contact them directly at grounds.maintenance@NFDC.gov.uk
- Trees will also be pruned or removed, where appropriate, to improve the growth of adjacent NFDC trees which are considered more suitable for the long term, to restrict the spread of pests and disease, to allow the control of invasive species or to remove trees which are not suitable for long term retention.
- Where tree roots are subject to sustained ongoing damage from lawnmowers or strimmer's, the application of 100mm of woodchip mulch (typically in a minimum 1m circle around the stem but sufficient to protect exposed roots) will be considered. In some areas, allowing grass and undergrowth to grow longer around a tree in an unmown swathe, can be a useful alternative with additional benefits for wildlife and the tree (this also reduces the grass cutting requirement for the Grounds Maintenance teams).
- Ivy (*Hedera helix*) is a native species which provides important habitat to a wide range of wildlife,

especially as an important source of food and cover for birds. Ivy often grows on tree stems and branches and can restrict the full structural assessment of a tree, it can also add additional weight and wind sail to the crown. Ivy will be severed at the base of relevant trees where it restricts the full assessment of parts, where a significant defect is suspected, or where ivy growth is so prolific it increases the sail area or affects the growth of the inner crown of a tree to an unacceptable level. Once severed, ivy will be left in situ to die back. This will reduce the impact of any loss of cover/habitat to local biodiversity and will help prevent sun damage to newly exposed parts of the tree.

- All works will be specific to each individual situation and will be dependent on the species and condition of the tree and other relevant factors.
- Section 96A of the upcoming Environment Bill 2019 refers to a requirement for local highways authorities to consult local communities before they fell any street trees. Guidance will be issued about how to discharge the duty in due course. NFDC is not a highways authority, and therefore is currently out of scope of this duty.

All tree work decisions will be taken by the Corporate Tree Officers and carried out by qualified tree contractors.



NFDC garage block in Totton

NFDC will not carry out works to specifically alleviate issues such as:

Overhanging Branches

There is no legal obligation for a tree owner to prevent trees growing over boundaries into air space. The Council inspects its tree stock to ensure that branches that do grow over boundaries are not likely to cause reasonably foreseeable damage to structures or injury to people and where appropriate to provide a reasonable clearance of gardens, driveways, roads and paths.

Occupiers have the right under common law to prune back overhanging growth back to their boundary (subject to consent from the Local Planning Authority for any trees under statutory protection, planning conditions or covenants) however they must not cross the boundary to undertake this work, they must not go beyond the boundary line or reduce the height of the tree, they must not climb the tree without permission from the tree owner.

All arisings technically remain the property of the tree owner and should be offered back to them, however if they decline they should be disposed of responsibly by yourself. Where such works take place to NFDC trees any arisings should be disposed of appropriately and not be deposited over the boundary. Any waste material placed back on the tree owners land without permission or on any open space land could be classed as fly tipping and result in a large fine.

It is not considered appropriate for neighbouring council properties/housing tenants to do works to NFDC owned trees either in adjacent woodlands, or gardens, other than small scale secateurs sized maintenance pruning. Council tenants must not instruct contractors to carry out works to NFDC trees.

It's important to note that if, by their actions, a neighbour leaves trees in a condition which:

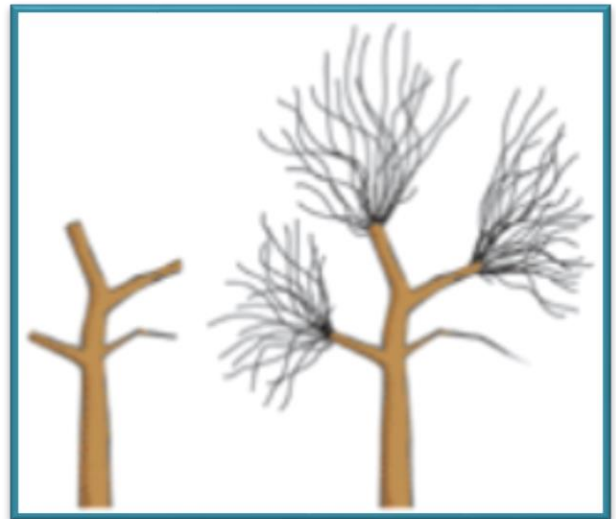
- Requires remedial works to make them safe
- As a result of the works, the tree fails and causes damage or injury

In such circumstances the neighbour is likely to be liable for any resulting damages and/or costs of work.

It is good practice to contact the Corporate Tree Teams to discuss any proposed works. It is also advisable to check that trees are not protected prior to any works taking place.

Blocked Light

As trees grow they can block out sunlight. This is particularly apparent where trees are located beyond the southern boundary of a site. 'The sun rises in an easterly position and tracks through south to set in a westerly direction' (Barlow & Harrison 1999) and as such trees located to the south can cause a high degree of shade, particularly during times of year when the sun is lower in the sky and when leaves are present on deciduous trees. These factors must be considered at the design stage for all proposed structures to minimise future conflicts. There is no proven 'right to light' in law in relation to trees. Pruning trees can negatively affect their visual appearance and has implications for long term tree health and retention. Pruning often results in dense re-growth which can increase issues of shade within a short period of time and therefore doesn't provide a sustainable or cost-effective method of controlling this issue.



Dense regrowth

Considering the concern relating to climate change and the benefits of trees in relation to the mitigation of climate change (i.e. helping to buffer extremes of temperature amongst other benefits – see Ecosystem Services); shade is likely to be of increasing importance to residents in the south of England.

'Sap' or Honeydew

This is a sticky liquid excreted by aphids feeding on trees which can be readily cleaned with warm soapy water. Encouraging insects which predate on aphids such as lacewings or ladybirds may help reduce this issue. Trees will not be pruned to stop sap or honeydew from falling on parked cars instead you will be asked to park away from the tree.

Bird Lime and Other Issues Associated with Wildlife

Trees provide an excellent source of roosting, nesting and feeding sites for a wide range of wildlife including birds and this is largely to be encouraged. The Council will not consider pruning or removing trees to alleviate problems associated with 'wildlife'.

Falling Leaves

Leaf fall is a naturally occurring event over which tree owners are not expected to have any reasonable control. This predominantly relates to deciduous trees and occurs over a relatively short period of time each year. Leaves can provide an excellent (and free) source of compost and can be easily collected and mulched with a lawn mower. The Council will not consider pruning or removing trees to alleviate problems associated with a trees natural process.

TV Reception

There is no legal right to television or satellite reception. Such issues will not be grounds for tree pruning or removal and may be best resolved by alternative engineering methods. Service providers should be consulted to discuss viable alternative solutions.

To Allow Increased Sunlight to Solar Panels

Solar panels should not be installed where existing trees will have a significant adverse impact. Whilst we appreciate the need to provide renewable energy resources, trees have an important role in maintaining and improving local amenity, in addition to contributing to local and national targets in tackling climate change. The presence of trees must be fully appreciated when considering a suitable location for the placement of solar panels, with the current and potential future shading effects accounted for. Where pre-installation site surveys have been carried out competently such issues should not develop. Service providers should be consulted to discuss viable alternative engineering solutions, such as separate optimisers on each panel to reduce any shading effect.



Solar panel shading

Because Trees are Deemed to be 'too big'

Trees grow adaptively to support themselves in relation to their surroundings and the typical loads they can be expected to experience. Trying to contain trees to a specific size is only a suitable management regime for certain species in specific circumstances (i.e. pollarding of street trees). This pollarding process is initiated 'soon after (a) tree is established' and 'larger trees should not normally be treated in this way' (BS3998: 2010 Treework – Recommendations). 'Crown reduction' can also be used to allow the retention of an important tree with structural defects, trees which cause an obstruction or trees which are likely to cause structural damage to property which would otherwise need to be removed. In all other situations, reducing the size of a trees crown is not considered appropriate.

Because Tree Roots have Entered Drains

Tree roots do not generally enter drains which are properly constructed and fit for purpose (i.e. designed for use around trees). Unfortunately, many drainage pipes in the UK are not constructed to this standard. Roots are opportunistic and will grow in areas which meet their requirements for air and water. Condensation on the outer surface of pipework and disturbed ground where pipes have been laid can provide good growing conditions for root development, particularly when surrounding ground has been compacted.

Where roots have entered drains there are reliable engineering solutions (such as relining pipes) which allow tree retention and solve the drainage issue for the long term.

Evidence of drain damage will need to be provided by a reputable company before any investigations will be undertaken by NFDC tree department.

The Impact of Tree Works

Pruning trees creates wounds which are potentially damaging and may allow the ingress of disease or decay. Following pruning, trees generally re-establish their leaf coverage as quickly as possible which can often lead to the development of dense re-growth exacerbating issues such as blocked light and leaf fall. Pruning often initiates the development of latent buds which do not form strongly attached branches and

necessitates ongoing future management.

Pruning can also damage the aesthetic appearance of trees and diminish their amenity contribution. For these reasons the pruning of NFDC trees will be kept to a minimum.

It is also strictly forbidden for Council tenants or anybody working on behalf of tenants to prune or damage council owned trees (other than very small secateurs size pruning from ground level).

Where trees are removed the establishment of a replacement is not always straightforward. Issues such as vandalism, drought stress, transplant shock and aftercare requirements can restrict success rates. Also, it takes a long time for such trees to make a significant amenity contribution to an area.

Our trees are monitored and surveyed regularly, and although they may in some instances appear unmaintained, good arboricultural judgement and practice is used. Often the best thing for the tree, is to leave it alone.

Who Can Carry out tree work?

Where works are due to NFDC trees, the NFDC tree contractor will carry out the work in partnership with councils Environment Services. They are fully vetted, licensed, insured and quality monitored by the NFDC tree department. Tree works carried out by the NFDC tree contractor will follow the principles set out in the British Standard for Tree Work (BS 3998 2010 - Recommendations for Tree Work).

Housing tenants are expected to undertake general management (trimming) of hedges, border maintenance and grass cutting etc.. However, for health and safety and insurance reasons they **must not** undertake any tree works (other than very small secateurs size pruning) within council owned gardens or land.

It is not considered appropriate for neighbouring council properties/housing tenants to do works to NFDC trees or to use their own contractors to carry out works on NFDC trees.

Private owners neighbours can carry out works to NFDC trees where they overhang their boundary as per their rights under common law (subject to consent relating to any statutory designations), they cannot enter NFDC land, reduce the height, climb NFDC trees or go further than their boundary without written NFDC permission to do so and they must also dispose of all waste responsibly themselves.

If you are unsure of the works you can undertake please contact the corporate tree department first for advice.



Minor pruning example

6.1.5. Damage Caused by Trees

Direct Damage to Property

Tree roots, stems and branches get thicker each year via a process called secondary thickening. Over time as they increase in size, they can disrupt or distort adjacent structures and surfaces. This is generally limited to 'lightly loaded' structures such as low walls, fences and paving. Trees roots generally deflect around more 'heavily loaded' structures such as houses that have deeper foundations.

In such circumstances alternatives to tree removal will always be explored first (i.e. engineering solutions). Securing, replacing or rebuilding walls, bridging walls and fences over tree roots, smoothing pathways over or moving paths away from the root protection area of a tree completely.

The asset value of the tree will be considered against the cost of alternatives. (i.e. applying the CAVAT (Capital Asset Valuation of Amenity Trees) system of evaluation) and weighing it up against the cost of alternative engineering solutions.

Indirect Damage to Property (Subsidence)

Throughout the growing season, as part of the growth process, trees extract water from the soil and release it into the atmosphere. On highly shrinkable clay soils this can result in soil shrinkage or movement which, in specific circumstances, can lead to the differential movement of structures with the potential for damage. Such soil movement can also be attributable to a wide range of other factors including the climate, surface vegetation such as grass or shrubs, drainage issues and other factors linked to the design and installation of the structure/building. Careful analysis of a range of evidence is required to determine the cause on the balance of probabilities. As set out in the accepted national guidance document "Subsidence of Low-Rise Buildings" (Institution of Structural Engineer's 2000) other potential influencing factors should be eliminated before the assumption is made that trees are the cause of structural movement.

Incidents of subsidence related damage involving NFDC trees are extremely rare, however there are areas of shrinkable clay soil within the District and the corporate tree department have access to soil mapping systems for NFDC land.

Members of the public who are concerned about tree related subsidence are advised to contact their insurers. To support situations where NFDC trees are implicated in subsidence related damage specific supporting evidence will be required including a subsidence survey by a reputable company before any tree investigation will be undertaken.

The value of the tree will be a material consideration in the process. To determine this, an established valuation system known as CAVAT (Capital Asset Valuation of Amenity Trees) will be applied in each instance. This mirrors the approach applied by signatories to the Joint Mitigation Protocol established by the London Tree Officers' Association to enable a cohesive and proportionate response to insurance claims related to trees and subsidence.

Recent case law (Including Perrin and another v Northampton BC 2007 and Berent vs Family Mosaic and London Borough of Islington 2012) has helped to clarify the court's perspective on the issue of the social and amenity value of trees, and set out that alternative solutions to tree removal should be considered; assessing the reasonably foreseeable 'real risk' of damage, and reasonable action to balance that risk; and also clarified how tree owners should proactively manage the risk from trees on clay soils.

NFDC will review its land holdings where there have been successful claims of damage and review if there are trees in this area which are likely to pose a 'real risk' and will take appropriate action.

Insurance Claims

Where trees are alleged to have caused direct or indirect damage to property and a formal claim is submitted the matter will be referred to the Council's insurers.

NFDC will consider claims directly from property owners. Such claims should be submitted in writing with at least three quotes to cover the cost of repair or replacement along with justification for the claim. Claims for damage which was not reasonably foreseeable are likely to be refused.

All claims should be addressed to:

New Forest District Council
Insurance & Risk Officer
Appletree Court
Beaulieu Road
Lyndhurst
Hampshire
SO43 7PA



Tree failure in Totton due to historic topping

6.1.6. Protection and Enforcement

- NFDC will adopt a robust approach to damage to its property. Where NFDC trees are felled or damaged without prior consent the matter will be referred to the police, and will undertake a full investigation for criminal damage to property.
- Should anyone witness any damage to council owned trees we encourage you to contact the police on 101 to report it and get in touch with us.
- Civil action will be considered to recover compensation for the loss or damage to the tree and/or any remedial works resulting; including replanting with suitable replacements, and aftercare.
- Accepted tree valuation methods will be applied, where appropriate, to establish a monetary value to the tree/s such a CAVAT, and will be incorporated into any claim.
- Officer time investigating damage may also be incorporated in any claim.
- NFDC will also consider the use of Tree Preservation Orders to increase the legal protection afforded to specific trees or woodlands which are considered to be under threat. Where damage is caused to a tree which is protected by a Tree Preservation Order, the Council will consider prosecution which could result in very large fines.

6.1.7. Enquiries Relating to NFDC Trees

Each year NFDC receives Thousands of enquiries relating to trees which will continue to increase with additional stresses on tree stock such as climate change, increased development, population and pests and diseases.

Requests for works to trees will be considered in line with the Tree Works Policy.

Tree issues quick reference guide

Issue	Background	NFDC Policy
Tree touching my property?	It must be physically touching not just overhanging the building.	NFDC will prune to give a suitable clearance (generally 1-2m) from structures.
Overhanging Branches	There is no legal obligation for a tree owner to prevent trees growing over boundaries.	NFDC will not prune or fell its trees to alleviate the nuisance of overhanging branches other than in exceptional circumstances (low enough to cause obstruction or hazard).
Light.	In law there is no right to light either in buildings or gardens/other open spaces. If natural light is being blocked by the growth of a hedge then action may be taken to reduce the problem under the High Hedges Act, Part 8 of the Anti-Social Behaviour Act, 2003.	NFDC will not prune or remove trees for light related issues.
Sap/honeydew.	Honeydew is caused by greenfly (Aphids) feeding on the tree, which excrete a sugary sap. Pruning the tree may only offer temporary relief.	NFDC will not prune or fell its tree to remove or reduce honeydew or other sticky residue from trees. Honey dew can be readily cleaned from surfaces with warm soapy water. Parked cars will be asked to park away from the trees.
Bird Droppings.	Nesting birds are protected under the Wildlife and Countryside Act 1981 (and other related wildlife law).	NFDC will not prune or fell its trees to remove or reduce bird droppings from trees or clear up/remove bird droppings. Parked cars will be asked to park away from the trees.

Blossom/leaves.		NFDC will not prune or fell its trees to remove or reduce leaf fall, blossom.
TV/satellite reception.	The responsibility for receiving a satellite television signal is with the company that erects the satellite dish or aerial. The company should erect their equipment in a location that receives a clear signal.	NFDC will not prune or fell a Council owned tree to prevent perceived interference with TV/satellite installation/reception.
Trees and solar panels.	The current and future presence of trees must be fully appreciated when considering a suitable location for the placement of solar panels.	NFDC will not prune or fell its owned/managed trees to improve natural light to a solar panel.
Trees too big or too tall.	A big or tall tree is not dangerous just because it may be considered too big for its surroundings.	NFDC will not prune or fell a Council owned tree simply because it is considered 'too big' or 'too tall'.
Drains	Tree roots do not aggressively target drains; however, they may enter through existing cracks.	NFDC will ask that evidence of trees entering drains is provided. If proven, engineering options will be explored.
Pollen.	It is not feasible to prune trees to remove pollen sources. Pollen is ubiquitous in the environment.	NFDC will not prune or fell its trees to remove or reduce the release of pollen.
Fruit/berries/nuts		NFDC will not prune or fell its trees to remove or reduce the nuisance of fruit/berries or nuts or remove such fallen fruit.
Wild animal/insect pests.	Bees, some animals, and many birds are protected species and advice should be taken before considering their removal.	NFDC will not prune or fell its trees to remove or reduce incidence of perceived pests such as bees, wasps, rodents or any other wild animals.
Trees obstructing view.	There is no legal right to a 'view'.	NFDC will not prune or fell its trees to improve the view

		from a council or private property.
Personal medical complaints.	Whilst we can sympathise with conditions we cannot prune or fell a tree because of a personal medical issues.	NFDC will not prune or fell its trees, or restrict new tree planting, because of a personal medical conditions.
The tree is close to a fence wall.	Was the tree in situ before the fence wall? Is the tree causing any damage? Can the fence/wall be bridged over the tree roots? Can a chain link fence be used instead of solid fencing?	Alternative engineering solutions are always explored first, and the value of the tree offset against the value of any works undertaken to remedy the solution. Trees will only ever be removed as a last option when all other avenues are explored, and replacement planting will always be used.
Exceptional circumstances.	We recognise that in some exceptional circumstances the problems caused by a tree are so great that consideration may be given to undertaking remedial works.	NFDC recognises that in some exceptional circumstances the problems of a tree are so great that it will consider undertaking remedial works. Each situation will be assessed individually on its merits. The final decision in these cases will lie with the Corporate Tree Officers only. If trees are removed replacement planting will always be used as part of the mitigation.

NFDC will respond to enquiries from housing tenants and members of the public. Enquiries will be dealt with on a priority basis and the following system will be applied where possible. Due to characteristics of

natural events such as storms, high winds, prolonged wet weather, etc. periods of high demand may be experienced.

Classification	Response Time	Fix Time	Description
Urgent/high	Asap – 1 week	Asap – 1 week	Specific concern about safety and posing an immediate risk (i.e. split branches/stems, fallen trees in high use areas).
Medium Risk	1 month	3 months	General concerns about safety, dead branches, ill health, cavities and fungi. Trees causing actual damage to property. Trees obstructing access (e.g. low branches over paths and roads).
Low Risk	3 months	1 year	Trees thought to be unsuitable for long term retention. Fear of possible damage. For trees defined as ‘too big’, blocking light / causing shade, falling leaves/fruits, overhanging property. Tree works are unlikely to be appropriate in these situations but NFDC typically will visit the site to assess the situation if resources are available.

Enquiries Relating to Private Trees

NFDC Tree Officers will give brief informal advice relating to private trees upon request including outlining relevant best practice and referral to specialists where appropriate.

Enquiries requesting a Council approved list of tree work contractors or consultants will be referred to the Arboricultural Association Approved Contractors scheme and the Registered Consultants scheme (www.trees.org.uk).

Complaints

Formal Complaints should be made in writing to the Council in line with the NFDC Complaints Procedure. http://forestnet/media/1358/Complaints-Procedure/pdf/Complaints_Procedure_Jan_2019.pdf

6.1.8. Tree Works and Wildlife

Tree works may need to be carried out at a particular time of year to minimise the impact on the tree's health or to avoid issues such as the disturbance of wildlife. In particular, bats and nesting birds.

Council tree works will meet criteria and best practice under relevant legislation and guidance including the Wildlife and Countryside Act 1981, Countryside Rights of Way Act 2000, Natural Environment and Rural Communities Act 2006 and the Conservation of Habitats and Species Regulations 2010 (as amended) (Habitat Regulations).

Prior to the commencement of works the wildlife/habitat potential of trees will be considered and appropriate checks will be made as necessary. Further advice and/or relevant licences will be sought when appropriate. In some cases, work may need to be postponed to minimise impacts on protected species.

Wherever possible habitat features such as cavities, dead wood, water pockets, log piles and standing dead trees (among others) will be retained in situ as valuable niche habitats for wildlife. The presence of protected and other species will be a material consideration during the tree inspection process.

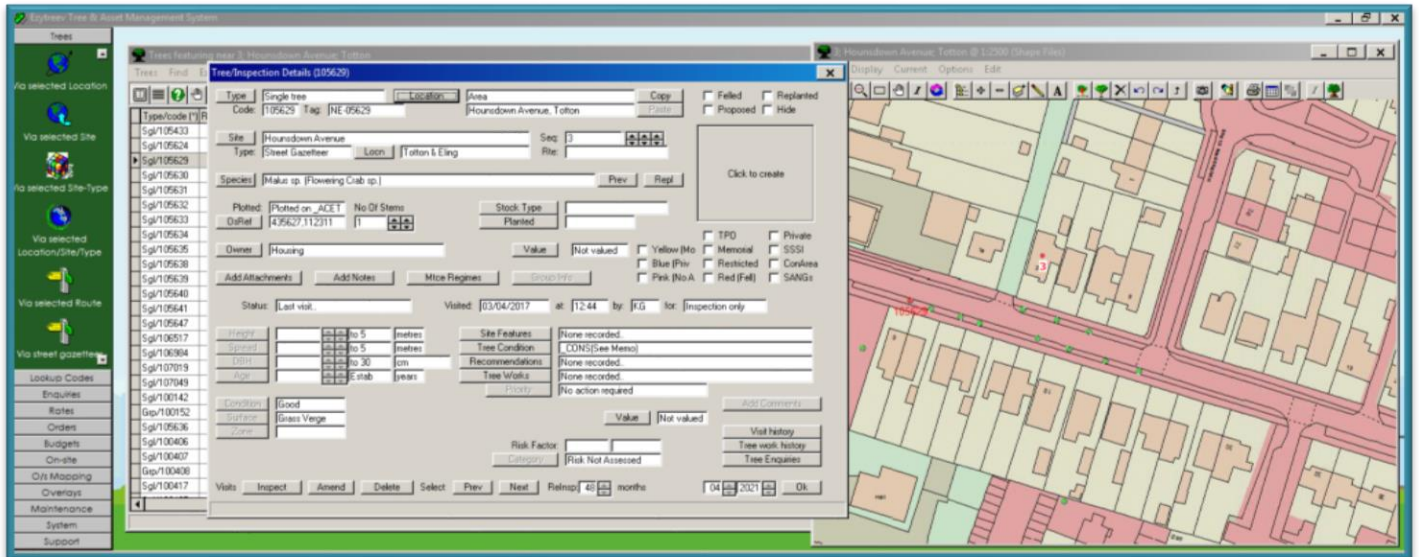
If possible arisings from tree works or felling will be left on site to provide additional habitat.



Standing Dead Wood in the National Park

6.1.9. NFDC Tree Management and Systems

NFDC current operates a tree specific database which keeps an electronic record of trees under Council management along with details of their species, dimensions, age and condition, an audit trail of inspections undertaken and works carried out. This is important to demonstrate how NFDC meets its duty of care in relation to risk management but also acts as an inventory of the Council’s tree stock, informing current and future management.



Tree management system

Local authorities have a general duty under the Local Government Act 1999 to ‘secure continuous improvements in the way in which its functions are exercised’.

NFDC have in-house qualified and experienced tree officers who have in-depth knowledge of local areas and do not have a vested commercial interest to make any money from tree works as a private contractor may. This means they give an overall assessment as to what is best for the trees and the public’s health and safety whilst trying to preserve NFDC’s trees for future generations to enjoy.

NFDC is committed to working towards increasing efficiencies and quality within the management of the Council’s tree stock, including an ongoing review of processes, systems and hardware. Improvements in the quality of data recorded for Council trees will increase the reliability and usefulness of the information and allow the identification of trends, highlighting areas of strength and weakness.

6.1.10. Canopy Cover

The Government sponsored report 'Trees in Towns II' (Britt and Johnston 2008) indicates that the average canopy cover across local authorities in England is 8.2%. In the south of England, the figure is from 11.2-11.8%. There are currently no reliable figures to indicate canopy cover with the NFDC boundary. This is an objective for the future which will allow an informed assessment as to whether NFDC is meeting its aim to sustain and increase canopy cover. Canopy cover information can also be used to identify areas of land that would benefit from new planting.

- ❖ **Action Point 1:** Obtain information on canopy cover within the District.



Mature *Cupressus macrocarpa*

6.1.11. Tree Planting

'The best time to plant a tree was 20 years ago, the second-best time is now'
- Chinese proverb

The principle aim of new planting will be to maintain and increase tree cover within the district and to achieve a robust and diverse tree population, well suited to the planting location and able to meet the challenges of a changing climate and pests and disease, whilst maximising amenity, biodiversity and other tree related benefits.

All new tree planting will utilise high quality, disease free planting stock from reputable suppliers grown to British Standard 3936 (1992) Specification for Trees and Shrubs (sections 1-5).

Planting will be undertaken following the principles set out in the British Standard 8545 (2014) Trees: From Nursery to Independence in the Landscape – Recommendations.

NFDC recognises the contribution of native species to biodiversity and also to the character of the New Forest, however this must be considered in tandem with the predicted impacts of climate change including projected increases in temperature, changes in the seasonality of rainfall, and an increased frequency of extreme events' (Broadmeadow et al 2010).

The ultimate aim will be a robust tree stock of varied age distribution and a wide range of appropriate species and genetic material.

NFDC will explore options relating to the provenance of trees (both in terms of origin of seed and all parts of the growing process and materials used) and will look for opportunities to support those suppliers who grow high quality, disease free trees sustainably grown in the UK, which are likely to be suitable for the future. This will help to reduce risks associated with the importation of trees and soil which are a significant source of pests and disease which threaten UK trees.

NFDC will investigate the provenance of its tree planting material and will support and work with those suppliers who can help achieve this goal.

- ❖ **Action Point 2:** NFDC will impose planning conditions on all developments within the New Forest District area to ensure high quality tree planting methods are used, using trees sustainably grown in the UK for their full production cycle.

Trees will be selected which will be specifically suited to their location for the long term and will minimise future conflicts.

There will be an overriding bias towards the planting of larger species of tree which provide correspondingly greater benefits, however smaller species will be considered where appropriate, including the potential creation woodland shelter belts where there is local support and suitable sites available. It is also vital to plant the right tree in the right place to minimise pruning works to the tree as it matures.

NFDC is committed to replanting trees following a tree removal. Wherever possible two replacement trees will be planted for each tree removed. Where, due to location or other issue this is not appropriate, NFDC will seek to plant at least one tree on land which it manages in the vicinity, so the tree cover in the local area is not diminished.

‘Areas of trees/woodland can be cheaper to maintain than grass’ (Woodland Trust ‘Trees or Turf’ report 2011).

Planting and establishing trees is not a cheap or low-cost exercise. Budgets will need to be considered along with appropriate business plans to ensure resources where there is a proven need are made available.

There are many areas of incoming development land, Sangs sites that will be adopted by NFDC, which could provide potentially useful planting sites. An increase in inter-departmental co-operation between different sections of the Council will be encouraged to identify new planting schemes. This could include options for obtaining land for the purpose of tree planting to mitigate nearby developments.

NFDC will proactively seek to increase tree canopy cover with new planting initiatives, with the aim of concentrating resources on those areas which would most benefit from tree planting. NFDC housing sites have been highlighted as priority planting areas. In some properties the front or rear garden may be planted with suitably sized trees whilst the property is empty between tenancies. To ensure these new trees will establish and grow to maturity, they will receive appropriate irrigation and aftercare, and be protected by the tree team.



In addition, NFDC is committed to planting new trees in all areas which have previously had little or no tree cover. Where trees are to be planted on open spaces, or as direct replacement there will generally be no consultation however NFDC tenanted properties may be consulted when planting is planned in residential gardens and access is required for aftercare

Requests for new tree planting are actively encouraged from residents and NFDC is keen to hear from people who would like trees to be planted on any Council owned land. Priority will be given to the planting of trees which will be of greatest benefit to the wider community.

Requests for Memorial or Commemorative tree planting are encouraged, whether to remember individuals, celebrate community causes, or to commemorate historic events or anniversaries, NFDC Corporate Tree Team welcome applications from those who would like trees to be planted. The Cemeteries service run a memorial trees service/woodland burial service – Further advice on this will be published in a separate guidance note.

- ❖ **Action Point 3:** Increase canopy cover on NFDC land. Obtain canopy cover information by I-Tree eco

survey to enable future monitoring of tree cover and inform areas to undertake comprehensive planting schemes.

Vehicles and mowers driving on the grass can compact the soil making it inhospitable for root growth and can also cause physical damage to tree trunks and branches. This is a problem in many areas due to increasing car ownership and limited formal parking spaces. NFDC will seek to identify and secure potential planting sites and protect these from damage associated with car parking in tandem with other Council initiatives in relation to car parking. Bunding will be used to prevent parking and areas will be left wild unmowed to deter access.

NFDC will explore opportunities for external funding and support for tree planting schemes and will actively encourage community involvement in planting and aftercare programmes.

- ❖ **Action Point 4:** Explore opportunities to secure outside funding for tree planting.

Good aftercare for 2-3 years after planting is essential to ensure that the investment in trees is not wasted; this is particularly true for larger 'standard' trees. Aftercare of trees can be time consuming and expensive. NFDC will actively seek to involve the local community to help with watering and aftercare of newly planted trees (also giving them a vested interest in the future health of the tree). However, the corporate tree contractor will also be employed to water trees on a regular basis and mulch is used around the base of the trees to help retain moisture.

NFDC will seek to plant smaller sizes of tree stock, where possible, which have a lower aftercare requirement, increasing the cost effectiveness of planting schemes.

NFDC Tree Officers have produced a Tree Planting Specification (Appendix 4) which is to be followed for all standard sized trees on NFDC land, or land due to be adopted by NFDC to help ensure planting scheme success.

6.1.12. NFDC Trees and Council Development or Maintenance Projects

'Root systems stems and canopies, with allowance for future movement and growth need to be considered in all projects, including those which do not require planning permission'. (BS 5837: 2012 Trees in Relation to Design, Demolition and Construction - Recommendations).

Trees are at risk from damage where works are undertaken to demolish or construct buildings and related infrastructure. Wounds to branches, stems and roots can have a significant impact on a tree's future health and stability.

Tree roots, which provide essential support, water and nutrients, are most at risk from damage, as they are generally not visible and often overlooked. Roots are predominantly located in the upper 600mm of the soil and can extend laterally well beyond the 'drip line' or overhang of the crown. The structure of the soil surrounding the roots is also at risk from compaction (such as from vehicle access) and contamination (i.e. spillage of substances toxic to tree roots) which can have further long-term impacts on tree health.

The principles of BS 5837: 2012 (Trees in Relation to Design, Demolition and Construction – Recommendations) will be applied whenever works are planned near to NFDC trees.

The tree team has actively encouraged liaison with other Council departments to ensure that trees are fully considered in the planning stage of projects. Unfortunately, this has not always been successful. Due to historic and continued unsanctioned removal of trees by other NFDC departments, and with recognition of the overwhelming importance placed on trees by the public, enshrined in Policy, a formal 'consultation & approval' process has been formalised.

Other Council departments will now involve the Corporate Tree Team at an early stage when any development or maintenance works are being considered near to or affecting NFDC Trees. This will require consultation in the design phase of projects. All subsequent agreed tree works will be undertaken by the approved corporate contractor only, under strict guidance from NFDC Corporate Tree Officers. To apply to the 'consultation & approval' process please email nfdccorporatetrees@nfdc.gov.uk. A corporate tree approval sign off document will be issued, which should be kept by the department and will list all constraints, methods and approved works.

The value and contribution of trees will be a material consideration in the process. Where appropriate, recognised tree valuation methods (see CAVAT section 10.1) will be applied to inform the process and specify relevant mitigation measures (such as decompaction or replanting) or alternative engineering solutions.

In all circumstances, the full cost of the tree work and replacement trees on a 2 for 1 basis, their planting and 3 years aftercare to ensure establishment will be chargeable. Off-site compensatory planting should not be seen as the default justification for the loss of either existing trees or to overcome design challenges that are needed to provide the above ground space and below ground substrate needed to support large canopy trees within development projects. (LTOA Climate Change Working Party. 2019)

Utilities operations near trees will be managed in line with the guidance set out by the National Joint Utilities Group (Volume 4: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. Issue 2, 2007). If utility companies and their contractors fail to carry out works in accordance with this guidance NFDC will seek compensation from the organisation responsible.

6.1.13. Council Procedures for Property Acquisition and Sale of Council Land

There is much incoming opportunity to acquire sites that could be used to provide tree planting or woodland creation as mitigation land for new development. This provision may be funded by a 'conservation covenant' fund, in order to meet the expectations within the Environment Bill 2020.

Inter-departmental co-operation between different sections of NFDC will be encouraged to identify suitable sites, including funding provision, capital, purchase of land, and project management and management in perpetuity.

The Tree Team will be informed by the Council's Estates Team whenever properties are to be purchased or sold off so that trees can be considered. This may be the addition of land with trees to the surveyed or the referral of sites where trees may be at risk to the Planning Tree Team for consideration for Statutory Protection (Tree Preservation Orders).

The Planning Tree Team is responsible for all matters relating to tree protection and trees in relation to the planning system within the New Forest District Council area.

Trees under the Council's ownership are not generally subject to statutory protection in the form of Tree Preservation Orders. This is because such trees are deemed to be under good management. When Council land is sold off there is a potential for tree damage or removal and the most important trees will be considered for protection.

- ❖ Action Point 5: Establish a procedure to ensure that trees are considered when sites are acquired or sold off by the Council.

Ex-Council Houses

All ex-Council housing properties are subject to a covenant which requires that owners contact the NFDC Tree Team to gain prior written consent for any tree works.

Applications for works under the covenant will be considered in line with the NFDC tree works policy and responses will be in writing.

NFDC will liaise with other relevant council departments and the Local Planning Authority to ensure that enquirers relating to tree protection on ex-Council properties are alerted to the presence of the covenant and the restrictions it imposes.

6.1.14. Land Adoption

If any land is to be adopted by NFDC from a development, or SANGS (Suitable Alternative Natural Greenspaces) or Alternative Natural Green Recreational Space (ANGRS) the Corporate Tree Officers will inspect the site before the land is handed over, if trees are within this area, a tree survey will be carried out for health and safety purposes, and the developer will be instructed by Planning Officers to carry out any works which are necessary at their own expense. Any newly planted trees that have failed, should be replaced with heavy standard trees and monies secured for their ongoing establishment costs so the Council does not incur additional costs.

6.1.15. Managing Trees Sustainably

Arisings from NFDC tree works, used within the local authority, are typically left on site as habitat (as a weed suppressant on flower beds, among other uses) or are processed into fuel for biomass boilers. The Council's tree contractor produces approximately 300 tonnes of woodchip for biomass resulting from tree works for NFDC and its partners each year.



Deadwood habitat niche

6.1.16. Woodland Management

NFDC is responsible for several woodland areas (approx. 25 hectares in total) comprising woodland strips and larger areas of woodland. These sites are predominantly used for recreation and through routes/access and are locally important sites for biodiversity (particularly when acting as a corridor - joining other areas of green infrastructure).

Historically tree management has been limited to works to ensure safety and the ad hoc management of invasive species where funds have allowed.

Invasive species such as *Rhododendron ponticum* and Laurel (*Prunus lauroceracus*) have developed extensively, giving rise to a shrub layer monoculture particularly within Parish woodland sites, suppressing the growth of all other ground flora, and most notably, a total prevention of tree seedling regeneration. It causes a massive reduction in the biodiversity value of woodland sites, and disrupts complex ecosystems, insect associations, soil and mycorrhizal fungi associations. *R ponticum* areas are essentially barren (Offwell Woodland & Wildlife Trust, 2004). Once established, it is difficult and costly to eradicate. Its thickly interlaced, impenetrable branches cover many metres of ground and hinders tree inspections, which are a statutory requirement.

The consequences for *Rhododendron* infested land has been seen elsewhere in the UK, and has led to the total dereliction and abandonment of forestry sites. NFDC has been working to control and reduce *Rhododendron* on NFDC woodland sites with some success. *Rhododendron* presents a very real threat to the long term future of woodland cover in those areas afflicted, requiring the Authority to work with partners such as Town and Parish Councils, New Forest National Park and Forestry England.

Larger sites will be the subject of woodland management plans to direct their long-term management and to bring them into line with the UK Forestry Standard (2011), to improve biodiversity, amenity and recreational values and to ensure woodlands are able to meet the challenges posed by a changing climate and by pests and diseases. The same principles of management will be applied to smaller areas of woodland throughout the district when sites are proactively inspected.

There is considerable opportunity to seek alternative sources of funding for woodland improvements. NFDC will actively seek to maximise the benefits from these opportunities.

- ❖ **Action Point 6:** Undertake woodland management plans for principle woodland sites to enable grant funding to be applied for.

NFDC will take steps to increase local community involvement in the management of the woods, with the aim of developing a sense of ownership for local people as stakeholders in the site.

- ❖ **Action Point 7:** Take steps to encourage community involvement in tree and woodland management.

Some woodland areas have been subjected to extensive fly tipping.

Fly tipping will be addressed proactively as a Council wide approach, involving a range of different departments. Reducing the impact of flytipping will have a positive affect on property values, biodiversity gains, the soil and rooting environment, and access for tree inspections. Enforcement action will be taken against people illegally fly tipping on Council land.

- ❖ **Action Point 8:** Address fly tipping on woodland and open space sites.

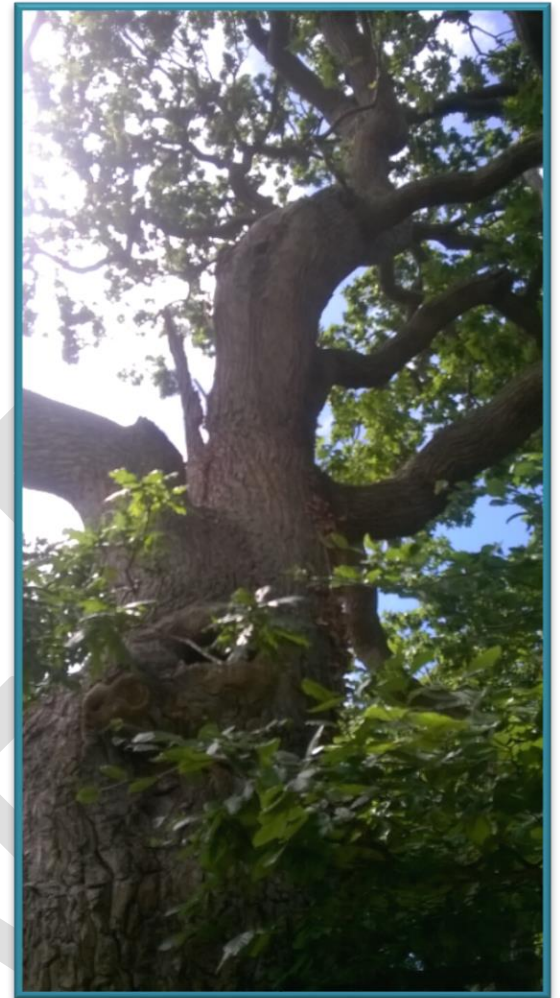
NFDC trees provide key habitat for a wide range of flora and fauna including many priority species as identified by the Hampshire Biodiversity Action Plan and Red Data List.

Where possible, trees will be managed to promote biodiversity and to provide as large a range of niche habitats as possible. This may include the control of invasive species, the retention of dead trees (standing and fallen) and dead branches wherever feasible (taking the safety of visitors into account). Proactive works will be undertaken to increase the volume of woodland edge habitats and the number and range of species which provide important cover, nectar and food sources to related wildlife.

Natural regeneration of suitable species will be encouraged along with the retention of seed-bearing trees. This process of encouraging balanced woodland succession may in some cases require supplementary planting where natural processes are likely to be insufficient.

Veteran trees, (those trees which exhibit characteristics of ancient trees regardless of age) are of international importance to biodiversity, for saproxylic invertebrates (insects associated with dead wood), fungi, birds, bats and lichens.

The UK and The New Forest has a wealth of ancient and veteran trees. Such trees and the landscape around them require careful management to avoid negative impacts on the habitats of important species and the future health and survival of the tree. Where present, trees with veteran features, and nearby potential future veterans, will be given consideration and where appropriate specific management plans will be produced to ensure a succession of habitat.



Oak with cavities in trunk 1

- ❖ **Action Point 9:** Identify ancient & veteran trees on Council land and prepare individual management plans where appropriate. NFDC will pass on information relating to ancient & veteran trees to the [Hampshire Biodiversity Information Centre \(HBIC\)](#)

6.1.17. Pests and Diseases

‘Changes to climate could have a significant and rapid impact on the distribution and abundance of many pests and diseases.’

Tubby and Webber (2010)

The threat from pests and diseases is a rapidly changing arena which is now firmly imprinted on the public consciousness thanks to historic issues such as Dutch Elm disease (*Ophiostoma novo-ulmi*) and more recent concerns such as Ash Dieback (*Chalara fraxinea* / *Hymenoscyphus pseudoalbidus*).

Trees are relatively slow growing organisms which are slow to adapt to rapid changes in conditions, leaving them particularly vulnerable.

The threat from introduced pests and diseases to trees, forests and woodlands has never been greater. Defra’s Tree Health Management Plan sets out government’s approach to tree health in England which is in line with the Plant Biosecurity Strategy for Great Britain (DEFRA, 2014). It sets out how government and a wide range of other partners are managing new and future threats to the tree population in England in a strategic approach to tree health. NFDC Tree Officers will work in accordance with the recommendations set out in this.

Globalised trade and climate change now present a greater risk to the UK’s trees. Increasing concerns are particularly attributable to the impact of the importation of large rootballed or containerised trees, soil and untreated wood products, which have allowed pests and disease from other countries to develop in the UK.

Public procurement should stipulate standard sized trees to be UK sourced and grown trees to invest in UK tree nurseries and reduce the demand for imported trees. (The Woodland Trust, 2020) NFDC will not use directly imported trees.

The Forest Research maintains an online [Tree Alert reporting tool](#). This important citizen science tool allows users to report suspected pests and diseases and the site contains detailed information on [identification](#). Further to this the [Observatree project](#) is a UK network of over 200 specialist volunteer tree health surveyors trained to collect bark, soil and foliar samples, following biosecurity procedures. Many training and resource materials are available on the website and we would encourage interested persons to join and engage with this project. This work is vital to understand the spread and distribution of tree pests and diseases across the UK.

A rapidly changing climate may also allow new and existing species of pest and disease to develop.

NFDC Tree Officers will follow national guidance and industry best practice in response to all tree pest and disease:

- NFDC will require its suppliers to act in full compliance with plant passport labelling requirements.
- Developer obligations - any trees planted within developments will be subject to a planning condition requiring:
 - Suppliers must be registered with the plant health authorities and be authorised and be able to issue plant passports as required. Plant passporting documentation must be supplied at the time of delivery. All must be grown in the UK for the full duration of the production cycle.

- The use of healthy planting stock is critical to the biosecurity and resilience of the tree population.
- Diversity of tree species and genetics within tree species is at the core of woodland adaptation and ensuring resilience in the future, this will be borne in mind when selecting trees for planting and supplier choice.
- Regular inspection of NFDC tree stock via proactive and reactive surveys by experienced, qualified Tree Officers will highlight any pest or disease on NFDC land.
- The tree team will take part in ongoing training and make use of available resources to keep pace with the rapidly changing situation in the UK.
- The formulation of specific, standalone Action Plans where necessary.
- Proactive steps will be taken to improve the health and robustness of NFDC trees (increasing the diversity of species, age range and general tree health).
- Informal advice or referral to other specialist bodies will be given to the public to assist in the local management of these issues.

NFDC will meet its statutory obligations by immediately notifying relevant bodies (i.e. Food and Environment Research Agency) if notifiable pests or diseases are discovered (i.e. Phytophthora sp, fireblight etc) and will work to assist with the Government's Action Plan for Tree Health and Plant Biosecurity by reporting relevant pests and diseases.

7. Private Trees

7.1. Tree Preservation Orders (TPO's)

The Town and Country Planning (Tree Preservation)(England) Regulations 2012

<http://www.legislation.gov.uk/ukxi/2012/605/contents/made> gives local planning authorities powers to make and serve Tree Preservation Orders (TPO's) to protect trees where it appears that it is expedient in the interests of amenity to do so. In some instances, it may be expedient to make a Tree Preservation Order for future amenity e.g. newly planted trees as part of a conditioned landscape scheme. On average the tree team makes 30 new Tree Preservation Orders every year. The expediency of making a new TPO is determined on a case by case basis by the Tree Officers.

All Tree Preservation Orders, Tree Work Application Decisions and Appeal Decisions may be viewed by the public during normal office opening hours.

The council investigate any breaches made towards trees that are protected by virtue of growing within a Conservation Area or that are subject of a Tree Preservation Order and will prosecute where it is considered in the public interest to do so.

Tree work applications to trees that are subject to a TPO

The council is under a duty to consider and determine tree work applications to trees that are protected by TPO's within 8 weeks from the date of which the application was registered.

While there is no statutory requirement to consult third parties, the council provides 28 days from which the date of the application was registered to make any comments regarding the proposal.

Replacement Tree Planting for trees subject to a TPO

Where consent is granted for the removal of a protected tree and where it is considered suitable, a replacement tree will be specified to be planted in the vicinity of the original tree in accordance with the

specification as detailed within the condition.

7.2. Conservation Areas

Under the Town and Country Planning (Tree Preservation)(England) Regulations 2012

<http://www.legislation.gov.uk/ukxi/2012/605/contents/made> the council is under a duty to consider notifications of works to trees that have a stem diameter of 75 mm or greater when measured at 1.5 m from ground level and which are growing within a designated Conservation Area.

Tree work notifications to trees that are growing within a Conservation Area

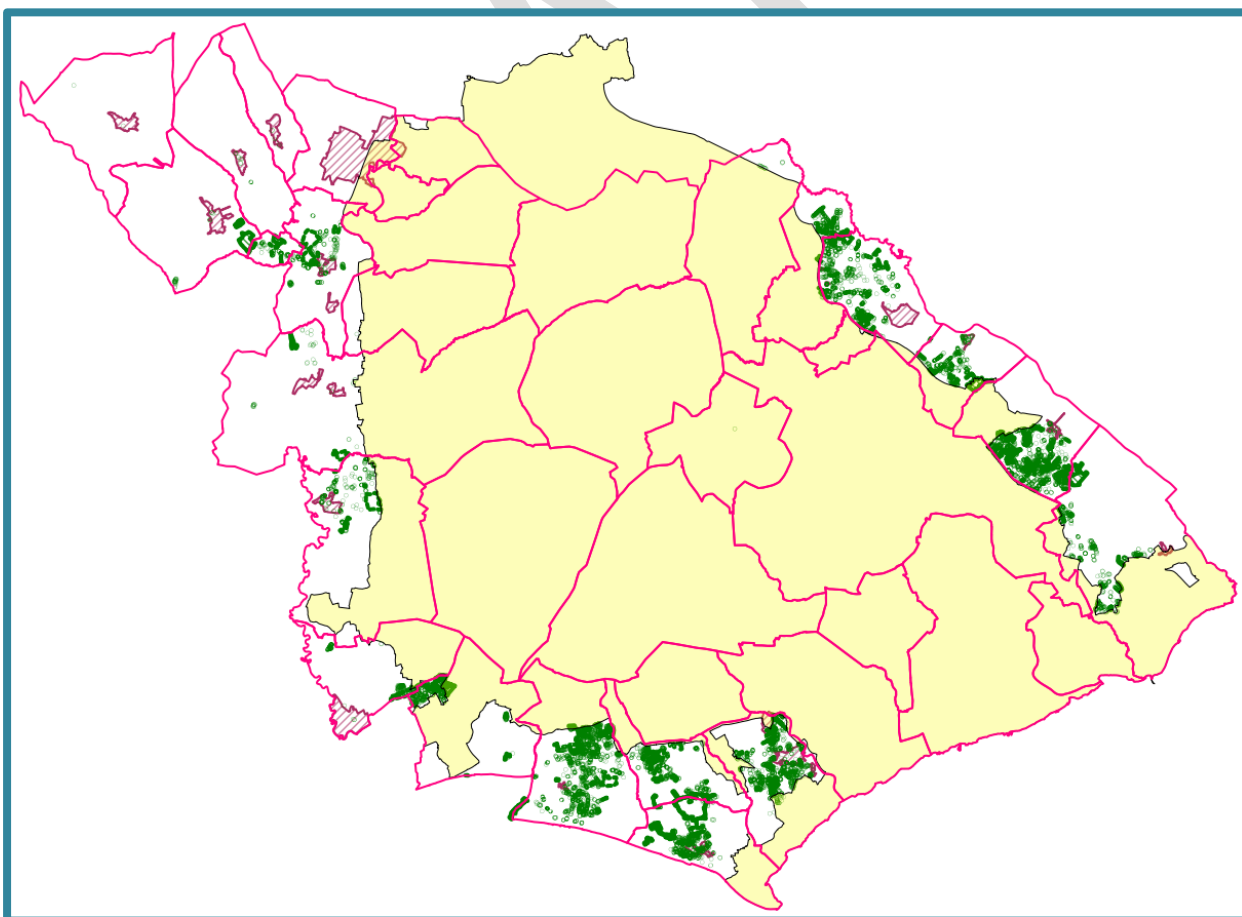
The council has 6 weeks from the date of registration to either have no objections to the proposal or to object by making a Tree Preservation Order.

While there is no statutory requirement to consult third parties, the council provides 28 days from which the date of the notification was registered to make any comments regarding the proposal.

The council takes guidance from British Standard 3998: 2010 when determining tree work applications/notifications.

7.3. Protected Trees in the New Forest

The map below shows the distribution of the districts Conservation Areas and Tree Preservation Orders with a majority of TPO's being found in the more densely populated areas.



In total there are 22 conservation areas and over 1500 Tree Preservation Orders dating from 1950 through to present day. This results in an average of 650 tree work applications/notifications being submitted each year to work on protected trees.

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8. Climate Change

8.1. Overview

“Climate change is the most pressing environmental, social and economic problem facing the planet. The consequences of climate change are global, long-term and in some cases, already irreversible. Government recognises the current and future challenges involved in management of the urban forest and is committed to protecting the nation’s trees and woodlands from increasing threats such as pests, diseases and climate change. Climate change will bring with it new challenges in the form of an increase in pests and diseases that have the potential to damage and degrade the urban forest. Tree selection and management strategies will need to adapt to accommodate new biosecurity threats; increasing resilience to these threats will be essential to secure the urban forest’s contribution to economic growth, improving people’s lives and enhancing nature.”

- Forestry Commission, The Right Trees for Changing Climate



Calshot Cemetery

A changing climate is likely to have a significant impact on trees in the UK. Trees, particularly those in and around the areas where we live and will become increasingly important to help moderate the effects of climate change. Increasing urbanisation combined with a changing climate are leading to more frequent and severe flood, heat and air pollution episodes in Britain's cities. (Davies et al., 2017)

Forecasts suggest that the UK is likely to experience hotter, drier summers (an average warming of 3.9 degrees in the south east of England) and warmer, wetter winters (Defra 2009). There is also likely to be an increase in extreme weather events with a potential increase in flooding and tree failures in high winds.

Reducing wind speeds and regulating temperatures through the provision of shade, slowing the percolation rate of water by interrupting rainfall and releasing it more gradually to ground level, trees can be very effective in reducing the impacts of extreme weather such as high summer temperatures and buffering the impacts of storm water events (See Ecosystem Services).

Changing conditions are likely to increase the growing season for trees and could allow a new range of species to flourish. In contrast, species which are less suited to warmer, drier summer conditions and the potential for drought may decline.

NFDC will face these challenges by promoting and planting those trees which are likely to be best suited to future conditions, with the objective of achieving a diverse tree stock avoiding over-reliance on any single species, or provenance location of tree. A “portfolio approach” (using natural regeneration, local provenance planting stock, and planting stock from appropriate, 2 degrees, and up to 5 degrees more

southerly provenances) could help to spread the risk and increase the likelihood that some trees will thrive for the future.

An early investment in regular watering during the drier summers in the first few years of establishment ensures new trees will survive to provide for future generations. Due to the high rate of tree failures seen in development sites in the District, NFDC tree Officers have written a Tree planting and Establishment specification, based on the success seen by those local authorities using it, which may be specified as part of all planning consents.

NFDC will follow the guidance of the Tree and Design Action Group and take steps to increase overall canopy cover across the District to provide mitigation for the effects of climate change. Just 10% rise in urban canopy cover could cancel out the 4C rise in temperature predicted this century. (Commission for Architecture and the Built Environment, 2009)

Due to increasing recognition of the need for action on climate and the roles that trees can play we have experienced a marked increase in enquiries for more tree planting. Whilst we will do everything possible to accommodate these requests (see Tree Planting), due to the segmented land holdings of NFDC land, and suitability of sites for tree planting, it is not enough to simply over-plant green open spaces to meet canopy cover targets. Parish and Town Councils, private landowners, homeowners, NFDC tenants etc must all be called upon to do the same and plant trees where possible.

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Pollard poplar tree at Calshot

8.2. Ecosystem Services

In Britain, the government's latest Climate Change Risk Assessment reveals the greatest climate change threats to the country to be flood and heat-related risks to communities and businesses (Committee on Climate Change, 2016). Air pollution is also a problem in many densely populated cities, particularly in more deprived areas (Netcen, 2006), and is forecast to be an increasing public health concern.

We are increasingly confronted with news of severe impacts of environmental degradation all over the world through the media. The urgency and importance to integrate nature's diverse values in decisions and actions stand out more than ever, to protect and improve our local environment, as highlighted in the NFDC Corporate Plan 2020-2024.

NFDC's trees provide a range of important regulating ecosystem services and contribute towards the sustainable future of the district.

The ecosystem services model is a powerful tool to communicate the many benefits of trees and support real life decision making. (Jacobs, et al., 2016) The concern about the future impacts of climate change on urban environments has led to a growing interest in the role trees play in providing ecosystem services, as

an effective way to regulate some of the negative impacts of urbanisation (Andersson et al., 2014) and upcoming impacts of climate change.

The benefits people obtain from ecosystems are categorised as:

Provisioning services

- Food
- Timber production

Regulating services

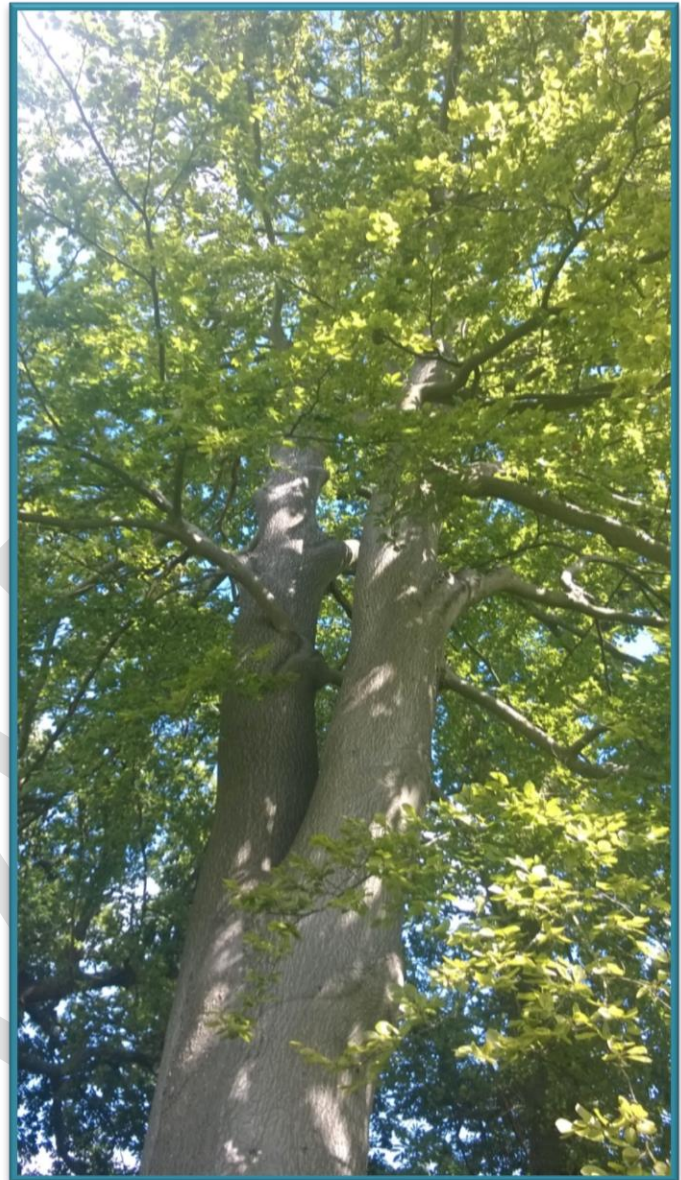
- Air purification - enhancing air quality by intercepting and/or absorbing gaseous pollutants and particulate matter (Escobedo and Nowak, 2009)
- Heat amelioration - alleviating summer heat through evaporation, photosynthesis and shading (Doick and Hutchings, 2013)
- Storm water attenuation - reducing stormwater run-off by intercepting and absorbing water and improving infiltration (Armson et al., 2013) with roots penetrating previously compacted areas (Denman *et al* 2012) and the constant process of transpiration helping to prevent waterlogging

Cultural services

- Public amenity
- Opportunities for recreation

Supporting services

- Soil formation, biodiversity and habitats for wildlife (MEA, 2005).
- Managing erosion along slopes or banks adjacent to rivers or roads



Mature beech at Langdown Lawn

Urban trees, woodlands and forests should be recognised as a ‘nature-based solutions’ for climate change adaptation and sustainable urbanisation (European Commission, 2015) and are now being used to reframe policy debates on biodiversity conservation, climate change adaptation and mitigation strategies, and the sustainable use of natural resources (Potschin et al., 2015). (Davies et al., 2017)

New guidance from government on developing Payments for Ecosystem Services Schemes may offer structure that could be developed in future to assist and encourage practical tree and woodland management operations, or planting schemes (DEFRA, 2013) An example of this in practice is the UK Woodland Management grants scheme by the Forestry Commission.

NFDC Tree Officers will communicate the benefits of trees and the great importance of their ecosystem

services. (See i-Tree Eco section 10.2.1)

Tree valuation will be a part of all decisions where trees may be compromised, or where they are to be integrated into development.

9. Biodiversity

The term biodiversity refers to the variety of life forms within an ecosystem. Trees and hedgerows provide many benefits in terms of biodiversity, giving wildlife shelter for roosts and breeding sites, food and feeding areas, habitat corridors and connectivity.

Older mature trees, particularly of Oak and Beech, are a characteristic of the New Forest. They are a feature not only of the ancient woodlands of the Open Forest, but of the villages and other settlements that have developed over time as an integral part of the Forest landscape. The New Forest as a whole is recognised to be one of the most important sites in north-west Europe for ancient and veteran trees.

Trees are unique in their ability to support a variety of wildlife in many of the most hostile environments within an urban setting.

The New Forest is a **Designated Special Area of Conservation (SAC)** under the EC Habitats Directive.

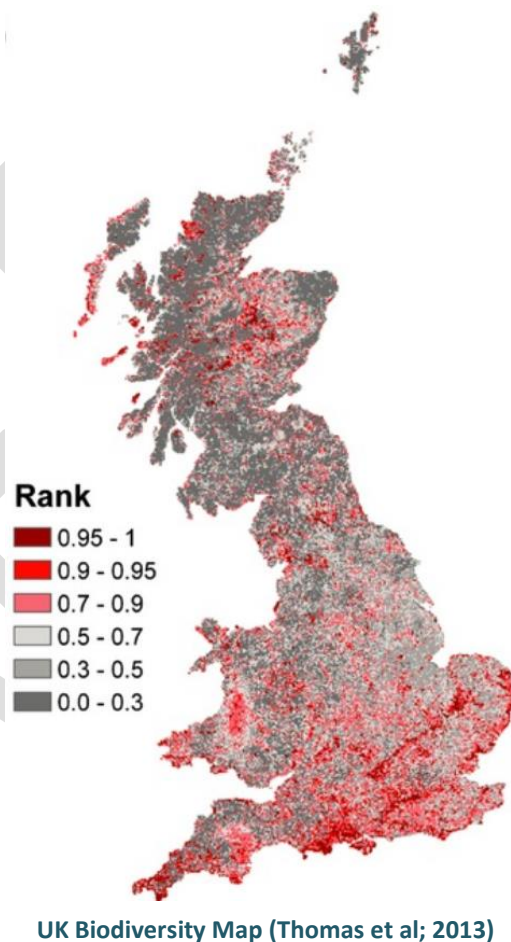
The New Forest has been identified as of potential international importance for its saproxylic invertebrate fauna by the Council of Europe (Speight 1989) and is a major stronghold for the Annex II species stag beetle *Lucanus cervus* in the UK and is one of the most important sites for fauna associated with rotting wood. This deadwood is invaluable for a variety of organisms such as bacteria, lichens, fungi.

Protection is given to species such as bats, badgers and nesting birds under European and UK legislation.

Of 18 British species of bat, 13 are found in the New Forest.

It has been recognised that introduced pests and diseases are a major risk to native biodiversity and ecosystems, including trees in woodlands, commercial forests and in the urban environment. (Tree Health and Plant Biosecurity Expert Taskforce, 2013)

In the National Planning Policy Framework of 2012, the Government stated that local planning authorities should “set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure” (Communities and Local Government 2012).



The NFDC Corporate Plan 2020-2024 recognises concern over the accelerating impact of climate change, habitat erosion and wildlife loss, and actions to protect and improve our environment will be at the heart of all decisions.

The aims within the Governments 25-year Environment Plan 2018 to leave our environment 'in a better condition than when inherited it' are reflected in the ambitions in the NFDC Corporate Plan 2020-2024 "We are passionate about leaving things better than we found them".

To deliver our obligations under the Habitats Directive: Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, The Wildlife and Countryside Act, Natural Environment and Rural Communities Act, 2006 (s40: duty to conserve biodiversity) and the Environmental Protection Act 1990 the following principles will be applied:

- NFDC will retain standing dead trees due to the valuable habitat they provide.
- Retain exposed or heaved root balls in tree belts and woodlands, for habitat niche provision.
- Seek to leave fallen timber and felled trees in situ, depending on site suitability to benefit habitat creation.
- NFDC will leave stumps to rot away naturally wherever possible, due to the deadwood habitat provided
- Seek to retain mature ivy on trees. It will only be removed to aid tree safety inspections, reduce risk of wind throw or reduce shade to more valuable habitats beneath
- Work with our Ground Maintenance Department to select sites that are currently mown grass, to be left unmown underneath and around trees, seeding with wildflower mix to encourage a varied mosaic of habitats, and to protect trees rooting area from compaction and inadvertent damage.
- Hedgerows are acknowledged as an important part of the environmental infrastructure and NFDC will seek to protect and manage existing hedges, and ensure any removed hedges are offset by replacement planting.
- NFDC will actively work to remove invasive species from our woodland sites and engage with partners such as the New Forest Non-Native Plants Project
- To ensure that the land is, so far as is practicable, kept clear of litter and refuse, Tree Officers may erect signage, contact residents, and in all cases will reserve the right to take further action. The potential for a cleansing contract to be drawn up to address litter within woodland sites exists.
- NFDC will seek to expand woodland areas and look for opportunities to create new woodlands
- NFDC will ensure high standards of biosecurity are specified in the procurement of all new planting stock
- NFDC will specify peat-free compost in the procurement of all new planting stock

- NFDC will adhere to the requirements of the Wildlife and Countryside Act 1981 in relation to the protection of wildlife during all its activities.
- NFDC will actively seek out expert advice in relation to work that may affect European designated protected species or sites
- New Forest District Council, through planning and other policies, is committed to conserving the stock of mature trees wherever possible in order to maintain the local character, cultural history and wildlife value of the area.

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10. Tree Valuation

In recent years there has been an increasing interest in the ‘value’ of trees and other natural resources. This is reinforced by the Lawton Report (Making Space for Nature 2010) which outlined how the benefits provided are not fully appreciated or valued. There are several recognised methods for providing a monetary value for individual trees or groups of trees. These take account of the visual or amenity contribution that trees can bring and the ecosystem services (such as controlling storm water, absorbing pollution and carbon sequestration etc) which, without trees, would require alternative expenditure. Trees are assets for the council and should be allocated values.

10.1. CAVAT

Capital Asset Valuation of Amenity Trees is regarded as one of the principal methods of tree valuation in the UK. CAVAT provides a method for managing trees as public assets rather than liabilities. It can be used as a strategic tool to aid to decision-making in relation to the tree stock, and is also applicable to individual cases, where the value of a single tree needs to be expressed in monetary terms to, for example, recover compensation for damage to, or unauthorised removal of council owned trees.

- As part of the i-Tree Eco survey, Southampton’s’ trees were valued using CAVAT to be worth £3,215 million
- Street trees in London have been accredited with an individual average value of £8,000-£10,000 using the CAVAT valuation system.

These figures illustrate the significant monetary value that can be applied to trees and hint at the likely value of the total NFDC tree stock. Trees are a significant asset for the Council and require long term investment and management to maximise their returns.



Silver birch

CAVAT

SPREADSHEET TO CALCULATE VALUE OF INDIVIDUAL TREE STOCK

Denny Close, Fawley

Betula pendula

Only enter data in the green boxes

© Christopher Neilan
Created by Alexandra Sleet

CAVAT	Quantities you measure / look up	Calculated Values
Step One: Basic Value		
Stem Diameter (cm)	40-49.9	£25,256
Unit Value Factor	15.88	
CTI Rating	100%	
CTI Value		
Step Two: Functional Value		
Functional Adjustment	100%	£25,256
Adjusted Value		
Step Three: Final Value		
Life Expect. Factor	20 - 40	
FINAL VALUE		£20,205

Silver birch CAVAT valuation

10.2. i-Tree

Torbay, supported by Forest Research and Natural England, were the first authority in the UK to apply the i:Tree Valuation System which was developed by the US Forest Service and has been used to value the trees of New York, and is currently being applied to London's trees. Torbay's trees were valued at £280 million (structural/replacement value).

10.2.1. i-Tree Eco

Southampton City Council conducted an i-Tree Eco survey to value the ecosystem services their trees provided in 2016. These services were valued at more than £1.29 million per year. Key findings of the study were:

Carbon capture

- Each year Southampton's trees remove 2,684 tonnes of carbon from the atmosphere worth £609,327
- 100,583 tonnes of carbon are currently stored in Southampton trees worth £23.4 million

Rainwater Interception

- Southampton's urban forest intercepts 95 million litres of rainfall every year, equivalent to an estimated £142,894 in avoided water treatment costs

Removal of air pollution

- 90 tonnes of airborne pollutants are removed by Southampton' trees per year, worth £533,720

Future recommendations

- Aim to increase canopy cover by 6.5% to 25% canopy cover. Through street planting, mandatory planting of trees on new developments, and by ensuring existing trees are maintained and allowed to grow to maturity. (Mutch, et al., 2017)
- Species mix should be diversified to build resilience to climate change, emerging pests and diseases and to improve ecosystem service provision.

NFDC will take steps to attribute a monetary value to its tree resource. This information will be used to:

- Identify the total value of the Council's tree stock. Which has the future potential to provide additional justification for funding provision.
- Identify the value of individual trees involved in claims of damage or related to proposed developments, to inform and assist decision making.
- Identify the value of trees which have been damaged or felled without consent, to ensure adequate compensation is sought.

10.3. ICT

The upcoming delivery of a new publicly accessible NFDC website will offer much potential for improving information delivery to New Forest residents. Self-service will bring improved efficiencies in dealing with enquiries, and it is hoped online maps will guide service users to the correct owner or department. The enquiry would also be tracked through the website, enabling the enquirer to see when resolved.

A new sufficiently resourced web-based service will publicise any works requiring consultation, required by the upcoming new statutory duty to consult on street tree felling. NFDC tree officers will actively engage with colleagues to bring this service through development to completion.

11. Consultation, Implementation and Review

This document has been produced in liaison with the Tree Strategy Task and Finish Group and has been passed to the following stakeholders for consultation:

NFDC Environment Services

NFDC Planning Services

NFDC Legal Department

NFDC Insurance Department

NFDC Housing Services

Forestry England

Forestry Commission

National Trust

New Forest National Park Authority Tree Team

Hampshire County Council Arboricultural Team

An action plan will be set out to direct the Council's response to meet its objectives within a specific time frame.

Action Plan Points are detailed in Appendix I.

Review

The strategy will be formally reviewed after 5 years to assess its impact, make necessary updates and ensure it is still fit for purpose.

12. Definitions

- Aftercare
 - Management of newly planted trees to avoid mortality and to facilitate establishment. Including watering, installation and maintenance of stakes, ties and guarding and formative pruning.
- Ancient tree
 - All ancient trees are of historic interest, whether as markers along old boundary lines giving insight into historic land divisions, an indication of former landscape management practices, to churchyard yews that pre-date Christianity (Woodland Trust)
- ANGRS
 - Alternative Natural Green Recreational Space (see SANGS)
- Biodiversity Net Gain
 - Biodiversity Net Gain requires developers to ensure habitats for wildlife are enhanced and left in a measurably better state than they were pre-development.
- Biomass
 - Plant material used as a source of renewable energy. In ecology, biomass is the sum of the material in living things.
- Bund
 - A man-made embankment or dam. Bunds may also be used for noise mitigation, to hide an eyesore, or to restrict vehicular access
- Canopy cover
 - In any given area, the proportion to tree canopy cover in relation to the total area when viewed from an aerial perspective.
- Carbon sequestration
 - Living plants, though the process of photosynthesis 'lock up' carbon, especially trees in the form of lignin in wood, until such time as the timber is decayed by fungi and returned to the soil. The mass of woodland soil ensures retention of the majority of the carbon.
- CAVAT - Capital Asset Valuation of Amenity Trees
 - A method for assigning a monetary value to the amenity valuation of trees, intended for publicly owned trees and developed by Christopher Neilan of the London Tree Officers' Association (LTOA).
- Climate change
 - Climate change refers to long term changes in regional and global average of temperature, humidity and rainfall patterns over seasons, years or decades. Global phenomena may include increased temperature, change in sea level through ice mass and glacier loss, shifts in the blooming and subsequent seed production of plants and trees, and extreme weather events.
- Climate change adaptation
 - Adjustments to human activity or the natural environment to moderate the harm (or exploit any benefits) of climate change. The shade cast by trees moderates high ambient temperatures (which may increasingly be a health risk). Trees, with other elements of green space, also reduce the risk of flooding.
- Compaction

- Soil compaction occurs when soil particles are pressed together, reducing pore space between them resulting in, a greater density. A compacted soil has a reduced rate of both water infiltration and drainage with less oxygen available to tree roots making the soil environment inhospitable to growth.
- Corporate Tree
 - Any and all trees situated on land owned by NFDC, managed by NFDC, or that NFDC has a responsibility for.
- Covenant
 - A legal condition tied to the use of land, applying either to one particular owner or to any (future) owner. All ex-NFDC council houses have a covenant which passes to all subsequent owners to restrict tree work without written consent from NFDC. This forms a part of the measures to protect trees and encourage tree ownership in the district.
- Deforestation
 - The destruction of forest and woodland for human purposes. Locally seen as land parcels are developed for housing or other uses. In urban areas, mass tree loss due to changing homeowner preferences has led to the term 'urban deforestation'.
- Defra
 - Department for Environment, Food and Rural Affairs.
- Ecosystem
 - A biological community of interacting organisms and their physical environment.
- Green Infrastructure
 - The network of green space, such as trees, hedges or grassed open space considered as a beneficial element of urban design.
- ICT
 - Information and communications technology
- i-Tree
 - Software in the public domain developed by the US Department of Agriculture (USDA) and introduced in 2006 to facilitate urban tree survey and management.
- i-Tree Eco
 - An i-tree application that gives a monetary value to the environmental benefits of urban trees, including air quality, carbon sequestration, energy usage and rainfall interception.
- Lichen
 - Organisms belonging to the lower plants consisting of a photosynthetic alga or cyanobacterium (blue-green alga) in symbiotic association with a fungus, making crust-like (crustose), leaf-like (foliose) or shrubby (fruticose) forms that are commonly blue-green or orange.
- Mitigate
 - 'To lessen the severity of, to make more easily borne'. For instance, a purpose of tree inspection and pruning works is to mitigate tree risk.
- Native
 - Trees that colonised Britain during the time between the end of the ice age about 10,000 years ago and the formation of the Channel by the gradual expansion of ancient rivers, some thousands of years later, which effectively isolated Britain from new introductions.
- Non-native

- Trees that have been introduced to the UK by humans are known as non-native.
- Natural regeneration
 - Growth from seed which was naturally dispersed. The natural regeneration of trees in a woodland is an alternative to planting.
- Naturalised
 - Introduced as opposed to native trees that have become established in the plant life of a region, Sycamor and Beech trees are examples.
- Nuisance (common law)
 - Common law (private) nuisances are said to be of three kinds: Encroachment on, or direct physical injury to, a neighbour's land, and interference with a neighbour's reasonable use or enjoyment of his property.
- Nuisance (statutory)
 - A nuisance under the Environmental Protection Act 1990, defined as 'unacceptable interference with the personal comfort or amenity' of the public.
- Particulates
 - Matter in the form of minute separate particles, an example being sooty particulate pollution from vehicle emissions
- Photosynthesis
 - The process by which green tissues (containing chlorophyll) manufacture carbohydrate from carbon dioxide (CO₂) from the air and water (H₂O) from the soil, releasing oxygen, The necessary energy is supplied by sunlight
- Pollutants
 - A substance that pollutes something, especially water or the atmosphere.
- Pollution
 - The presence in the environment (whether the air, waters or land) of something that is in some respect harmful.
- SANGS
 - Suitable Alternative Natural Greenspaces (**SANGs**) are existing open spaces that are due to undergo enhancements designed to attract more visitors by providing an enjoyable natural environment for recreation as an alternative, or to relieve visitor numbers on ecologically sensitive sites nearby, eg the New Forest National Park.
- SUDS
 - Sustainable drainage systems are drainage solutions that provide an alternative to the direct channelling of surface water through pipes and sewers to nearby watercourses.
- Swathe
 - A broad, wide strip of grass or wild flower meadow.
- Veteran
 - Veteran trees are trees with some or all of the habitat niche features of ancient trees, specifically crown retrenchment and decay in trunk, branches or roots (Lonsdale, 2013), but caused by wounds or decay, rather than of old age. Reactive growth to physical damage or other abiotic stressors leads to the appearance of veteran features, but veterans may be much younger than ancient trees.
- Wildlife Corridors

- Interconnected vegetation providing unhindered wildlife movement between habitat. Often seen as linear hedgelines connecting individual woodlands amongst human activity such as farmland, or housing development. Of critical importance as development pressures increase and intensify

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13. References

The strategy has been put together with reference to the local and arboricultural knowledge and experience of the Corporate Tree Officers and the approach and practices applied by other organisations involved in tree management in the local area (including the New Forest National Park, Forestry Commission, Forestry England, and Hampshire County Council).

Tree strategies produced by the following authorities have also been reviewed:

Christchurch Borough Council
Poole District Council
Test Valley Borough Council
Fareham Borough Council
East Dorset District Council
Hart District Council
Leicester City Council
Rushmoor Borough Council
Basingstoke and Deane Borough Council
Nottingham City Council
Newcastle City Council
Waltham Forest Borough Council
Colas (managing trees on behalf of Portsmouth City Council)

Other specific reference material is detailed below:

Akbari H (2002) Shade trees reduce building energy use and CO₂ from power plants.

Andersson, E; Barthel, S; Borgström, S; Colding, J. [Reconnecting cities to the biosphere: stewardship of green infrastructure and urban ecosystem services](#). *Ambio*, 2014 – Springer
Armson, D; Stringer, P; Ennos, A, R. The effect of street trees and amenity grass on urban surface water runoff in Manchester, UK. *Urban Forestry & Urban Greening*. Elsevier, 2013

Barlow, J & Harrison, G (1999) Shaded by Trees. Arboricultural Practice Note 5. Arboricultural Advisory and Information Service

Barrell, J (2009) Climate Change and Trees. Arboricultural Association Newsletter Issue 141. Arboricultural Association.

Binggeli P. The conservation value of sycamore, *Q. J. For.* , 1993, vol. 87 (pg. 143-146)

Britt, C & Johnston, M (2008) Trees in Towns II: A new survey of urban trees in England and their condition and management. Department for Communities and Local Government.

Brown and Kodric-Brown (1977) Brown, J and Kodric-Brown, A (1977). Turnover rates in insular biogeography: effects of immigration on extinction. *Ecology* 58, 445–449.

BS 3936: 1992 Specification for trees and shrubs (sections 1-5). BSI. BS3998: 2010 Tree works –

Recommendations. BSI.

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

Coles R.W. and Bussey S.C. 2000, 'Urban forest landscapes in the UK - progressing the social agenda.' Landscape and Urban Planning 52, pp181- 8

Committee on Climate Change, 2016, Available at: (<https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-climate-change-risk-assessment-2017/ccra-chapters/people-and-the-built-environment/>)

Commission for Architecture and the Built Environment, 2010. Community green: using local spaces to tackle inequality and improve health, London: Commission for Architecture and the Built Environment.

Communities and Local Government (2012). National Planning Policy Framework. Crown Copyright, pp26.

Coomes, E. G., Jones, A. P., Hillsdon, M (2009). 'The relationship of physical activity and overweight to objectively measured green space accessibility and use.' Social Science and Medicine, under review

Davies, H, J; Doick, K, J; Hudson, M, D; Schreckenber, K. Challenges for tree officers to enhance the provision of regulating ecosystem services from urban forests. Environmental Research, 156 (2017), pp. 97-107
DEFRA (2005) UK Government Sustainable Development Strategy. DEFRA.
(<http://sd.defra.gov.uk/what/principles/>)

DEFRA (2007) A strategy for England's trees, woods and forests. Department for Environment, Food and Rural Affairs.

DEFRA (2009) Adapting to Climate Change: UK Climate Predictions. Department for Environment, Food and Rural Affairs.

DEFRA (2011) Action Plan for Tree Health and Plant Biosecurity. PB13657. DEFRA.

DEFRA (2011) Natural Environment White Paper, The Natural Choice: Securing the Value of Nature 2011.

DEFRA (2014) Protecting Plant Health A Plant Biosecurity Strategy for Great Britain, 2014

DEFRA (2014) Tree Health Management Plan, 2014

DEFRA (2019) PHR – (EU) 2016/2031, 2016

Denman, E.C., May, P.B. and Moore, G.M. (2012). The use of trees in urban stormwater management. In *Trees, people and the built environment*. Crown Copyright.

Doick, K, J ;Hutchings, T, Air temperature regulation by urban trees and green infrastructure, Forestry Commission, 2013

Nature-Based Solutions and Re-Naturing Cities: Final Report of the Horizon 2020 Expert Group. European Commission, Brussels (2015)

- Escobedo, F, J; Nowak, D, J. Landscape and urban planning, [Spatial heterogeneity and air pollution removal by an urban forest](#). Elsevier, 2009
- Fitzpatric, M (2011) British Tree Week: Best Woodland Walks. The Telegraph 4 October 2011. (Available at: www.telegraph.co.uk/gardening/plants/trees/8804203/British-Tree-Week-Best-woodland-walks.html).
- Forest Research (2010) Benefits of Green Infrastructure: Evidence Note. Forestry Commission.
- Forestry Commission (2011) The UK Forestry Standard: The governments' approach to sustainable forestry. (www.forestry.gov.uk/ukfs).
- Future Matters: The Sustainable Community Strategy for the New Forest District Council 2008-2012
- Gill, S, Handley, J, Ennos, R & Pauleit, S (2007) Adapting cities for climate change: the role of the green infrastructure. *Built Environment*, 30(1).
- Hampshire Biodiversity Partnership (1998 & 2000) Hampshire Biodiversity Action Plans Vol 1 and 2. HBP.
- Hartig, T Evans, G W Jamnder, L D et al (2003) Tracking restoration in natural and urban field settings.
- Jacobs, S. A. et al., 2016. A new valuation school: Integrating diverse values of nature in resource and land use decisions. *Ecosystem Services*, December 22(Part B), pp. 213-220.
- Journal of Environmental Psychology*, 23 (2), 109-123.
- K Alexander, J Butler & T Green (2006) The value of different tree and shrub species to wildlife. *British Wildlife*. October 2006, 18-28.
- Kim and Kaplan, Kim, J and Kaplan, R (2004). Physical and psychological factors in sense of community: new urbanist Kentlands and nearby Orchard Village. *Environment and Behaviour* 36 (3), 313–340.
- Kuo, F E & Sullivan, W C (2001) Environment and crime in the inner city: Does vegetation reduce crime? *Environment and Behaviour*, 33(3), 343-365.
- Land Use Consultants (2011) Trees or Turf Report. Woodland Trust.
- Lawton, J H, Brotherton, P N M, Brown, V K, Elphick, C, Fitter, A H, Forshaw, J, Haddow, R W, Hilborne, S, Leafe, R N, Mace, G M, Southgate, M P, Sutherland, W J, Tew, T E, Varley, J, & Wynne, G R (2010) Making Space for Nature: a review of England's wildlife sites and ecological network. Report to Defra.
- London Tree Officer Association (2008) Joint Mitigation Protocol. LTOA.
- London Tree Officers Association (2019) Climate Change Working Party, London Tree Officer Association Position Statement – Increasing Tree Planting in Response to Climate Change. (Available at: https://www.ltoa.org.uk/docs/London_Tree_Officer_Association-Position_Statement.pdf)
- London Tree Officers Association (2010) 'Trees do more than you think' leaflet. LTOA. (Available at:

http://ltoa.org.uk/component/docman/cat_view/100-trees-do-more-than-you-think).

Lonsdale, D. (2013). *Ancient and Other Veteran Trees: Further Guidance on Management*. London: The Tree Council.

Lovasi, G., Quinn, J., Neckerman, K., Perzanowski, M. & Rundle, A. (2008) 'Children living in areas with more street trees have lower prevalence of asthma.' *Journal of Epidemiology & Community Health*, 62(7), pp. 647-649.

MEA MA, Millennium ecosystem assessment—ecosystems and human well-being: synthesis - World Resources Institute, Washington, DC, 2005
National Joint Utilities Group (2007) Volume 4: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (Issue 2).

Michael D. Morecroft, Victoria J. Stokes, Michele E. Taylor, James I.L. Morison, Effects of climate and management history on the distribution and growth of sycamore (*Acer pseudoplatanus* L.) in a southern British woodland in comparison to native competitors, *Forestry: An International Journal of Forest Research*, Volume 81, Issue 1, January 2008, Pages 59–74, <https://doi.org/10.1093/forestry/cpm045>

Mutch, E.M., Doick, K.J., Davies, H.J., Handley, P., Hudson, M.D., Kiss, S., McCulloch, L., Parks, K.E., Rogers, K. and Schreckenber, K. (2017) Understanding the value of Southampton's urban trees. Results of the 2016 i-Tree Eco survey. University of Southampton, Forest Research, Treeconomics and Southampton City Council. Southampton. 81pp. ISBN 978-0-85432-004-2.

Mitchell, R. Available at:
<https://www.hutton.ac.uk/research/groups/ecological%20sciences/our%20science/biodiversity-and-ecosystems/decline-oak>

Mitchell RJ, Bellamy PE, Ellis CJ, Hewison RL, Hodgetts NG, Iason GR, Littlewood NA, Newey S, Stockan JA-Taylor AFS.(2019) Collapsing foundations: the ecology of the British oak, implications of its decline and mitigation options. *Biological Conservation*, on line early doi.org/10.1016/j.biocon.2019.03.040.

Natural Ecosystem Assessment (2011) *The UK National Ecosystem Assessment: Synthesis of the Key Findings*. UNEP-WCMC, Cambridge.

Netcen (2006) *Air Quality and Social Deprivation in the UK: an environmental inequalities analysis - Final Report to Defra*. Contract RMP/2035. Oxon

New Forest District Council (2002) *Growing Better Together: Trees in the New Forest District*. NFDC.

Newton, J (2007) *Wellbeing and the natural environment: a brief overview of the evidence*. Unpublished report to DEFRA.

NFDC (2009) *New Forest District (outside the National Park) Core Strategy: Adopted 26 October 2009*. NFDC.

NWDA (2007) *Economic value of urban design*. Amion Consulting.

Offwell Woodland & Wildlife Trust, 2004. *Rhododendron ponticum - A killer of the Countryside*. [Online] Available at: <http://www.offwell.free-online.co.uk/rhododen-2.htm>

[Accessed 30 12 2019].

Peterken GF. Ecological effects of introduced tree species in Britain, For. Ecol. Manage. , 2001, vol. 141 (pg. 31-42)

Potschin, M.; Kretsch, C.; Haines-Young, R., E. Furman, Berry, P., Baró, F. (2016): Nature-based solutions. In:

Potschin, M. and K. Jax (eds): OpenNESS Ecosystem Services Reference Book. EC FP7 Grant Agreement no. 308428. Available via: www.openness-project.eu/library/reference-book

Royal Town Planning Institute (2012) National Planning Policy Framework (England). DCLG.

Rumble, H., Doick, K. J., Rogers, K. & Hutchings, T. R., 2015. *Valuing Wrexham's urban forest: assessing the ecosystem services of Wrexham's urban trees: a technical report*. [Online]
Available at: [https://researchportal.port.ac.uk/portal/en/publications/valuing-wrexhams-urban-forest\(ee8c5cfe-8358-4b90-8b56-9dc8ab7b066f\).html](https://researchportal.port.ac.uk/portal/en/publications/valuing-wrexhams-urban-forest(ee8c5cfe-8358-4b90-8b56-9dc8ab7b066f).html)
[Accessed 22 11 2019].

Rumble, H., Rogers, K., Doick, K. & Hutchings, T., 2015. *Valuing Wrexham's Urban Forest Assessing the Ecosystem Services of Wrexham's Urban Trees: A Technical Report*, Wrexham: Forest Research.

Shaw, R Colley, M and Connelly, R (2007) Climate change adaption by design: A guide for sustainable communities. TCPA, London.

Simson, A (2008). The place of trees in the city of the future. *Arboricultural Journal* 31(2), 97-109.

Southwood, T.R.E. (1961) The numbers of species of insect associated with various trees. *J. Animal Ecology* 30: 1-8

Stovin, V R, Jorgensen, A and Clayden, A (2008) Street trees and stormwater management. *Arboricultural Journal* 30, 297-310.

Sustainable Development Commission (2008) Sustainable Development in Government (SDiG) 2008: Challenges for Government. Sustainable Development Commission.

The Centre for Sustainable Healthcare, 2019. *nhsforest.org*. [Online]
Available at: [https://nhsforest.org/evidence-benefits#Greater social cohesion](https://nhsforest.org/evidence-benefits#Greater%20social%20cohesion)
[Accessed 2 12 2019]

The Woodland Trust (2020), Emergency Tree Plan for the UK - How to increase tree cover and address the nature and climate emergency, Grantham

Thomas, C, Anderson, B, J, Moilanen, A, Eigenbrod, F, Heinemeyer, A, Quaife, T, Roy, D, B, Gillings, S, Armsworth, P, R, Gaston, K, J, Reconciling biodiversity and carbon conservation, *Ecology Letters*, Volume 16, issue s1, 2013.

Tiway, A, Sinnett, D, Peachey, C J, Chalabi, Z, Vardoulakis, S, Fletcher, T, Leonardi, G, Grundy, C, Azapagic, A and Hutchings, T R (2009). An integrated tool to assess the role of new planting in PM10 capture and the human health benefits: a case study in London. *Environmental Pollution* 157, 2645–2653.

Tree and Design Action Group (TDAG) 'Trees in the Townscape: A guide for Decision Makers'

Tree Health and Plant Biosecurity Expert Taskforce, 2013. *Final Report*, s.l.: DEFRA.

Tubby, K V and Webber, J F (2010). Pests and diseases threatening urban trees under a changing climate. *Forestry* 83, 451-459

Ulrich, R S (1984). View through a window may influence recovery from GP practice. *Science* 224, 420-421

United Nations (1993) Earth Summit: Agenda 21- The United Nations Programme of Action from Rio. United Nations.

Wilson, P. 2018 Available at: <http://www.treeterms.co.uk/> Accessed 25/02/20

Wolf, K 1998, Urban Forest Values: Economic Benefits of Trees in Cities, University of Washington College of Forest Resources, Factsheet #29

Woodland Trust. (n.d.). <http://www.ancienttreeforum.co.uk>. Retrieved November 27, 2016, from ancienttreeforum: <http://www.ancienttreeforum.co.uk/wp-content/uploads/2015/02/ancient-tree-guide-4-definitions.pdf>

Woolley, H., Rose, S., Carmona, M. & Freedman, J., 2003. *The Value of Public Space -How high-quality parks and public spaces create economic, social and environmental value*, London: CABE Space

14. Appendixes

14.1. Action Points

Action Point	Action	Officer	Schedule
1	Obtain canopy cover information for NFDC area by i-Tree eco survey. 1.1.10 Canopy Cover	Tree officers	2022-2024
2	NFDC will impose planning conditions on all developments within the New Forest District area to ensure high quality tree planting methods are used, using trees sustainably grown in the UK. Reference to be made to NFDC corporate tree planting specification 1.1.1 Tree Planting	Planning Officers	2020-onwards
3	Increase canopy cover on NFDC land. Obtain canopy cover information by I-Tree eco survey to enable future monitoring of tree cover and inform areas to undertake comprehensive planting schemes. Aim to undertake schemes on 10 separate sites. 1.1.1 Tree Planting	Tree officers	2022-24
4	Explore alternative sources of funding for planting and woodland management. 1.1.1 Tree Planting		
5	Establish a procedure to ensure that trees are considered when sites are acquired or sold off by the Council.	Tree officers	2014/15

6	Undertake woodland plans for principle woodland sites to enable grant funding to be applied for. 1.1.6 Woodland Management	Tree officers	2014-17
7	Take steps to encourage community involvement in tree and woodland management. 1.1.6 Woodland Management	Tree officers / Housing officers	2014-16 ongoing
8	Address fly tipping on woodland and open space sites. 1.1.6 Woodland Management	Tree Officers / Streetscene / Open spaces	2014/15 ongoing
9	Identify veteran trees on Council land and prepare individual management plans where appropriate. See Page 42 20. Woodland Management and Woodland Biodiversity	Tree officers	2016/17

14.2. Tree Risk Management Strategy 2020-25

14.3. Ash dieback Action Plan

14.4. NFDC Tree Planting Specification

14.5. Planning Condition