Reading Borough Council
Tree Strategy, March 2021

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Reading Borough Council
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Front cover: Forbury Gardens (Anna Iwaschkin)

EXECUTIVE SUMMARY

Context

i. It is now 10 years since Reading's last Tree Strategy was produced and adopted. The need for review is made more urgent by the Council's declaration of a Climate Emergency in February 2019, and the production of a Climate Emergency Strategy 2020-2025 to respond to this. This new Tree Strategy is intended to be an adaptable document that can be reviewed as and when required.

ii. The benefits of trees are many. Environmental benefits include absorbing carbon dioxide, improving air quality, reducing flooding, shading and sheltering to reduce urban temperatures, providing and improving wildlife habitats and a movement network and reducing noise. There are also aesthetic benefits that make our environment more enjoyable, as trees contribute to local character, make up a valued part of the historic environment, enhance privacy and add greenery and colour. These factors all help to contribute to better mental and physical health.

iii. Trees have historically been an intrinsic part of Reading, with street tree planting and tree planting within open spaces a particular feature of the Victorian and Edwardian expansion of the town. Reading has a significant tree stock, in particular in its parks, school grounds, housing areas and along its highways. There is an extensive network of woodlands within the Borough, often on elevated ridgelines, and trees are also a key element of the perimeters of the flood meadows of the Thames and Kennet, as well as the railway corridors.

iv. The Council itself owns and manages approximately 12,500 specimen trees in addition to woodlands and groups of trees, and therefore has a major role in implementing the strategy as a landowner. Since 2010, around 2,000 trees have been planted by the land-owning departments of the Council. Overall, the tree canopy cover of Reading is 18% of the Borough's area.

v. There have been a number of changes since 2010 which the new Tree Strategy has to take into account. New national planning policy and environmental legislation affect matters around planning and management of trees. At a local level, the Reading 2050 vision sees Reading as a 'City of Rivers and Parks', whilst the new Local Plan strengthens planning policy around trees.

Objectives

vi. The 2020 Tree Strategy has the following objectives

1. RBC Tree Stock – protect, retain, manage and plant trees to ensure an increased canopy cover of healthy trees resistant to pest & diseases and climate change and to reduce air pollution.
2. Climate adaptation – increase the diversity of the tree stock (family, genus and species) to provide resistance to climate change; plant large canopy species

wherever feasible; maintain and keep trees healthy in order that they can achieve their full potential thus ensuring that Reading's Urban Forest is resilient to the impacts of climate change and provides the maximum role in mitigating its effects.

3. Tree planting – plant at least 3,000 'standard' trees by 2030 on Council land.
4. Canopy cover – increase overall canopy cover to 25% by 2030; ensure that all wards have at least 12% canopy cover by 2030; and target priority areas for tree planting based on canopy cover, air pollution, treed corridors, green links, areas of high landscape value and ensure RBC and planting on development sites considers these.
5. Protection of private trees – the Local Planning Authority will continue to use its powers under the Town & Country Planning Act 1990 to make Tree Preservation Orders and to retain & protect trees on development sites in line with good arboricultural practice
6. RBC will engage with partners, public and landowners and work with key partner volunteer groups to raise awareness of the Tree Strategy aims and good arboricultural management practices
7. Improve biodiversity across the Borough by; selecting trees that are either native or of wildlife value, particularly in semi-natural areas; by ensuring that tree planting does not compromise or adversely affect other habitats; by use of natural regeneration where practicable; and by protecting ancient woodlands and ancient/veteran trees.
8. Identify all areas suitable for street tree and other planting on Council land – initial study to be completed by 2022, with continued updates.
9. Funding – continue to secure funding for tree planting through government and other funding streams and partners.
10. Biosecurity – continually review RBC purchasing and working practices to ensure RBC are working to good arboricultural practice to minimise the chance of introducing and/or spreading pests, diseases or invasive species within the Borough.
11. Trees & Development – tree retention, protection and planting within development sites will be in accordance with the aims of the Tree Strategy and Local Plan policies.
12. Monitor progress – record and report net tree gain on an annual basis and reassess canopy cover in 2030.

Our aims and how we're going to achieve them

vii. Section 3 sets out detailed measures for achieving the objectives, and leads to an Action Plan (Appendix 1) that states how the objective will be achieved, by whom, over what timescale, and how it will be resourced.

viii. Information is included on how the Council will manage its own tree stock. This covers the various functions of the Council which have some responsibility for land on which trees stand.

ix. The strategy aims to increase canopy cover. On its own land, the Council will plant at least three trees for every non-woodland tree felled. Guidance is included on new tree planting, and the emphasis will be on tree planting to achieve a more diverse tree stock. Priority areas for planting will be around the treed corridors shown on the map in Appendix 3. The Council tree planting aims depend on increases in funding.

x. The strategy sets out how trees will contribute to mitigating and adapting to the effects of climate change in Reading. This includes an emphasis on diversity and larger canopies. The contribution trees can make to improving air quality is also a key part of the strategy.

xii. Strong and effective protection of important trees, including ancient woodlands and ancient and veteran trees, will continue through the Council's tree protection powers. The Council will practice good biosecurity methods in its own activities to prevent the spread of pests and disease and will work to create a more resistant tree population. There will be a strong cross-relationship with the new Biodiversity Action Plan.

xiii. Improved monitoring and reporting of gains and losses of trees, both in Council ownership and on development sites, will be required to ensure that the strategy is effective.

CONTENTS

PART ONE - IMPORTANCE OF TREES TO READING - CHANGES SINCE 2010 - LINKS TO OTHER COUNCIL STRATEGIES

1.1 The benefits of trees are well documented. They contribute many social, environmental, economic and health benefits to an urban Borough such as Reading. Ensuring appropriate retention, maintenance and planting of trees within the Borough is vital to provide these benefits, enable climate change proofing of the Borough, to meet the Council's environmental aims and to make the town a desirable place to live and work.

1.2 In 2010, Reading Borough Council formally adopted its first Tree Strategy. It set out a shared vision and strategy for both private and public sector trees in Reading and set out a strategic approach towards their future management. It is appropriate 10 years on to review the previous aims, reflect on the achievements met and set out our aims for both the short and long term.

1.3 Climate change is one of the greatest challenges we face, the Council's climate emergency declaration in 2019 committed us to work towards a carbon neutral Reading by 2030. Tree retention and planting will aid in meeting that challenge. Over the last 10 years, acceptance of the importance of tree retention and planting, for the multiple benefits they provide, has increased, particularly as a result of the extremes of weather that climate change brings and the continued loss of biodiversity that occurs. A Climate Emergency Strategy has been produced and this new Tree Strategy complements it, addressing some of its actions. The benefits of trees are much wider, however, and include contribution to our town's character and heritage, improving air quality and providing a habitat for wildlife.

1.4 This revised Tree Strategy will be an adaptable one; being updated as and when required to remain current, in line with changes to national and local policy, procedures, best practice and Government guidance.

Figure 1: Limes at Victoria Recreation Ground (Anna Iwaschkin)

Trees in Reading

1.5 Reading has Saxon origins and rose to particular prominence as a medieval religious centre with the foundation of the Abbey. There was a significant expansion in the 19th century supporting major employers, such as Huntley and Palmers, Sutton Seeds, various brick and tile works and Simonds Brewery. To support these industries, rapid residential development took place. This phase of the town's evolution created its network of characteristic street tree planting. London Road, Caversham Road, Kendrick Road, Coley Avenue and numerous side roads were planted with stately Plane trees in the form of avenues or were lined with Lime trees. Numerous parks, recreation grounds and open spaces were laid out at this time, all using trees as an important component of their design and legacy. Some other open spaces derived from former estates outside the urban area, such as Caversham Park and Whiteknights, where trees had long held an important role. Today we are fortunate to benefit from the significant tree planting that took place in the Victorian and Edwardian eras and, to a lesser extent, in later periods.

1.6 The Council owns (freehold) approximately 25% of the land within the Reading Borough area. Within that land, the Council is responsible for a significant number of trees and woodlands growing in a wide range of locations e.g. in parks and woodlands, schools, care homes, housing areas, along highways. Reading contains numerous parks and other open spaces. Parks such as Prospect, Palmer, and the Thameside Promenade provide the opportunity for people to experience trees of various forms, types and ages in a relatively dense urban environment. In addition there are prestigious open spaces of notable character in the centre of Reading such as St Mary's Churchyard (Reading Minster), The Forbury Gardens and St Laurence's Churchyard, or others such as at Caversham Court just outside the town centre. Some of these areas are designated historic parks and gardens, whilst others are undesignated but still an important part of the historic character of Reading, and the trees form a vital element of the character.

1.7 There are extensive networks of woodlands and groups of trees across the Borough in both private and public ownership. These are remnants of what are likely to have been larger wooded areas, that historically provided food and fuel. They form significant and distinctive landscape features and help to define the landscape character of Reading. The concentration of woodland and other trees on higher ground defines the very visible wooded ridges that are an acknowledged feature of the skyline and character of Reading, which are designated as 'Major Landscape Features' in our Local Plan.

Figure 2: Beech trees at McIlroy Park (Anna Iwaschkin)

1.8 Other landmark trees coincide with the generally older housing stock, particularly within the 15 conservation areas in the Borough, where they contribute strongly to their character and appearance, as well as their setting and views in and out of the areas. The Conservation Area Appraisals for these 15 areas includes reference to important open spaces and trees where these form an integral element of the value of the area.

1.9 Street trees have an important role in helping to define the character of many areas; enhancing the street scene and softening the hard urban environment as well as providing a barrier to noise and pollution.

1.10 Trees also form significant parts of the landscape along the Thames, Kennet and Holybrook rivers, alongside the railways, and on the various arterial roads running into and out of the centre of Reading – these are the 'treed corridors'.

1.11 The benefits of trees are many. The environmental benefits include:

- They absorb carbon dioxide, the major climate change gas, reducing levels of this gas in the atmosphere;
- Tree canopies intercept rain, delaying rainfall onto hard surfaces and into the mains drainage systems, thereby reducing surface water runoff and flooding caused by heavy rain (important to help mitigate the impacts of increases storms as a result of climate change);
- They provide shelter and shading from wind, rain and sun and reduce urban temperatures as well as the temperatures of watercourses (especially important with regard to climate change adaptation);

- They improve air quality by removing gaseous air pollutants, such as ozone and nitrous oxides, and particulate matter such as soot and smoke and they release oxygen;
- They reduce noise, particularly noise from traffic;
- They provide habitat for wildlife and are a vital component of the town's green infrastructure with street and urban trees providing wildlife corridors and stepping stones across the urban area.

1.12 In addition, there are significant aesthetic benefits, including

- They are a significant feature of the character of many streets, reinforcing their scale and proportion and enhancing their attractiveness;
- Developments/housing with an established tree stock can result in higher property prices;
- They screen undesirable features, enhance privacy and add greenery and colour;
- They are of historical importance, providing link to Reading's past and to mark wider historical events, and are key features of heritage assets such historic parks and gardens and conservation areas; and
- They can reduce certain types of anti-social behaviour such as graffiti, in some circumstances.

1.13 As a result of all of the factors above, trees and provision of green spaces have been shown to contribute to better mental and physical health.

Figure 3: Verdun Oak, Forbury Gardens (Geoff Sawers)

Since the 2010 Strategy …

1.14 As was detailed in the 2010 Strategy, in October 2008, a Council motion was agreed as follows:

> *"This Council has always recognised the significant and positive contribution that trees can make to the quality of the urban environment. In particular, it notes that:*
>
> *1. Trees can greatly enhance the visual amenity of our environment, are vital for people's sense of well-being and contribute to everyone's quality of life.*
>
> *2. Trees are essential in maintaining and enhancing the Borough's biodiversity.*
>
> *3. Trees play a crucial role in reducing urban temperatures, mitigating the effects of climate change and facilitating better urban drainage."*

1.15 In the ten years since the adoption of the Tree Strategy, a number of relevant Council plans, policies and procedures have changed requiring the Tree Strategy to be updated to reflect these.

National policy

NPPF

1.16 Chapter 15 'Conserving and enhancing the natural environment' of the National Planning Policy Framework 2019 (NPPF) states that:

> *"Planning policies and decisions should contribute to and enhance the natural and local environment by:*
>
> ...
>
> *b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
>
> ..."

1.17 It goes on to state that when determining planning applications, local planning authorities should apply a number of stated principles, including:

> *"development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and"*

Town and Country Planning Act 1990

1.18 Under Part VIII (Special Controls), Chapter I Trees, Section 197 of The Town and Country Act 1990 states (no change since 2010):

"Planning permission to include appropriate provision for preservation and planting of trees. It shall be the duty of the local planning authority—

(a) to ensure, whenever it is appropriate, that in granting planning permission for any development adequate provision is made, by the imposition of conditions, for the preservation or planting of trees; and

(b) to make such orders under section 198 as appear to the authority to be necessary in connection with the grant of such permission, whether for giving effect to such conditions or otherwise.

1.19 Section 198 relates to the serving of Tree Preservation Orders, which the Council has and continues to do when appropriate. Section 211 relates to trees within Conservation Areas and requires notice (a Section 211 Notice) to be submitted to the local planning authority 6 weeks prior to carrying out tree works (with a few exceptions). The Council will continue to serve Tree Preservation Orders where trees of sufficient merit within Conservation Areas are proposed for felling.

Environment Bill 2019/2020

1.20 This Bill is one of the Government's key vehicles for delivering its vision set out in the 25 Year Environment Plan. The Bill had its first reading on 15 October 2019 and second reading by MPs on 28 October 2019 unopposed but with MPs acknowledging that weaknesses in the Bill require improvements. It was re-introduced to parliament following a general election on 30 January 2020 and had its second reading on 26 February. It was considered at a Public Bill Committee in November 2020.

1.21 Included within the Bill are measures to 'improve the air we breathe' and 'restore and enhance nature and green spaces', both of which tree planting can contribute to.

1.22 Within this latter measure, The Environment Bill introduces a 'Duty to Consult' which will give the public the opportunity to understand why a street tree is being felled and express any concerns regarding this.

1.23 If the Bill becomes law, the Council will implement required procedures. The Council is in the Spring of 2020 establishing a Tree Forum that will consist of Third Sector volunteers and organisations to heed the 'Duty to Consult' as above as a recognised element of joint working with the community.

Reading Borough Council - Corporate

1.24 The Corporate Plan 2018-2021 (refreshed in spring 2019) sets out in Chapter 13 the Council's priority to: *'Keeping Reading's environment clean, green and safe'* with a vision for the Borough to be *'clean, green and safe'*.

1.25 Tree retention and planting will contribute towards a number of the projects identified within the Plan such as improving air quality, working towards a carbon zero town and investments in our parks.

1.26 In 2019, the Council declared a Climate Emergency and pledged to work towards making Reading a carbon neutral town by 2030. The Council is also working alongside the Reading Climate Change Partnership in coordinating the development of the new Reading Climate Emergency Strategy 2020-2025, which was launched in November 2020. Retention and planting of trees will be a vital part of dealing with climate change by, e.g. rainfall interception, cooling the local environment, proving shade and CO_2 sequestration by trees to reduce CO_2 levels.

The Reading 2050 Vision

1.27 Following on from Reading's 2020 Vision (developed in the mid 1990s), through the Reading 2050 Vision, project partners Barton Willmore, Reading UK and the University of Reading aim to excite and engage with people across Reading: local communities, businesses, education providers and public sector, to support Reading's economic growth and evolution as a smart and sustainable city.

1.28 The Vision celebrates the achievements of Reading as a place, including:

- 408HA of open space throughout the town, including woodlands, wetlands, parks, play areas, pitches and allotments which includes 5 Historic Parks and Gardens
- 32% Carbon emissions reduction Reading-wide since 2005
- 1.29 The Vision acknowledges Reading as a 'City of Rivers and Parks' and suggests ways of enhancing this, including:
- Develop greater connectivity through our green spaces and waterways via a considered strategy which includes greening the IDR to act as a lung for the city, and embedding the 'internet of things' technology within it.
- Engage with leading built environment industry specialists to encourage the considered provision of open spaces, bodies of water and vegetation in our urban spaces, inside and on buildings, in order to minimise heating and cooling requirements and pre-empt climate change impacts.
- Enhance and encourage understanding of the ecology and biodiversity of our open space for informal leisure activity and educations purposes.

1.30 The objectives of the Tree Strategy can assist in enabling these visions.

Planning

1.31 The Council's new Local Plan was adopted in November 2019. The Local Plan provides planning policies detailing expectations for developments within the Borough relating to trees, landscaping and biodiversity.

1.32 Policy EN14 (Trees, Hedges and Woodlands) states that: *"Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading's vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced. New development shall make provision for tree retention and planting within the application site,*

particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained."

1.33 Through the use of both national and local policies the Council will continue to ensure the appropriate retention and protection of trees within development proposals and secure landscaping within new sites in order to contribute to our corporate aims and the aims of this Tree Strategy, although this needs to be supported by resources for monitoring and enforcement. It is an expectation that all development has due regard to tree related planning policies and to the aims of this Strategy.

1.34 There are 1500+ Tree Preservation Orders across the Borough and 15 designated Conservation Areas. Protection of significant trees within Conservation Areas will be expected in accordance with EN1: Protection and Enhancement of the Historic Environment. The Council has and will continue to retain, protect and seek replanting of trees through its powers under The Town and Country Planning Act 1990 and The Town and Country Planning (Tree Preservation) (England) Regulations 2012. There are also five designated historic parks and gardens (Caversham Court, Caversham Park, Forbury Gardens, Prospect Park, Reading Cemetery) all of which have very important trees and/or woodlands present, whilst other undesignated parks and open spaces also have historic importance and are characterised by important trees. Four out of the five historic parks are within Council ownership, and the Council will continue to protect and manage the trees within them in line with their importance. Caversham Park is in private ownership, and policy CA2 of the Local Plan identifies the need to protect important trees on this site.

1.35 In addition, Policy EN12 (Biodiversity and the Green Network) introduces a series of 'green links' which link together areas of biodiversity significance and potential significance, many of which consist of groups or corridors of trees, whilst EN13 identifies the important Major Landscape Features, three of which in particular (West Reading wooded ridgeline, East Reading wooded ridgeline and the North Reading dry valleys and Chilterns escarpment) are characterised by their tree cover.

1.36 'Protection' of hedges falls under the Hedgerow Regulations 1997, which is administered by the Planning Section. If hedges meeting set criteria are proposed for removal, a Hedgerow Removal Notice must be served to the Council. The Council then has 42 days to determine whether the hedge is an 'important' hedge, as defined by the Regulations and if so, whether they want to serve a Hedgerow Retention Notice, taking into account the exemptions that apply. A Hedgerow Retention Notice is permanent but can be withdrawn by the Council at any point. The Council cannot refuse permission to allow the hedgerow to be removed other

than by serving a Notice. If a hedge is removed in contravention of the regulations the owner can face a fine of up to £1000 in a Magistrates' Court, an unlimited fine in the Crown Court and a requirement to replace the hedge. 'Important hedges' do not include any within or bordering a domestic garden, hence those fitting the criteria are limited within Reading Borough.

RBC tree management

Ownership, management and composition of the Council's tree stock

1.37 At present, the Council owns and manages approximately 12,500 specimen trees in addition to woodlands and groups of trees. There are 12,987 features on the database, of which 491 are groups of trees. The breakdown by land-owning department is shown in Table 1.

Table 1: Number of trees (or groups of trees) in public ownership by land-owning department

Highways	Parks	Cemeteries	Housing communal areas	Education excl. schools	Other
5,209	4,768	398	1,927	204	481

1.38 Since the adoption of the first Tree Strategy in 2010, the Council has undertaken a review of its tree stock in line with good tree management practice and has introduced a new tree management system in order proactively to manage its trees in line with tree health and personal Health and Safety requirements. Both case law and increased incidents of extreme weather in the last decade have highlighted the importance of the adoption of a tree management system.

1.39 The new management software has enabled a Borough-wide tree survey allowing the Council to determine the condition, age, and make-up of its tree stock in order to assist in prioritising and devising tree planting plans on an annual basis.

1.40 Trees are surveyed on a three- to five-year rolling programme, with trees in higher target areas on a more frequent inspection schedule. Trees with defects are monitored more regularly.

1.41 The database also allows the Council to manage trees by their family group and genus or species. A full list of trees by family and genus/species is in Appendix 4. The ten most common families and associated genus/species are in Table 2 below, and largely reflect historic – mainly Victorian – planting preferences.

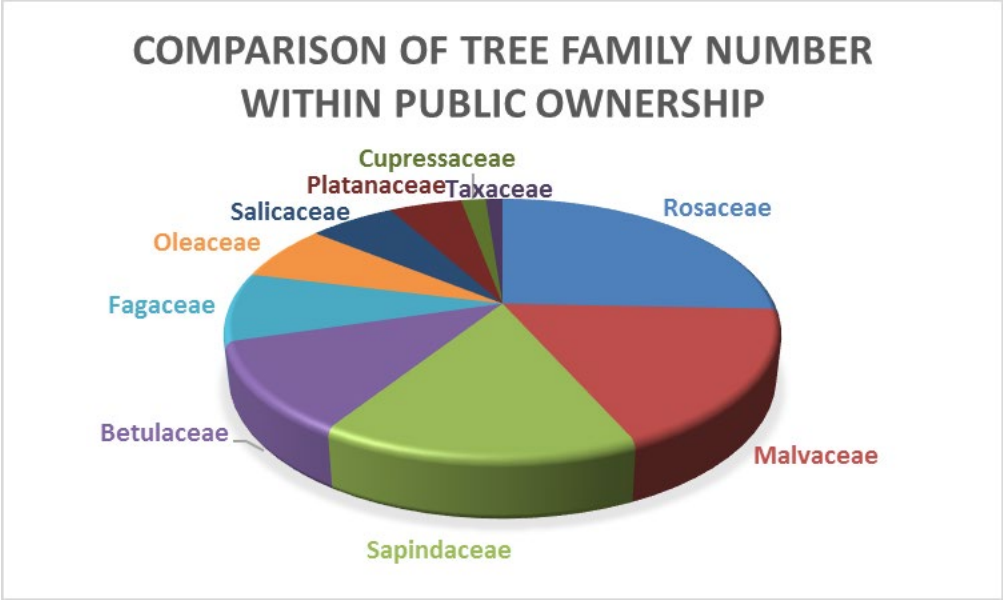
Table 2: Ten most common genera/species of trees in public ownership

Family	Genus/species	Common name	Numbers
Malvaceae	Tilia sp.	Lime	1997
Rosaceae	Prunus sp.	Cherry	1441
Fagaceae	Quercus sp.	Oak	882
Oleaceae	Fraxinus	Ash	789
Sapindaceae	Acer pseudoplatanus	Sycamore	665
Betulaceae	Betula	Birch	591
Platanaceae	Platanus	Plane	576
Sapindaceae	Acer platanoides	Norway maple	568
Rosaceae	Sorbus sp.	Whitebeam, rowan and service tree	493
Rosaceae	Malus	Apple	410

Table 3: Ten most common tree families in public ownership

Family	Common name	Number
Rosaceae	Rose	2898
Malvaceae	Mallow	1997
Sapindaceae	Soapberry	1770
Betulaceae	Birch	1273
Fagaceae	Oak or beech	968
Oleaceae	Olive	789
Salicaceae	Willow	687
Platanaceae	Plane	576
Cupressaceae	Cypress	196
Taxaceae	Yew	133

Figure 4: Comparison of tree family number within public ownership



1.42 In addition to the routine maintenance of individual trees, the Council has adopted, and implemented, woodland management plans for a number of its woodlands, with help from the Forestry Commission and from voluntary and community organisations such as The Conservation Volunteers (TCV), Nature Nurture and Econet.

1.43 There are individual management plans for Bugs Bottom and Clayfield Copse, as well as for large sites with areas of woodland, such as Prospect Park. TCV has ongoing projects at Blundells Copse, Bugs Bottom and Clayfield Copse and Blackhouse Woods, as well as at Lousehill Copse.

Figure 5: Lousehill Copse (Anna Iwaschkin)

Tree felling

1.44 Trees are monitored and managed with a view to retaining them for as long as possible without compromising public safety. Management for retention includes canopy reduction and pollarding/re-pollarding. In some cases, valuable trees, e.g. ancient and veteran trees, are fenced in order to prevent public access where this may be dangerous, and/or ensure the continued health of the tree.

1.45 Sometimes the risk becomes too great to retain a tree, and the decision is taken to fell it. Felling is a last resort after exploring other ways of addressing the risk. Recording of felling was started in 2014. Table 4 below shows the numbers of trees felled in the past six years, a total of 309, or an average of 52 trees annually.

Table 4: Tree felling in Reading Borough, 2014-2019

2014	2015	2016	2017	2018	2019
47	57	68	44	24	69

1.46 Where trees are felled, the locations are recorded for consideration of replacement tree planting in the following season.

Tree planting

1.47 The adoption of the 2010 Strategy resulted in the allocation of an annual tree planting budget to cover all planting costs (trees, labour and establishment maintenance). This has enabled the Borough to carry out comprehensive planting over the last 10 years.

1.48 The capital budget is supplemented by allocations from Housing Department budgets, Section 106 agreements, and schools' budgets. This has enabled the planting of an average of 200 trees annually for the past decade (excluding woodland planting). On average, therefore, the Council is planting four times as many trees as it removes. Where trees are felled on the public highway, tree pits are left open, to allow for replacement planting.

1.49 The numbers of trees planted over the past decade by land-owning department is in Table 5 below. The effects of a reduced capital budget for tree planting in 2018-2020 can be seen.

Table 5: Tree planting in Reading Borough by land-owning department

Year	Highways	Housing	Parks	Schools	Total
2010/11	56	86	152	Not known	294
2011/12	160	101	69	Not known	330
2012/13	Not known	124	24	25	173
2013/14	130	62	9	32	233
2014/15	64	72	54	Not known	190

Year	Highways	Housing	Parks	Schools	Total
2015/16	94	10	38	3	145
2016/17	95	14	32	20	161
2017/18	156	40	46	Not known	242
2018/19	55	33	20	19	127
2019/20	TBC	TBC	TBC	TBC	162 (to date)
TOTAL	**810**	**542**	**444**	**99**	**2,057**

1.50 The allocation of capital for tree planting is determined by the priorities of the 2010 Tree Strategy, with priority given to areas with low canopy cover and to replacement of trees that need to be removed for Health & Safety reasons. In addition, requests from members of the public, communicated directly, via councillors or via the Reading Tree Wardens Network (RTWN) are given priority when there is funding available.

1.51 In addition to standard tree planting, substantial planting of whips has been undertaken across the Borough, which includes significant work with volunteer groups, and has taken place in areas such as Bugs Bottom and Palmer Park. There will be improved recording and mapping of the location of this planting to ensure their long-term success.

1.52 Alongside adoption of the 2010 Strategy, the Reading Tree Warden Network (RTWN) was set-up. The RTWN has, over the last 10 years, provided invaluable help in securing funds for tree planting and carrying out tree planting projects alongside the Council. These projects have included:

- Significant street tree planting across the Borough, including the inaugural planting of Plane trees in Richfield Avenue
- Avenue planting in various parks/open spaces, e.g. Prospect Park and Long Barn Lane
- Tree planting within St Mary's Churchyard (alongside the Diocese)
- Tree planting on the Reading Festival site
- Tree planting on Hartland Road
- Tree planting on Brunel Road
- Tree planting within six Whitley schools.

The RTWN also carries out maintenance jobs on trees across the Borough e.g. watering in drought periods, rescuing trees from canine damage as well as reporting dangerous tree situations. They also look out for pests and other threats to trees.

1.54 Since 2010, the planting of community orchards at locations including Prospect Park and Waterloo Meadows has also taken place under a Transition Town Reading project.

1.55 In addition, the adoption and implementation of the woodland management plans (see paragraph 1.42), with help from the Forestry Commission and from voluntary and community organisations, has included tree planting with the Borough's woodlands.

1.56 Finally, as part of its management strategy, suitable tree planting locations are noted whilst trees are being surveyed in order to build up a 'bank' of tree planting locations for consideration each planting season. These locations will be shared with RTWN and other groups that we have relationships with in planting trees throughout the town.

Figure 6: RTWN planting Oaks in Hartland Road (Anna Iwaschkin)

Transport

1.57 Transport for London's (TfL) 'Healthy Streets' initiative aims to introduce more trees and greenery to make streets more attractive, more biodiverse, to tackle air pollution, to provide resilience to climate change (extreme weather) and to provide shade and shelter. RBC is proposing to integrate these principles as a core element of our new transport strategy for the period 2020-36 (subject to consultation), to help achieve a shift towards sustainable transport, walking and cycling by creating more attractive streets within Reading.

Figure 7: Plane trees in Kendrick Road (Nicola Tipler)

1.58 As part of the assessment of major infrastructure projects within the Borough, the inclusion of trees and other planting will be factored in alongside the considerable benefits of promoting a shift from private car use to sustainable transport, walking and cycling. Previous major projects such as Junction 11, Reading Station interchanges and the A33 MRT scheme have included tree planting which was vital to mitigate tree loss and soften an inevitable increase of hard landscape.

1.59 At full Council on 22 May 2019 a new interest group 'Cleaner Air and Safer Transport Forum (Transport Users Forum)' was formed in response to the Council's declaration of a climate emergency. Several of the duties of this forum link to the aims of the Tree Strategy, namely:

- To propose measures to improve air quality across the Borough;
- To identify and share best practice in relation to clean and green 'healthy streets' initiatives which promote sustainability, healthy living, energy efficiency, sustainable transport and carbon reduction.

1.60 The transport network includes the cycle and walking network alongside which tree planting will be incorporated where feasible. It also includes the railway network, which is managed by Network Rail. Appendix 7 contains detail on Network Rail's vegetation management.

Canopy cover

1.61 The 2010 Tree Strategy included aims around increasing canopy cover. The overview map identified areas of '10% or less canopy cover' and these became priority areas for tree retention and planting. The overall aim was a 10% increase in canopy cover by 2030.

1.62 Unfortunately, the 2010 Strategy lacked a baseline figure for the Borough's canopy cover, so it is impossible to categorically confirm whether the aims set out in 2010 are likely to have been achieved. Around 2,000 trees have been planted by the Council since 2010, and this is certainly more than a 10% increase in the number of 'arboricultural features' that our tree management software records, which is currently almost 13,000. However, this includes woodlands and copses as individual features. Therefore, Council planting of 2,000 trees, combined with administration of Tree Protection Orders (TPOs) and new planting on development sites, whilst certainly having extended the canopy cover by 2010, is unlikely to be on track for a 10% increase

1.63 As part of the preparation of the new strategy, i-Tree Canopy has been used to identify the current canopy cover of the Borough in total and by ward and therefore give us the baseline figure that the 2010 Strategy lacked. This has enabled us to have a clear idea of the current areas where canopy cover is low, i.e. where tree retention and planting should be focused, and provides information for future comparison, as well as to assess the cover within individual wards. The results are set out in part 3 of this document, along with this Strategy's aims for expanding cover. Canopy cover will be assessed again in 2030, which is considered to be an appropriate minimum period for any comparison to be meaningful.

1.64 The Council will assess the Borough's canopy / trees further for the benefits they provide using i-Tree Eco within the next 5 years and then remeasure whenever appropriate. This assessment is based upon the canopy cover, and should be tied to the date of the canopy cover objectives in section 2. i-Tree Eco is currently designed to provide estimates of:

- Urban forest structure - Species composition, number of trees, tree density, tree health, etc.
- Pollution reduction - Hourly amount of pollution removed by the urban forest, and associated percent air quality improvement throughout a year. Pollution removal is calculated for ozone, sulphur dioxide, nitrogen dioxide, carbon monoxide and particulate matter 2.5 (<2.5 microns).

- Public health impacts – Health incidence reduction and economic benefit based on the effect of trees on air quality improvement for the United States only.
- Carbon - Total carbon stored and net carbon annually sequestered by the urban forest.
- Energy Effects - Effects of trees on building energy use and consequent effects on carbon dioxide emissions from power plants.
- Avoided runoff - Yearly avoided runoff attributed to trees summarized by tree species or strata.
- Forecasting - Models tree and forest growth over time; considers factors like mortality rates, tree planting inputs, pest and disease impacts and storm effects. Some ecosystem services including carbon and pollution benefits are also forecasted.
- Bio-emissions - Hourly urban forest volatile organic compound emissions and the relative impact of tree species on net ozone and carbon monoxide formation throughout the year.
- Values - Compensatory value of the forest, as well as the estimated economic value of ecosystem services.
- Potential pest impacts - based on host susceptibility, pest/disease range and tree structural value.

Treed corridors

1.65 The Reading Tree Strategy – Overview Map incorporated within the 2010 Tree Strategy identified 'treed corridors' across the Borough, consisting of railways, roads and watercourses, which were and are a priority for tree retention and planting to provide green corridors into, out of and through the town. These remain within this new Strategy and are cross referenced with priority routes for tree planting to address high air pollution areas within the Borough.

1.66 It would also be appropriate for Green Links, as identified in the Local Plan, to be identified as 'treed corridors' within this Strategy in order to help link and strengthen these.

1.67 The Council will also explore opportunities to 'green' the cycle and walking network through tree planting to make these more pleasant for users by, for example, providing shade in the summer and the filtering of air pollution and particulates.

Climate change and disease proofing

1.68 It is becoming increasing important for trees to form an integral part of any town for the multiple benefits they provide. In order to climate change proof our town, we need to assess the species make-up of our tree stock and work towards a

greater diversity of tree species as the effects of climate change are not clear in terms of species survival.

1.69 In addition, pests and disease introductions as a result of global movement of goods have resulted in a significant detrimental impact on a number of species within the UK. An appropriate diversity of tree species will therefore also help to ensure that canopy cover is better protected should a pest or disease affect a particular genus or species.

Figure 8: Judas tree, St Lawrence's churchyard (Anna Iwaschkin)

Links to other Council strategies

1.70 It is important that the Tree Strategy compliments other Strategies across the Council and vice versa:

- Biodiversity Action Plan (BAP)
- Draft Reading Transport Strategy 2036
- Reading Climate Emergency Strategy 2020-2025
- Open Spaces Strategy
- Reading Borough Local Plan
- Reading Borough Council Corporate Plan
- Highway Asset Management Policy
- Air Quality Action Plan
- Reading 2050 Vision
- Woodland management plans
- Conservation area appraisals.

PART TWO—OBJECTIVES

OBJECTIVE 1 RBC Tree Stock – protect, retain, manage and plant trees to ensure an increased canopy cover of healthy trees resistant to pest & diseases and climate change and to reduce air pollution.

OBJECTIVE 2 Climate adaptation – increase the diversity of the tree stock (family, genus and species) to provide resistance to climate change; plant large canopy species wherever feasible; maintain and keep trees healthy in order that they can achieve their full potential thus ensuring that Reading's Urban Forest is resilient to the impacts of climate change and provides the maximum role in mitigating its effects.

OBJECTIVE 3 Tree planting—plant at least 3,000 'standard' trees* by 2030 on Council land.

OBJECTIVE 4 Canopy cover – increase overall canopy cover to 25% by 2030; ensure that all wards have at least 12% canopy cover by 2030; and target priority areas for tree planting based on canopy cover, air pollution, treed corridors, green links, areas of high landscape value and ensure RBC and planting on development sites considers these.

OBJECTIVE 5 Protection of private trees – the Local Planning Authority will continue to use its powers under the Town & Country Planning Act 1990 to make Tree Preservation Orders and to retain & protect trees on development sites in line with good arboricultural practice.

OBJECTIVE 6 RBC will engage with partners, public and landowners and work with key partner volunteer groups to raise awareness of the Tree Strategy aims and good arboricultural management practices.

OBJECTIVE 7 Improve biodiversity across the Borough by; selecting trees that are either native or of wildlife value, particularly in semi-natural areas; by ensuring that tree planting does not compromise or adversely affect other habitats; by use of natural regeneration where practicable; and by protecting ancient woodlands and ancient/veteran trees.

OBJECTIVE 8 Identify all areas suitable for street tree and other planting on Council land – initial study to be completed by 2022, with continued updates.

OBJECTIVE 9 Funding – continue to secure funding for tree planting and maintenance through government and other funding streams and partners.

OBJECTIVE 10 Biosecurity – continually review RBC purchasing and working practices to ensure RBC are working to good arboricultural practice to minimise the chance of introducing and/or spreading pests, diseases or invasive species within the Borough.

OBJECTIVE 11 Trees & Development – tree retention, protection and planting within development sites will be in accordance with the aims of the Tree Strategy and Local Plan policies.

OBJECTIVE 12 Monitor progress – record and report net tree gain on an annual basis and reassess canopy cover in 2030.

PART THREE - OUR AIMS AND HOW WE'RE GOING TO ACHIEVE THEM

3.1 The overall aims are to increase tree planting and canopy cover across Reading, and to effectively protect, maintain and manage the important trees that we already have. This is essential if we are to work towards a carbon neutral Reading, and to make sure that Reading can cope with the climate change which is already occurring.

3.2 These aims fit in with the overall framework and actions of the Climate Emergency Strategy, which was published in November 2020. It has six main themes of:

- Energy and Low Carbon Development
- Natural Environment and Green Spaces
- Water Supply and Flooding
- Transport and Mobility
- Health
- Resources

It also has four overarching themes of:

- Education
- Adaptation (Resilience)
- Business
- Community.

Management of the Council's tree stock

3.3 Objective 1 of the 2010 Tree Strategy was related to the management of the Council's tree stock. In order to meet with this objective, we introduced the use of ArborTrack Tree management software. All of the Councils trees, excluding schools and land within individual Housing properties, have been surveyed and added to this database to enable proactive management of the tree stock by:

- Map based system which can be updated using tablets in the field allowing easy identification of individual trees.
- Each tree has an inspection regime allocated to it depending on age and condition.
- The system produces inspection schedules.
- Details of faults and disease can be recorded and monitored at each inspection.
- Works schedules and bills of quantities can be easily produced and the works recorded in each trees record.

3.4 Other data can be obtained from ArborTrack to help the Council decide on strategic tree management, such as identification of mature trees for which succession planting needs to be planned and identification of genus and species diversity to identify which are over-represented within the Borough. The former is vital in ensuring appropriate allocation of resources for planting to provide future replacements prior to felling. The latter is necessary to ensure that our tree stock is resilient to future pest and disease outbreaks and to mitigate the impacts of climate change.

3.5 Council trees are surveyed on a 3-5 year cycle, depending on their location, although some are noted for annual inspection. Data are stored in the specialist database, ArborTrack. Urgent and priority works noted during inspection are carried out as soon as practical.

3.6 The Council undertakes tree work principally to maintain the health and safety of the trees and on land that it owns. We prune trees for health and safety reasons, to remove actionable nuisances, in order to clear the public highway, or where trees are causing foreseeable damage to property. We do not cut back branches that block light or TV signals, drop leaves, flowers or fruit, or drip honeydew on cars.

3.7 Where there is no alternative to felling, trees are removed. It is not Council policy to grind out stumps, except where trees are to be replaced, where leaving a stump will create a hazard or where stump removal is prudent due to the presence of e.g. Honey fungus.

Table 6: Tree felling on public land, excluding works undertaken as part of woodland management, in Reading Borough (as recorded)

2014	2015	2016	2017	2018	2019	Total
47	57	68	44	24	69	309

3.8 When trees are felled on the public highway, the tree pit is made safe but kept open, so that a new tree can be planted in the pit during the following planting season (or later, if the tree succumbed to a soil-borne pathogen).

3.9 Almost all tree maintenance is carried out by our in-house teams of arborists, who are fully trained in all aspects of tree work, as well as first aid and working safely on the public highway. Training is regularly refreshed when the relevant qualifications need to be refreshed under the law, or to keep arborists up to date with good practice.

3.10 The Council carries out all tree work to the current British Standards Institute's BS 3998: 2010 'Tree work – Recommendations' and all tree planting and procurement to BS 8545: 2014 'Trees: from nursery to independence in the landscape. Recommendations'. The Council observes the law in respect of bird nesting and protected species. Procedures relating to work on trees in Conservation Areas and trees subject to Tree Protection Orders are also observed. This relates both to internal Council trees and to work carried out for private and public sector clients

on a commercial basis. Whilst works to Council owned and managed trees are exempt from requiring a Section 211 Notice (Notice of works to trees in a conservation area) to be submitted, we notify the Natural Environment Team in Planning for their information.

3.11 The Council also expects third parties to observe the law in respect of interventions involving trees within the Borough. This includes application of National Joint Utilities Group (NJUG) guidelines to utilities companies. Highways inspectors have been advised to inform the Tree Officer of infringements. Violations are inspected, and penalties imposed, although the Council prefers a cooperative approach, and will work with utilities contractors to find a solution to works near trees (see later details under 'Streetworks').

3.12 Insurance claims against Council-owned trees are investigated, and trees are neither pruned nor felled where there is insufficient evidence to warrant this. Again, the Council will take a reasonable approach in situations when one of its trees is confirmed to be contributing to damage of property as part of its duty of care to neighbours.

3.13 Frequently Asked Questions (FAQs) will be published on the Council's website in order to assist with common queries. This will also include information to volunteers in regards to tree and whip planting within the Borough.

3.14 In relation to the Council's woodlands, these are managed separately. Woodland Management Plans have been produced for 90 hectares of Reading's woodlands (across 18 sites), which started in 2013. Implementation of the plans will benefit wildlife, amenity and the community - and the Forestry Commission part fund the works through the England Woodland Grant Scheme. Further information can be found at the grounds maintenance page of the Council's website.

3.15 Under Part 8 of the Anti-Social Behaviour Act 2003 (which came into effect in 2005), people whose light is affected by neighbouring evergreen trees / hedges are able to make a formal complaint to the Council if they are unable to resolve the matter themselves and if the trees/ hedges meet set criteria. The Council will aim to maintain its evergreen hedges to ensure that they do not affect the reasonable enjoyment of neighbouring gardens and/or houses in relation to light.

Figure 9: Weeping Beech, Reading Old Cemetery (Cemetery Junction) (Anna Iwaschkin)

Highways

3.16 RBC has adopted a Highways Asset Management Policy which sets out the means by which the Council will manage the creation/construction, acquisition, operation, maintenance, rehabilitation and disposal of all Council Highway Assets. This will be achieved by applying a systematic management approach to every aspect of the highway including asset planning, community expectations, risk assessment and management, asset accounting, budget allocation, the Highways Asset Management Plan (HAMP), the Highways Maintenance Manual and reporting and defining roles and responsibilities. All Highways assets, including trees will be covered by this approach with regular inspections and remedial/renewals being carried out as part of the highways condition surveys and safety inspections.

3.17 The Highways tree stock is an important asset with 5,209 street trees currently under management using the ArborTrack system, which complements the Asset Management approach to highways maintenance adopted by the Highways Department. The highway offers significant tree planting opportunities both for replacements and new planting, subject to underground and aboveground services and visibility constraints.

3.18 Under Section 154 of the Highways Act 1980, where private trees are considered a threat to users of the public highway or public footpaths, the Council can require the owner to make the tree(s) safe. If trees and hedges are causing an obstruction to the highway the Council will issue a letter requesting works to be carried out to remove the obstruction within 14 days. If the works are not carried out in this time a formal notice will be issued giving a further 14 days to have the works carried out. If the works are still not carried out after this time legal proceedings may be

instigated, which can result in the Council carrying out the work if it is not undertaken within the required period, and recovering costs.

3.19 Reading Borough Council has set the statutory heights of 5.5m for the carriageway (road) and 2.75m for the footways / footpath (pavements), i.e. tree branches must be maintained above these heights. If a tree is protected by a TPO or is situated in a Conservation Area, formal approval is not required for pruning to achieve these heights, however the Planning Section should be given prior notice of the intended works.

3.20 New tree planting locations within the highway will take into account the location of highway furniture, e.g. signs, lampposts, bus stops, and to avoid future obstructions. In addition, it will be ensured that planting on Council land and on development sites will not obstruct sight line safety. Where trees are planted on private land close to the public highway, advice will be given to landowners / developers to install suitable root barriers to prevent future root damage to pavement and road surfaces in order to avoid trip hazards occurring. Please see the section on Tree Planting.

3.21 Similarly when new highway furniture is installed it will be ensured that the locations minimise the likely need to significantly prune or fell existing highway trees during their expected lifespan.

Street works

3.22 Works within the public highway by utility companies/Statutory Undertakers has the potential to cause significant harm to important street trees and adjacent private trees where works are within the pavement. Reading Borough Council expects all companies carrying out works within the Borough to have due care for Council and private trees adjacent to or within their working area. We expect all utility companies/Statutory Undertakers to follow National Joint Utilities Group Volume 4: 'Street Works UK Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees' (NJUG 4) at a minimum and be able to fully justify any works that do not conform to this. Statutory Undertakers are encouraged to liaise with appropriate officers at the Council where conflicts with trees arise and agree a method of working prior to commencement. If Statutory Undertakers are found to have caused unnecessary harm to Council trees, we will seek monetary compensation for any subsequent tree works that are necessary and for the full cost of planting a replacement tree if required. In addition, where the condition of a street tree has deteriorated since its last inspection, checks will be made to our street works register to establish if these are the likely cause of the deterioration and if necessary the relevant utility company will be approached for compensation.

3.23 The Council has sought a written agreement from the main five Statutory Undertakers (SSE, Southern Gas Networks, Virgin Media, Thames Water and BT) confirming their commitment to carry out their works with the expected

consideration for adjacent trees. This has been in the form of a declaration which we have asked them to sign, and which we require signature of when notice is given of works close to trees. This Declaration can be found in Appendix 5.

3.24 The Council's aim is to ensure that Highways Inspectors are fully aware of NJUG 4 with sufficient understanding of the document in order to challenge the working methods of contractors working on behalf of Statutory Undertakers close to trees. It is also an aim for Highways Inspectors to be trained to have basic arboricultural knowledge relating to the law and tree hazard identification.

Waterways

3.25 Reading is fortunate to have a number of watercourses running through the town; namely the River Thames, River Kennet, Kennet & Avon Canal and the Holybrook. The watercourses benefit the town from an aesthetic point of view but also provide outdoor leisure opportunities, wildlife habitats and an alternative transport route. A mix of light and shade on river banks creates a diversity of habitats on the banks and in the channel and the shade from trees helps keep rivers cool to resist the impacts of climate change. Some trees can also help to prevent the deterioration of river banks. The Thames and the Kennet / Kennet & Avon Canal are identified as treed corridors on the map in Appendix 3, hence are priority routes for tree retention and planting. The Council will work with neighbouring authorities to ensure that the important environment of the Kennet is conserved, and that biodiversity value is enhanced where possible.

3.26 Although the embankments / towpaths are generally not public highway, Reading Borough Council, as Lead Local Flood Authority, encourages land owners to carry out tree works, but step in to clear any dangerous / damaged / overhanging vegetation that is causing a blockage or could potentially increase flood risk. The Council would look to recharge where appropriate. The Environment Agency also has powers to remove trees or carry out tree works alongside main rivers where they cause a flood risk.

3.27 The Highways department works with the Parks department to arrange and pay for tree and vegetation clearing works, for example at Holybrook adjacent to Brook Street West and along the Holybrook flood plain below Southcote / Lesford Road.

3.28 Highways annually inspect the local highway ditches and non-critical ordinary watercourses that are on our asset register and arrange for tree and vegetation works as appropriate and required.

Figure 10: Fobney Island (Anna Iwaschkin)

Education

3.29 In relation to education land, individual schools are responsible for the management of trees on their land and must allocate resources within their budget for this. Regular inspection and maintenance of trees by schools is of utmost importance given both the high target zones and that under an occupier's 'common duty of care', as defined by The Occupiers Liability Act 1957, '*an occupier must be prepared for children to be less careful than adults*'.

3.30 Within the Council Health & Safety Department's 'Property Management and Compliance Guide', schools are required to have their trees inspected by a competent person on a monthly basis to industry best practice. In addition, they are required to have a statutory inspection every 3-5 years (dependent on individual tree risk) by an approved contractor.

3.31 The Education Department within Reading Borough Council will encourage schools to carry out regular inspections to meet with their duty of care to the pupils and to comply with Health & Safety requirements.

3.32 Education officers will also encourage schools to carry out tree planting for e.g. shading and pollution filtration, providing advice on free or grant funding for tree planting, and to encourage pupils to be involved in the planting in order that future generations can appreciate the benefits tree provide. The advice will also make schools aware of other non-tree planting options available, e.g. hedges.

Housing

3.33 Housing land across the Borough contains a significant number of trees, including 1,927 within communal land. Tenancy agreements make explicit what tenants can and cannot do in respect of trees on rented properties in order to avoid unauthorised loss. To ensure no unnecessary felling of trees and to encourage appropriate management and tree planting, the Housing Department will devise a

tree policy as an addendum to the current tenancy agreements. Housing Officers will promote the objectives of the Tree Strategy to tenants.

Valuation

3.34 In order to avoid loss of good trees within the Borough, once Council land is identified for sale, the Valuation Section has and will continue to request that the trees be surveyed to identify any Health & Safety issues and assessed for a possible inclusion within a TPO. Where it is agreed that trees merit inclusion, a TPO may be served prior to the sale of the land in order that any potential purchasers are aware of tree constraints should they wish to redevelop the land where it is considered appropriate so to do.

3.35 The Valuation department will aim to avoid disposal of areas of woodland (or other high value wildlife habitat) which may result in pressure to fell or develop these areas, or where they are retained by the new owners, are less likely to be managed appropriately.

Tree planting

3.36 The overall aim is to significantly increase tree planting on Council land, to plant 3,000 trees by 2030, subject to achieving the necessary funding. Whilst other planting, e.g. of whips, and natural regeneration, does not count towards this figure, it is also an important element of objectives for extending canopy cover.

Make-up of tree stock

3.37 We have identified that the Council's tree stock currently consists of a large variety of trees, dominated by particular genera. The list of trees by family, genus and species is in the table in Appendix 4. The most common tree is Lime (Tilia), of which there are almost 2,000, followed by Cherry (Prunus) (1,441). There is also a surprisingly large variety of different conifers.

3.38 Annual tree planting over the next 30 years will focus on the families, genera and species which are underrepresented in order to create a more diverse tree stock. The reasons for this are not only aesthetic; diversity provides protection against pests and diseases spreading through particular varieties of tree, as well as supporting a greater range of fauna. The aim is to work towards a tree stock containing only 30% of any one Family, 20% of any one Genus and 10% of any one species. This will take time, as the historic, largely Victorian, planting has resulted in a predominance of certain trees. These are a relatively long-term investment, and there is no intention to fell trees to help achieve a greater mix. Replacement will therefore occur over time as trees senesce, as well as taking opportunities for mixed planting in new locations. The aim to improve diversity should not compromise the integrity of heritage assets such as historic parks and gardens or conservation areas.

3.39 The need to increase certain tree species and avoid planting of others to achieve diversity will also be considered when landscaping schemes for development sites are assessed. There will be an expectation that developers and their landscapers will have due regard to our diversity aim and that landscaping will be designed accordingly.

3.40 It is known that some species can have a negative impact on human health. Therefore, species choice, particularly within well-used areas, will need to be mindful of these effects.

3.41 The Council will undertake to produce a preferred species list by 2022 that takes account of these considerations.

Native versus non-native

3.42 The 2010 Tree Strategy suggested that native species should be planted in preference to non-native species where appropriate. Native trees generally support a greater number and diversity of wildlife than non-native trees; their association with wildlife having built up over a longer period. The incorporation of native planting will continue to be of importance to compliment the aims of the Council's Biodiversity Action Plan (BAP), and only native species will be planted in semi-natural habitats and particularly along wildlife corridors. However, the inclusion of non-native species will also be appropriate to make the Borough more resistant to climate change and the impact of pests and diseases. When selecting non-native trees, the Council will focus on those that are beneficial to wildlife in its planting schemes and will expect developers to do the same. There will be instances where exotic, ornamental planting will be justified, for example in public parks, particularly historic parks and gardens, and in and around conservation areas to maintain their original character.

3.43 Tree stock should either be UK grown or sourced from a domestic nursery that retains its trees for a minimum of one year (a full growing season) within the UK before sale to ensure plant health and non-infection by foreign pests or disease.

Where and how to plant

3.44 As mentioned above, the Council is proactively identifying locations for tree planting in order to have a bank of locations ready for each tree planting season. As well as identifying the more obvious places for planting, i.e. within soft landscape areas, the Council will also look at potential creative ways of introducing space for tree planting where it does not currently exist, e.g. build-outs in narrow streets and planters of sufficient sizes, where this does not compromise highway use by all users.

3.45 When determining the right species to plant in any location, the Council will have due regard to the 'Right tree, Right Place' principle and will add 'the right tree pit' to that.

3.46 The potential negative aspects of trees are acknowledged, such as shading solar panels and interrupting television signals, 'nuisance' from natural trees debris (e.g. leaves, branches, twigs, honeydew), roots blocking drains, direct and indirect damage to buildings and structures (walls, hard surfacing) and even temporary traffic disruptions for tree works adjacent to the highway. Tree debris is a natural consequence of having trees and cannot be eliminated, only managed appropriately to minimise hazards. New tree planting under the 'right tree, right place, right pit pits' principle aims to address the other issues to avoid future conflict thereby ensuring trees can achieve their optimum size and lifespan without the need for detrimental pruning. Developers will be expected to approach planting with these same principles in mind and private landowners will be encouraged to consider these potential conflicts over the lifespan of any tree prior to planting.

3.47 The Council recognises the importance of good quality tree pits in order for trees to not only survive, but to thrive and achieve their optimum size and life span for maximum environmental benefits. Tree pits will continue to be designed to meet the requirements of the location and species in order to provide a sufficient rooting environment and prevent damage to adjacent structures. As more creative locations for planting are identified, this will mean a greater cost per tree, hence, within the limitations of the annual budget, the number of trees in such locations will not be as great.

3.48 The Council will use the tree canopy data (including at ward level), air pollution data and identified 'green corridors' to assist in defining where tree planting should be increased. These priority locations can be seen on the maps in Appendices 2 and 3.

Figure 11: Handkerchief tree, Forbury Gardens (Anna Iwaschkin)

Maintenance

3.49 An appropriate portion of the annual tree planting budget will continue to be used for maintenance. The need for regular watering to ensure survival of new trees has been highlighted in recent years where drought and high temperatures have taken their toll on new planting. The Council does however have 99% survival rate for new planting by regular manual watering throughout the growing season (with the exception of the very dry summer of 2018, when losses exceeded 10%). Throughout the maintenance periods, where new trees have failed, they will be replaced unless it has been determined that soil conditions will prevent establishment. In view of the higher temperatures and reduced rainfall we are already experiencing and which is likely to continue, we will explore introducing alternative methods of watering and moisture retention, which may include greater community involvement. There will also be a need for more careful strimming around trees and potentially the use of strimmer guards.

3.50 With the climate emergency more groups have come forward wishing to undertake ‘mass whip plantings’ and this is expected to grow in the future. Whilst whip planting can produce canopy for the future, the chance for survival unless properly tended to, can be minimal. Groups are encouraged to come to the Council to suggest places appropriate for whip planting. Once an area is planted, this will be added to a mapping system so that the areas can be noted in the future. Whips should be clearly marked out and a regular watering and clearing of the areas undertaken by the groups to ensure their success.

Natural regeneration

3.51 Natural regeneration, or rewilding, involves allowing trees to grow from seeds falling from existing trees. This can be a very resource-efficient way of enhancing tree cover, as minimal intervention is needed, and has a good success rate. Within existing woodlands, the Council’s approach is generally to allow natural regeneration to take place rather than to undertake tree planting. It can also be considered as a way of extending existing woodlands, albeit that opportunities to do so in Reading are likely to be limited and natural regeneration on the fridges of woodland would have to be managed to maintain the important woodland edge habitat. Outside woodlands a more proactive approach is generally needed to ensure that trees are planted in the right place and are managed accordingly.

Figure 12: Boundary Lane (Sarah Hanson)

Funding

3.52 Meeting the objectives in section 2 of increasing tree planting on Council land, as well as canopy cover overall, can only be achieved if it is adequately resourced, and an increase in planting will need an increase in funding.

3.53 In relation to the funding of tree planting, the Council will continue to proactively seek grant funding and other funding streams, to secure money through Section 106 agreements where there is a need for off-site planting, and to facilitate memorial tree planting in order to increase the tree stock and provide adequate maintenance. The Council will also consider introducing match funding for local communities to encourage tree planting in their neighbourhoods. In addition the Woodland Trust's outreach team can provide advice and financial support to landowners on woodland creation schemes, and offers subsidised planting packs for groups and individuals, including free trees for schools and community groups.

3.54 Partners in tree planting initiatives include Trees for Cities, which annually gives a grant to the Reading Tree Warden Network for a joint planting scheme with the Council, and Ethical Reading's Trees for Reading, a new business-funded venture.

3.55 The Council also encourages neighbourhood associations and neighbours to work together to raise funding for tree planting in residential streets, and there have been several successful projects improving streets that are deficient in canopy cover.

3.56 Internally, the result of the i-Tree Eco assessment will provide a value for the Council's tree stock (a Council Asset) in terms of its 'ecosystem service'. This will enable due consideration for a review of the budget allocated for tree maintenance and planting.

3.57 The Council will continue to use its powers under The Town and Country Planning Act 1990 and The Town and Country Planning (Tree Preservation) (England) Regulations 2012 to secure replanting in Conservation Areas and where protected trees are felled, wherever possible and appropriate. Where replanting within a Conservation Area cannot be enforced by law, owners will be encouraged to replant in order to meet the objective of the Tree Strategy and will be offered advice if required.

Hedge planting

3.58 Hedgerow retention and planting will play an important part in responding to the climate emergency and will contribute to the aims of the revised Biodiversity Action Plan (BAP). Hedgerows capture carbon, assist in reducing air pollution in urban areas, help soften the urban environment, function as noise barriers, aid wind mitigation (making areas more pleasant to walk and cycle) and are an important resource for wildlife providing both food and shelter. Appropriate management of existing and new hedgerows will be important, to maximise these benefits that they provide. New hedgerows will help strengthen identified green links, in addition to trees, and will be of particular importance where trees cannot be accommodated in order to provide the link between areas of habitat. There will be an expectation for new developments to incorporate hedge planting within landscape schemes, especially where sites fall within the vicinity of green links or are on identified 'treed corridors'.

Climate change

3.59 The Tree Strategy is important in how it can work in collaboration with the Climate Emergency Strategy and any resulting actions. Trees sequester (absorb) carbon dioxide and therefore can offer a role in assisting in reducing Reading's carbon footprint.

3.60 However, estimating the contribution that a tree will make to reducing carbon emissions is difficult, and can depend on its species, size and maturity. A rule of thumb often used is that a tree will absorb one tonne of carbon dioxide over an assumed lifespan of 100 years. The amount of carbon dioxide that a tree will absorb each year varies according to the age and species of the tree, and the ability to absorb carbon dioxide will be significantly lower in the first years. This is therefore only an approximate measure, and should not be used for any detailed analysis, for instance for carbon offsetting, but on this basis, the additional 3,000 trees on Council land would absorb 3,000 additional tonnes of carbon dioxide over 100 years, with the main benefits likely to be seen as the trees mature. Although the expectation is that this will be supported by tree planting on private land, clearly, given that Reading produces over 500 kilo-tonnes of carbon dioxide emissions annually (see the Climate Emergency Strategy for more information) tree planting can only be part of a much wider response to reducing carbon emissions.

3.61 The most significant value of trees as part of the climate emergency response is in how they protect people and environments from adverse climate impacts. For example, they help to mitigate the urban heat effect in the town through transpiration and shading, they prevent surface water run off by absorbing water through their leaves, branches and roots, and their fallen leaves feed the soil allowing for further carbon absorption. Overall, the Tree Strategy will be important in adapting current tree provision and mitigating/preventing future issues related to climate change.

3.62 In order to ensure the tree population of Reading is resistant to climate change, we will:

- Improve species diversity to make the tree population more resistant to species loss/ failure as a result of a changing climate;
- Plant large canopy trees wherever feasible on Council owned land;
- Aim to secure space for large canopy species within development sites;
- Aim to secure natural Sustainable Drainage Systems (SuDs) within development sites, i.e. trees and landscape features as opposed to attenuation tanks, as the default position;
- Aim to secure green walls / green roof planting within development sites where 'on the ground' planting space is limited; and
- Plant trees in clusters where appropriate.

3.63 The risk is flooding is likely to increase with increasing frequency of storm events as a result of climate change. Tree planting is an important part of any flood alleviation strategy, contributing to natural flood management systems. Trees act to intercept rainwater, some of which evaporates directly back into the atmosphere; interception of the remaining (even when not in leaf) resulting in a slowing of the water flow into the drainage system, thereby relieving pressure on these during storms. The uptake of water by tree roots and the increase in soil infiltrations rates where trees exist also contributes to storm water management.

Canopy cover

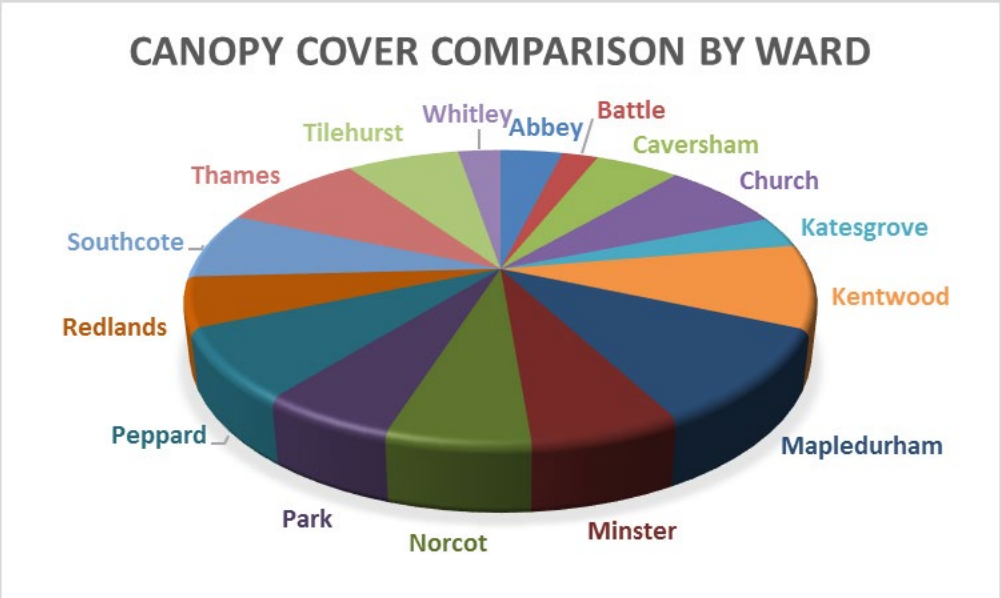
3.64 Canopy cover is a useful measure of the proportion of an area which is covered by the canopy of a tree. In terms of the climate change agenda, as well as for other matters such as air quality, it is a more meaningful measure than absolute numbers of trees. The Council has utilised i-Tree Canopy to estimate tree coverage within the Borough as a whole and within the individual wards. This has provided baseline data so that the increase in canopy cover can be followed over time. It has enabled us to identify the areas with low tree coverage where tree retention and planting can be prioritised.

3.65 The results are shown on the chart in Appendix 2 and the individual details for each ward are shown in the table below.

Table 7: Percentage canopy cover in each ward

Ward	Canopy cover (%)
Abbey	11.6
Battle	6.72
Caversham	15.8
Church	22.8
Katesgrove	10.4
Kentwood	27.9
Mapledurham	32.2
Minster	19.7
Norcot	18.9
Park	17.7
Peppard	23.6
Redlands	16.7
Southcote	22.1
Thames	27.0
Tilehurst	21.1
Whitley	7.95
Total for the Borough	18

Figure 13: Canopy cover comparison by ward



3.66 The current canopy cover is approximately 18%. This includes 12,496 number of individual Council trees, excluding those within non-communal Housing land, in schools and the 15 woodlands across the Borough. It also includes privately owned land, demonstrating the need to promote the value of trees to residents and land owners in the Borough.

3.67 It is important for this Strategy to aim to increase canopy cover in light of the global climate crisis. This aim must balance ambition with what can realistically be achieved, taking account of the borough's geography.

3.68 Reading is a highly urban borough, with the fourth highest population density in the South East at the 2011 Census. That translates directly to a densely built environment with almost half of Reading's area covered by the footprint of buildings, road carriageways and railway lines. The Council owns or has direction over approximately a quarter of all the land within the Borough and much of that land is made up of other areas where opportunities for tree planting are very limited, such as sports pitches, surface car parks, service yards, open water, or priority habitats that are not characterised by tree cover. Within that context, it remains notable that Reading's tree cover is already higher than the average for towns and cities of 16% (Forest Research, 2018). There is thus limited additional land available for planting, and even less land over which the Council is able to exercise control.

3.69 This Strategy aims to increase canopy coverage within the Borough to 25% by 2030. This is a genuinely ambitious target which responds to the immediate Climate Emergency we face, whilst reflecting the amount of land that is likely to be suitable and potentially achievable for extended cover. It would represent a substantial 39% increase in canopy cover over existing levels.

3.70 To achieve this target, it is evident that the Council recognises that it cannot undertake achieving these results alone. Most essentially, it will need private landowners across the Borough to respond similarly and immediately through their own planting. The Council reiterates that the number of trees planted must significantly exceed those felled on Council land and this follows true for each and every private land owner within the borough to achieve 25% tree cover by 2030.

3.71 In addition, whilst recognising that each ward has a distinct geography, the aim is to ensure that all wards exceed 12% canopy cover by 2030, and this will require immediate improvement in four wards in particular – Abbey, Battle, Katesgrove and Whitley. Again, the Council will do its part through Council planting (subject to funding), ensuring net increases in tree numbers on development sites and the retention of trees through TPOs. However, the contribution of private landowners will again be vital.

3.72 New ward boundaries in Reading have been set for 2022. There will therefore need to be a review of this Strategy to take account of the new ward boundaries and to amend the objectives accordingly. This review may also cover other matters.

3.73 In order to contribute to the aim of increasing canopy cover, the Council will aim to plant at least three trees for every non-woodland one felled on its own land. Over the last 10 years, the Council's target of planting two trees for every one felled has been surpassed, and it is an opportunity to increase our ambitions to meet the climate change challenge. However, achieving this will require an increase in funding for tree planting and maintenance.

3.74 The Council will work with key stakeholders to ensure that a robust and active engagement and encouragement programme is established and motivated as set out in sections N1, N5, N7, N17 and N21 in the Nature Theme Action Plan of the Climate Emergency Strategy document. It is evident that without the public's involvement, for example through current working relationships that exist with voluntary organisations such as RTWN, The Conservation Volunteers and Trees for Reading, to whom the Council is very grateful, this ambitious target will fail and it is the public's active and willing participation alongside the Council that is paramount to achieving this aggressive target.

Biosecurity

3.75 To deal with the threats from pests and diseases, the Council will continue to practice good biosecurity measures when carrying out tree work and disposing of waste wood.

3.76 The Council's current tree surveying includes inspection for known and expected pests, in order that appropriate action can be taken in line with Government guidance. The arborists are also trained to look for defects in trees when they are working on them. In addition to the Council's inspection programme, the Forestry Commission monitors 12 sites for Oak Processionary Moth. The Tree Wardens are also vigilant, and notify the Council of suspected infections.

3.77 In order to keep abreast of developments, the Council's Arboricultural Team subscribes to Landscape Institute, Forestry Commission and Arboricultural Association alerts about biosecurity issues.

3.78 There are pockets of Chalara, Ash dieback, on Council sites. Where these are found, periodic clearance of affected trees, usually young trees, occurs. Any replanting which takes place will consider alternate species or dieback resistant Ash (if and when these become available).

3.79 The choice of varieties of tree to plant will be influenced by biosecurity concerns; varieties less subject to disease are being planted more frequently and mixed rather than monoculture planting is increasingly being done.

3.80 In addition, we will carefully consider suppliers of seeds, plants, trees and wood products to ensure they have appropriate biosecurity procedures in place in line with Government guidance. The Council currently uses tree nurseries which have good biosecurity policies in place. In addition, bedding plants are currently purchased from a UK supplier who grows their own from seed. Shrubs are

purchased from a UK supplier who grows their own, buying in larger plants from reputable sources. Suppliers are asked to confirm that they have regular Ministry inspections and hold a Plant Passport, which denotes that they can issue plant passports for all plants that they handle. All suppliers are expected to keep up with any changes and ensure compliance with current Regulations (plant health regulations having changed in December 2019).

3.81 The Council are currently working on formulating a procedure to deal with disposal of arisings to take biosecurity issues into account.

3.82 Biosecurity will also be considered on development sites where there will be an expectation for developers to ensure that plants and trees are from suppliers with appropriate biosecurity measures. Developers will also be expected to deal with invasive species in line with government guidance.

Pest and disease resistance

3.83 The incidence of pest and disease introductions has had a significant effect on the UK tree population over the last 50 years, e.g. Dutch Elm disease, Horse chestnut leaf miner, Ash dieback and Oak Processionary Moth to name a few. To help create a tree population within the Borough more resistant to the impact of pests and diseases, we will:

- Improve tree diversity to reduce the impact on the tree population as a whole from the loss of any one species / genus;
- Ensure good biosecurity working practices to prevent the introduction and spread of pests and diseases;
- Carefully consider all tree work to minimise the impact on the trees' future health, e.g. timing of the work (phenology), keeping pruning to the minimum required and following good arboricultural practices;
- Keep new trees healthy – right tree, right place, right tree pit and right maintenance of Council trees;
- Securing sufficient landscape maintenance for new planting on development sites.

Air pollution

3.84 Clean air is essential for our health, quality of life and the environment. Air pollution is not only harmful to human health but also has harmful effects on plants and animals as well corroding materials and buildings. There are areas close to congested roads where levels of nitrogen dioxide exceed the air quality objectives and where levels of particulates are elevated. Particulates are classified by their mass (PM10 and PM2.5), with the smaller particulates, PM2.5 being more harmful due to their ability to travel further into the lung.

3.85 The Environment Act 1995 requires local authorities to review and assess air quality on a regular basis, against a set of Air Quality Objectives (AQOs) set out in the Air Quality Regulations. Local authorities are required to declare Air Quality Management Areas (AQMAs) in any area where the AQOs are exceeded and there is relevant human exposure, and must draw up an action plan to show what steps it intends to take to improve local air quality.

3.86 In September 2006, Reading Borough Council declared six AQMAs. In September 2009, monitoring then indicated there were additional areas where nitrogen dioxide levels were being exceeded. As a result the six AQMAs were revoked and replaced by a single management area which covers perceived and actual exceedances. An Air Quality Action Plan was subsequently drawn up and measures from it to improve air quality are being implemented.

3.87 The AQMA is shown on the Local Plan Proposals Map and highlights the main area of concern which includes much of the central area and main radial transport corridors. As such these correspond with 'treed corridors' identified on the map in Appendix 3, hence priority planting along these routes will provide green corridors which help improve air quality.

3.88 Policy EN15: AIR QUALITY of the new Local Plan requires that:

> *"Development should have regard to the need to improve air quality and reduce the effects of poor air quality".*

3.89 Trees directly absorb harmful polluting gasses such as oxides of Nitrogen, Sulphur dioxide and ground-level ozone as well as trapping particulate matter in their leaf surfaces.

3.90 The use of trees to help tackle air pollution can be maximised by careful species selection, i.e. choosing trees that will tolerate air pollution, and planting large canopy trees where possible. This can be considered both through Council planting and securing appropriate planting on development sites. Guidance, such as The Trees and Design Action Group's (TDAG's) 'Tree Species Selection for Green Infrastructure' and Barcham's Tree Species Selection Guide will be utilised for this purpose. The former, more extensive guidance, provides information on the tree characteristics useful for trapping pollution, e.g. dense crowns and textured leaves, along with advice on providing a mix of tree height and dimensions to allow air turbulence/mixing in order to disperse pollution. It contains a long list of species suitable for 'transport corridors' which can be considered for use in highway and major infrastructure planting.

3.91 As stated in the policy text for EN15, mitigation measures for development may include planting and green walls. This planting (trees, hedges, shrubs & green walls), along with green roofs, is also important to improve air quality and will therefore be expected within development sites alongside tree planting or as an alternative where tree planting is demonstrated to be unfeasible.

3.92 In addition, it is important that we continue to secure and implement other methods of reducing air pollution for the benefit of the trees and vegetation that already exists.

Biodiversity

3.93 Trees and woodlands provide a vital resource for wildlife. They provide nesting and roosting sites, food in the form of foliage, wood, fruits and seeds and invertebrates. Numerous species depend on trees for their survival.

3.94 Whilst woodlands tend to be the most important, trees within the urban environment play a vital role by providing corridors and stepping stones for wildlife.

3.95 Reading has 193 hectares of woodland and scrub, much of which (approximately 50% - 95 hectares) is owned (freehold) by the Council. Other landowners include Network Rail, the University of Reading, schools and private land owners.

3.96 The majority of the RBC woodland is being managed in accordance with woodland management plans that were adopted in 2013 – these will need to be updated in 2023.

3.97 It will be important to avoid tree planting on certain valuable habitats where tree cover is not a feature of that habitat to avoid degrading the value they provide.

3.98 The Council has also recently undertaken a review of its Biodiversity Action Plan (BAP), prepared alongside this strategy, and the Tree Strategy aims to compliment this. To maximise biodiversity through planting we will:

- Carefully consider species selection, planting predominantly native or wildlife friendly species. The introduction of some non-native species will be acceptable to 1) retain the character of the older parts of the town where exotic species were historically planted and 2) to add to climate proofing the tree population.
- Prioritise planting along green corridors/links (as identified in the Local Plan), which incorporate wildlife corridors, both on Council land and on development sites.
- Continue to protect existing trees through service of Tree Preservation Orders and retention of trees on development sites.
- Aim to secure naturalistic SUDs provision on development sites as the default position.

Figure 14: Oak at Prospect Park (Anna Iwaschkin)

Ancient woodland and ancient and veteran trees

3.99 Despite being a very urban borough, Reading is fortunate to have several pockets of ancient woodland; those being in Tilehurst (Kentwood Grove -McIlroys Park) and Emmer Green (Blackhouse Woods - Clayfield Copse). As an action of our new Biodiversity Action Plan, we will be carrying out an exercise to identify woodlands that are likely to be "ancient" which are below the 2ha threshold used for identifying woodlands in Natural England's Ancient Woodland Inventory.

3.100 In addition to ancient woodland, there are scattered Ancient and Veteran trees across the borough, mainly within parks, including historic parks and gardens, but also within the grounds of old manor houses and occasionally within smaller private gardens.

3.101 These trees are an important heritage asset by providing a link to the history of Reading, from ancient parkland such as Prospect Park to stately homes and former estates such as Caversham Park and Whiteknights.

3.102 Ancient woodland, that being land which has been continuously wooded since at least 1600AD, now covers only approximately 2.4% of the UK's land area. These woodlands tend to be richer in plants and animals than other woodland areas and contain many rare and vulnerable species. Preventing their felling is important, but not enough alone to protect all their associated wildlife. Management of some of the woodland is also required, e.g. coppicing to provide open, sunny, sheltered glades for butterflies. Maintaining and managing these, along with other woodland,

is vital to maintain an adequate amount of appropriate habitat to allow the species within them to thrive.

3.103 The NPPF provides the following definition:

> *"Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage".*

3.104 Ancient and veteran trees, which can be considered as an ecosystem in themselves, provide a habitat and a food source for a myriad of species, some of which are only found on such trees. Both standing (within the tree) or fallen deadwood on and around such trees (and within woodlands) is important as a resource (habitat, nesting and food source) for many species of bird and for nesting and roosting sites for bats. Also, many rare invertebrates associated with wood decay require ancient woodlands in which there has been a continuous succession of ancient trees and in turn these deadwood fauna are an integral part of the woodland wildlife community. Long standing dead wood is an important habitat for rare fungi such as the ecologically important and protected Oak polypore, *Piptoporous quercinus*.

3.105 As is acknowledged within the NPPF, such woodland and trees are irreplaceable habitats. The Council will continue to protect these through a combination of appropriate management, objecting to development proposals that would have a detrimental impact and the service of TPOs to prevent felling. There may also be opportunities for expansion through natural regeneration.

Figure 15: Veteran Oak within a private garden in Caversham Park Village (circumference just over 8m) (Sarah Hanson)

Tree protection

3.106 The protection of both Council and private trees across the Borough will be vital alongside planting. To protect trees we will:

- Continue to use our powers under The Town and Country Planning Act 1990 and The Town and Country Planning (Tree Preservation) (England) Regulations 2012 to serve new Tree Preservation Orders, prioritising those where there is a foreseeable threat to a tree(s), and to serve new Tree Preservation Orders where felling is proposed in a Conservation Area, i.e. where a Section 211 Notice is submitted, if the tree(s) is worthy of a TPO.
- Continue to use our powers under The Town and Country Planning Act 1990 and The Town and Country Planning (Tree Preservation) (England) Regulations 2012 to take legal action where contraventions take place to demonstrate the importance of trees in the Borough
- Use national and local planning policies, along with relevant British Standards and good practice guidance to ensure the retention of trees (where appropriate) on development sites and to secure new tree planting to ensure a net gain in tree number, including on Council owned development sites.
- Retain Council trees until such time as they pose an unacceptable risk to people or property, with the exception of trees which are deemed to have outgrown their location where felling due to a future foreseeable risk/nuisance is appropriate.
- Take legal action or seek mitigation action / planting where Council trees are damaged / felled by third parties using Capital Asset Valuation of Amenity Trees (CAVAT) to determine a value for the tree where monetary compensation is required.
- Aim to develop better working relationships with external bodies, e.g. utilities companies and large land owners, whose actions can have a significant affect.
- Consider the potential harm to good quality trees and the amenity they provide when assessing High Hedge complaints.
- Retain important hedgerows, where allowed by the Hedgerow Regulations 1997.

3.107 Reading Borough Council's internal planning applications – RBC will respect the aims of tree policy and of this Strategy when considering its own internal planning applications. The Council should lead by example in tree retention, protection and planting on new / redeveloped sites.

Development

3.108 The Reading Borough Local Plan, adopted in November 2019, contains a strong new policy (EN14) on retention and planting of trees. In view of the climate emergency, the Council will apply the provisions of this policy rigorously. Where new planting is secured on development sites by condition, the Council will seek to secure resources to ensure that this is monitored and, where necessary, enforced.

3.109 Under The Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended), land owners are able to carry out specified works without the need for planning consent. The works allowed, such as extensions, outbuildings and driveways, all have the potential to harm adjacent trees. Permitted Development (PD) rights do not override a Tree Preservation Order hence any PD works that might affect a protected tree must be agreed with the Local Planning Authority. The Council, through the planning service, will remind land owners of this. The same would apply to trees in Conservation Areas – in both situations, trees can only be removed without approval/notice being given if required in order to implement full planning approval.

Community engagement

3.110 The canopy cover objective of this Strategy, as well as many of the other objectives, cannot be achieved by the Council alone. As well as the major landowners referred to elsewhere in this Strategy, there will also be a need for appropriate planting and maintenance by private residents, and support from community organisations, which might include a role in planting and watering to complement the Council activities.

3.111 There is already substantial co-operation between community and volunteer groups and the Council. As set out in paragraph 1.52, the Reading Tree Warden Network (RTWN) was set up 10 years ago, and it will continue to be of considerable assistance in helping to achieve the objectives of this Strategy. As well as a history of successful community engagement on this issue, the Council has also recently looked to involve community groups on other matters such as heritage, and this demonstrates that such approaches can be of great assistance.

3.112 A Tree Forum for Reading is about to be established in spring 2020. This will include volunteers and community organisations, and it will provide a platform for undertaking the 'Duty to Consult' introduced by the Environment Bill. There may be opportunities for additional joint working through that route.

3.113 The Council's website will need to be one of the main points of contact for community engagement, and will require improvement to fulfil this purpose. There should be a single location, where information on trees, including this Strategy, are set out in a clear, easy to access format. This will enable the Council to produce information for residents or landowners on important aspects of planting and maintenance. Subject to resources, the Council will also need to consider targeted distribution of information that can help us meet the objectives for trees.

Trees on a wider scale

3.114 Within the Reading 2050 Vision, Vision Statement 6 states:

"Welcomes ethical and sustainable businesses that support Reading"

3.115 Reading Borough Council's actions and decisions can also have an impact on a wider scale through our waste strategies and procurement policies. The new Climate Emergency Strategy details the Council's policies on these and the issue is also addressed in the revised BAP.

3.116 In relation to the Council's own green waste production, we recycle as much of our tree arisings as possible. Chippings are distributed throughout the Borough, for example in woodlands for path surfacing, in parks for use as a mulch on flowerbeds and to allotment holders for use on their allotments.

3.117 A percentage is sold to contractors as and when they require them.

3.118 When working in woodlands logs and chippings are left as habitat stacks for biodiversity.

Monitoring and reporting

3.119 It is our aim to publish annual figures on our website to demonstrate our net gain in tree number in the Borough.

3.120 The Planning Section will keep a record of the number of trees felled on development sites against the number included in approved landscape schemes to demonstrate a net gain.

3.121 Parks (as the department carrying out tree work on most Council owned land) will keep a record of the number of trees felled against number planted to demonstrate a net gain.

3.122 Individual residents, private land owners and organisations are encouraged to let us know when they undertake planting so we can record this. Details of tree planting can be emailed to the Council's Natural Environment Team.

GLOSSARY

Air Quality Management Area (AQMA) - An area where air quality objectives are not likely to be met. There is a requirement to draw up an action plan for each AQMA.

BAP - Biodiversity Action Plan

BEIS - BEIS – Department for Business, Energy & Industrial Strategy

Capital Asset Valuation of Amenity Trees (CAVAT) - This provides a method for managing trees as public assets rather than liabilities. It is designed not only to be a strategic tool and aid to decision-making in relation to the tree stock as a whole, but also to be applicable to individual cases, where the value of a single tree needs to be expressed in monetary terms.

CO_2 - Carbon dioxide

i-Tree Eco - A software application to quantify the structure and environmental effects of urban trees, and calculate their value to society. Data from an i-Tree Eco survey can be used for making effective resource management decisions, develop policy and set priorities for a town's trees and greenspaces. *(Definition from Forest Research)*

National Planning Policy Framework (NPPF) - A document setting out national planning policy for England. This was finalised in 2019, and replaces a variety of previous national guidance within a single document.

NJUG - The National Joint Utilities Group Ltd (NJUG) is the UK's trade association. representing utilities and their contractors solely on street works matters.

RBC - Reading Borough Council

RCES - Reading Climate Change Emergency Strategy

Reading 2050 Vision – Can be found on the Living Reading website

RTWN - Reading Tree Warden Network

'Standard' trees - For the purposes of Objective 3, a 'standard' tree will be of a minimum 8-10cm girth and 2.5m in height at the time of planting. N.B. the majority of the 3,000 trees are expected to be above this minimum.

Sustainable Drainage Systems (SuDS) - For the purposes of this document, this term is taken to cover the whole range of sustainable approaches to surface water drainage management.

TDAG - Tree Design Action Group

TfL - Transport for London

TPO - Tree Preservation Order

Trees for Cities - UK charity working at a national and international scale to improve lives by planting trees in cities.

Trees for Reading - Partnership providing funding from local businesses for tree planting in their locality (Ethical Reading).

APPENDIX 1: ACTION PLAN

Table 8: Action Plan

Objective	Action	Who	How	Resource scope / issues	Timescale
1. RBC Tree Stock – protect, retain, manage and plant trees to ensure an increased canopy cover of healthy trees resistant to pest & diseases and climate change and to reduce air pollution.	Protect Council trees from third party threats; only fell for health & safety reasons or when there's damage to property; manage trees in line with good arboricultural practice; plant with consideration of species and 'right tree, right place, right tree pit' principle; continue street tree planting	All Council land owning / managing departments	Careful consideration of development on RBC land; identify trees for TPOs on RBC land to be sold; RBC to seek compensation for damage to tree stock by external persons; manage trees in line with good arboricultural practice for optimum health; continue annual planting; increase species diversity & large canopy planting	Existing staff resources	Ongoing

Objective	Action	Who	How	Resource scope / issues	Timescale
2. Climate adaptation – increase the diversity of the tree stock (family, genus and species) to provide resistance to climate change, plant large canopy species wherever feasible and keep trees healthy in order that they can achieve their full potential to ensure that Reading's Urban Forest is resilient to the impacts of climate change so that it provides the maximum role in mitigating its effects	Careful consideration of species selection on RBC land and private land; plant large canopy trees where feasible; ensure appropriate maintenance of new trees to ensure establishment; maintain trees in line with good arboricultural practice; plant trees where appropriate on river banks to keep rivers cool (on average 50% of the water surface with dappled shade is desirable); devise a preferred species list for the Borough.	All Council land owning/managing departments, led by Parks; Planning Department; Developers; private householders; planning agents; Landscapers, Tree Consultants	Through appropriate planting and maintenance of Council trees and though the development control process to secure appropriate planting and maintenance on development sites. Tree works may also be required to reduce flood risk.	Existing staff resources	Ongoing. Preferred species list by 2022.
3. Tree planting – plant at least 3,000 'standard' trees by 2030 on Council land.	Continue planting on Council land and private land to ensure a net gain in tree number, especially within priority areas; focus on larger canopy trees where feasible.	All Council land owning / managing departments; Planning; private land owners; Developers; private householders; planning agents; Landscapers, Tree Consultants	Retention, protection and planting of trees on Council land; Planning Department through development control; encouragement of planting by private land owners	Additional staff and funding resources required.	Ongoing, with specific targets to 2030.

Objective	Action	Who	How	Resource scope / issues	Timescale
4. Canopy cover – increase overall canopy cover to 25% by 2030; ensure that all wards have at least 12% canopy cover by 2030; and target priority areas for tree planting based on canopy cover, air pollution, treed corridors, green links and areas of high landscape value	As for objective 3	As for objective 3	As for objective 3	As for objective 3	As for objective 3
5. Protection of private trees - the Local Planning Authority will continue to use its powers under the Town & Country Planning Act 1990 to make Tree Preservation Orders and to retain & protect trees on development sites in line with good arboricultural practice	Make TPOs where necessary and expedient; ensure development proposals retain appropriate trees & protect them during the construction process in line with good arboricultural practice and in accordance with agreed methods	Planning Department (including Planning Enforcement); Legal Services	Service of TPOs and through planning conditions	Existing staff resources	Ongoing

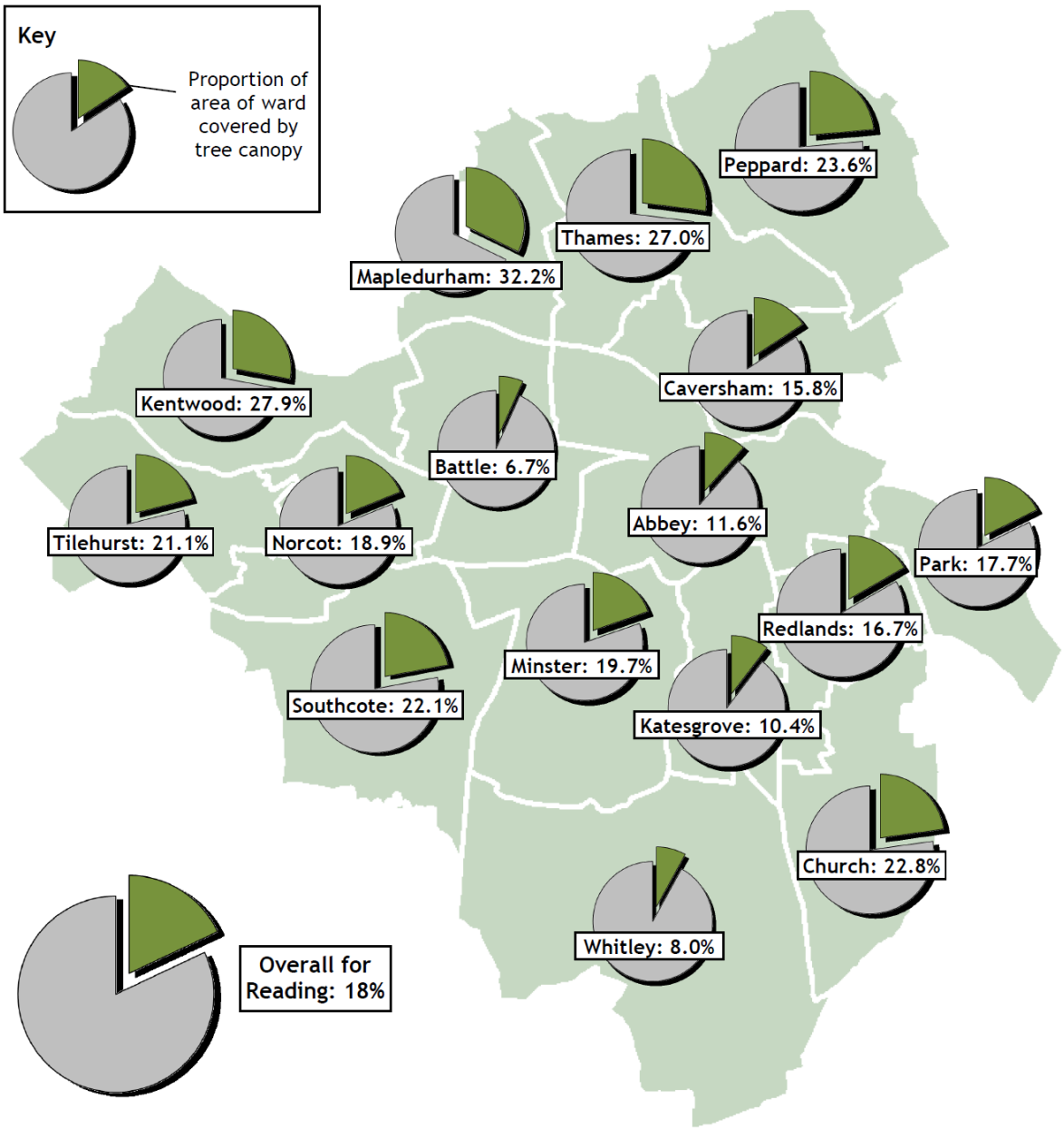
Objective	Action	Who	How	Resource scope / issues	Timescale
6. RBC will engage with partners, public and landowners to raise awareness of the Tree Strategy aims and good arboricultural management practices	Improve advice on RBC website; encourage RTWN to include advice/links on their website, providing support to RTWN on the website where possible; provision of advice to owners of protected trees; guidance to volunteer groups on tree and whip planting; continue to liaise with Network Rail over management of lineside vegetation.	All Council departments; external bodies; public; Tree Contractors and Consultants; Landscape architects; businesses	Promotion of good tree management practices through the Council and RTWN website; promotion of good arboricultural practice to tree owners with TPOs and in Conservation Areas	Existing staff resources	Ongoing
7. Improve biodiversity across the Borough by selecting trees that are either native or of wildlife value, particularly in semi-natural areas, by use of natural regeneration where practicable, and by ensuring that tree planting does not compromise or affect other habitats	Ensure species selection on RBC land and development sites maximises biodiversity benefits; prioritise planting along identified green routes and links; promote green walls and roofs where tree planting not feasible; promote natural SUDs; promote aims of the BAP; Manage woodland so as to maximise their value to wildlife for example by retaining standing and fallen deadwood, opening up rides and glades and encouraging natural regeneration on the edge of woodlands; Avoid planting trees on areas of high biodiversity value such as wildflower meadows and wetland areas	All Council Departments; Developers; private householders; planning agents; Landscapers, Tree Consultants	Through planting on Council land and through maximisation of greening on development sites in accordance with Tree Strategy, Local Planning Policies and BAP; Implementation of woodland and ecological management plans	Existing staff resources	Ongoing

Objective	Action	Who	How	Resource scope / issues	Timescale
8. Identify all areas suitable for street tree and other planting on Council land – initial study to be completed by 2022, with continued updates	Built up a bank of potential planting sites on RBC land in preparation for annual planting and external requests for new planting	All Council Departments, primarily Parks	By identifying potential tree planting sites when tree surveying and recording these	Existing staff resources	Ongoing
9. Ensure continuing funding for tree planting	Continue to identify sources and work with external bodies to secure funding for annual tree planting	All Council land owning/managing departments, led by Parks.	Via Trees for Cities, Trees for Reading, RTWN, Memorial planting, S106, CIL, crowd funding, public funding (match funding), potential further budget following financial valuation of tree stock	Existing (and potentially increased) RBC tree budget; external funding; planning obligations	Ongoing
10. Biosecurity – continually review RBC purchasing and working practices to ensure RBC are working to good arboricultural and horticultural practice to minimise the chance of introducing and/or spreading pests and diseases within the Borough; ensure biosecurity is considered on development sites	Continually review RBC purchasing and working practices to ensure RBC are working to good arboricultural and horticultural practice to minimise the chance of pest/ disease introduction to, and spread within, the Borough; ensure and encourage good practice to private land owners; ensure landscape schemes on development sites consider biodiversity when sourcing and maintaining trees; devise action plan on dealing with invasive species.	All Council land owning/managing departments, led by Parks; Planning Department; Developers; private householders; planning agents; Landscapers, Tree Consultants	Ensure working practices and management follow Government guidance; consider biosecurity when agreeing details of landscaping and maintenance on development sites.	Existing staff resources	Ongoing

Objective	Action	Who	How	Resource scope / issues	Timescale
11. Trees & Development - tree retention, protection and planting within development sites to be in accordance with the aims of the Tree Strategy and Local Plan policy	Ensure tree retention and landscape schemes on development sites contribute to the aims of the Tree Strategy and comply with Local Plan Policy and that any opportunities for additional planting are secured.	Planning Department; Council landowning department when submitting a planning application on RBC land; Developers; private householders; planning agents; Landscapers, Tree Consultants; RBC Streetworks	Through the development control process, securing appropriate planning conditions and objecting to proposals which do not meet the objectives of the Tree Strategy and Local Plan policies; improve liaison with utility companies; additional resources for monitoring and enforcing compliance with landscaping conditions and contravention of planning law.	Existing staff resources	Ongoing
12. Monitor progress – Record and report net tree gain on an annual basis; reassess canopy cover in 2030	Continue recording of tree felling and planting on Council land; create a database for recording felling and planting secured on Development sites; provide a facility to allow private landowners to inform RBC of trees planted	Planning, Parks, private land owners, business owners	Annual reporting on the Council's website of net gain in tree number on development sites, Council land and new by private individuals and businesses	Existing staff resources	Ongoing

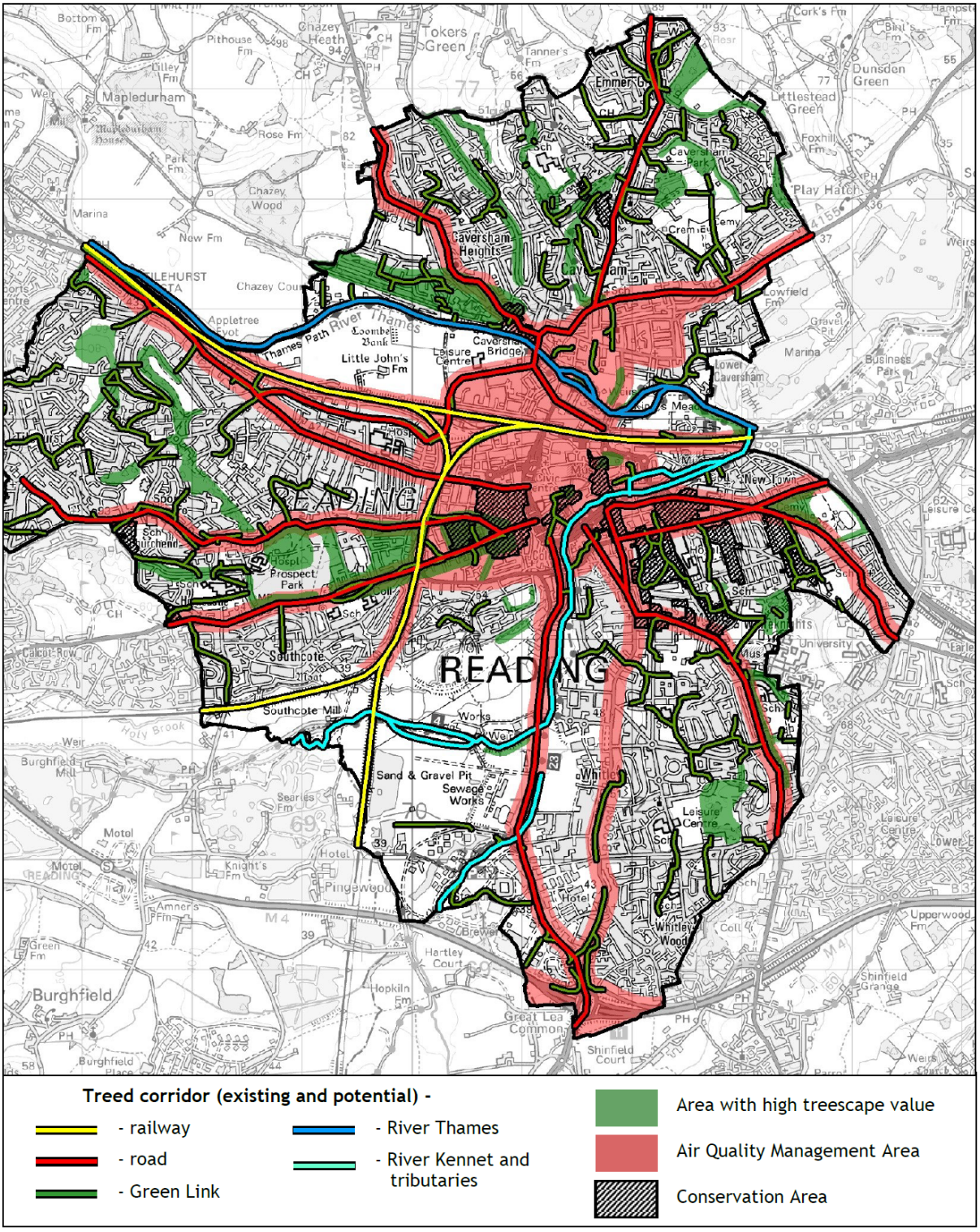
APPENDIX 2: MAP SHOWING CANOPY COVER BY WARD

Figure 16: Map showing canopy cover by ward



APPENDIX 3: MAP SHOWING TREED CORRIDORS AND OTHER CONTEXT

Figure 17: Map showing treed corridors and other context



APPENDIX 4: COUNCIL TREE NUMBERS BY FAMILY AND GENUS

Table 9: Council tree numbers by family and genus

Family	Genus/Species	Numbers
Adoxaceae	Sambucus nigra	2
Altingiaceae	Liquidambar	85
Aquifoliaceae	Ilex	89
Araucariaceae	Araucaria auricana	3
Betulaceae	Betula	*591*
Betulaceae	Carpinus	*197*
Betulaceae	Alnus sp.	*138*
Betulaceae	Corylus	*42*
Betulaceae	Betulaceae total	968
Bignoniaceae	Catalpa bignonioides	18
Cupressaceae	Chamaecyp.	*110*
Cupressaceae	Cupressus	*32*
Cupressaceae	Sequoiadendron giganteum	*24*
Cupressaceae	Thuja plicata	*15*
Cupressaceae	Taxodium distichum	*8*
Cupressaceae	Metasequoia	*7*
Cupressaceae	Cupressaceae total	196
Fabaceae	Robinia	*77*
Fabaceae	Laburnum sp.	*29*
Fabaceae	Gleditsia triacanthos	*21*
Fagaceae	Quercus sp.	*882*
Fagaceae	Fagus	*215*
Fagaceae	Castanea sativa	*49*
Fagaceae	Fagaceae total	1273
Ginkgoaceae	Ginkgo biloba	2
Juglandaceae	Juglans regia	48
Magnoliaceae	Liriodendron tulipifera	*37*
Magnoliaceae	Magnolia	*9*
Magnoliaceae	Magnoliaceae total	46
Malvaceae	Tilia sp.	1997
Myrtaceae	Eucalyptus sp.	4

Family	Genus/Species	Numbers
Nothofagaceae	Nothofagus sp.	6
Oleaceae	Fraxinus	789
Pinaceae	Cedrus	*126*
Pinaceae	Pinus	*95*
Pinaceae	Larix decidua	*21*
Pinaceae	Picea sp.	*18*
Pinaceae	Abies sp.	*15*
Pinaceae	Pseudotsuga	*9*
Pinaceae	Pinaceae total	284
Platanaceae	Platanus	576
Rosaceae	Prunus sp.	*1441*
Rosaceae	Sorbus sp.	*493*
Rosaceae	Malus	*410*
Rosaceae	Crataegus sp.	*371*
Rosaceae	Pyrus sp.	*171*
Rosaceae	Amelanchier sp.	*12*
Rosaceae	Rosaceae total	2898
Salicaceae	Salix sp.	*365*
Salicaceae	Populus sp.	*322*
Salicaceae	Salicaceae total	687
Sapindaceae	Acer pseudoplatanus	*665*
Sapindaceae	Acer platanoides	*568*
Sapindaceae	Aesculus	*368*
Sapindaceae	Acer sp.	*169*
Sapindaceae	Sapindaceae total	1770
Simaroubaceae	Ailanthus altissima	9
Taxaceae	Taxus sp.	133
Ulmaceae	Ulmus sp.	75
N/A	Other Conifer	30
N/A	Unidentified	383
N/A	Groups: other broadleaf	367
N/A	Groups: mixed	124

APPENDIX 5: DECLARATION FOR STATUTORY UNDERTAKERS

Agreement between Reading Borough Council and [company]

We the undersigned recognise the importance of trees within the Reading Borough Council area for the multiple benefits they provide. As such we commit to undertaking our required works with due care and consideration to both private and public trees. We recognise that Council trees are a public asset with environmental, social and economic benefits for both the residents of Reading and those that pass through and visit the town. As a public asset, we understand that their management is paid for by the public and therefore that any works or felling required as a result of our works should be paid for by us and that where possible replacement trees should be planted for any trees that must be felled during works.

When working within the Reading Borough boundary, we agree to the following:

- To fully assess the potential impact of our works on adjacent public and private trees, seeking our own arboricultural advice if necessary.
- To ensure our working practices comply with National Joint Utilities Group Volume 4: 'Street Works UK Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees' (NJUG 4), at a minimum, and will communicate this to all contractors and sub-contractors.
- If we cannot conform to NJUG 4, we will fully justify this and agree a method statement prior to commencement of any works.
- Should our work result in the immediate or future need for tree works, we will provide reasonable monetary compensation. We accept the Council's use of Capital Asset Valuation of Amenity Trees (CAVAT) in assessing the monetary value of compensation should a tree need to be felled in order to implement, or as a result of, our works.

Signed:

Name:

Position:

Company:

Date:

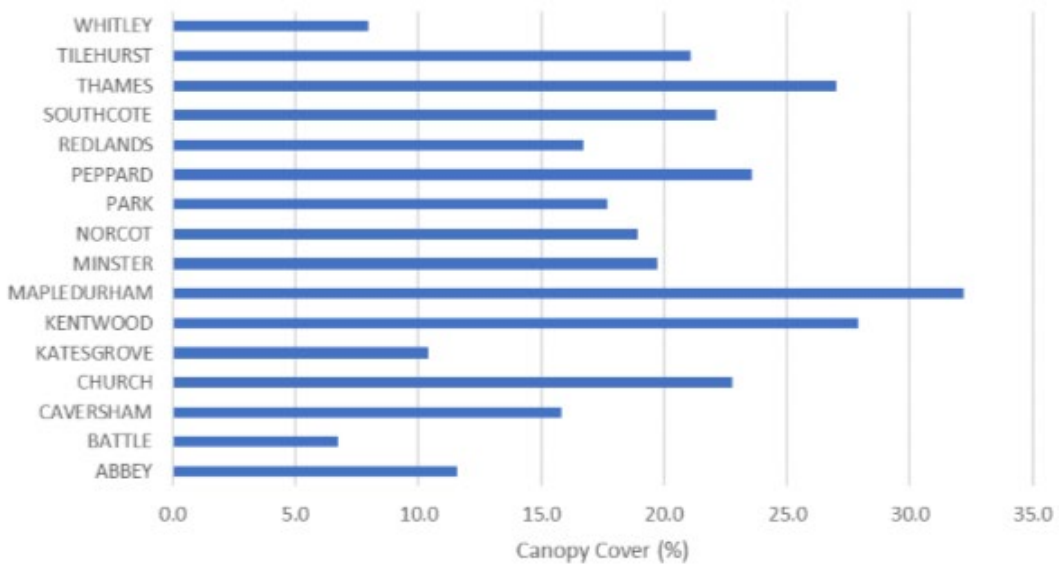
APPENDIX 6: I-TREE READING CANOPY ANALYSIS

Prepared by Georgia England, University of Reading

Results

The I-Tree Canopy assessment calculated the canopy cover of Reading to be 18%, which is 2% higher than the UK average (in towns and cities). It also means Reading is within reach of the UK target canopy cover of 20%. Individual I-Tree Canopy assessments were completed for each of the Reading wards, the results of which can be found in Figure 18. The ward canopy cover ranges from 6.7% to 32.2%. Canopy cover was greatest in the Mapledurham, Kentwood and Thames, which were determined to be 32.2%, 27.9% and 27% respectively. Whilst Whitley, Battle and Katesgrove wards had the lowest (8%, 6.7% and 10.4% respectively).

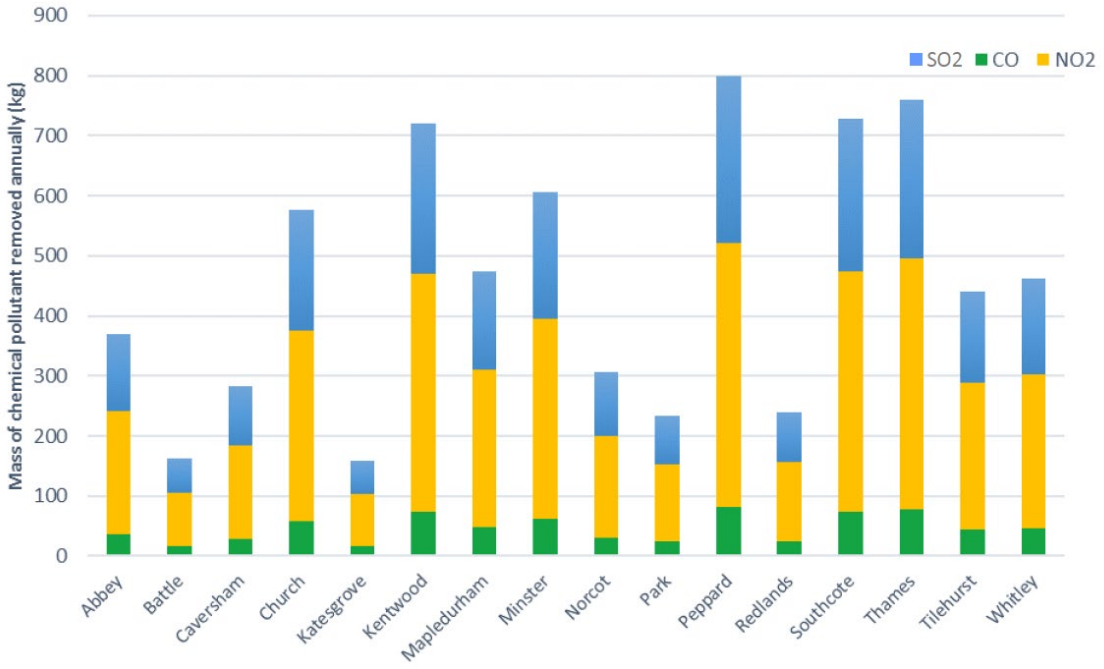
Figure 18: Canopy cover by ward in Reading



In addition to canopy cover, I-Tree Canopy calculates 'benefits' provided by the tree assets. The benefits are pollutant removal services; such as carbon monoxide (CO), carbon dioxide, Ozone, particle matter etc. Figure 19 shows the annual mass removed of three pollutant examples; carbon monoxide (CO), nitrogen dioxide (NO2) and sulphur dioxide (SO2). From this data it is clear that Thames, Southcote, Peppard and Kentwood provide the majority of chemical removal benefits out of all the Reading catchments. Battle and Katesgrove remove the least pollutants in terms of mass.

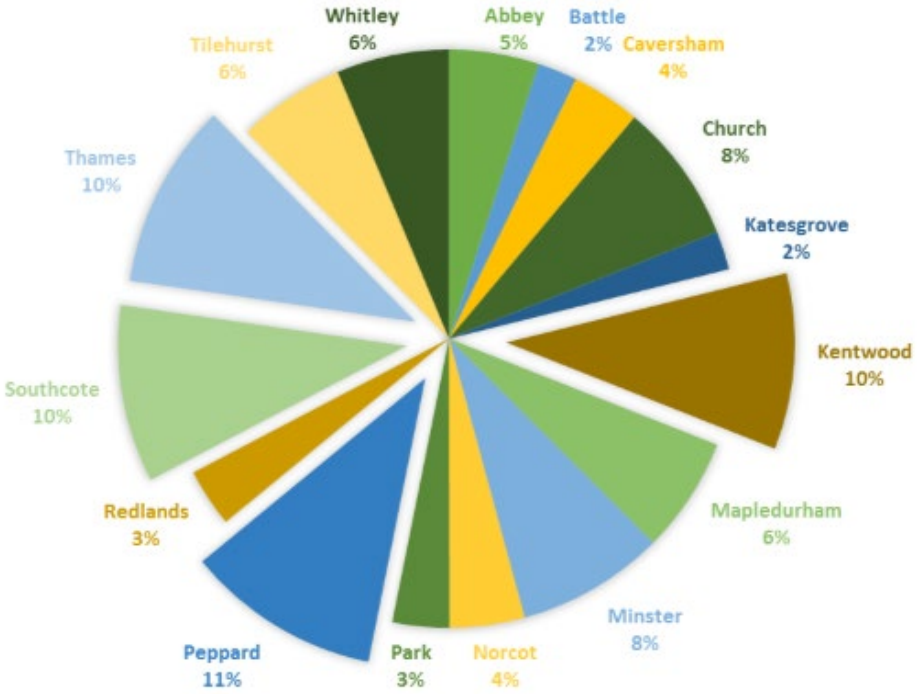
From the data we also see that Mapledurham and Whitley provide similar benefits, despite the major difference in canopy cover (32.2% and 8% respectively). This is because the benefits are also dependent on the area of the ward. Despite Mapledurham having high canopy cover, its area is one of lowest out of all the Reading wards (147ha). In comparison, Whitley has a low canopy cover but has the largest area of all the Reading wards (508ha).

Figure 19: I-Tree results calculating the estimated mass of pollutant removed annually by trees within Reading wards



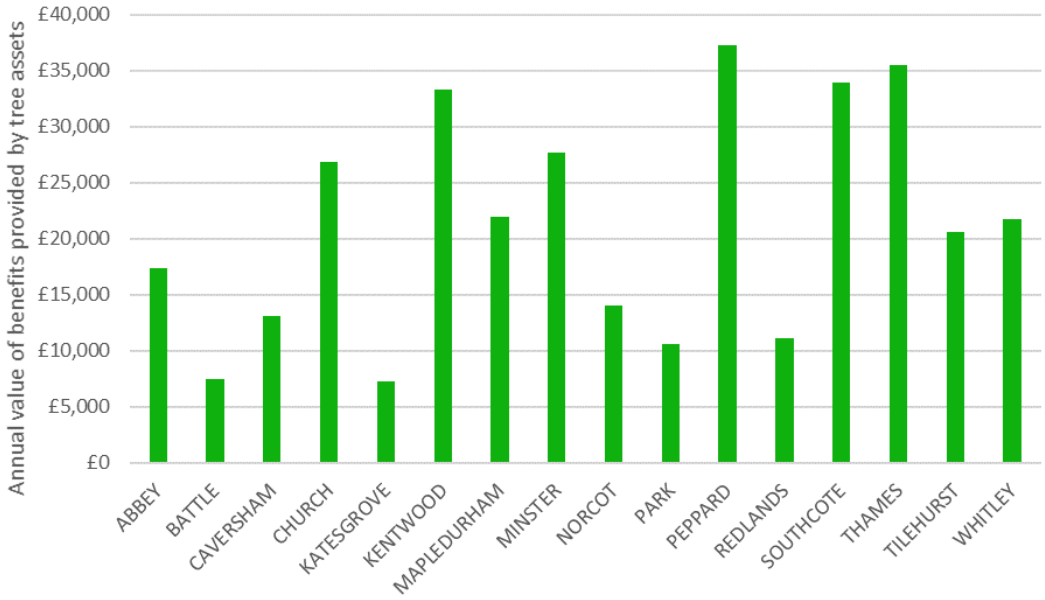
Another benefit determined by I-Tree Canopy is carbon storage; the overall carbon stored in Reading is determined to be 204,470t. Figure 20 presents the carbon stored within each ward as a percentage of this value. As expected from analysing the other benefits, Peppard, Kentwood, Southcote and Thames hold the highest percentage of overall carbon storage. Whereas Katesgrove, Park and Redlands contribute the least, reflected in their low percentages.

Figure 20: Total carbon stored per ward as a percentage of the overall carbon stored within Reading



I-Tree Canopy also calculates an economic valuation of the benefits provided. Figure 21 presents the total annual benefit value in £s for each Reading ward. The difference between the highest and lowest valuation is £30,000, which emphasises the difference in benefits being received between wards. Consistent with the other results, Peppard (£37,325), Southcote (£33,971), Thames (£35,489) and Kentwood (£33,279) have the greatest calculated values. In contrast, Battle and Katesgrove are valued at £7533 and £7291 respectively.

Figure 21: Total value of benefits provided by tree assets annually by Reading ward



Discussion

On reflection of the data obtained from the I-Tree Canopy assessment it is clear that canopy cover can vary significantly on a local scale. In Reading alone, the canopy cover results of individual wards varies by 25.5%. The impact of this difference can be seen from the variation in benefits provided by the tree assets within the wards.

The benefits are dependent of canopy cover and ward area, therefore wards with high canopy cover and larger area have the greatest calculated benefits. However, Whitley is the ward with the largest area (508ha) yet currently has an average benefit provision. In fact, the benefit values are matched by Mapledurham, a ward that is less than a third of the area of Whitley. This enforces how influential canopy cover percentage is on benefit provision.

Removal of these pollutants is beneficial for human health, as the chemicals can cause illness and respiratory problems. By increasing canopy cover of an area, the annual removal of these pollutants also increases. Furthermore, increased canopy cover has been linked to other benefits; including improving mental health, urban flooding and shading, as well as environmental benefits (e.g. biodiversity and connectivity).

Limitations

There are limitations to using the I-Tree Canopy assessment method. The accuracy of the canopy cover results is dependent on the number of points identified (tree or non-tree), the more points completed the higher the accuracy. In this assessment the points were identified until the standard error was equal to ±1.50%. There is potential for human error in identifying whether the point fell on a tree or not, although the likelihood of this significantly influencing the results is low.

However, the benefit results present higher potential inaccuracies, which is due to uncontrolled variables. For example, trees vary in their ability to remove pollutants; depending on age, species and location. These limitations mean the standard errors for the benefits are high.

Future recommendations

The UK target canopy cover is 20% for urban areas; 6 of the 16 wards already exceed this target. However, to optimise the canopy cover in Reading and reach the proposed target, the primary focuses should be on the wards Whitley, Battle and Katesgrove. As these wards would require extensive tree planting to reach achieve the canopy cover goal.

However, if benefit provision is prioritised it would be more important to focus on planting in Battle, Katesgrove, Park and Redlands. The current ward tree assets provide significantly low benefits, it would be advantageous to increase canopy cover in these areas.

APPENDIX 7: INFORMATION ON NETWORK RAIL'S VEGETATION MANAGEMENT

Network Rail's (NR's) estate is approximately 51-52,000 hectares in size and 16,000 km long (double if you count both sides) with an average width of 12m from the track to the fence. It contains approximately 6 million trees (taken to be those 3m tall and above) with Ash being the most prevalent species (16%); other species including Sycamore, Oak and Birch. Certain works in recent years resulted in a public outcry the result of which (following political involvement) was that NR had to undertake a formal review of their procedures. As part of this, there have been improvements to their website to help explain their vegetation management policies and a national helpline from which you can be linked to the local team in order to answer specific enquiries.

NR's management guidance provides the required safety zones to both allow safe working zones for NR staff and to manage the potential risk of harm to the rail network or trains from falling trees, the effect of which can be major disruption or injury. A railway cross-section is divided into 4 zones:

1 The area immediately around the trains and railway infrastructure must be kept clear for the safety of passengers and staff;

2 Near the railway wild flower grasslands are encouraged which are perfect for insects and butterflies;

3 Bushes and brambles provide habitats for small animals such as hedgehogs and amphibians. Smaller birds such as sparrows and robins are attracted to berries which grow along the railway;

4 At a safe distance further back from the railway, taller trees provide habitats for animals such as squirrels and larger birds.

NR believe that these different lineside habitats help create a more biodiverse ecosystem than a uniform line of trees.

Given the differing levels of the railway across the network, some of which runs through deep cuttings, each location is assessed by local engineers and is treated in a site-specific manner, taking into account such factors as slope angle, vegetation type and soil type in order to determine likely root stability. Where alternatives to felling are appropriate, these are implemented.

Prior to recent lineside vegetation works through Reading and Wokingham, NR engaged with RBC, Wokingham BC, RTWN and Wokingham District Veteran Tree Association. NR is a significant landowner within the Borough and the railway is a designated 'treed corridor' in this Strategy. As such, NR will be an important contributor in helping the Borough meet the objectives for canopy cover, therefore RBC will continue to liaise with NR in order minimise tree removal and discuss replacement planting.

- NR environment pages
- Vegetation management and community involvement

ACKNOWLEDGEMENTS

Tree Wardens – thanks to the members of RTWN who provided some lovely photographs of trees and woodlands in Reading.

Georgia England, University of Reading – big thanks to Georgia for sharing her canopy cover assessment & data for the Reading Borough area.