Redington Frognal Neighbourhood Plan

Contribution of Trees to Townscape Character

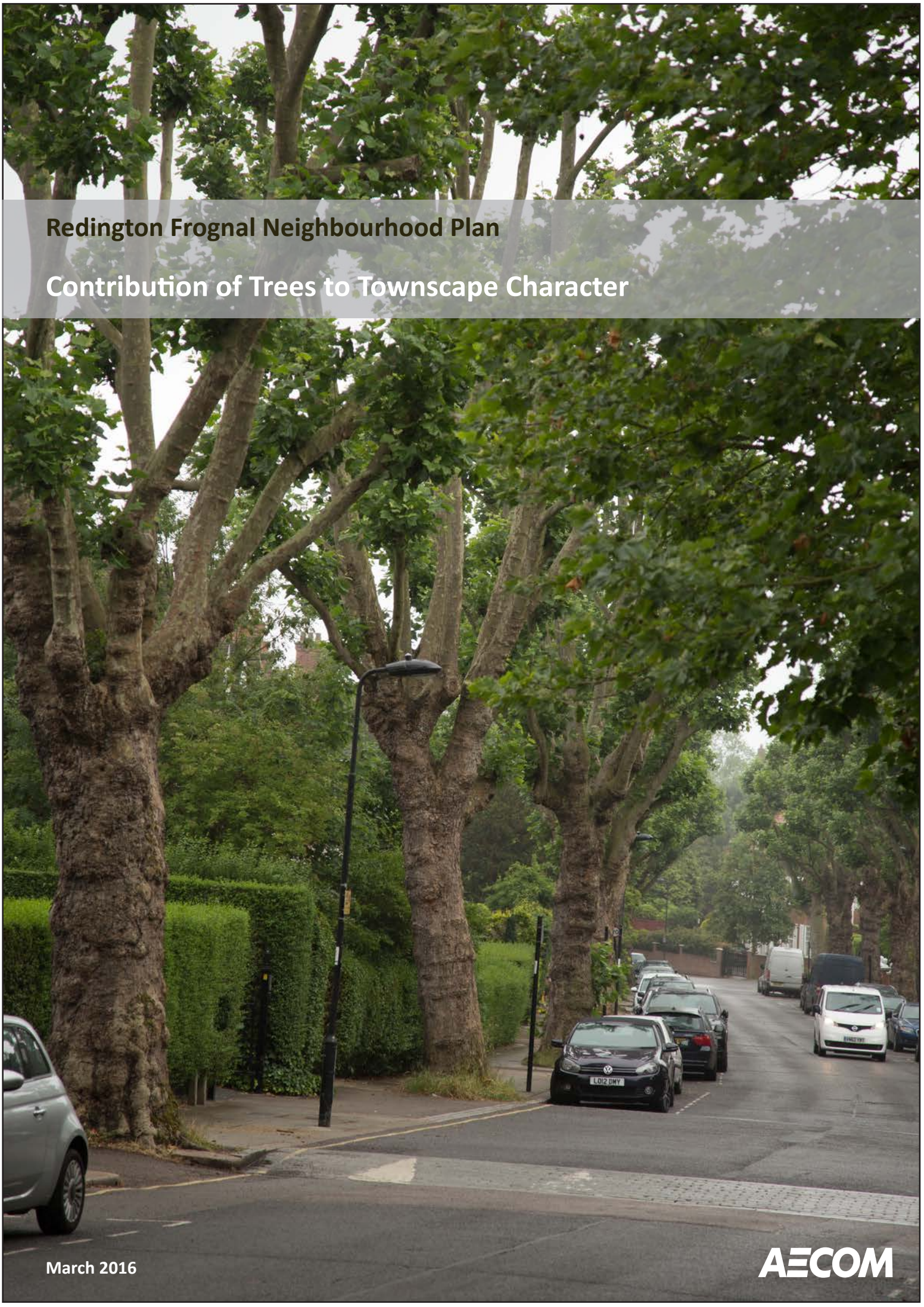

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Figure 1: Aerial Photograph

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Introduction

The history and character of the Redington Frognal neighbourhood area is described in detail in the Heritage and Character Assessment (HCA) for the area (AECOM, 2015). The HCA identified mature trees and vegetation in gardens as making a particularly strong contribution to the character of the area.

Redington Frognal Neighbourhood Forum has appointed AECOM to prepare this short report, which summarises the distribution of trees and the contribution they make to the character of the area. It is based on a desk study of maps created specifically for the project. In the absence of a detailed arboricultural survey, ProximiTREE™ data has been used to identify trees within and on the boundaries of the area. Data obtained from Camden Council identifies trees with Tree Preservation Orders (TPO). Finally, historic aerial photographs have been reviewed to demonstrate changes in tree cover within the area over time.

This report is intended to provide a baseline against which future change can be monitored. It may also be used to inform policies in the emerging Neighbourhood Plan for the area. Recommendations for further work are made at the end of the report.

Figure 2: Area Location Plan

The Benefit of Trees

Trees provide many benefits to the urban environment but are often undervalued. They play a vital role in improving our environment, the quality of peoples' lives and contributing to the economy. The aesthetic value of trees can substantially enhance the townscape and screen detracting elements in views. Shade and shelter provided by their canopies helps to cool urban areas in the summer and prevent heat loss by buffering the impact of cooling winds in winter.

It is widely known that trees contribute to ecosystems by providing food and habitat for birds and other animals, and that they improve air quality by absorbing a range of potentially harmful gases from the air including carbon dioxide, sulphur dioxide and carbon monoxide. There is also strong evidence that trees in the urban environment have been associated with reductions in violence and crime, increases in property prices, improved recovery times from illness, and reducing stress (TDAG, 2011). The benefits of trees have been shown to be far-reaching, creating a strong sense of unity and identity in a place (Forestry Commission England, 2011).

London's Urban Forest

A landmark study, 'Valuing London's Urban Forest' (Treeconomics, 2015) aimed to quantify the value of trees to London's ecosystem and environment. The study estimates that there are 8,421,000 trees in Greater London, with canopy cover across the region of 21%. This means that London meets the UN Food and Agriculture Organisation definition of a forest. Within Inner London, the study estimates there are 1,587,000 trees with a total canopy cover of 18%. It has further been estimated using the Capital Asset Valuation for Amenity Trees (CAVAT) method that the amenity value of trees in Greater London is £43.3 billion, providing total annual benefits to the economy of £132.7 million.

Data provided by ProximiTREE™ estimates that there are a total of 6,866 trees in Redington Frognal, with a total canopy cover of around 30%. This is significantly higher than the rest of Inner and Greater London, and demonstrates the value and contribution of trees to the character and sense of place of this area.

The Greater London Authority (GLA), in partnership with the Forestry Commission, published a Supplementary Planning Guidance (SPG) titled 'Green Infrastructure & Open Environments: Preparing Borough Tree and Woodland Strategies' (GLA, 2013). This document provides more detailed guidance on London Plan Policy 7.2.1 to protect, maintain and enhance trees and woodland in London. The London Borough of Camden has yet to publish a comprehensive tree and woodland strategy.

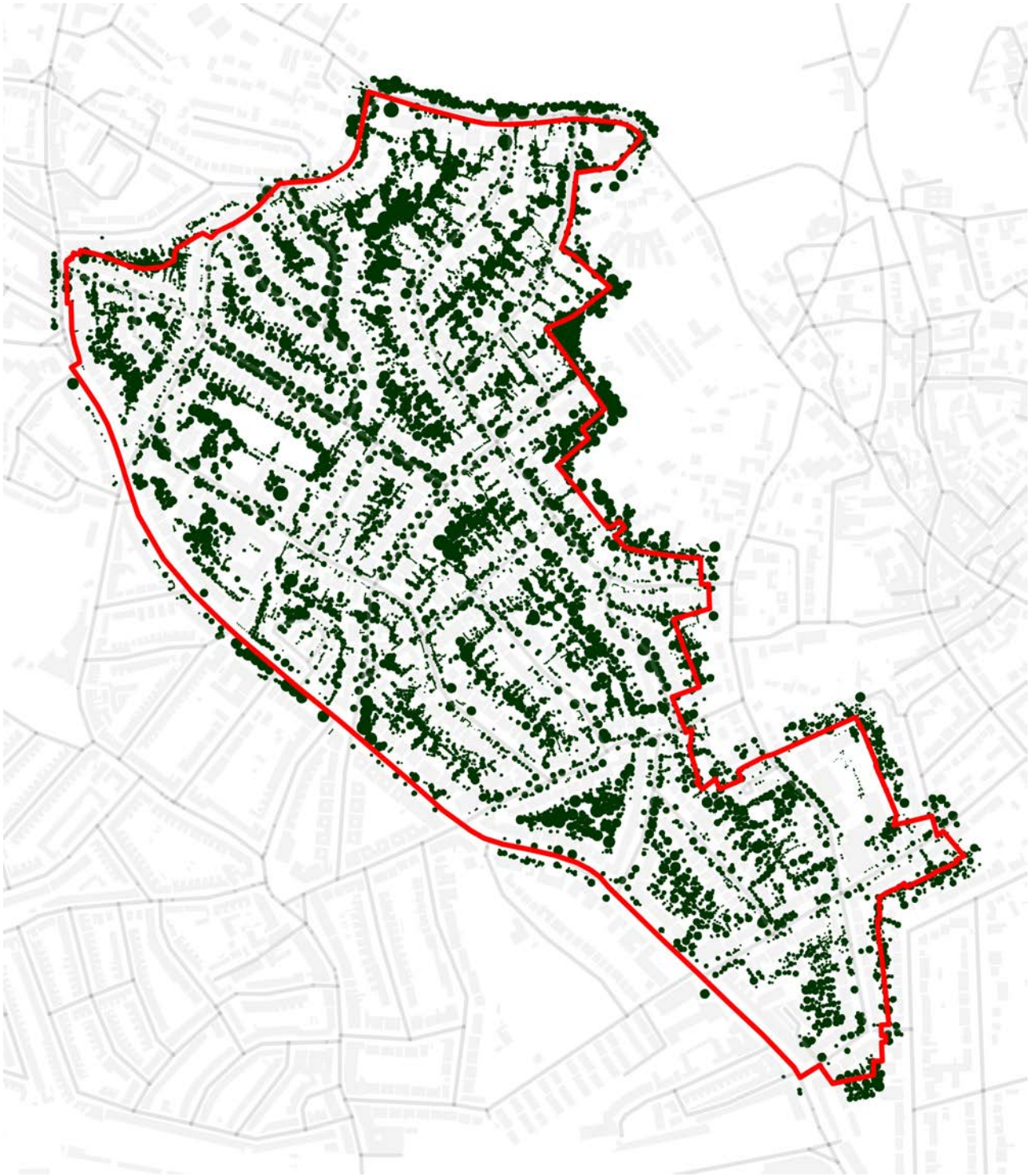
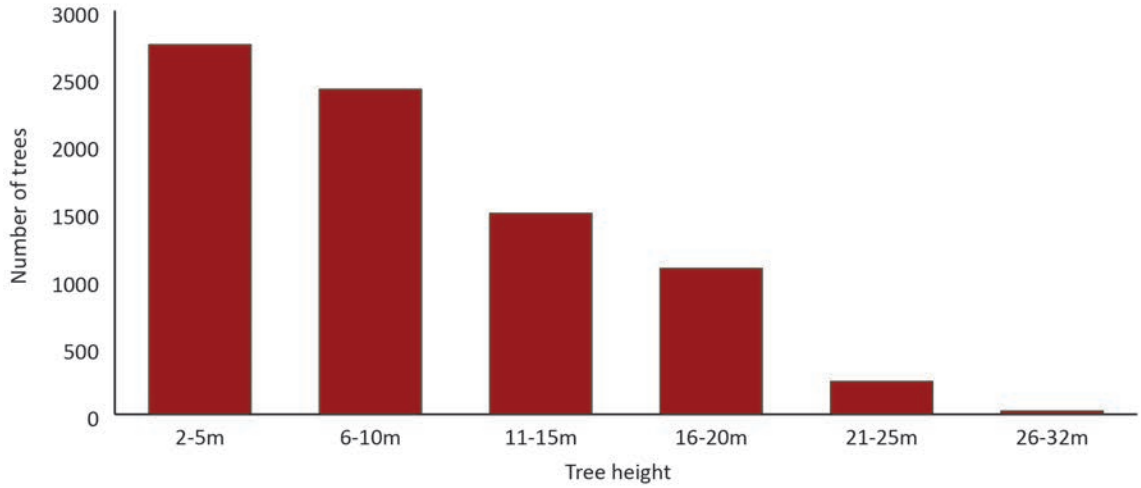


Figure 3: Tree Canopy Cover

Distribution of Trees

Trees are generally evenly distributed, with the exception of Finchley Road where they are largely absent. The survival of trees which are contemporary with the original laying out of the streets unifies the area and is an indicator of its historic value. Streets such as Greenaway Gardens and Redington Road where trees are more sparse or have been lost has resulted in a reduced sense of enclosure and privacy, and underlines the comparative value of trees to the rest of the area. Along streets that have fewer trees the contribution of vegetation, including trees, in private gardens is increased.



There are a wide variety of tree species within Redington Frognal, with broad leaf species the most common. The following are the most frequently found species and are generally the most mature within the area:

- London Plane (*Platanus x hispanica*)
- Horse Chestnut (*Aesculus hippocastanum*)
- Lime (*Tilia cordata*)
- Oak (*Quercus robur*)
- Silver Birch (*Betula pendula*)
- Ash (*Fraxinus excelsior*)
- Sycamore (*Acer pseudoplatanus*)
- Rowan (*Sorbus aucuparia*)
- Copper Beech (F*agus sylvativa Purpurea*)
- False Acacia (*Robinia pseudoacacia*)
- Cherry (*Prunus sp.*)
- Apple (Malus sp.)
- Scots Pine (*Pinus sylvestris*)
- Sweet Gum (*Liquidambar styraciflua*)

Trees in the public realm are almost entirely street trees, as public green space in the area is limited. These trees are also some of the largest and oldest trees in the area, such as the pollarded London Plane trees located along Ferncroft Avenue and Rosecroft Avenue which are around 18-20m tall with canopy spread of approximately 16-25m. Records held by the London Borough of Camden indicate a trend towards an increased loss of street trees within the area, peaking at 31 trees removed in the period 2014-15. The streets with the highest number of trees removed since the records began are Redington Road, Templewood Avenue, Croft Way, Oak Hill Avenue and Frognal. However, to compensate for this London Borough of Camden has also increased the number of street trees planted over the past four years, from two in the period 2011-12, to 27 in 2014-15. In total, since 2011, 66 street trees have been removed and 50 planted, resulting in a net loss of 16 trees.

Trees in private front gardens contribute greatly to the setting of streets and buildings. The garden setting of buildings creates a buffer between them and is a central element of the original design of the area. Trees in private rear gardens are visible through gaps between buildings. Apart from the street trees, some of the tallest and oldest trees are within private rear gardens by reason of the length of time since the area was laid out. Generally, the larger trees are located in the north and north-west of the area on higher ground close to Hampstead Heath; to the east of Redington Gardens; in the rear gardens of properties between Redington Road and Rosecroft Avenue; and around Kings College London. The greatest concentration of trees over 25m in height in the area is in the rear gardens between Redington Road and Rosecroft Avenue.

Trees provide structure and the closed canopy of deciduous trees in summer provides shade and enclosure, creating a more intimate setting.

The combination of abundant and mature trees and vegetation creates a varied urban habitat for wildlife and supports an ecosystem that includes insects, invertebrates, amphibians, birds, bats and other small mammals. The area's trees provide valuable foraging and potential roosting or nesting sites for a range of bird and bat species. Trees within Redington Frognal collectively function as part of the area's green infrastructure. These valuable green corridors facilitate the movement of wildlife through the area.

Tree Preservation Orders

Tree Preservation Orders (TPOs) are a planning designation that can be made by a Local Planning Authority (LPA) under the Town and Country Planning Act 1990 to protect trees for the benefit of public amenity, enjoyment or the environment. A TPO may apply to an individual tree, a group of trees, or an entire woodland. A TPO designation protects the tree by prohibiting the cutting down, topping, lopping, uprooting and wilful damage or destruction unless permission has been granted by the LPA. Breaching a TPO is an offence.

Additionally, much of the Redington Frognal area is covered by a conservation area, shown in pink on Figure 4. In conservation areas, normal TPO procedures apply to trees already protected. However, trees that are not already protected which have a stem diameter of greater than 75mm measured 1.5m above the ground may not be worked on unless written notice has been given to the LPA at least six weeks before the work starts. This allows the LPA the opportunity to consider protecting the tree with a TPO (DCLG, 2012).

There are 705 individual trees protected by TPOs in Redington Frognal, representing around 10% of all trees. These trees are evenly spread across the area and are almost exclusively street trees or trees in the public realm, with a few located in private rear gardens. Trees protected by TPOs include avenues each side of the following streets:

- Chesterfield Gardens;
- Clorane Gardens;
- Croft Way;
- Ferncroft Avenue;
- Frognal Lane;
- Heath Drive;
- Hollycroft Avenue;
- Kidderpore Gardens;
- Oakhill Avenue;
- Redington Road;
- Rosecroft Avenue; and
- Templewood Avenue.

There are belts of individual trees protected by TPO around Number 28 Arkwright Road, a Grade II listed building, and the Arkwright Mansions on the corner of Arkwright Road and Finchley Road.

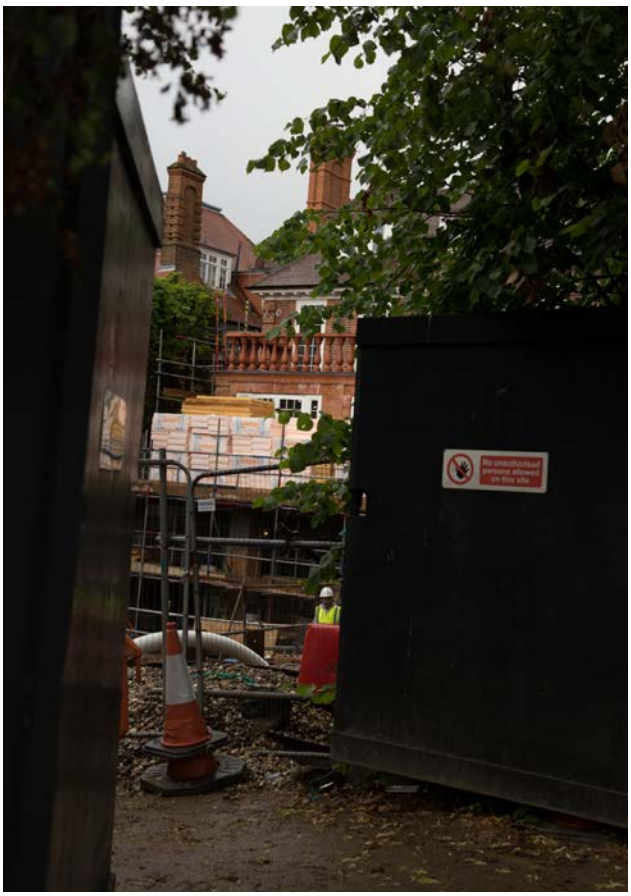
Figure 4: Tree Preservation Orders

Issues

A number of issues and trends have been identified with regards to trees within the area.

There has been widespread loss of trees along Finchley Road over the past century. Historic photographs and aerial imagery of Finchley Road show it was once a narrower street. It has been widened since the 1940s resulting in the loss of tree avenues, and is now dominated by vehicles. Furthermore, the tree loss records provided by London Borough of Camden suggest an increasing trend in the removal of street trees since the records began in 2000.

The area's underlying geology is predominantly London Clay, and therefore the removal of trees could result in ground heave. Ground heave may result in damage to a building and is caused by clay which has shrunk as a result of moisture uptake by a tree suddenly swelling again when the tree is no longer there to take up water (Barrell Tree Consultancy, 2011).



The conversion of gardens into driveways and housing extensions has resulted in the partial loss of trees along some streets; these minor incremental changes could have a major cumulative effect on the verdant character of the area and urban habitat.

In addition to these direct changes, a range of indirect pressures on trees could result in a change in character over time.

Climate change is likely to result in more extreme weather patterns including more frequent floods or drought. This may be compounded by the complex underlying hydrology and of the area, including underground rivers. Such extremes could have an impact on the health and viability of trees in the area.

Over recent years a number of new plant pests and diseases have established in the UK which have the potential to significantly reduce or even eliminate populations of certain species. A substantial loss of trees to pests and disease could substantially change its verdant character, particularly if a disease was to affect one of the more common street tree species, such as London Plane. In response to the threat posed by pests and disease, in the case of a national outbreak such as the current outbreak of ash dieback (Hymenoscyphus fraxinea), it will be important to monitor the health of vulnerable tree species, and if a suspected case is

identified this should be reported to the Forestry Commission via their online Tree Alert form, or to Camden Council's tree officer. Any planting schemes proposed as part of new development should be reviewed to ensure they contain a range of different tree species and varieties. Furthermore, any tree losses to disease should be replanted with a mix of disease tolerant or resilient species.

Opportunities

There are opportunities to both provide further protection to existing trees which are valued within the area and plan for the future by developing a tree strategy as part of the neighbourhood planning process.

Most of Redington Frognal is covered by a conservation area, which provides some protection to trees, as previously described in Section 5 of this report. If there are trees not within a conservation area, or not already covered by TPOs which significantly benefit the local area, a request to the LPA could be made to apply TPOs to these trees. This should be based on a full arboricultural assessment, which should demonstrate the value of the trees assessed using the CAVAT method or similar.

There is an opportunity to define policy that enforces or encourages homeowners and developers to retain existing trees within front and rear gardens to protect the garden setting of buildings and the contribution that trees in these locations make to the verdant character of streets. This could be through specific policy that restricts tree removal, or by using policy to incorporate trees into development.

Opportunities to reintroduce trees along Finchley Road should be further considered as part of a wider strategy to improve the public realm in the area. Consideration should be given to larger species which add structure to the wide street. Additionally, where there are gaps in avenues of existing streets these should be filled in by planting additional trees.

After periods of extreme weather, and particularly following times of drought it will be important to monitor the health of trees; any trees that fail should be replanted with species more tolerant to extremes of climate. Furthermore any planting schemes proposed as part of new development should contain a range of species more resilient to environmental change.

There is an opportunity to protect and strengthen the green corridors which cross the area through neighbourhood planning policy and community initiatives.

Minimum soil depths and volumes for tree planting could be explored as a part of a tree strategy, with particular reference to basements and proximity to buildings, where lateral and vertical root spread could cause structural damage.

A high potential for underground rivers and watercourses has been identified in the area, with the primary watercourses roughly aligned along Frognal ad Arkwright Road and along Heath Drive and Redington Road. Along these streets, tree species that take up excess water from the ground, such as Willow and Poplar, should be encouraged.

Recommendations

A detailed arboricultural assessment based on a field survey of trees in both the public and private realm within the Redington Frognal area should be carried out in order to quantify and more fully understand the mix and make up of tree stock within the area. The approach to the arboricultural assessment would need to be agreed with a qualified arboricultural consultant from the outset to decide whether the assessment seeks to survey each individual tree in the public realm, or looks at sample areas in both the public and private areas. To support the arboricultural assessment all available data held by Camden Council on public trees should be obtained. The arboricultural assessment would provide a database of tree data including species, size and condition. This assessment should make use of the CAVAT method, or similar, to quantify the amenity value of trees.

Following the completion of an arboricultural assessment, it is recommended that the Redington Frognal Neighbourhood Forum work with Camden Council in developing a tree strategy for the area following guidance in the Preparing Borough Tree and Woodland Strategies SPG. This will assist in creating specific management principles for maintaining and planting trees, and could inform policy development in the neighbourhood plan. Consultation with tree officers at Camden Council would be vital in ensuring the tree strategy is in line with a wider Borough strategy for trees and woodland.

The tree strategy should include clearly defined aims and objectives and cover all trees within the area whether on public or private land. It should set out desired tree species for the area to maintain character, improve biodiversity, protect against pests and diseases, and be resilient to climate change. Target areas for planting should be identified, to ensure the right trees are planted in the right place for the long-term benefit of the area. Standards should be included for the specification of tree planting and the design of tree pits to ensure long-term success. Finally, key roles should be identified as well as a structure for monitoring its overall delivery.

To support the tree strategy, policy should be implemented in the Redington Frognal Neighbourhood Plan. Such policies should cover the following:

- The circumstances in which tree removal can be considered;

- Mitigation measures if tree removal is to be permitted, which could include compensatory planting requirements or contribution to a community infrastructure levy (supported by CAVAT); and
- The approach to tree planting and species selection that will be taken, likely with strong reference to the tree strategy.

Alongside the development of a tree strategy and policy in the Redington Frognal Neighbourhood Plan, the following should be explored:

- Publishing through an online web-based GIS the locations and details of all trees protected by TPO to improve accessibility and understanding of this data; and
- Setting up a local tree management group which can develop relationships with local businesses, public bodies, volunteer organisations, charities, and community groups to protect the future management of trees and support or finance further planting.

Further guidance on the protection or management of trees can be obtained from:

- Forestry Commission (*http://www.forestry.gov.uk/england*)
- The London Tree Officers Association (*http://www.ltoa.org.uk/*)
- Trees and Design Action Group (*http://www.tdag.org.uk/*)
- The Tree Council (*http://www.treecouncil.org.uk/*)
- Trees for Cities (*http://www.treesforcities.org/*)

Limitations

This report is based solely on desk-study with no fieldwork specifically carried out to identify trees and their condition. The ProximiTREE™ data used to inform this report was purchased from eMapsite. This data was created in 2010, so there may have been recent changes which are not represented within the data. ProximiTREE™ data is created by analysing aerial photographs using remote sensing to detail the location and circumference of the canopy. Approximate tree heights are subsequently determined by using a Digital Terrain Model which is accurate to +/- 80cm.

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