London Borough of Lambeth

CLAPHAM COMMON TREE STRATEGY

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Reviewed by Land Use Consultants

CCMAC

Lambeth

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FOREWORD

Councillor Helen O'Malley

Chair of Clapham Common Management Advisory Committee

Clapham Common, a designated conservation area managed by the London Borough of Lambeth, is an extensive green open space of 199 acres (80.6 hectares) which provides an important refuge for wide a range of wildlife as well as a space for the recreation and leisure of South Londoners. It supports over 1800 individual trees including London Plane, Lime and Horse Chestnut, Maple and Ash.

In 2011 the London Borough of Lambeth, working within Clapham Common Management Advisory Committee (CCMAC), commissioned an audit of trees on the Common in order to develop a tree strategy to provide a robust forward action plan for the protection of Clapham Common's tree stock. The strategy aims to provide a long term vision for landscaping the Common, and guide decisions for the planting, care, and replacement of trees on the Common.

The need for a Tree Strategy for Clapham Common was a key priority in the Clapham Common Landscape, Conservation and Management Masterplan 2007. This was a good example of partnership working within Lambeth and demonstrates how officers, elected representatives and local stakeholders worked together to secure shared decisions, delivery and outcomes for Lambeth and Clapham Common.

CCMAC recognise the importance that trees play in improving environmental and landscape quality, and thus contributing to the Common's current ecological value, as identified in Local Biodiversity Action Plan (BAP) targets. CCMAC is also committed to effective management of the Common's tree stock, allocation and sourcing of appropriate funding, identification of new planting opportunities, conservation of notable individual trees and expansion of existing tree cover.

Our objective in developing this strategy is to provide sustainable management of the Common's existing tree stock through best practice for the benefit of nature conservation, landscape protection/enhancement as well as other environmental benefits such as noise and dust suppression, and enabling recreation and educational activities. We also look to increase, where possible, under-tree planting of a native herb and wildflower layer to increase biodiversity. This strategy ensures that tree loss to disease, damage or neglect is minimised, and any that are lost are replaced with native species, where feasible, in order to make the most of existing features such as planted avenues. New planting will also create or replace green corridors and retain and enhance areas of heritage character.

I therefore wish to give my thanks to everyone who has contributed to this strategy for the commitment, expertise and sense of vision each has brought to its delivery, including Lambeth Council officers, the Clapham Society, the Friends of Clapham Common, Trees for Cities, Land Use Consultants and ACS Consulting.

Definition of Terms (used in this document)

Cellular Confinement Systems are a three dimensional, expandable honeycomb structures, that when positioned at ground level, offer tree root protection

Compaction (soil): the loss in pore spaces in soil caused by surface traffic or excessive cultivation

Coppicing: the cutting of a woody plant near ground level to encourage the development of multiple stems

Clapham Common Masterplan: details the vision for the Common for the next 50 years, agreeing a clear framework for conserving, maintaining and improving the Common and providing a coordinated approach to design and management

Crown lifting: raises the crown height by removing lower braches or pendulous growth

Crown reduction: overall reduction in height and spread of the tree canopy by pruning back to a growing point

Crown retrenchment is a term used to describe the way in which peripheral dieback occurs as a tree (typically over-mature) redirects energy and growth to the lower region of the crown

Crown thinning: reduction in the density of foliage from within the crown by evenly removing branches back to a growing point

Bacterial washes: introduce beneficial bacteria and mycorrhizae, which assist the tree in absorption of nutrients

Dead and Dying: non living trees, which may be considered for safe retention as a wildlife habitat, or in a condition which limits life expectancy and/or severely diseased

Decompaction: (of soil) typically using compressed air to penetrate voids in the soil in order to separate granular based materials and improve the soil environment for root growth

Die back: is the progressive death of a tree or branch from its extremities towards the roots

Ezytreev: is a bespoke tree management software package used by the Council for collecting and storing tree data to assist with management

Full-mature trees are fully established, retaining good to moderate vitality but with slowing growth

Infill Planting is used to refer to tree planting post 1890

Long term is defined as over 20 years

Mature describes a fully established tree around the middle of its usual life-expectancy; generally retaining good vitality and having attained its ultimate dimensions

Medium term is defined as between 10 and 20 years

Mulch is material laid down over the rooting area of a tree to help conserve moisture, suppress weeds or encourage beneficial microflora

Ornamentals describe small growing trees selected for the aesthetic features, such as flowers or bark

Over-mature are fully mature trees in at least the last quarter of their usual life-expectancy and displaying symptoms of decline

Pollarding is the complete or partial removal of the crown of a young tree so as to encourage the development of branches. Re-pollarding includes removal of the shoots arising from pollarding

Secondary Avenues are succession planting along the length of existing avenues, in anticipation of future tree loss and minimize its visual impact

Semi-mature describes developing trees which have not yet reached a typical mature height or spread and do not bear viable fruit or seed

Short term is defined as up to 10 years

Subsidence is the downward movement of a building and its foundations. One of the causes of subsidence is the drying by water abstraction by roots and the shrinkage of certain clay soils

Succession planting: replacing existing trees in anticipation of their loss in the short to medium term

Stand: in woodland context is a group of managed trees

Target is anything including passing people, structures such as buildings, footpaths, roads or driveways, which is located within striking distance of a tree. Target area is the area surrounding a tree

Thinning means the removal of selected trees from within a woodland stand

Tree Strategy contains the long term vision for the planting and removal of trees on the Common as well as defines the approach to the sustainable management of the tree stock

Vertical mulching is a technique used to alleviate soil compaction within the root zone by auguring or drilling 5cm wide, 10cm deep holes in the soil on 25 -50cm centres under the affected trees, starting at approximately 3m from the trunk and out to the drip line of the branches

Veteran tree is a loosely defined term for an old and valued specimen, which may have survived beyond the typical age range of the species and which displays particular ecological criteria

Weeds are plants growing in an unwanted or inappropriate location and maybe woody or herbaceous

Young describes newly planted trees, up to 5 years in its location

Executive Summary

The trees and woodlands on Clapham Common (the Common) are an intrinsic and valuable feature of this historic landscape. Since the first tree planting took place in the late 19th century, London Planes have been widely used both as individual specimens and to line the main avenues and footpaths of the Common. A larger proportion of these original trees still survive and remain a key feature of the area, defining the character and appearance of the Common. Tree planting and natural regeneration has continued throughout the 20th century, adding woodland, ornamental trees and secondary avenues. As a result, the Common has a diverse tree population, with multiple functions and immense value.

The London Borough of Lambeth Council (the Council) recognises this value and wishes to promote and enhance the benefits that trees and woodlands provide, not only to the users of the Common, but also to the wider community. Trees offer both direct and indirect benefits to the environment, economy and society as a whole. It is for this reason that the Tree Strategy has been developed to ensure that the benefits and value afforded by the trees in the Common are neither lost nor compromised.

The aim of the Tree Strategy (the Strategy) is to achieve sustainable and attractive tree and woodland cover at the Common. This aim shall be delivered by ensuring that tree and woodland management is sustainable and achieved through best practice. A focus on using native species shall contribute to biodiversity gains, whilst the wildlife and habitat value of the Common shall be maximised through retaining and enhancing the individual character areas.

The aim and objectives of the Tree Strategy are to be realised through adopting a 'Vision for Tree Cover' (the Vision), which is identified within the Strategy and relates directly to the Action Plan. The Action Plan lists the necessary tasks required to achieve this Vision, which addresses the key issues and delivers the aim and objectives.

The Vision for Tree Cover is a framework of management, which adheres to the following principles:

1. Recognition of the key elements and historic character of the Common and plan future replanting programs to replicate and enhance these features
2. Maintenance of the broad visual character of the Common by prolonging the life of and replacing, as a priority, the historic tree groups, avenues and individual specimens
3. Use of suitable tree species (fitting to the local setting) for replacement planting, whilst incorporating the wider benefits, such as climate change adaptation, air filtering and control of storm water runoff
4. Avoidance of unplanned and inappropriate infill planting
5. Maximisation of ecological and biodiversity gains
6. Match planting with the current rate of tree decline over the next 50 years, to provide direct replacement of the existing trees

A number of key issues have been identified through a process of tree survey and consultation with Stakeholders. Threats to the current landscape relate to the mature and over-mature age of the key historic trees, which are steadily declining. This has the potential to cause significant change to the current landscape as avenue and specimen trees are lost, with a corresponding impact upon the character and appearance of the Common. This is compounded by the fact that much of the replacement planting, in recent years, has not been planned with a focus on renewing these historic avenues, groups or specimens.

The survey undertaken during August 2011 recorded both the age and condition of the trees. This has allowed the identification of those trees, which are likely to fail in the short term. It has also provided a clear breakdown of those trees that are in a poor condition and are likely to decline rapidly without adequate and timely management. This equates to 10% of trees in poor condition (potential to fail in the short term) and 30% in fair condition (potential to fail in the medium term). Analysis of the tree survey has been used to form the Action Points and the Action Plan tasks, which highlight where resources can be allocated in order to prolong the life span of key trees.

The principles behind the practical measures within the Action Plan are also described within the Strategy document. This provides a reference to inform the decision making process and also sets out the Council's obligations to meet its legislative responsibilities, in line with local and national policies and guidance.

The Common relies heavily on continual community support from local partners. The Tree Strategy recognises the enormous and valuable contributions from groups such as The Friends of Clapham Common and the Clapham Society. The Council seeks to maintain these valuable partnership arrangements as well as forging new links with the broader community. The Action Plan therefore expands upon and reflects many of the current projects, such as the management of Nursery Woods and new planting schemes, but which also explores new ideas. Examples include introducing a Tree Warden Scheme to help monitor the health of trees and practical demonstrations of tree dismantling operations for local schools and interested groups. As part of this process, it is intended to explore alternative funding streams and help resource the tree and woodland management projects such as planting and biodiversity improvement. This can involve seeking funding to which direct access is only available to local groups or charities. Owing to the important historic nature of the Common's avenues and individual trees, the Heritage Lottery Fund is hoped to be a viable revenue stream.

The Action Plan contains the practical measures necessary to implement the Tree Strategy and the Vision of Tree Cover Plan (Vision Plan). This starts with a high degree of input from Council officers who, in consultation with Stakeholders, will set priorities, formulate planting schemes and organise new aspects of arboricultural operations, such as soil de-compaction. The Council's ongoing tree condition survey will also be a key element of the Action Plan by maintaining contemporary records, particularly with respect to tree condition. However, once implemented and a well-defined consultation stream is established, it is intended that the balance of decision making and monitoring will progressively transfer from the Officers to the Stakeholders. A process of regular monitoring and review is recommended to ensure the successful implementation of the Tree Strategy for the Common.

1. Introduction

1.0 Introduction

1.1 The role of the Tree Strategy is to develop a long term vision for the planting and removal of trees on the Common as well as to define the approach to the sustainable management of the tree stock. The Tree Strategy contains a detailed framework of guidance for future tree management. The Action Plan is a working document, which contains relevant tasks designed to deliver the overall aims and objectives of the Tree Strategy.

1.2 The Tree Strategy incorporates the following elements:

- Framework of the Tree Strategy- Provides direction and guidance for future tree management whilst incorporating relevant working documents and related Council policies and strategies
- Tree Stock – A summary of the details pertaining to the trees and woodlands at the Common with an assessment of their amenity value, age and condition
- Principles of Management – Sets out how the trees are to be managed in line with Council policy and best practice
- Guidance for forming the Action Plan – Advises on updating the Action Plan and suggests methods for arranging partnership agreements and possible funding streams
- Monitor and Review – Provides a suggested methodology for the review of the Tree Strategy and Action Plan
- Action Plan – A program of tasks set to achieve the Tree Strategy objectives

1.3 Aims / Objectives

1.3.1 The primary aim of the Tree Strategy is:

- To achieve sustainable and attractive tree and woodland cover at the Common

1.3.2 The objectives to achieve this aim are:

- Encourage sustainable management, ensuring loss to disease, damage and neglect is minimised (TS1)
- Use native tree species to replace failed trees and to extend tree diversity and cover across the Common (TS2)
- Retain and enhance the individual character areas defined by their tree planting and to create green corridors (TS3)
- Manage the tree stock through best practice for the intrinsic environmental, social and economic benefits trees provide (TS4)

Clapham Common - early 1800's and modern-day

1.4 Clapham Common

1.4.1 Clapham Common is a key amenity land area within the eastern quarter of the London Borough of Lambeth. The Common is a designated Conservation Area, located between Clapham, Balham and Battersea. With a land area of 220 acres it is one of London's largest green spaces. Whilst over 100 acres of the Common is located within the London Borough of Wandsworth, sole responsibility for management lies with the London Borough of Lambeth.

1.4.2 The Common supports approximately 2000 individual trees and two areas of woodland. The majority of the trees are mature, which provide significant landscape value and make an important environmental contribution. The Common is designated a site of Grade 2 Borough Importance for Nature Conservation, by the Greater London Authority.

1.4.3 The Common was first brought under active management in the mid 18th century, which saw wide scale drainage and tree planting. Noteworthy examples of the trees planted at that time are still present within and surrounding the Holy Trinity churchyard. The Common was subsequently acquired by the Metropolitan Board of Works, which led to the first formal planting of London Plane trees beside both Long Road and The Avenue. Individual specimens and boundary tree groups were coupled with the planting of The Avenue, Horse Ride and Bishops Walk (c1877). These arboreal features remain to be of enormous historic and landscape importance. Infill tree planting has occurred throughout the 20th century, with noteworthy examples growing near to the Bandstand. More recent additions include trees bordering Nightingale Avenue, Nightingale Walk and a central avenue stretching from Nursery Wood to Clapham Common North Side. Battersea and Nursery Woods are also 20th century features, which have developed from unchecked natural regeneration.

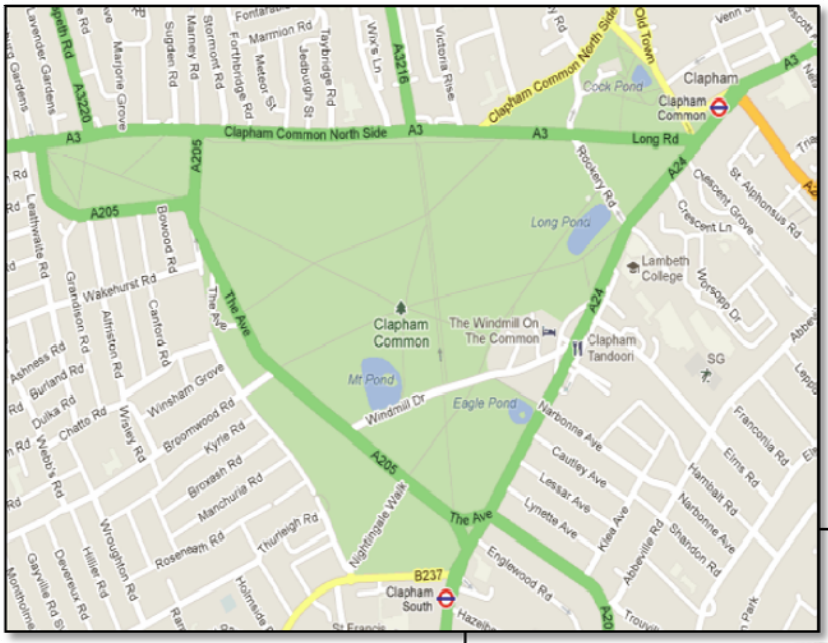
Clapham Common North Side circa 1900's

Clapham Common North Side 2012

1.5 Clapham Common Masterplan

1.5.1 The development of the Tree Strategy was identified as a priority by Stakeholders following the production of the 2007 document 'Clapham Common Landscape, Conservation and Masterplan' (the Masterplan). The formation of the Masterplan followed an in-depth consultation process, which helped establish a well-defined direction for the future management of trees on the Common. The Tree Strategy therefore aims to create a vehicle for the implementation of specific management objectives, as identified in the Masterplan. The Tree Strategy also adopts the general landscape / replanting recommendations, illustrated in the Masterplan's overall 'Landscape Vision'.

Clapham Common - l*ocation map*



Aerial photograph

1.6 The Value and Benefit of Trees to Clapham Common

1.6.1 Trees and woodlands are an important element of the Common and provide many benefits. The Council recognises the importance that trees play in improving environmental and landscape quality, enhancing the Common's ecological value and its biodiversity.

1.6.2 The benefits attained from trees can be defined and measured in both direct and indirect terms, although they are not readily translated in to monetary value. Nevertheless, the benefits of trees (e.g. their aesthetic beauty and their ability to produce oxygen) are widely known. Trees also provide many indirect benefits, such as increasing land and house values to absorbing particulate pollutants from traffic fumes. The Tree Strategy identifies and promotes these benefits where appropriate as a means of maximising the value of the Common's trees, for current and future residents and users. The principal benefits are listed below:

Social benefits

- Providing amenity, aesthetic value and historical continuity
- Marking the changing seasons with leaf flush, flower, autumn colour and fall
- Symbolising community focal points providing structure and orientation
- Shelter from rain and sun
- Physiological and psychological health improvement

Economic benefits

- Increasing property values (the presence of trees can increase the value of residential and commercial property by 20%*)
- Encouraging investment of industry and services to improve aesthetics of an area
- Reduce fuel costs for heating and cooling buildings due to shelter and shade
- Providing a sustainable source of woodchip biofuel
- Providing a sustainable source of compost (leaf litter) and mulch
- Reduced cost over traditional or formal parks management

*International Society of Arboriculture UK

Environmental benefits

- Maintenance and enhancement of biodiversity
- Absorbing carbon dioxide (the main greenhouse gas) and producing oxygen
- Filtering, absorbing and reducing pollutants (ozone, sulphur dioxide, carbon monoxide, nitrogen dioxide, dust and particulates).
- Buffering extremes in temperatures providing cooling in the summer and warming in the winter
- Intercepting rainfall and thereby reducing run-off and the effects of flash floods
- Increasing biodiversity and the breadth of ecological habitats to provide natural links or green corridors within parks and open spaces
- Encouraging the movement of wildlife between areas.
- Reducing noise levels by screening traffic noise

The Old Town

2. Framework of the Tree Strategy & Action Plan

2.0 Framework of the Tree Strategy & Action Plan

2.1 Format

2.1.1 The Tree Strategy sets out the long-term vision for the management of trees and the woodlands on the Common. It identifies the most valuable trees in landscape and/or historic terms, which in turn should determine the focus and priority for available resources. The Tree Strategy has been formulated following an appraisal of the tree stock and a review of the current and future management requirements. This has been used to inform specific tasks within the Action Plan.

2.1.2 The Tree Strategy and Action Plan are prepared as two distinct elements. The Tree Strategy focuses on long term aims and objectives and the management principles by which the objectives are to be achieved. The Action Plan sets out the tasks necessary to achieve the aims of the Tree Strategy. It is recognised that the Action Plan is a document, which has a pre-determined life span because the condition of the trees will change as the maintenance program evolves through implementation.

2.1.3 The first Action Plan will therefore be limited to a 10 year program, which itself will be informed by further tree condition surveys during that period. It is recognised some tasks will be repeated and ongoing, whilst specific tasks may well present themselves after some time has elapsed. As a consequence, the review and monitoring process is an important feature of the Tree Strategy. Review and monitoring will ensure that new and evolving action points can be incorporated to more accurately reflect the ageing of the tree stock and future needs of Stakeholders.

2.2 Stakeholders

2.2.1 Stakeholders have been consulted and involved in the development process of the Tree Strategy, which involved incorporating detailed feedback and observations. However, for the remaining individuals and groups, who have an interest in the Common, a process of dialogue is required with those responsible for the implementation of the Action Plan. Stakeholders are therefore indentified below.

2.2.2 Stakeholders responsible for implementing management:

Council Officers

- Tree Officers
- Client Officers
- Parks Area Managers

Contractors

- Term Arboricultural Contractor
- Arboricultural Consultants
- Landscape Consultants

- Ecologists

Outside bodies

- Friends of Clapham Common
- Trees for Cities
- Tree Wardens

2.2.3 Stakeholders to directly consult on management proposals

- Friends of Clapham Common
- Clapham Common Management Committee
- Ward Councillors
- The Clapham Society
- Senior Council Officers / Parks Managers

2.2.3 Stakeholders to inform through wider publication of strategy

- Residents
- Local Businesses
- Local Schools
- Veolia (Contractor)
- Non related Council Departments (e.g. Highways , Planning, Insurance)
- Wandsworth Council
- Greater London Authority

Mature trees forming internal avenues

2.3 Legislation

2.3.1 Whilst the Tree Strategy has clear and bespoke local aims, it must however address and not conflict with current legalisation relevant to tree and woodland management. The following legislation covers the Council's requirement to ensure trees are maintained in a safe condition. Legislation has an influence upon the management practices, which are undertaken and the duty to those working directly on the Council's behalf.

i) Occupiers Liability Act 1957 and 1984

This Act lays down a duty for occupiers (land owners or managers) to take reasonable steps to ensure that premises (including woodland) are reasonably safe for visitors permitted to be there. Reasonable steps are usually taken to mean that the Council (in this case), will conduct a regular inspection of tree health and condition and carryout any necessary remedial works. The amount and timing of remedial work is usually considered as that which is reasonably practicable to achieve.

ii) Highways Act 1980

The Act covers laws associated with the public highway. Section 154 deals with trees and shrubs located on private land; it gives the Council powers to serve a notice on the owners of trees, which are deemed to constitute a danger to the users of the highway. This includes dangerous trees that could fall on to the road, or trees and hedges that block a driver's view or interfere with the light level from adjacent street lamps. Although the Common is under public ownership, trees may cause an obstruction to the highway, including those Red Routes managed by Transport for London.

iii) Health and Safety at Work Act 1974

The Health and Safety at Work Act 1974 places a duty on employers and the self-employed to ensure, as far as is reasonably practicable, that their work does not affect the health, safety and welfare of others. The control of risks that may affect the health and safety of the public on the Common may usually lead to the temporary exclusion from areas where tree work is being conducted. Risks would not only apply to use of chainsaws and heavy machinery but would also apply to noise and control of harmful substances such as fuel or emissions.

iv) Miscellaneous Provisions act 1976

This Act contains legislation in sections 23 and 24 that enables the Council to deal with dangerous trees on private property. This legislation would only be applicable if a tree was dangerous to users of the Common and the owner refused to make it safe. The Council can serve notice upon the owner to make the tree safe. If the notice is ignored, the Council can enter on to private property in order to make safe the offending tree.

v) Town and Country Planning Act 1990 (TCPA)

This Act contains legislation, which imposes a duty upon the Council to protect trees or tree groups and woodlands by the serving of Tree Preservation Orders (TPO). The TPO prevents anyone from pruning or felling protected trees without first obtaining permission from the LA; anyone considering felling or pruning without such permission should consider the maximum penalty of £20,000, which the courts could impose. Without this legislation many of our mature trees would have been lost.

Additionally, the TCPA prevents the immediate pruning and felling of trees growing within conservation areas. Conservation areas (CA) provide special architectural or historic interest identified by the Council under the Planning (Listed Buildings & Conservation Areas) Act 1990. There is a statutory duty to preserve and enhance the character or appearance of such areas. Unlike private residences, the Council is exempt from the requirement to submit a notice for works to work upon its own trees, which grow within conservation areas. Private land owners are required to give the LA six weeks' notice of their intension to carryout tree work with a CA.

Mount Pond

2.4 Relevant Policy, Guidance and Strategy

2.4.1 The aims and objectives of the Tree Strategy are directly influenced and guided by Council Policies and take direction from Regional and National Guidance and Strategies, which relate to trees and woodlands. The purpose of identifying the relevant policy documents is to identify the alignment of the Tree Strategy against these policies and to reflect and promote their common aims and objectives.

2.5 Lambeth Local Development Framework (LDF)

2.5.1 The LDF is a series of documents, which replace the adopted Local Plan and which encompass elements of the Unitary Development Plan, which it ultimately supersedes. The LDF contains development and land use policies that will fulfill the Council's community, economic, environmental and social aims for the Borough in the future. Those strategic objectives, which relate to trees, are as follows:

i) Tackling and adapting to climate change (retaining existing trees and promoting further tree planting and urban greening)

ii) Maintaining and increasing biodiversity (the Council's wildlife habitats and its natural environment need safeguarding and enhancing)

iii) Sustainable Urban Drainage Systems (measures to achieve urban greening e.g. upon roofs, retention of existing trees, new tree planting, living (green) walls, new areas of ground cover planting)

iv) Providing essential infrastructure (increase the quality of open space in Lambeth by safeguarding, linking and upgrading existing open space, improving access and retaining existing trees through the delivery of the Lambeth Open Spaces Strategy)

2.6 Unitary Development Plan (UDP)

2.6.1 The UDP sets out land use within the Borough over a 10 year period. Detailed land use plans set out development aims and are reviewed and carried forward where they remain relevant.

2.6.2 The current UDP states that the Council recognises the contribution that trees can make to the character and amenity of an area and the need to preserve, maintain and, where appropriate, replace existing trees.

2.6.3 Policy 39 Streetscape, Landscape & Public Realm Design Trees is most relevant to the Tree Strategy and states that: *'trees of high amenity value will be protected.'* The planting of new (street) trees and shrubs will be promoted and encouraged.

2.7 Open Spaces Strategy

2.7.1 The open spaces strategy was developed in 2004 with the purpose of i) documenting the quality and value of the Councils open spaces and ii) to set the priorities of future management and development. The open spaces strategy contains a number of relevant recommendations, which are detailed below:

- Council develops proposals to increase the provision of and the accessibility to nature and natural areas
- Council considers the preparation of a landscape strategy, which seeks to reinforce local distinctiveness, link open spaces and enhance biodiversity
- Council gives further consideration to the involvement of Friends Groups, Residents Associations, wildlife groups, businesses, and individuals in the local management of parks and open spaces

2.8 Lambeth Local Biodiversity Action Plan

2.8.1 The Lambeth Biodiversity Action Plan is a document designed to help provide the information needed to protect Lambeth's wildlife and biodiversity. It is split into various habitat types and gives corresponding individual management aims. The elements with particular relevance to the Tree Strategy are those dealing with woodland, parks and green spaces and bats. Where appropriate, the Tree Strategy will incorporate these broad aims, which are listed below.

Aims of the Woodland Action Plan

i) To protect existing woodland sites within Lambeth for the benefit of biodiversity and current and future generation of local people
ii) To increase the quality and biodiversity of Lambeth's woodlands
iii) To increase, significantly, the area of woodland in Lambeth

Aims of the Parks and Greenspaces Action Plan

i) To encourage good nature conservation practice, to encourage a greater diversity of wildlife habitat
ii) To raise awareness in people, schools and businesses of the importance of Lambeth's parks and greenspaces in terms of the biodiversity of both the Borough and London
iii) To encourage a greater involvement by residents in their local parks and greenspaces for a wider range of positive uses, including landscape and nature conservation.

Aims of the Bat Action Plan

i) To help arrest and reverse the current decline in London's bat population.
ii) To raise awareness in Lambeth of the legally protected status of bats and their habitats and to consider the needs of bats in any management works or development
iii) To redress misconceptions and secure their status as culturally valued species

2.9 The Mayor's Biodiversity Strategy (2002)

2.9.1 The London Mayor's Biodiversity Strategy aims to protect and enhance the natural habitats of London together with their variety of species and to secure and promote biodiversity:

i) positive measures to encourage biodiversity action, promoting the management, enhancement and creation of valuable green space
ii) incorporating biodiversity into new development
iii) access to nature and environmental education.

2.10 London Tree and Woodland Framework

2.10.1 The London Tree and Woodland Framework is part of the Environment Strategy of the Greater London Authority. The overall goal of the framework is to ensure that:

i) The existing stock of trees and woodlands is managed and maintained to safeguard its value to London both now and in the future.

ii) There is an increased awareness of the value of trees and woodlands to the health and well-being of all Londoners.

iii) The contribution of trees and woodlands to London's sustainability and quality of life is maximised.

iv) Natural regeneration and new planting in appropriate locations is encouraged to further enhance the contribution of trees and woodlands to London life.

2.11 Clapham Common Masterplan - The Next 50 years

2.11.1 This document is the principal point of reference for the Tree Strategy and includes direction from many of the policies, strategies and guidance described in this section. The Masterplan had a wide remit, but included a detailed public consultation on the future direction for tree management at the Common.

2.11.2 Through a process of defining the character and historic layout of the Common, the management objectives adopted in the Masterplan seek to prolong, enhance and replace the original avenues, individual trees and tree groups. Conversely, the more recent tree and avenue planting of the mid to late 20th century are recognised to detract from the original and notable character of the Common. The identified objectives are to be adopted and implemented in the Tree Strategy:

- Carry out tree planting to sustain the stock of trees on the Common whilst maintaining its largely open character, protecting important views and leaving clear areas for sports and other activities

- Replace trees that have been lost from the 19th century avenues and other historic plantings such as entrance clumps, roadside groups, which can include restoring the formal planting around Holy Trinity Church
- Enhance woodland through re-spacing of young trees and understorey
- Ensure sensitive management of the mature and over-mature stock in order to conserve important individual trees and tree groups whilst maintaining public safety

2.11.3 Based upon consultation with Stakeholders, the following objective is **not** to be implemented as part of the Tree Strategy:

- The selective tree removal from the Central Avenue and Birch Avenue, to conserve the open character of the Common

  It has been decided to allow these two features to decline naturally over time and only replace trees if it is considered replacement planting would accord with the wider landscape objects of the Tree Strategy.

  Urban pressure in the form of soil compaction around young tree

3. Management of Trees at Clapham Common & Vision for Tree Cover

3.0 Management of Trees at Clapham Common – Vision for Tree Cover

3.1 The future management vision for tree management is contained within the Vision Plan (Plan1) and also contained at Appendix 1. The management principles, which are listed below, will govern the pattern of future planting and arboricultural management.

1. Recognise the key elements and historic character of the Common and plan future replanting programs to replicate and enhance these features

2. Maintain the broad visual character of the Common by conserving and enhancing the historic avenues and specimen trees and replacement once failed

3. Use only suitable tree species (fitting to the local setting) for replacement planting, whilst incorporating the wider benefits such as climate change adaptation, air filtering and control of storm water runoff

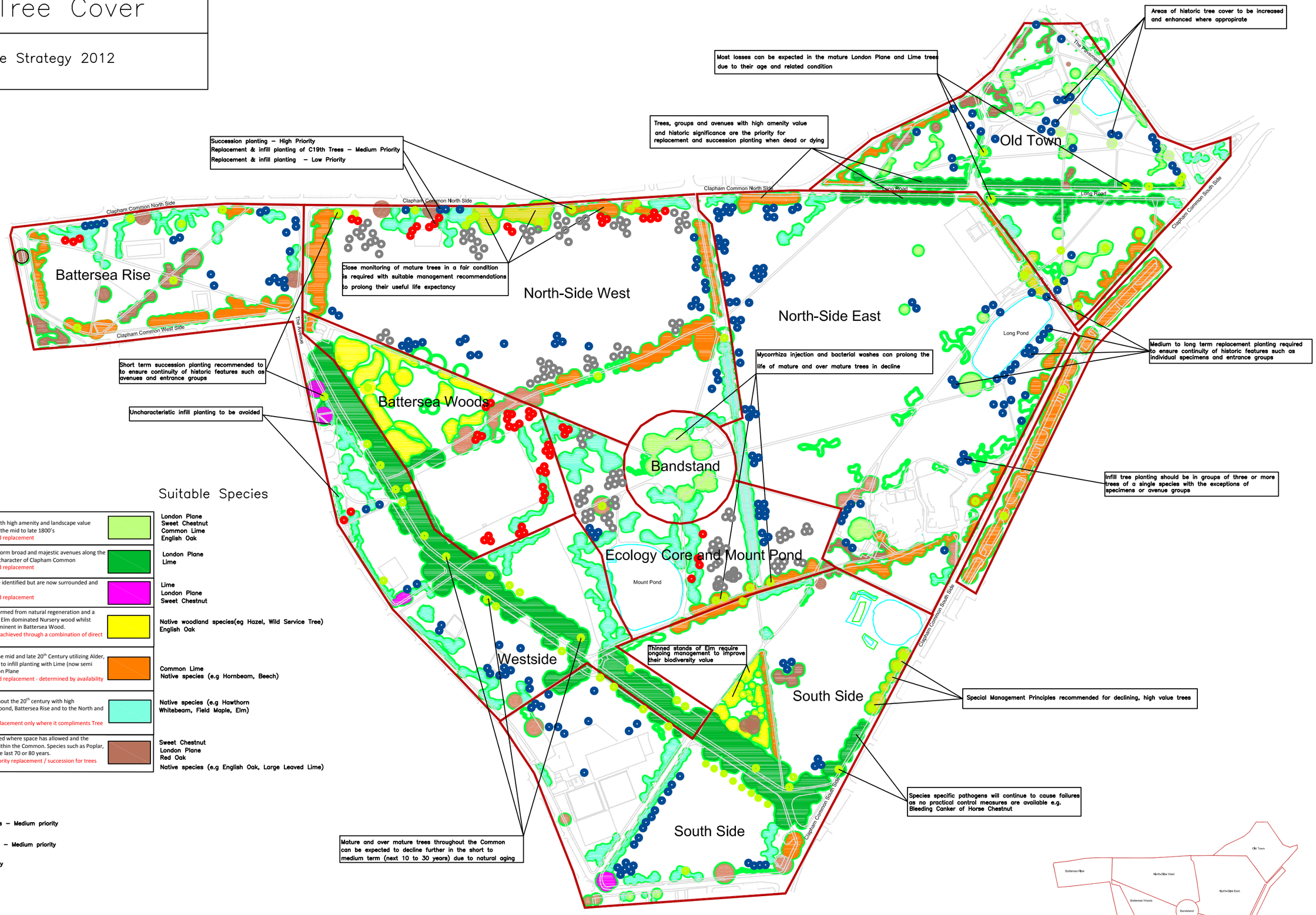
4. Avoid unplanned and inappropriate infill planting

5. Maximise ecological and biodiversity gains including the potential new orchard planting and by enhancing and extending woodland areas

6. Match new tree planting with the current rate of tree decline over the next 50 years, to provide direct replacement of the existing trees

Vision for Tree Cover

Clapham Common Tree Strategy 2012



Key

Suitable Species

Historic Specimens – A small number of mature Plane trees with high amenity and landscape value remain following the original planting of Clapham Common in the mid to late 1800's High priority for resource allocation for their management and replacement	London Plane Sweet Chestnut Common Lime English Oak
Historic Avenues – Mature London Plane with Common Lime form broad and majestic avenues along the boundaries and main roads and which largely define the tree character of Clapham Common High priority for resource allocation for their management and replacement	London Plane Lime
Historic Groups – Remnants of the early group planting can be identified but are now surrounded and enveloped amongst later planting High priority for resource allocation for their management and replacement	Lime London Plane Sweet Chestnut
Woodlands – Both Nursery and Battersea woods have been formed from natural regeneration and a process of limited management over the last 20 years. Infill of Elm dominated Nursery wood whilst Robinia sucker growth and self sown Blackthorn are most prominent in Battersea Wood. Moderate priority for resource allocation - management aims achieved through a combination of direct funding and community involvement	Native woodland species(eg Hazel, Wild Service Tree) English Oak
Secondary Avenues –Internal avenues have been planted in the mid and late 20th Century utilizing Alder, Birch and more recently Oak. Bishops Walk have been subject to infill planting with Lime (now semi mature) and extended to Clapham Common North with London Plane Moderate priority for resource allocation for management and replacement - determined by availability of surplus resources	Common Lime Native species (e.g Hornbeam, Beech)
Infill Planting – Progressive replanting has taken place throughout the 20th century with high concentrations of new trees around the play area and mount pond, Battersea Rise and to the North and Northeast of the Windmill Pub Low priority beyond immediate Health and Safety issues – replacement only where it compliments Tree Strategy Objectives	Native species (e.g Hawthorn Whitebeam, Field Maple, Elm)
Non Historic Specimens – Many individual trees have developed where space has allowed and the largest of these contribute significantly to the local amenity within the Common. Species such as Poplar, Oak, Robinia and Norway Maple have established well over the last 70 or 80 years. Low priority beyond immediate Health and Safety issues – priority replacement / succession for trees with high amenity value	Sweet Chestnut London Plane Red Oak Native species (e.g English Oak, Large Leaved Lime)

- Succession planting – High priority
- Replacement & infill planting of C19th trees – Medium priority
- Native scrub planting for bio–diversity gains – Medium priority
- Replacement & infill planting – Low priority

Defined Character Areas (Clapham Common Master Plan)

3.2 Key Elements and Historic Features of Tree Cover at Clapham Common

Historic Specimen Trees – A small number of mature London Plane trees with high amenity and landscape value remain following the original planting of the Common in the mid to late 1800's
High priority for resource allocation for their management and replacement once trees have failed

Historic Avenues – Mature London Plane with Common Lime form broad and majestic avenues along the boundaries and main roads and which largely define the tree character of the Common
High priority for resource allocation for their management and replacement once trees have failed

Historic Groups – Remnants of the early group planting can be identified but are now surrounded and enveloped amongst later planting
High priority for resource allocation for their management and replacement once trees have failed

Woodlands – Both Nursery and Battersea woods have been formed from natural regeneration and a process of limited management over the last 20 years. Regeneration of Elm dominates Nursery Wood whilst False Acacia sucker growth and self sown Blackthorn are most prominent within Battersea Wood.
Moderate priority for resource allocation - management aims achieved through a combination of direct funding and community involvement

Secondary Avenues –Internal avenues have been planted in the mid and late 20th Century utilizing Alder, Birch and more recently English Oak. Bishops Walk has been subject to infill planting with Common Lime (now semi-mature) that extends toward Clapham Common North, using London Plane
Moderate priority for resource allocation for management and replacement - determined by availability of surplus resources

Infill Planting – Progressive replanting has taken place throughout the 20th century with high concentrations of new trees around the Play Area and Mount Pond, Battersea Rise and to the North and Northeast of the Windmill public house.
Low priority beyond immediate Health and Safety issues – replacement only where it compliments Tree Strategy Objectives

Non-Historic Specimens – Many individual trees have developed where space has allowed and the largest of these contribute significantly to the local amenity within the Common. Species such as Hybrid Black Poplar, English Oak, False Acacia and Norway Maple have established well over the last 70 or 80 years.
Low priority beyond immediate health and safety issues – priority replacement / succession for trees with high amenity value

3.3 Key Issues

3.3.1 Both the guidelines within the Tree Strategy document and tasks outlined within the Action Plan focus upon addressing the Key issues as identified below:

Detrimental impact on the character and appearance of the Common following the inevitable loss of key landscape features such as mature London Plane avenues and individual specimens through natural decline

Over half the tree stock falls within the mature and over-mature age category; there is a very limited degree of succession planting ready to match the rate of tree decline

Inherent difficulty in replacing avenue gaps due to suppression and shade from mature neighbouring trees

Losses of new tree planting increased by poor planting practice, droughty conditions and local pressures, such as soil compaction and erosion from pedestrian 'desire lines'

Infill planting since the beginning of the 20th century has been sporadic and uncoordinated and has detracted from the historic character of the Common

Intensity of use and management operations have contributed to tree losses (mainly through soil compaction)

Woodland cover is immature and poorly structured with limited wildlife value

Inappropriate species choice and avenue planting has had a negative impact on internal views

Existing and potential species-specific pathogens e.g. Bleeding Canker of Horse Chestnut, will hasten the rate at which mature canopy cover is lost

Rate and impact of tree losses will be compounded by a decrease in available financial and managerial resources

3.4 Addressing Key Issues and Achieving Tree Strategy Objectives

The following principles are to determine the profile of future management whilst achieving the objectives of the Tree Strategy and addressing the key issues.

3.4.1 Encourage sustainable management, ensuring loss to diseases, damage and neglect is minimized (TS 1)*

Match the rate of tree decline/loss with new tree planting in order to achieve a diverse age structure over the next 50 years

Ensure regular monitoring of tree stock through a cyclical Tree Survey Program, which will be used to identify declining and defective trees and implement appropriate tree works

Employ special management techniques to trees with high amenity or historic value, which are showing signs of decline or are in a poor condition

Engage with Stakeholders to encourage ongoing participation in replanting, woodland management and tree health monitoring

In the long term, consider the wide scale removal and replacement of historic features, once they have fully declined

3.4.2 Native species are to be used to replace felled trees and broaden tree diversity and cover across the Common (TS2)

Where this does not conflict with the broader landscape objectives, such as retaining the historic character and in regard to climate change adaptation, native tree species are to be used for replacement planting, particularly for internal groups, formal areas and woodlands

Encourage natural regeneration of suitable species to enhance existing groups and woodland areas

3.4.3 Retain and enhance the individual character areas defined by their tree planting and to create and replace green corridors (TS3)

Adopt and implement the landscape design proposals as detailed in the Master Plan - The next 50 years, which identifies and defines the individual character areas

Concentrate resources on replacing the mature and over-mature London Plane avenues through replacement and succession planting once trees are declining rapidly and are unlikely to recover

Avoid inappropriate infill planting, particularly small growing, ornamental trees

Extend range of Battersea and Nursery Woodlands through group planting to enhance and create new green corridors

*TS –Tree Strategy Objective

3.4.4 Manage the tree stock through best practice for the intrinsic environmental, social and economic benefits trees provide (TS4)

Ensure that new planting is conducted to the correct specification procedure to minimize failures

Recommend only the necessary tree works to address current and potential health and safety issues

Incorporate, where ever possible, Lambeth's Biodiversity Action Plan into tree management procedures and the decision making process.

Ensure necessary training and resources are provided for the tree survey program.

Select appropriate species for new planting in order to maximize environmental benefits including tolerance to climatic changes, improving local air quality and managing surface water run-off

Recognize and promote the facts that maintaining the historic values and high amenity value trees contribute to the local landscape and the indirect economic benefits trees provide

Balance all tree works with the wider biodiversity aims as promoted within the Council's Biodiversity Action Plans

4. Tree Stock

4. Tree Stock

4.1 Summary

4.1.1 The trees planted at the Common fall into two broad categories. The first category includes the most visually prominent, fully mature, London Plane and Lime avenues, which flank the main roads. Trees in this category also include a number of specimens within since-depleted clumps at the main entrance points to the Common. These trees were predominantly planted before 1895 and have a high amenity value.

4.1.2 The trees in the second category are less defined and encompass mainly infill planting of a mixture of Horse Chestnut, Lime, Maple and Oak and a variety of ornamental species. New and extensions to existing avenues have also been planted but very few have been direct replacements or used as succession planting for the original, circa 1895 trees.

4.1.3 A detailed tree survey was undertaken in August 2011 and is based on the most recent condition survey completed in 2010. As part of the survey, an assessment of both the aesthetic quality and tree condition was made. This was necessary to aid the decision making process for the Action Plan and is also useful for setting priorities in order to direct resources toward the very best trees.

Examples of 20th century infill planting

Throughout this document the common name for the tree species is used. Their corresponding botanical name is provided in the table below for reference but will only be used where a distinction between species is required.

Common name	***Botanical name***
Alder, Common	*Alnus glutinosa*
Apple, Crab	*Malus sylvestris*
Ash, Common	*Fraxinus excelsior*
Blackthorn	*Prunus spinosa*
Beech, Common	*Fagus sylvatica*
Birch Silver	*Betula pendula*
Cherry, Wild	*Prunus avium*
Cherry, Bird	*Prunus padus*
Chestnut, Horse	*Aesculus hippocastanum*
Chestnut, Sweet	*Castanea sativa*
Elder	*Sambucus nigra*
Elm, English	*Ulmus procera*
Elm, Wych	*Ulmus glabra*
False Acacia	*Acacia Pseudoacacia*
Hawthorn, Common	*Crataegus monogyna*
Hazel	*Corylus avellana*
Holly	*Ilex aquifolium*
Hornbeam	*Carpinus betulus*
Lime, Common	*Tilia europea*
London Plane	*Platanus x hispanica*
Maple, Field	*Acer campestre*
Maple, Norway	*Acer platanoides*
Oak, English	*Quercus robur*
Oak, Holm	*Quercus ilex*
Oak, Red	*Quercus rubra*
Poplar, Hybrid Black	*Populus x canadensis*
Poplar, Lombardi	*Populus nigra Italica*
Rowan	*Sorbus aucuparia*
Sycamore	*Acer pseudoplatanus*
Tree of Heaven	*Ailanthus altissima*
Willow, Goat	*Salix caprea*
Willow, Grey	*Salix cinerea*
Willow, White	*Salix alba*
Whitebeam	*Sorbus aria*
Yew	*Taxus baccata*

4.2 Historic Value

4.2.1 The historic value of the trees at the Common cannot be under-stated. The wide avenues of London Plane trees have been a landmark of the area since the late 1800's and reflect both the local character of Clapham as well as London. Whilst there is evidence of historic pollarding, this form of management has long since lapsed. However, the closed and broad canopies of the trees above the footpaths and highways have remained constant for over a century.

4.2.2 The key to maintaining the trees with historic character will be to limit harm from tree management or associated park management, which may lead to irrevocable damage or tree stress. Harmful pruning works would include heavy crown reduction or re-pollarding (although this may sometimes be unavoidable in order to address structural defects for example). Indirect harm from park management would include root damage from machinery.

4.3 Ecological Value

4.3.1 All trees within the Common regardless of age, condition or historic significance, have an ecological value. This can be an accumulative effect of providing woodland cover or by providing individual habitats in specimen trees. In particular, the following elements of ecological diversity need to be recognised and incorporated into management.

4.3.2 **Dead and dying** trees play an important role in biodiversity, carbon storage, soil nutrient recycling, energy flows, hydrological processes, and natural regeneration of trees and woodland groups within the Common. Fallen dead wood should be left where it falls where possible, but if it has to be moved, it should be moved as short a distance as possible. Ideal locations for habitat piles (of dead wood) are into dappled shade near footpaths or glades and near other dead wood, keeping it in contact with the ground. Piles of smaller logs are usually more valuable if lashed together or stacked as 'dead hedges'.

4.3.3 **Leaf litter** is often cleared from formal areas but provides a major source of decomposable organic matter for the recycling of nutrients and providing habitats for soil fauna (invertebrates). Where possible leaf litter should be left in situ where this does not conflict with high management properties (e.g. sport pitch maintenance). Consideration will also need to be given to the control of pests and diseases through leaf litter management.

4.3.4 The **trees and woodlands** provide valuable roosting sites for birds, in particular the historic specimens and other trees within the Ecology Core. Nests in holes or cavities in dead trees and large, hollowing trees provide ideal roosting sites for species such as the great spotted woodpecker. Some birds can rely heavily on invertebrates living in dead wood as a food source. At least ten of our fifteen bat species use tree holes for summer and winter roosts.

4.3.5 **Wildlife corridors** are valuable to biodiversity because they help to link the various habitats present within the Common with one another. At a local level, they help allow the tree-dependent species to migrate and therefore provide access to wider or more remote habitats. The primary aim in this regard is to improve the links between the two wooded areas. On a larger scale, the Common as a whole, can link to corridors provided by inter-connecting roads with street trees and gardens supporting trees and shrubs within private properties. The transition of wildlife can be improved by ensuring that boundary tree groups and tree avenues have limited gaps within the canopy.

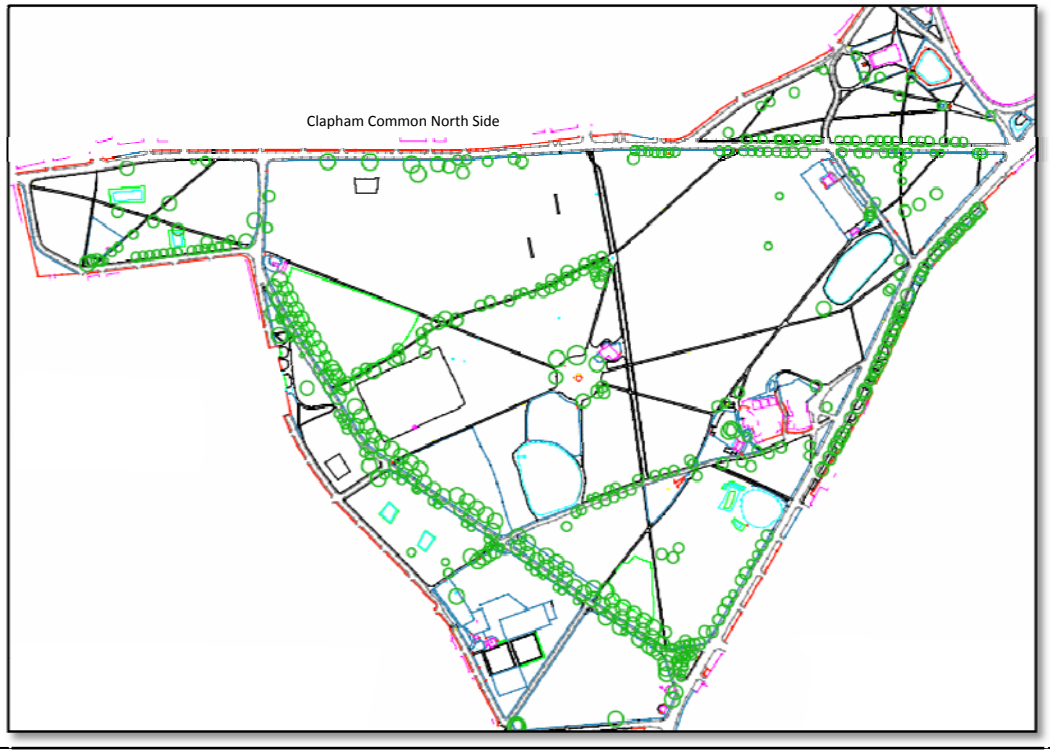
4.4 Amenity Value and Landscape Contribution

4.4.1 An amenity assessment of the individual trees has been undertaken to highlight those trees which make a significant contribution to the landscape. The trees classified as having a High Landscape Value were selected based on the following criteria:

- Visual prominence
- Size
- Inclusion in historic features i.e. Avenues
- Canopy health and absence of significant structural defects

4.4.2 These trees are considered to be those that should be prioritized for management. Equally, should trees with a high landscape value appear to decline, special management techniques should be implemented in order to prolong their safe retention.

Plan 2 Distribution of trees with high landscape value (also included at Appendix 2)



4.5 Tree Condition

4.5.1 The August 2011 tree condition survey records were analysed using the Council's tree database and broadly separated into the criteria set out in Table 1 and summarised in Table 2. The database holds records of just over 2400 trees in total, of which there are approximately 2000 individuals and 14 groups. There are 150 or so records held on the database which reflect the historic detail of those trees which were initially recorded as dead or dying but which have been since removed. Plan 2 (Appendix 3) shows the distribution of tree condition.

Table 1 – Description of Tree Condition

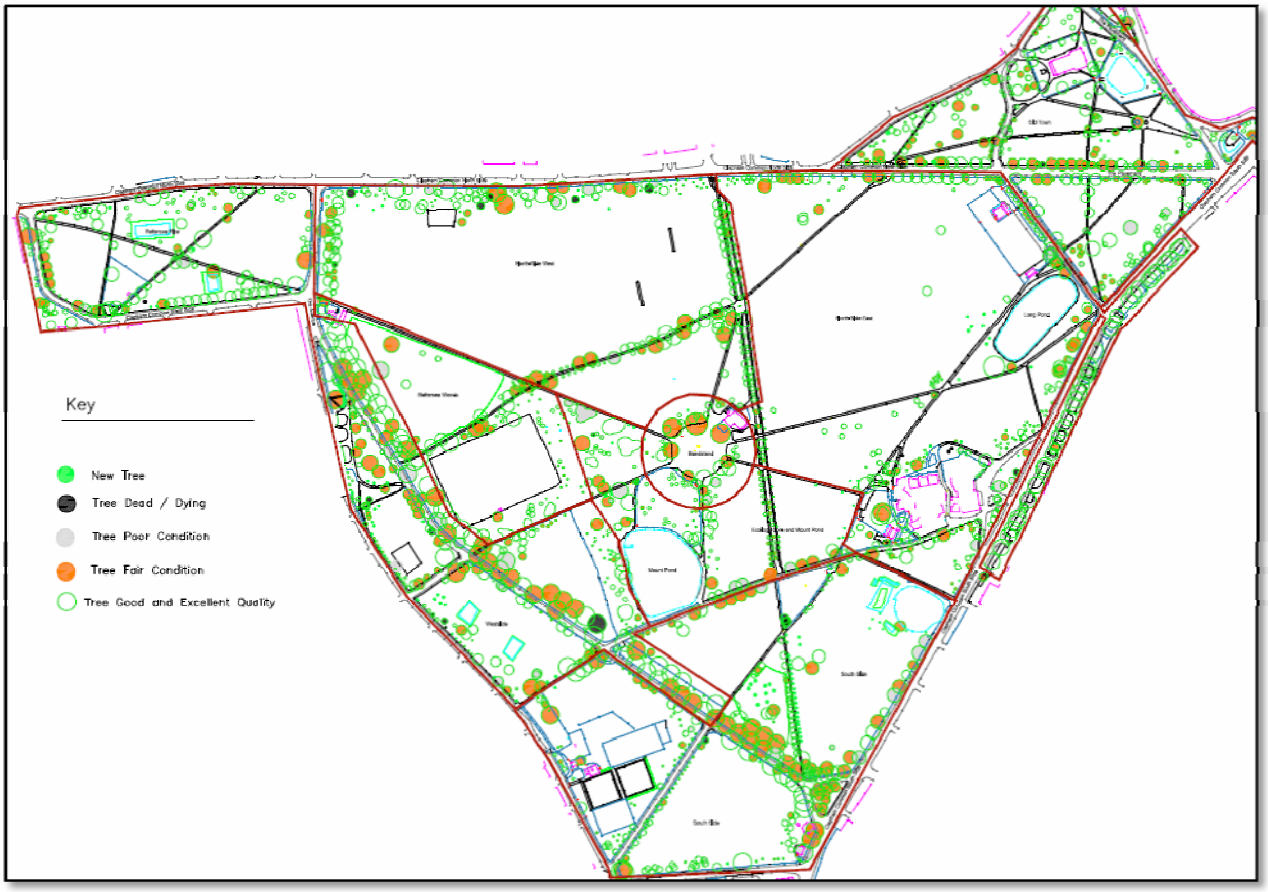
Excellent Mature tree free of visible defects combined with high landscape value, located in a prominent position
Good Mature trees with minor defects or those which can be rectified with remedial pruning; Young or middle aged trees, which have good future potential
Fair Young or middle aged trees with limited landscape value; Mature trees with major structural defects or declining physiological condition
Poor Trees with significant defects or those rapidly declining in condition
Dead / Dying Either non living growth (can be considered for safe retention for wildlife habitat) or in a condition which results in a limited life expectancy and/or severely diseased

Table 2 - Condition of Individual Trees at Clapham Common

Condition	Total	Mature/Over-Mature	Semi Mature / Young
Excellent*	32	31	1
Good	1013	505	508
Fair	523	422	101
Poor	148	122	26
Dead/Dying	48	21	27

* No over-mature trees fall within the 'Excellent' condition description.

Plan 3 Distribution of Tree Condition (also included at Appendix 3)



4.5.2 The records show that approximately half the mature and over-mature trees are in a good and excellent condition and which are unlikely to decline in the foreseeable future. Over-mature trees can maintain their apparent declining condition for many years.

4.5.3 The trees in a poor condition represent the trees likely to be lost in the short term. This pattern is not considered to be species specific but corresponds primarily to tree age. These trees have either significant structural defects or appear to be declining rapidly in physiological condition. Of the trees in a poor condition, approximately 50% (75 individuals) fall within the mature and over-mature age category. This represents the most likely loss in mature canopy over in the next 10 years or so. Trees currently within the 'fair' category are also likely to decline in condition over the same period, leading to an ongoing reduction in mature canopy cover across the Common as a result.

4.5.4 The trees in fair condition represent a large proportion of the mature tree stock, with many suffering from natural physiological decline due to their age. This is evident in the thinning or natural retrenchment of the canopy and is displayed as crown dieback or reduced vigour and vitality (small leaved, shorter than normal extension growth). A large proportion of these trees are found within the historic avenues of the Horse Shoe Ride and the Old Town.

4.5.5 Of the mature and over-mature trees, approximately 30% are in a fair condition. This represents the proportion of the tree population, which could readily slip into decline if subjected to physiological or environmental stresses. Whilst it is not possible to accurately predict the rate of tree decline (dependent on factors such as drought, storm events and pathogens), it is logical to assume that losses in next 20 to 50 years will largely be confined to this group of trees.

4.5.6 This highlights the priorities for tree management at the Common, as a significant loss of high amenity trees from the key historic features, can be expected. A combination of succession planting and/or special management techniques, (where appropriate), is necessary to offset losses and help reduce the rate of tree decline. This also provides a rationale for short to medium term resource allocation that can be updated and modified following each subsequent tree condition survey (2014, 2017 etc.) and which is used in the Action Plan.

Historic avenues containing London Planes are declining at a rate commensurate with their age

4.6 Tree Age Structure

4.6.1 In general, the Common has an aging tree stock with over half of the trees having reached full maturity and a progressive number of trees crossing over into over-maturity each year. This explains, to some degree, the fair condition of many of the fully mature trees, as age accounts for the inevitable presence of physiological and structural defects. The bulk of circa 1895 planting is now fully mature, meaning that they have attained full canopy height and spread with only minimal further extension growth expected. Such trees have fully exploited the available soil volume at their disposal and their crown shape has been determined by the presence of nearby trees together with the availability of light. Of all the London Plane trees, approximately 350 are mature with only 56 categorised as semi mature or young (see Table 3 below). A similar pattern can be established in the age structure of the Lime trees. There is an evident trend illustrating that Horse Chestnut, Ash and more recently Oak, have dominated the 20th century planting and replanting regimes.

Plan 4 Age Distribution (also included at Appendix 4)

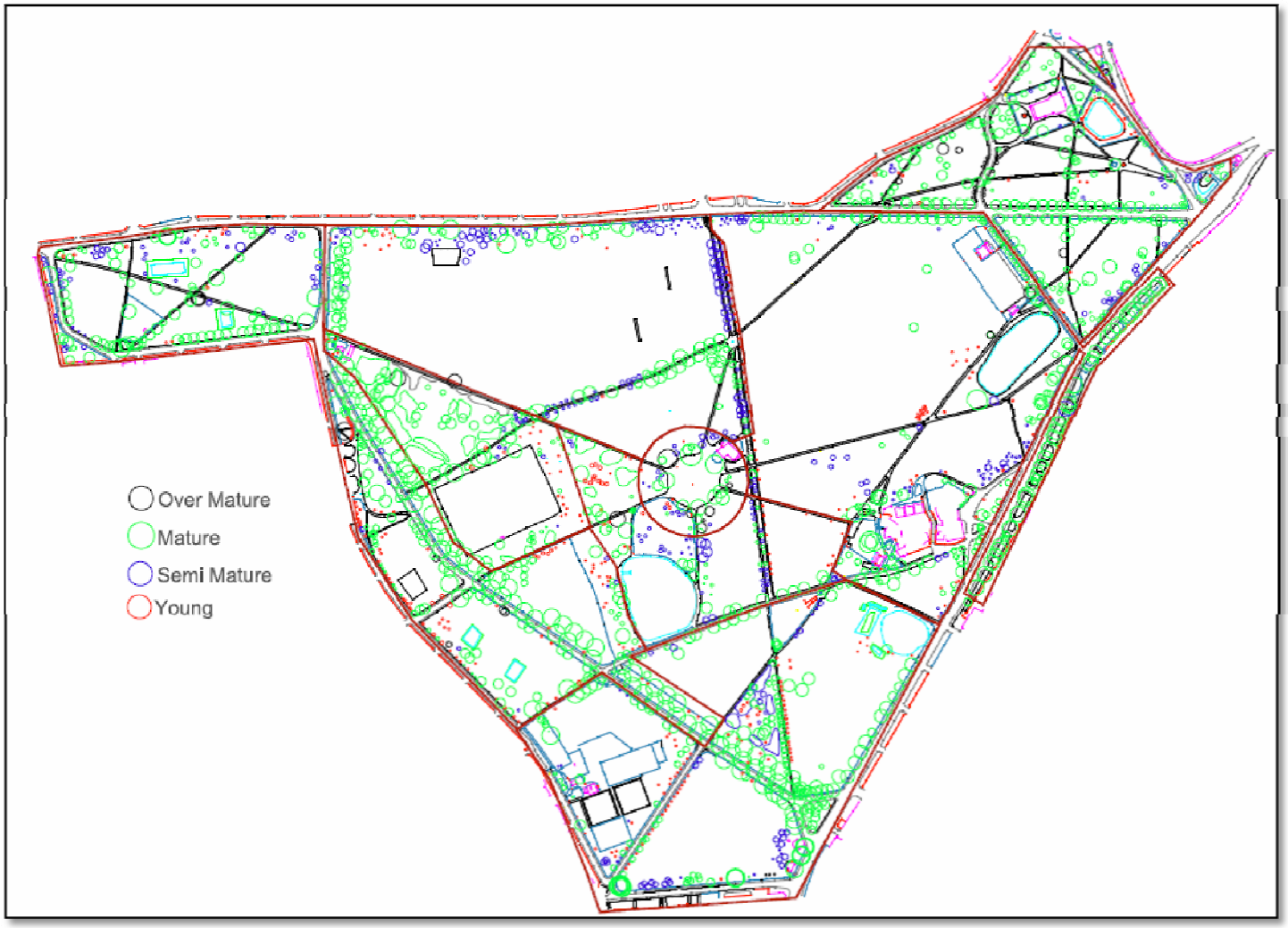


Table 3 Age Structure of Existing Trees at Clapham Common

Age	Total	Percentage of Total	London Plane	Lime
Young	394	17%	23	16
Semi Mature	652	29%	33	121
Mature	1266	54%	347	292
Over Mature	40	2%	17	2

4.6.2 Table 3 provides a current age breakdown of the 2,352 records (including the large groups) of trees and which demonstrates the implications to sustainable canopy cover at the Common. Faced with the inevitable loss of the mature trees over the coming decades, the appearance and dominance of the historic arboreal features, such as the Avenue Horse Track, is in jeopardy. This imbalance in the age structure cannot be readily reversed and can only be offset by timely and on-going tree planting.

4.6.3 The anticipated volume of replacement and succession planting will be heavily influenced by the availability of resources. However, based upon the current rate of tree decline (10% dead/poor condition measured over the last 5 years), complete succession planting can be achieved by planting 50 trees per year, for the next 50 years. Whilst it is not expected that all the current tree stock will have declined and failed over this period, succession planting, equating to 2500 trees, will create a more diverse age structure and achieve sustainability and continuity in canopy cover.

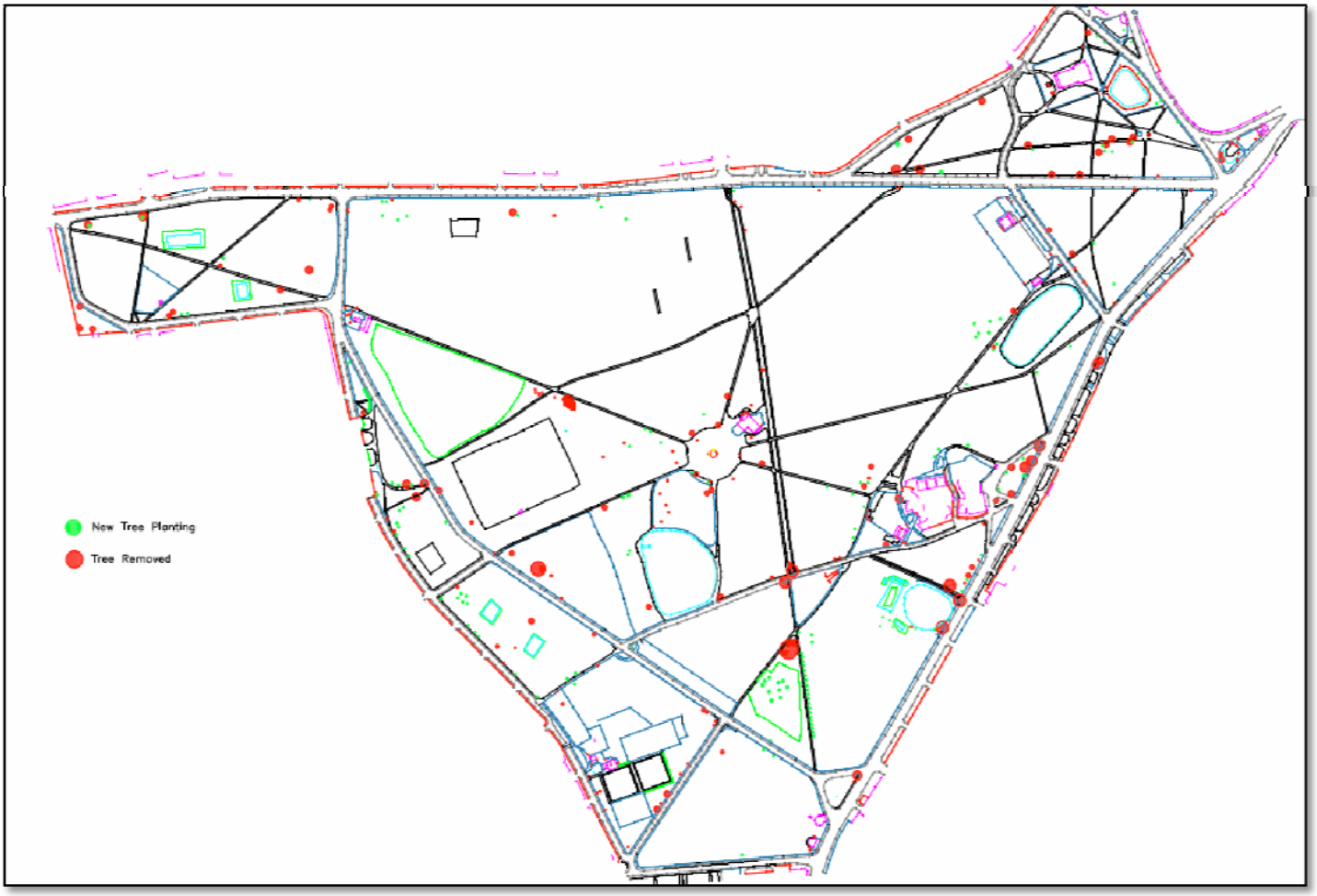
Declining Common Lime tree

4.7 Recent Planting

4.7.1 Close to 150 standard trees have been planted since the trees were first plotted on the Council's tree data computer system in 2005. The majority of this has been carried out by the Friends of Clapham Common in partnership with Trees for Cities. This planting has included a second row of Lime trees along the eastern edge of Nursery Wood and screening with ornamental trees near Wakehurst Road. Most recently, the Trees for Cities project has planted trees in various locations, particularly along Clapham Common West Side. Plan 5 indicates the distribution of recent planting to those lost.

4.7.2 The soil type at the Common heavily influences success rate of new planting. Geological survey maps of the areas show that the Common is located on River Terraces comprising wide tracts of stratified gravel and sand covered by a thin peaty bed. It is clear from observations of the Common that some species thrive (London Plane) whilst others struggle to reach their full growth potential (Oak).

Plan 5 Showing New Planting in Comparison to Felled Trees over a 5 Year Period (Appendix 5)



4.7.3 Approximately 10% of young trees, (planted over the last 5 years) have either died or are in a poor condition. Whilst this survival rate for urban planting is not unusual, it highlights the need for timely and ongoing aftercare in the early stages of growth. However, appropriate replacement and succession planting is required, to ensure that the historic character of the Common is not lost.

Newly planted Sweet Chestnut

Ash tree with advanced basal decay requiring replacement

4.8 Tree Decline and Factors Affecting Longevity

4.8.1 The number of established trees lost over the last 5 years, based on tree felling records, roughly matches the newly planted trees over the same period. However, subject to the imminent failure of dead, dying or poor trees (approximately 10%), it is likely that the number of trees most likely to be lost in the next 5 years will outstrip the current number of new trees being planted.

4.8.2 The factors affecting tree longevity and their decline at the Common are wide and sometimes unpredictable but which are often associated with the following;

i) Species Characteristics

Tree species have a huge variance in life expectancy. Oaks for example, would only be considered to be mature at 150 years whilst a Silver Birch is often over-mature and in a state of decline at 80 years. Whilst this issue cannot be countered with the existing tree stock, species selection for new planting programs will have a considerable influence on the tree cover for future generations.

ii) Soil Type

The soil type and structure determine the depth and spread of roots. The Common was originally marshy, which would have had limited soil fauna and created an anaerobic characteristic. When the Common was drained in the late 18th Century, the resulting soil will have been low in nutrients and freely draining owing to the sand and gravel subsoil. Whilst 20th century horticultural practice will have created the improved grassland now present, the low nutrient content of the soil and free draining structure, will limit the natural growth potential of established trees.

iii) Nutrient Availability

This can be considered as one of the principal factors, which governs tree vitality and condition. If lacking in nutrients, particularly nitrogen and potassium, trees will become stressed. Secondary factors, such as prolonged drought for example, can predispose trees into premature decline. The application of fertilisers is a relatively inexpensive operation but they must be applied with caution having due regard to species, soil conditions and dosage. Applied incorrectly, any desired benefits can be lost and indeed may even result in lasting harm. Application of fertilisers may also conflict with other management aims at the Common, such as wild meadow creation in the Ecology Core, which is reliant on poor soil nutrient levels. It is therefore often more effective and with fewer impacts, to improve the soil health by introducing mycorrhizae and bacterial washes together with relieving soil compaction and improving soil structure.

iv) Soil Compaction

Compaction (compression of soil particles to the exclusion of air spaces) and breakup of soil structure can be considered alongside nutrient deficiency as a major cause of tree decline. Compaction asphyxiates roots and prevents their development and the regrowth of fibrous, feeding roots. As part of the tree survey in August 2011, soil density has been tested in various areas and measured at over 3 MPa. This equates to a soil which is wholly unsuitable for root development and growth and can be considered to be highly compacted. This could have been caused by many years of pedestrian footfall but soil structure can be rapidly damaged following the passage of machinery and vehicles, particularly in wet weather. Soil de-compaction can be highly beneficial, but is only unusually prescribed for high value trees. Prevention of compaction and protection of trees during routine parks maintenance and events is equally, if not more important.

v) Pest, Disease and Pathogens

Susceptibility to disease and aggressive pathogens can be heavily influenced by the above factors. Equally pruning wounds create an entrance point for pathogens, particularly decay fungi. The most prolific and visible pest can be seen on Horse Chestnut with its Leaf Miner causing premature leaf discolouration and fall. However, the more harmful Bleeding Canker of Horse Chestnut, which uses Lime species as a host too, has been identified at the Common. This disease affects both young and old trees and often leads to rapid death.

The decay fungus ***Inonotus hispidus*** is present and can be encountered fairly frequently on the mature Ash trees and to a lesser degree on the London Plane. Whilst Plane trees can tolerate the decay strategy of the fungus; Ash trees are unable to resist the rapid breakdown of timber fibres. As a consequence, this fungus is contributing to the decline and loss of the mature Ash trees along Windmill Drive. There are typically few practical control measures available to counter such pests and diseases and dealing with these issues at the Common must rely on the ongoing tree survey program to identify and address any associated risks.

Decay pathogens (e.g. Rigidoporus ulmaris in the image) have few control measures and trees displaying such disorders require careful assessment.

5. Principles of Management

5.0 Principles of Management

5.1 This section sets out the principles and methodology of the management and maintenance of the trees at the Common. Whilst there are clearly tasks and aims, which apply solely to the Common, these principles reflect the homogonous management, pruning and felling policies that are in place Borough-wide.

5.2 Council's Management Procedures / Policies

5.2.1 The management and maintenance of all council-owned trees is undertaken by the Tree Section housed within the Lambeth Parks and Greenspaces department. The section is managed by the Parks' Client Officer and currently has three Tree Officers. Enquiries directed to Council with regard to trees generally, their pruning or felling are dealt directly by the Council's Tree Officers. Residents' telephone or email enquiries are re-directed to the Tree Officers, but identification of obvious defects and problems on the Common, for example, may be received from Parks Rangers and other staff, the members of Friends groups or the Council's arboricultural or grounds maintenance contractors.

5.3 Lambeth Council's Tree Survey Methodology

5.3.1 Lambeth Council is committed to the regular inspection of its trees. This ensures that the Council meets its 'duty of care' to the public and others, within a time scale, which balances the availability of resources with industry best practice. At the Common, a detailed tree survey is carried out every 3 years and is supplemented with the identification of defects and problems by walking surveys and routine site visits.

5.3.2 The detailed tree survey is undertaken by a competent person with a minimum Level 2 qualification in Arboriculture. This equates to having sufficient training, expertise and/or qualification to identify tree hazards, assess levels of risk and make appropriate management recommendations.

5.3.3 The tree survey data collection, throughout the Borough is conducted using the industry-recognised Visual Tree Assessment system. This system is based on identifying both the biological and structural symptoms of defects or disease. Further investigation may be necessary, if internal decay is suspected for example, but this level of investigation, possibly with the use of decay detection equipment or aerial inspection, would not routinely be applied. A detailed record of each individual tree is held on a bespoke tree management database, Ezytreev, and enables the Tree Officers to record, categorize and analyse the survey data, as well as reviewing tree management history and creating works orders for contractors.

5.4 Pruning

5.4.1 Decisions for tree pruning requirements will be based on best arboricultural practice but the implementation of work will ultimately be balanced against the availability of resources. The need for tree work is prioritised as a result. Pruning, to deal with an immediate health and safety issue will be treated as a priority and matched with an appropriate level of work. The majority of tree pruning and felling requirements for the Common are identified during the cyclical tree survey program. The identified works are recorded and then issued in bulk to achieve best value based upon the economy of scale. Requests for works in addition to the cyclical program will not be undertaken unless a tree is:

- Imminently dangerous
- Dead, dying or significantly diseased
- Implicated as being a primary causal agent in cases of proven structural damage

5.4.2 Pruning requests for trees on the Common, which overhang into private property, are likely to be rare owing to the low number of adjacent residential buildings. Such work will not be routinely carried out unless it falls within one or more of the above criteria. There is no obligation for any tree owner, including the Council, to prune back overhanging branches, unless they are causing damage. Residents have a common law right to cut back any over-hanging branches to the boundary line whilst maintaining a duty of care to others. Trees covered by a Tree Preservation Order or which grow within a conservation area (as is the case at the Common), normally will require approval from the Council's planning department. The Council however, does not need to obtain approval for working upon its own trees within a conservation area.

5.4.3 The Council's current arboricultural works contract allows for tree works to be specified in terms of a 'General Prune'. This is a pruning description, which encompasses the broad elements of crown lifting, removal of dead wood or defective parts and which allows for some canopy thinning as well as re-pollarding work (under direction). The work description is set to a prescribed and acknowledged standard. Pruning instructions can still be specified individually, if this is beneficial for tree health but the ability to apply the 'General Prune' description is seen the most cost effective means to issue a range of necessary works in order to bring the selected trees to the contractual and arboricultural standard. Typically, a light general prune (GP1) is specified for low risk trees, which require minimal intervention (e.g. The Ecology Core). A heavier general prune (GP2) is unusual but may be applied to trees which are in close proximity to (targets) such as roads or playgrounds (e.g. Battersea Rise) or which require more intensive management in order to address a specific problem or defect.

5.4.4 In line with good arboricultural practice the Council will not routinely heavily reduce or pollard trees, as not only can this have a negative impact on tree condition, but such work also commits the Council to a potentially costly and intense regime, which manages the subsequent regrowth. The amenity value of heavily reduced trees is also diminished, which is considered to be undesirable. Pollarding is appropriate in some circumstances however, where for example pollarding or reduction follows an established management regime or specifically to deal with a severe structural defect. Such techniques can also be employed when complete tree removal is undesirable (e.g. to retain standing dead wood habitat). Pollarding cannot usually be retrospectively applied to mature trees without inflicting severe stress and which may not be

tolerated by the tree. The Common has many examples of lapsed pollards, which have not been pruned in this manner for many decades. Any attempts to recreate pollards from mature canopies must be carried out with due regard to existing tree condition, species and setting.

5.5 Pruning Best Practice

5.5.1 All tree work is carried out by the Council's approved contractor. Pruning and felling is carried out in accordance with the contract specification and adherence to the recommended guidance set out within British Standard BS3998:2010 – 'Tree Work - Recommendations' (Appendix 6).

5.5.2 Prior to any tree works being undertaken on the Common, an ecological assessment of specific trees may be required to ascertain whether protected species (e.g. nesting birds, bats and invertebrates etc.) may be affected. The timing of tree work may therefore be governed by the emergence of young, together with seasonal and weather conditions.

5.6 Tree Removal

5.6.1 Lambeth Council operates a strict policy in regard to consideration of the removal of Council-owned trees. This is based on the Council's commitment to retaining its current tree stock for future generations. Regardless of issues of inconvenience such as falling leaves, flowers, sap or other tree debris, trees will only be considered for removal where one or more of the following criteria are considered to apply:

- In imminent danger of falling or collapse
- Dead, dying or significantly diseased
- Required in the control of pests and/or pathogen
- An established link with subsidence
- Within a woodland and required for improvement
- Part of a management plan
- Ecological improvement

5.6.2 The total removal of a tree, even when it falls within the above criteria, may not always be appropriate. This is particularly the case in woodlands or very secluded areas, when the retention of standing stumps or 'monoliths' are important habitat for invertebrates and bats. In such cases they will also contribute towards Lambeth's Local Biodiversity Action Plan. It would not usually be appropriate to retain monoliths in high-use or formal areas, as their stability and anchorage are often unpredictable.

5.6.3 Tree felling (removal) when considered appropriate, can be undertaken in two ways; i) by dismantling in sections and ii) by felling from ground level or straight felling. The method of tree felling will be suited to both the location and the tree. It will usually be necessary to dismantle a tree in sections where it overhangs a road or building or where the ground surrounding the tree requires protection. Felling trees within an open area or indeed within the woodland may be appropriate through adopting the straight felling method. Whether or not to remove trees may be governed by the particular management aims for the individual Character Areas. Consideration for example of the removal and disposal of trees should be exercised in order to prevent the introduction or spread of pest and pathogens. The pathogen most likely to be transmitted within the UK is *Phytophthora spp*. which is a fungal causal agent of various diseases. The bacteria *Pseudomonas syringae* pv, *aesculi* (causing Bleeding Canker) is affecting a number of Horse Chestnuts on the Common and their careful removal and disposal, is necessary as a measure to restrict the spread of the pathogen and associated disease.

5.6.4 The removal of stumps, following tree felling, is considered to be appropriate in formal settings such as the Old Town or the Bandstand. If left in situ, stumps appear unsightly, constitute a trip hazard and potentially harbour tree-specific pathogens such as Honey Fungus, which can spread to local, healthy trees. When re-using the planting location or planting pit (within hard standing areas), typical planting preparations will require the stump to be ground out (using specialised machinery) and the introduction of new, graded topsoil free from weed species and pathogens.

5.7 Transplanting

5.7.1 The transplanting of trees, when identified individuals are not deemed to be in-keeping with the defined Character Area, may be possible with specialised equipment and techniques. Mechanical tree 'spades' can be employed to lift and transplant young trees with a stem diameter in the region of 20cm in valid circumstances. However, typical tree moving machinery can be readily used to transplant trees between 5 and 10 cm diameter. Transplanting very large trees (diameters in excess of 40cm), using a specialised tree platform for example, may be possible but compared to tree replacement, may be considered prohibitively costly.

5.8 Replanting

5.8.1 A systematic replanting methodology is necessary to ensure that requests for new trees are dealt with in a fair and ordered manner and are suitable to the area in question. It is also relevant to monitor and plan future replacement programs at the Common. The following systematic process is to be employed when recording suitable planting locations and requests from residents. The system relies on the Council's tree survey database to hold records of new and existing planting locations and should be applied in the following sequence:

i) Analyse tree database to identify vacant tree pits / locations of felled trees (site or region based)

ii) As part of the on-going cyclical tree survey program, identify:

- New planting locations specific to local need / management aims
- Delete planting pits of those deemed unsuitable (i.e. close to buildings or with 5m of the Highway)

iii) Following a planting request from members of the public:

- Supply residents (upon request) with local plan showing planting opportunities based on management priorities
- Upon agreement, associate the request for tree planting with an location on ezytreev database

iv) Strategic or succession planting:

- Associate new planting in suitable location next to, or in the region of over-mature or declining trees

Sufficient resources will be required to enable effective data collection, to ensure records are updated regularly and to carry out ongoing analysis of the database.

5.8.2 Whilst the majority of planting will be carried out by the Council's contractor, tree planting by volunteer and the members of the community has been highly successful in the past, and the individuals and groups will continue to be involved with the tree planting program at the Common. To ensure the best survival rates and aesthetic consistency, a detailed planting specification is provided at Appendix 7, which should be both issued to and adhered to, by all those involved in any form of tree planting on the Common.

5.8.3 **Species Selection**

Consideration of species choice (and tree size) will include a combination of factors: Purpose (e.g. screen, amenity, infill, focal point, replacement, biodiversity); history of success or failure; soil type and depth; position/space; potential longevity; aspect (north south east west) and available light; and site character.

i) Avenue Planting

It will be prudent to maintain the main characteristic avenues (Avenue Road and Long Road) with London Planes and Limes. However, consideration must be paid to the type of London Plane or Lime. The low-hanging branches of Silver Pendant Lime (*Tilia petiolaris*), although impressive as a singleton would inhibit passing traffic and be 'out of keeping' with the other trees in these avenues. The existing species of London Plane (*Platanus x hispanica*) rather than Oriental Plane should be maintained together with the specific clone, rather than in-filling with 'Augustine Henry' for example, which has a different form and appearance.

ii) Biodiversity Gains

Although exotic species such as Horse Chestnut and London Plane appear to thrive relatively well on the Common, the native species such as Wild Cherry, English Oak, Alder and Aspen will provide benefits to the flora and fauna (mostly invertebrates) of the Common. Species bearing fruit such as Rowan and Hawthorn will provide an attractive source of food for birds when planted in groups for example.

iii) Climate Change Adaption

Tree species, known to be susceptible to a climate with less rainfall, include Common Beech, Silver Birch and Whitebeam. However, species that seem to be resistant to long periods without rainfall include Sweet Chestnut (*Castanea sativa*), Red Oak (*Quercus rubra*), False Acacia (*Acacia pseudoacacia*) and Tree of Heaven (*Ailanthus altissima)*. The use of these species should be promoted in appropriate locations at the Common to prevent widespread canopy loss.

iv) Air Quality

Lambeth borough is an Air Quality Management Area (AQMA). 90% of Lambeth's air pollution is from vehicles and the main pollutants of concern are Nitrogen Dioxide, Fine Particulates, Carbon Monoxide and Volatile Organic Compounds. Certain tree species can assist more effectively with reducing particulate pollutants than others. Tree species which possess leaves with tormentose or down (small hairs) e.g. Pawlonia, Limes and London Plane help to trap particulates and which fall to the ground and are either cleared or naturally disperse and decompose.

5.8.4 **Species to Avoid** *(considerate planting location)*

i) Avoidance of future tree-related damage

There are tree species which are notorious for causing direct and indirect damage to structures on clay soils, for example Weeping and Crack Willows, Hybrid Black Poplars and Horse Chestnuts. Planting tree species, which have a capacity to grow with large dimensions, should be avoided within proximity of existing buildings and this may include London Plane. Consideration should be given to the future relationship between trees and buildings and the people that use them. Tree species such as Flowering Cherry and Norway Maple have shallow, surface roots and regularly cause direct damage to paths and kerbs. The planting location of such tree species should be carefully considered as their root growth may lead to the development of trip hazards from a young age. Horse Chestnut trees are well-known to affect defective drainage systems and should be avoided when planting near to underground services. Fruit-bearing trees such as Apples, Pears and Plums may not be suited to the Common unless special circumstances prevail. Exotic, ornamental species, which are unrepresented in other parts of the Common or general locality are unlikely to be suitable but clearly, all factors should be given fair consideration.

5.9 Woodland Management

5.9.1 The principle aim to increase biodiversity value of both Battersea and Nursery woodland, has been adopted by the Woodland Management Plan 2007 to 2012. This is an on-going project and tasks are being completed through a combination of public funding and voluntary action. Primary tasks include the thinning out of closely-spaced young trees and under-planting of desirable woodland species.

5.9.2 Woodland thinning is a process of progressively removing trees (sometimes over many decades) to decrease stand density and allow space for the retained trees develop. Traditionally, the purpose would have been to improve timber quality; the trees chosen to be removed therefore would be the weaker and suppressed individuals, with no long term value. Thinning for habitat improvement has very different aims. For example, the retention of forked trees or those with ‘swept’ stems (stem distorted by wind or defect), is not considered to be problematic and can in many ways add to the diversity and natural appearance of woodland.

5.9.3 Over-thinning on the other hand can lead to serious problems with trees being predisposed to blowing over due to changes in stand dynamic and exposure to unfamiliar wind loading. Although thinning is recommend up to an intensity of 50% in the Woodland Management Plan, this is unlikely to be problem due to the young age of the focal trees. The shelter provided by the surrounding mature trees will afford protection to the newly thinned trees. The timing for the subsequent phases of woodland thinning usually corresponds to a time when the branches of the tree canopy meet.

5.9.4 Shade and weed competition are usually the limiting factors to successful establishment of new trees beneath existing tree canopies. Shade tolerant species such as Beech are far more likely to succeed and successful planting can be promoted through regular aftercare. It will be necessary to prioritize aftercare, such as weed control and watering in dry weather.

5.10 Special Management Principles

5.10.1 The management of over-mature or 'age fragile' trees should be individually assessed before any works are carried out. Trees in such a condition are easily strained and droughty climatic conditions (e.g. causing water stress in summer) and inappropriate or heavy tree pruning works can force over-mature or 'age-fragile' trees into decline. In summary, it is likely that the following management practices may be appropriate in some form:

- Retention of secure dead wood (where this does not overhang well-used footpaths or formal areas)
- Retention of standing dead trees 'monoliths' (following an assessment of stability)
- Natural fracture pruning techniques (dead wood and live wood) when carrying corrective pruning works if suitable for biodiversity gains (sometimes referred to as coronet pruning)
- Retrenchment pruning to manage declining trees
- Re-pollarding to address health and safety issues within the Lime Avenue

5.10.2 Pruning

Some of the following pruning operations and techniques *may* be appropriate for individual, high quality or special trees.

- Pruning to render dead branches safe (may include retaining 'pegs' or short pieces of dead wood)
- Crown cleaning to remove all dead wood, crossing branches and to improve the aesthetic quality of a tree
- Pruning to reduce the risk of branch failure (shortening branches or reducing weight and lever)
- Pruning to encourage flowers and fruiting
- Pruning to remove or encourage climbing plants and habitat creation e.g. ivy growth

5.10.3 Soil improvement (following assessment of soil compaction)

In order for trees to grow successfully, their rooting medium must be healthy and fertile. The soil in which trees grow, especially older trees, can become 'sour' with poor soil structure, lacking in microbial activity and low in nutrients. Regular passes of pedestrians and or vehicles (footfall) can cause a soil to become compacted, lacking in oxygen and inhospitable for root growth. Where trees are of a quality or importance to merit special management, the following operations to improve the rooting medium are to be considered:

- Soil de-compaction using specialised pneumatic equipment
- Vertical mulching by introducing organic matter into the rhyzosphere
- Soil drenching with micro-bacterial washes
- Introduction of mycorrhizae (specialised fungi) by soil drilling
- Exclusion of competition (felling competitive species), removal of grass
- Application of appropriate mulches over rooting area
- Exclusion of foot fall/passing maintenance traffic

5.10.4 Prevention (protection against vehicle damage at events)

Trees can suffer direct damage from event vehicles. It will be prudent to identify those trees most at risk (i.e. those nearest access points to the Common and or those in the region of events) and to assess the best forms of protection, which may include a combination of the following:

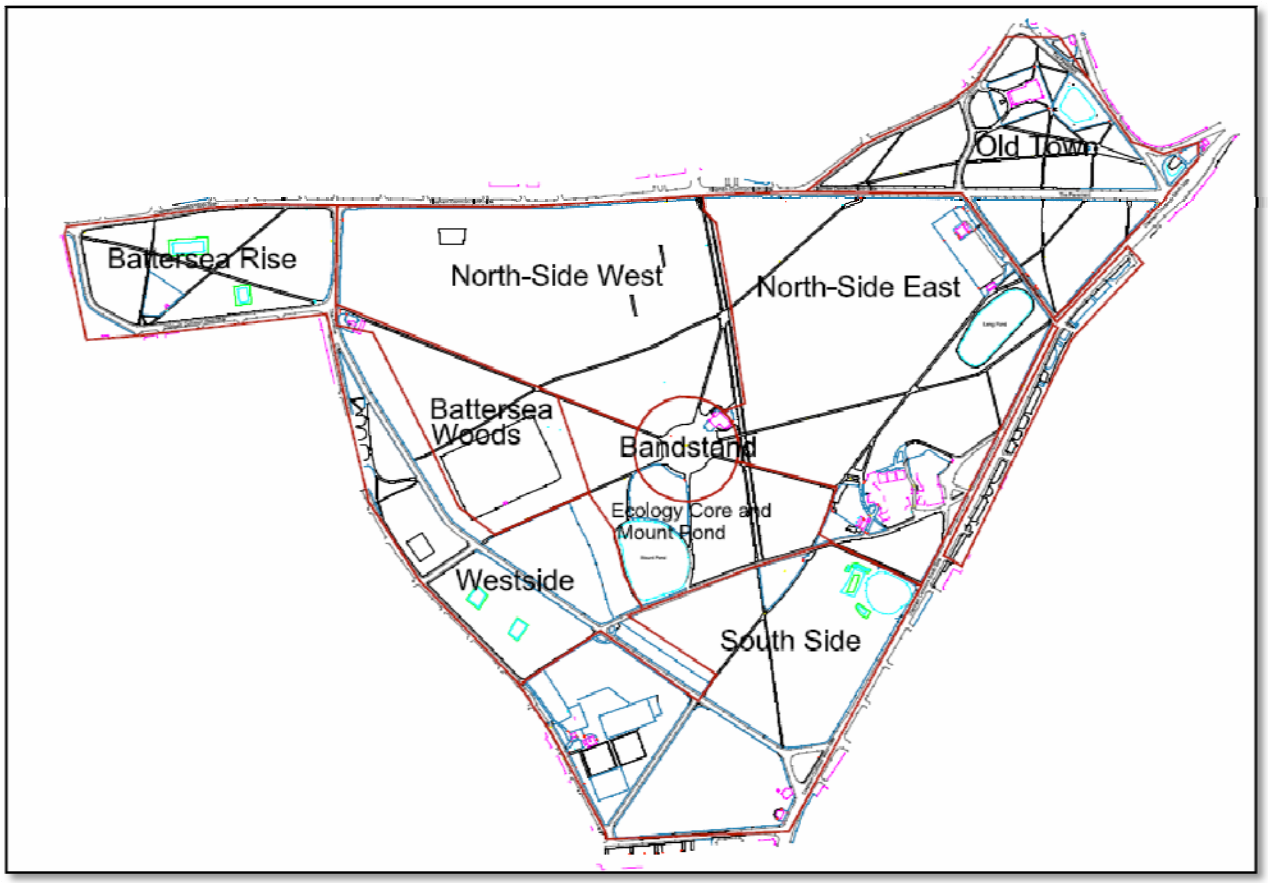
- Pruning (low branches)
- Root area direct protection (with temporary ground protection)
- Root area direct protection (with permanent ground protection e.g. Cellular Confinement Systems)
- Protection of trunks using 'trunk boxes'.
- Avoiding the use of trees for lighting or other electrical support
- Re-routing pathways/access points
- Soil de-compaction measures

6. Defined Landscape Character Areas

6.0 Defined Landscape Character Areas

6.1 Clapham Common was defined and separated into eight character areas as part of the Masterplan. These character areas reflect the nature of current and historic usage, but also broadly segment the Common by type and age of its trees and woodlands. As the Tree Strategy seeks to develop and accomplish the key objectives in the Masterplan, it is only logical that it too shall use these defined character areas for means of description and separation of tasks in the Action Plan.

Plan 6 – Character Areas – Masterplan



6.2 Battersea Rise & West Side

Battersea Rise

6.2.1 Mature London Plane trees flank Clapham Common West Side and includes originally planted trees dating from the late 1800's. Common Lime is a slightly later addition but these too are also now fully mature. Both the London Plane and Lime species are largely good quality here. Historic management has included pollarding, but recent pruning has been restricted to crown lifting and thinning. Later 20th century planting, including a mix of ornamentals are found within the central areas with no dominance of one particular species. Mature examples of Horse Chestnut, False Acacia, Common Lime, Norway Maple, Sycamore and Holm Oak are present. Planting in the last 20 years has mirrored this mix of species adding English Oak and Hornbeam.

6.2.2 Pruning requirements of the avenue trees have typically been restricted to canopy thinning but a reduction in size will be required in the future, in order to draw back branches overhanging the adjacent highway. The need for this will be established as part of the tree survey program. The mature and over-mature trees within the central areas will generally require light thinning to remove dead and defective parts and lift low branches.

6.2.3 Trees bordering internal footpaths include a number of excellent and good quality London Planes and Holm Oaks. Large Norway Maples are also present but are in poor and fair condition and their removal is likely to be required in the medium term. The over mature and poor quality False Acacia trees are expected to decline in the short term.

20th Century planting of Ash and Horse Chestnut

Key Issues

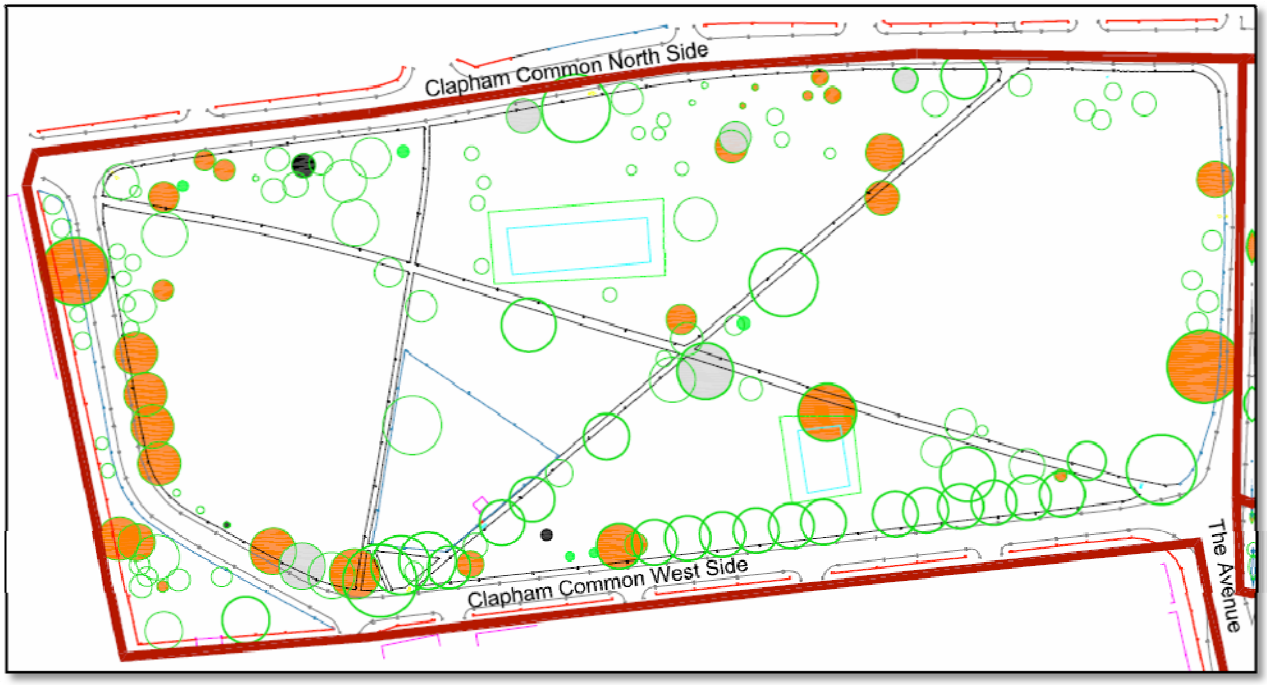
1. Declining high amenity trees in avenues and towards boundaries
2. Unchecked growth of London Plane trees requiring substantial pruning
3. 20th Century infill planting not replicating circa 1895 layout

Battersea Rise – Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives - TSO)

Closely monitor condition of the mature and over mature fair quality trees as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the poor quality avenue and specimen trees (TSO 4)

Progressively replace dead trees in the internal areas with large growing, native species (TSO 2)

Concentrate additional planting to northeast and eastern areas to replicate 1895 layout (TSO 3)

Succession planting in suitable locations next to avenue and specimen trees (TSO 3)

Suitable Species

Avenue and Boundaries - London Plane, Lime

Specimen Planting within Internal Areas – English Oak, Lime, Ash

Infill / Structural Planting – Rowan, Alder, Field Maple

The addition of species suitable for Climate Change adaptation should be considered

6.3 West Side

6.3.1 The London Plane trees flank both sides of The Avenue and the Horse Track and are a defining feature of the Common. The quality and condition of the trees is mixed, but the fully mature Limes are gradually declining. There are a number of unplanted gaps along the avenue from Windmill Drive to Broomwood Road and these should be replaced if not hindered by excessive shading from nearby trees. 19th century planting includes the very large London Plane and Black Poplar on the green adjacent to Wakehurst Avenue. Both trees have been heavily reduced in the past. Mature Sycamores are located to the south, but as the area opens, amenity grassland dominates, with few internal trees. A large standing stump (created as a wildlife monolith) has been retained, but this practice should not be replicated due to the semi-formal nature of area and for safety reasons. Tree stumps are a food source for Honey Fungus and in formal areas they should be removed entirely.

6.3.2 Recent pruning has been restricted to canopy lifting and thinning to remove deadwood over the highway. It is expected that this will continue to be the priority for pruning. The western boundary has both young Silver Birch (planted in the last 10 years) and mature Silver Birch. Following the decline and loss of the mature Silver Birch, their replacement is not considered appropriate.

Rapidly declining London Plane tree along the Horse Track

Key Issues

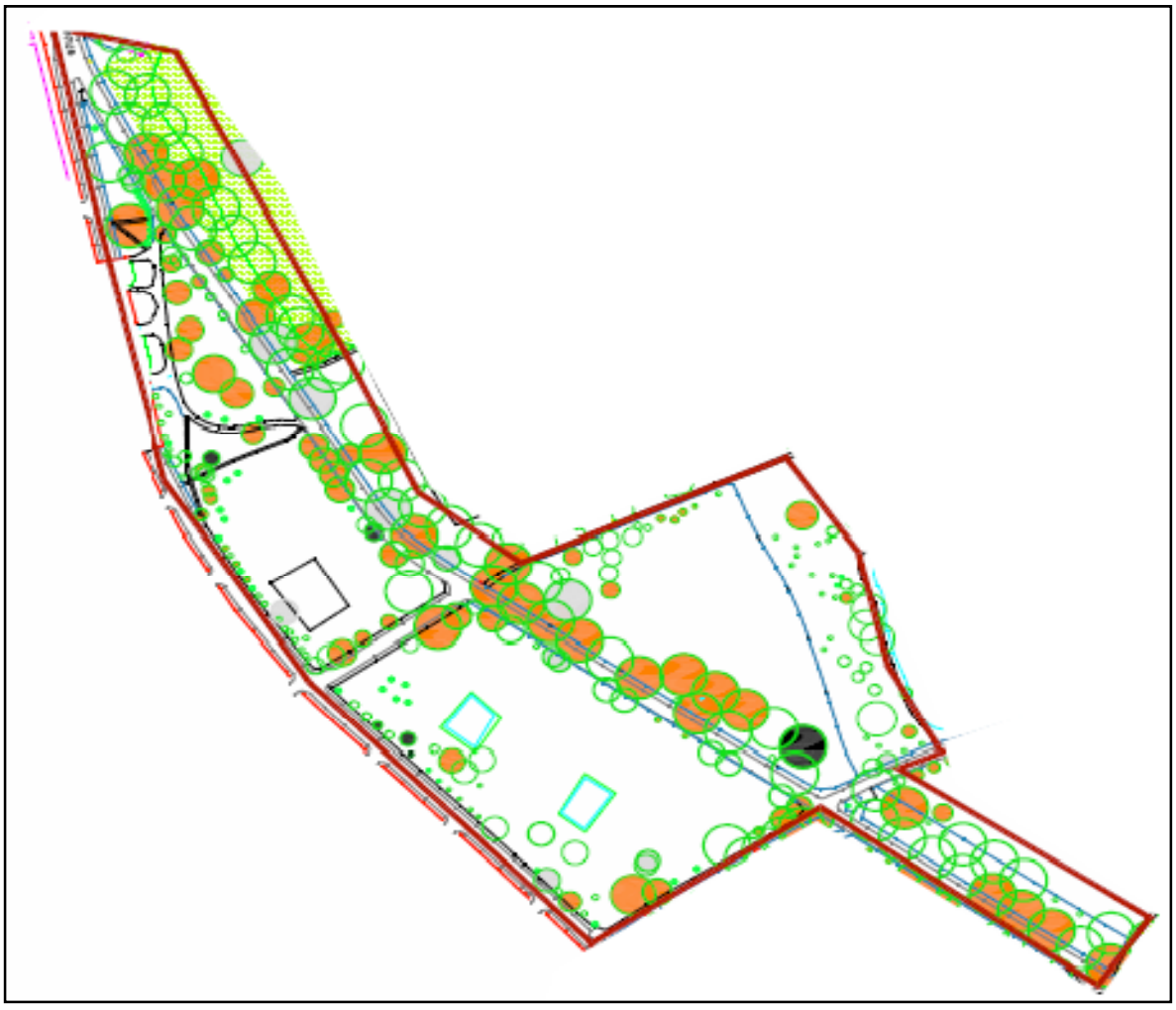
1. A high proportion of trees are considered to be in a Poor or Fair condition resulting in the potential loss of key character features such as the avenues
2. Sporadic use of ornamentals detract from visual character
3. Extensive use of Birch trees along western boundary detract from historic character

West Side – Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives)

Monitor condition of the mature and over mature avenues (focusing particularly on the Horse Track Ride) as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the poor quality avenue and specimen trees (TSO 4)

Replant current and emerging gaps along the Avenue and Horse Track (TSO 3)

Retain standing and canopy deadwood on trees to the east of the 'horse track' and around the fairground site, where this does not constitute an Health and Safety issue (TSO 4)

In the long term, consider the wide scale removal and replacement of historic avenues, once they have fully declined (TSO 1)

Suitable Species

Avenue and Boundaries - London Plane, Common Lime

Specimen Planting within Internal Areas – English Oak, Lime, Ash

Infill / Structural Planting – Rowan, Alder, Field Maple

The addition of species suitable for Climate Change adaptation should be considered

6.4 North-Side West

6.4.1 To the east of The Avenue the trees are concentrated at the boundaries with open central areas allocated to sports and recreation. A mature avenue of Horse Chestnut links Clapham Common North Side to Battersea Woods and includes trees in both good and fair condition. A small number are failing due to suppression, being shaded out by adjacent, dominant trees. Only minor pruning is likely to be required in the near future coupled with the removal of suppressed trees, when they exhibit symptoms of imminent demise.

Common and Red Horse Chestnut avenue

6.4.2 Mature trees, comprising mainly of Common Lime, run along the northern boundary with isolated examples of Sycamore, Horse Chestnut, Oak, False Acacia, Norway Maple and Beech. The remnants of the Spring Well tree group planted in 1870, includes a mature London Plane of excellent quality and a notable Lime tree. The group is surrounded by fair and poor quality Horse Chestnut and a Turkey Oak meaning that succession planting is essential along this boundary in order to secure the future of this key character feature.

6.4.3 A dense avenue of maturing London Planes runs along the boundary between North Side West and North Side East (linking Clapham Common South Side with Bishops Walk). These trees are closely spaced, some with inherent structural weakness due to tight forks. No historic pruning is evident but the weaker trees are likely to be shaded out and suppressed in the future, possibly triggering the need for their removal.

6.4.4 Fully mature London Plane and Common Lime trees are concentrated to the east of Bishops Walk and include a high proportion of good quality and visually important trees. Recent planting along Bishops Walk, has resulted in an unbroken avenue, without gaps. Resources should be concentrated along the northern boundary to replace historic groups and specimens and introduce native shrub groups. This will break up the large expanse of the sports pitches and maturing London Plane avenue.

Maturing London Plane avenue dividing North Side West & North Side East

Key Issues

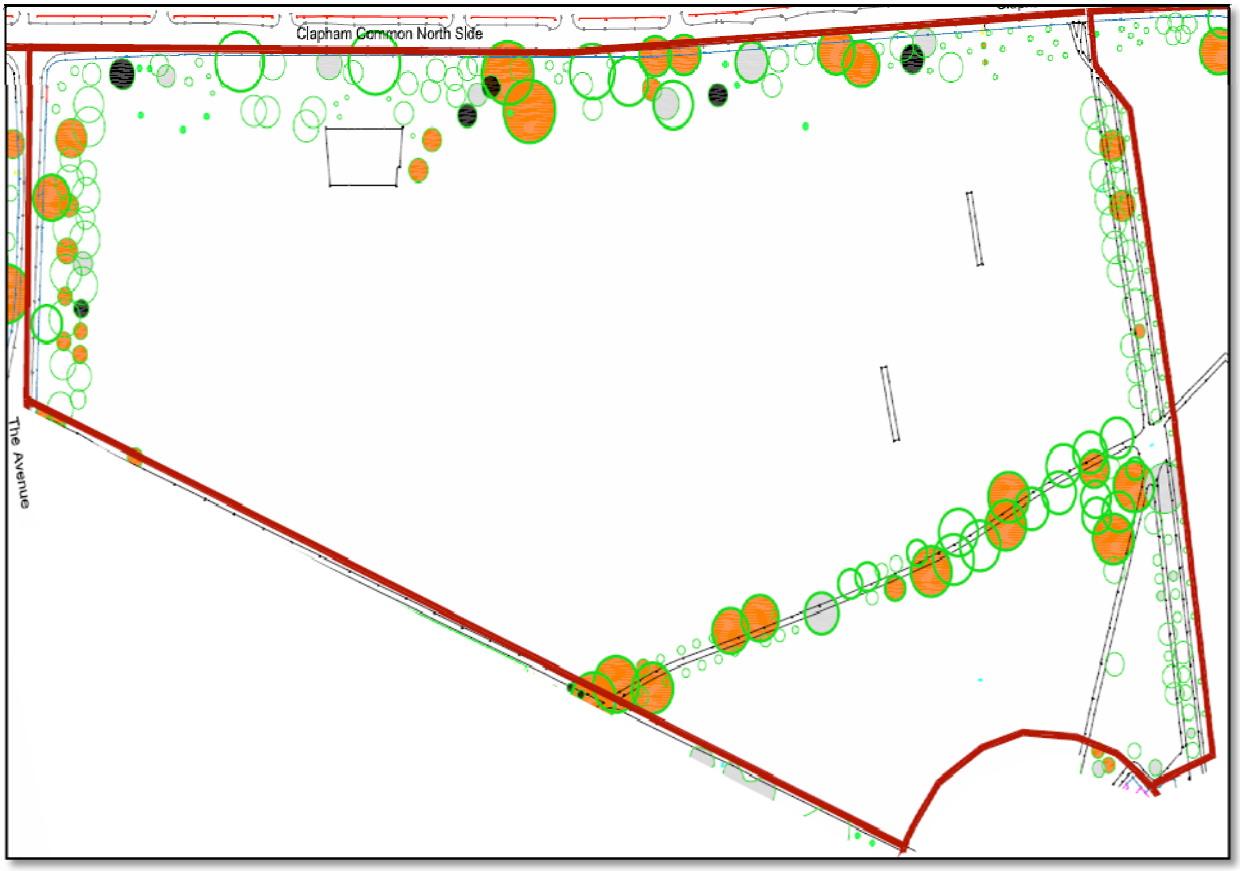
1. Progressive loss and decline of key character trees without suitable amount of replacement planting
2. Dense, internal barrier between North Side West & North Side East
3. Erosion and compaction of soil around trees due to desire line along northern boundary
4. Bleeding Canker present in Horse Chestnut avenue

North – Side West - Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives)

Remove poor quality and suppressed trees from the Horse Chestnut avenue (TSO 4)

Succession and replacement planting along the northern boundary to be prioritised (TSO 3)

In the long term break up newly planted avenues through removing weak and suppressed trees (TSO 3)

Closely monitor condition of the mature and over mature trees, as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the poor quality avenue and specimen trees (TSO 4)

Suitable Species

Avenue and Boundaries - London Plane, Common Lime

Specimen Planting within Internal Areas – English Oak, Lime, Ash

Infill / Structural Planting – Rowan, Alder, Field Maple

The addition of species suitable for Climate Change adaptation should be considered

6.5 Battersea Woods

6.5.1 The woodland can be considered to be immature, without a developed age range or true woodland structure (such as a staggered edge or defined woodland understorey). The woodland has developed from an area of unmanaged park land, in which self-sown secondary growth of False Acacia, Blackthorn, Hawthorn, Elder and occasional Crab Apple has established beneath the original London Plane and Lime trees. This secondary growth is most dense on the boundary with The Avenue, and thins out considerably towards the east.

6.5.2 Most of the understorey trees are closely spaced, suffering suppression or die back as a result of dense shade. Without continued management, the use and value of the wood will decline and health and safety issues are likely to increase. Woodland operations such as thinning and enrichment planting are necessary in the long term. This will help improve woodland structure and ensure that there is adequate space for the remaining trees to develop. It will also increase light infiltration to the woodland floor helping to promote ground flora and the shrub layer, thus aiding wildlife diversity.

6.5.3 The woodland is under active management in partnership with the Friends of Clapham Common and is set out in the Clapham Common Woodlands Management Plan 2007 – 2012. The management tasks involve a mixture of stand thinning and widening of footpaths to increase light infiltration and grading on woodland edge. The character of the open scrub towards the east is being maintained, with 'dead hedging' planned around the main groups. The retention of standing stumps and dead wood is encouraged to help achieve Lambeth's Biodiversity Action Plan aims. Continuation of the principles and tasks set in the Plan will need to extend beyond 2012 in order to ensure that these positive biodiversity gains are continued. However, the mature London Plane trees running along the southern boundary are to be actively managed as individuals.

6.5.4 There are opportunities to extend the area of woodland along the eastern boundary of the all-weather sports pitches. The continuation of the open form of the woodland, whilst creating additional wildlife corridor links to the Ecology Core, can be achieved through planting varied, but compact groups of native trees.

Key Issues

1. Self sown woodland with limited age and species diversity

Battersea Woods - Tree Condition

Dead Dying

Poor

Fair

Action Points (Tree Strategy Objectives)

Update and implement Management Plan for Clapham Common Woodlands (TSO 1)

Make biodiversity gains through retention of standing deadwood, use of dead hedges for internal boundaries and additional planting (TSO 4)

Carryout woodland thinning and replanting, whilst retaining the current character and layout (TSO 2)

Develop defined woodland edge for maximum wildlife gains (TSO 1)

Install interpretation boards to promote wildlife potential and woodland management practices (TSO 4)

Utilise transplanted Silver Birch (BR&WS) and Oak (NES) (TSO 3)

Suitable Species

Native Woodland Species e.g. English Oak, Ash, Silver Birch, Holly and Hazel

6.6 The Ecology Core & Mount Pond

6.6.1 The Ecology Core has a well defined character comprising of rough and mown grassland, scrubby tree groups and a children's playground. Mount Pond is located in the south-eastern corner with mature trees covering its central mound. These are not directly accessible and as a consequence, they have not been surveyed in detail.

6.6.2 Mature Alder form an internal avenue along the north-south cycle route adversely affects internal views and visually divides the Common. However, the trees are largely in a poor condition, with some trees identified for removal as part of the 2011 survey. The effect of selected tree removal will further breakup the formal nature of the avenue. Their replacement is not considered desirable.

6.6.3 Semi mature Horse Chestnut, Alder, Field Maple, English Oak and Cherry are established along the eastern edge of Mount Pond and extend into the fenced playground. The density of planting is high and no new planting is required in the short to medium term. Likely pruning requirements will increase in the future (as the trees mature), with a higher frequency of inspection necessary for those trees within the children's playground.

6.6.4 The region to the north-west is managed as meadow grassland, which has inadvertently seen natural regeneration of the mature specimen trees (English Oak, Ash and Hawthorn). Individual London Plane and English Oak trees exhibit signs of decline with a 'stag headed' form, but contribute significantly to biodiversity providing valuable dead wood habitats. Owing to competing ecology aims, additional planting is not to be actively encouraged.

Infill planting aiding wildlife value and providing a varied age structure

Key Issues

1. Rapidly declining Ash along boundary with Windmill Drive
2. Planting along north – south cycle track divides the Common and disrupts historic views
3. Sensitive infill planting is required to increase the value of the wildlife corridor through linking the two areas of woodland
4. The creation of natural meadow grassland conflicts with tree planting

North – Side West - Tree Condition

Dead Dying

Poor

Fair

Action Points (Tree Strategy Objectives)

Retain and manage declining and dead trees for dead wood habitat (TSO 4)

Remove failing trees along north-south cycle track without replacement (TSO 3)

Monitor condition of the few surviving mature London Plane and Ash trees as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the poor quality boundary Ash and specimen trees (TSO 4)

Enhance existing groups in meadow areas to the north with additional planting of native species (TSO 2)

Closely monitor trees which surround the playground (TSO 4)

Suitable Species

Avenue Trees – Ash

Specimen Planting - London Plane

Native species for meadow areas e.g. English Oak, Ash, Silver Birch, Holly and Hazel

6.7 The Bandstand

6.7.1 The Bandstand area is characterised by the circular planting of mature London Plane and now over-mature False Acacia trees. Horse Chestnut's were introduced in the mid 20th century and have reached early maturity. The London Plane trees are the principal landscape feature and form an impressive backdrop to the Bandstand. Due to the high public use of the area the trees have been intensively managed through crown lifting and crown thinning. The majority of the London Planes here are in a fair condition and warrant consideration for special management procedures, due to their high landscape value and prominence.

6.7.2 The over mature False Acacia will require more intensive management as they continue to decline and their removal in the short to medium term is likely.

Key Issues

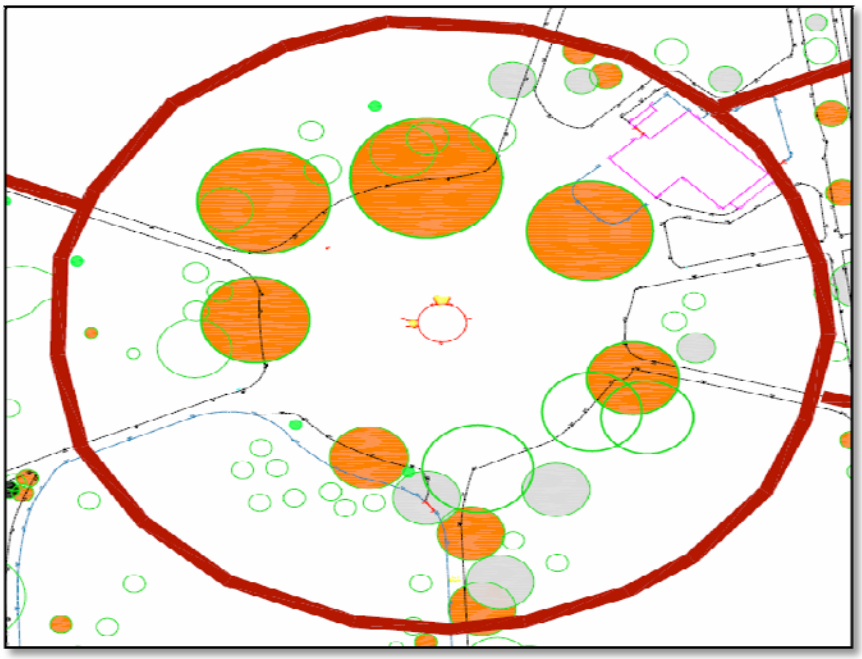
1. Loss of historic planting
2. Remaining high value character trees are in a poor or fair condition
3. Lack of succession planting

Bandstand - Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives)

Closely monitor condition of the London Plane trees as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the London Plane trees (TSO 4)

Carryout succession planting in suitable locations next to mature London Plane (TSO 3)

Suitable Species

Specimen Planting - London Plane

The addition of species suitable for Climate Change adaptation should be considered

6.8 North–Side East

6.8.1 The avenue trees along Long Road and Clapham Common South Side contain the original 1870 and circa 1895 planting of London Plane and Common Lime. Taking into account their maturity however, there are a high proportion of good quality trees with no immediate management requirements. Of those trees, which appear to be declining, the Lime trees are in poorer condition than the London Planes, with severe suppression and poor historic management, including heavy crown reduction. The Limes are unlikely to survive in the long term and they should be replaced as a priority, together with filling any existing gaps. Problems with successful tree establishment may arise, particularly along the northern boundary, due to the orientation and growth-limiting effects of shade. In this case, the establishment of secondary avenues are recommended to provide long-term replacement of the feature.

6.8.2 The original planting around Long Pond, which includes the historic 'Fagus Group', has seen the greatest change, with few of original examples now remaining. Although recent planting has occurred to the east of Long Pond, this area should remain one of the priorities to re-establish the historic layout.

6.8.3 Trees around the residential properties and the Windmill public house were planted to a high density following the 1870 and 1895 works and additional planting in the 20th century has continued this trend. As a consequence, there is no immediate need to increase tree cover in this area. Owing to the presence of buildings with shallow foundations, the planting of trees with a high water demand should be avoided.

6.8.4 The avenue of Alder trees, which flank the cycle tracks, extends northwards past the bandstand and breaks into the mature Lime trees. The Alder trees are declining rapidly and their removal at an appropriate time will assist in breaking up the density of this formal avenue. However, the recent addition of a single line of English Oak trees, stretching the entire length of this character area, will once again risk dividing the Common in two as they mature. These young Oak trees are in a good condition and a number could be transplanted to more suitable locations, in order to break up the uniformity of the avenue.

Decline of specimen Lime tree showing a 'stag headed' top.

Key Issues

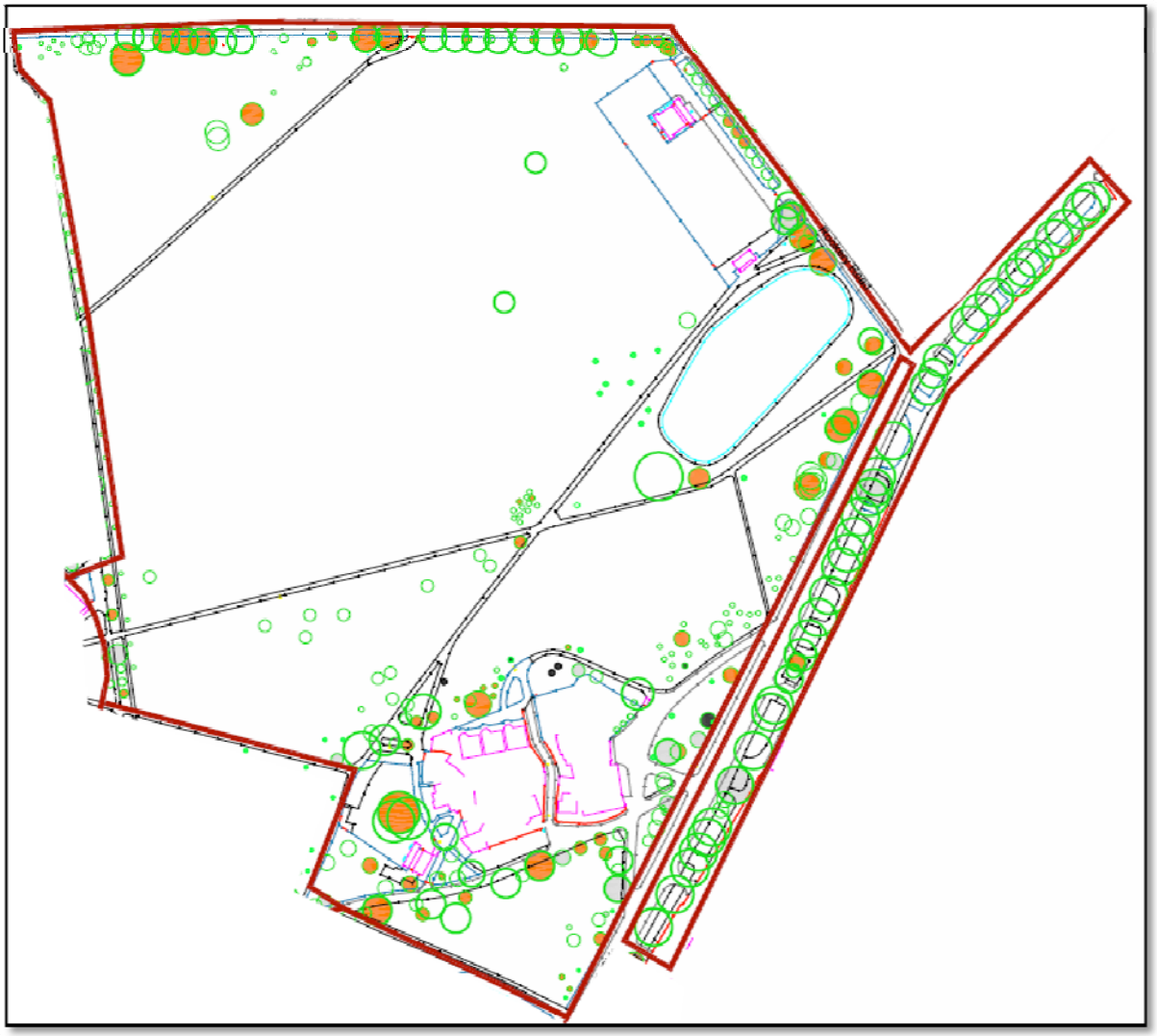
1. Loss of historic trees around Long Pond and historic Fagus Group without suitable replacement
2. Decline of key character trees in avenues, groups and specimens
3. Likely problems with shading leading to poor success in replacement avenue planting
4. Erosion and compaction of soil around trees due to the desire line along northern boundary

North –Side East – Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives)

Closely monitor the condition of the mature and over-mature, fair quality trees as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the Poor quality avenue and specimen trees (TSO 4)

Replant current and emerging gaps along Clapham Common North Side (TSO 3)

Concentrate additional planting around Long Pond to replicate 1895 layout (TSO 3)

Remove dead trees along north-south cycle track and add small groups to create woodland effect (TSO 3)

Suitable Species

Avenue and Boundaries - London Plane –Common Lime

Specimen Planting within Internal Areas – English Oak

Infill / Structural Planting – Rowan, Alder, English Oak

The addition of species suitable for Climate Change adaptation should be considered

6.9 Old Town

6.9.1 Mature London Planes feature the length of Long Road, many of the trees being the original 1870 planting. Many of the trees are in a fair and poor condition and will require careful and regular inspection. The original London Plane trees, within Holy Trinity Church, are in a good condition requiring minimal works. The trees located along the eastern boundary are however in a poor condition, with large gaps developing in the pre 1870 layout. As a consequence, replacement and succession planting should be concentrated in this area.

6.9.2 The land to the east of Holy Trinity Church has a high concentration of trees, with mature specimens of Ash and over-mature examples of Horse Chestnut, False Acacia and Tree of Heaven. Mature London Plane and small ornamental trees, including Flowering Cherry, have been planted within the grounds of the Church, with a wider mix of ornamentals toward the northern end.

6.9.3 Newly-planted London Planes have established well in the open areas and serve to compliment the now over-mature Hybrid Black Poplar (Cooks Tree), which is a dominant feature next to the memorial fountain. The areas of the walled gardens around Clapham Common tube station contain maturing London Plane, Common Lime and Sycamore. There is also prolific and invasive sucker growth of Tree of Heaven, which will require long term management to ensure its control.

6.9.4 To the south of The Pavement, mature London Planes form a continuous avenue and are largely in good condition. The intermittent, subsequent planting of Lime trees within the avenue do not however compliment the feature and have become suppressed specimens with a limited life expectancy. The open areas to the south are dotted with mature London Plane and Lime, complimented with a group of early mature Limes in the north-east corner.

Heavily reduced Hybrid Black Poplar Tree (Cooks Tree)

Key Issues

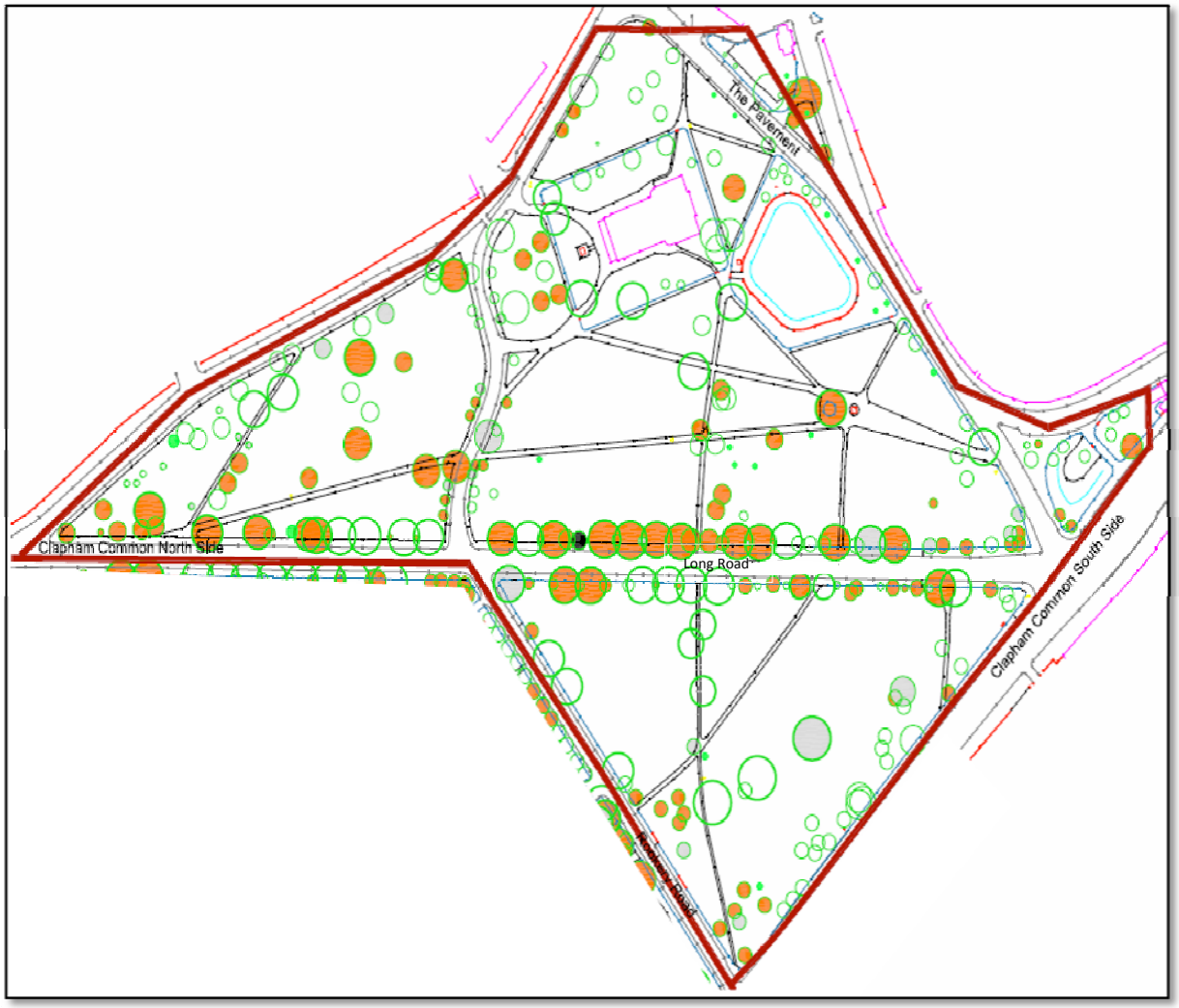
1. High concentration of poor and fair condition trees in the original, pre 1870, avenue planting
2. Suppressed and subordinate Lime trees within avenue planting detracting from amenity value
3. Limited succession planting may result in the loss of historic and visual character

Old Town - Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives - TSO)

Closely monitor the condition of the mature and over-mature fair quality trees as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the poor quality avenue, and specimen trees (TSO 4)

In the long term, consider the wide scale removal and replacement of historic avenues, once they have fully declined (TSO 1)

Replant current and emerging gaps along Long Road and The Pavement (TSO 3)

Suitable Species

Avenue and Boundaries - London Plane

Specimen Planting with Internal Areas –London Plane, Lime

Infill– Native species such as Field Maple and Hornbeam

The addition of species suitable for Climate Change adaptation, should be considered

6.10 South Side

6.10.1 This area has two distinct elements, falling either side of The Avenue. To the west, the trees are concentrated at the boundaries with mature London Plane and Common Lime flanking the highway. The Lime trees are again declining more rapidly than the London Plane, which is betrayed by crown dieback and reduced vigour. This is a characteristic of the species and its typical longevity, rather than any other factor. The removal and replacement of the declining Lime trees is considered to be a priority, once the trees have died.

6.10.2 A group of early mature Horse Chestnut, Ash and Hornbeam are developing well amongst four very large Lombardy Poplars at the northern boundary, adjacent to Clapham South station. Early mature Lime and Bird Cherry are found along the western boundary with Nightingale Lane. Owing to the high density of early mature trees, there is no identified need for additional planting in this area.

6.10.3 Silver Birch has been exclusively planted along Nightingale Walk but there is a clear division of poor quality mature trees and recently planted saplings. The Masterplan identified this feature as detracting from the historic character. As a consequence, the mature Birch shall not be replaced following their natural demise.

6.10.4 Closely-spaced Lime and London Plane flank the eastern boundary of The Avenue, with the addition of over mature Horse Chestnut and Ash along Clapham Common South Side. A number of recent and historic tree losses mean that there are a number of gaps between the trees as they stretch toward and beyond Eagle Pond. Tree replanting in these areas is deemed a priority.

Ash trees along Windmill Drive declining rapidly

6.10.5 Ash is the dominant species along the boundary with Windmill Drive but they are rapidly declining in health. Close monitoring of the declining Ash and appropriate action is required, in order to secure their retention. An avenue of mature and early mature Common Lime starts at the southern corner of the Green Waste facility and continues along the side of Nursery Wood.

6.10.6 Nursery Wood is relatively young in age class and predominantly even-aged with dense, closely spaced trees. The prominent tree species include Turkey Oak, English and Wych Elm and mature Lombardy Poplar and Horse Chestnut. The understorey vegetation is largely formed of Elder and Hawthorn but has recently been enriched with Yew, and Birch.

Recent thinning works to create greater structural diversity in Nursery Wood

6.10.7 Woodland management undertaken by the Friends of Clapham Common has focused on improving the age structure and species mix through the under-planting of native trees. The current Management Plan for Nursery Wood details this process and recent boundary thinning works have increased light infiltration to encourage the establishment of newly planted trees. It will be necessary to update the management plan in the future to ensure the continuation of the of task. Due to the small size of Nursery Wood there is less scope to create a fully graded woodland edge, but thinning works will contribute to this end. Similarly to Battersea woods, stand and fallen deadwood shall be encouraged and retained. To maximise the wildlife benefit, a central core should be retained and protected by dead hedges.

Key Issues

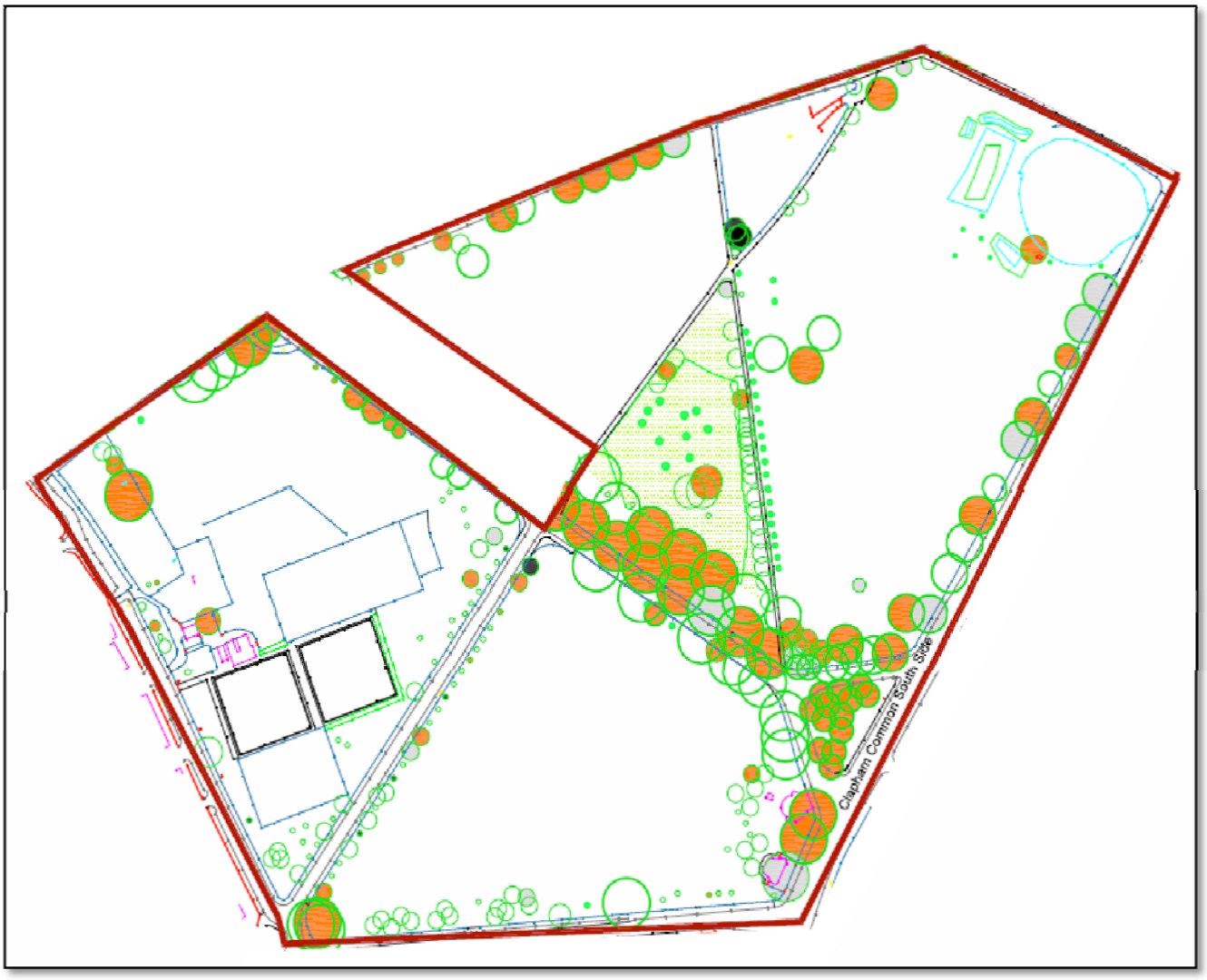
1. High proportion of trees in poor and fair condition resulting potential loss in key character features, such as the Plane avenues
2. Significant decline of mature Ash trees along boundary with Windmill Drive
3. Inappropriate planting of Birch trees along Windmill Walk
4. Bleeding canker prevalent in Horse Chestnuts along Clapham Common Southside which is likely to lead to future losses

South Side – Tree Condition

Dead Dying

Poor

Fair



Action Points (Tree Strategy Objectives - TSO)

Closely monitor the condition of the mature and over mature fair quality trees as part of Tree Survey Program (TSO 1)

Implement soil improvement program, vertical mulching and/or soil de-compaction measures for the poor quality avenue, and specimen trees (TSO 4)

In the long term, consider the wide scale removal and replacement of historic avenues, once they have fully declined (TSO 3)

Replant current and emerging gaps along Clapham Common South Side and The Avenue (TSO 3)

Make biodiversity gains through retention of standing dead wood, use of dead hedges for internal boundaries and additional planting (TSO 4)

Carryout woodland thinning and replanting (TSO 2)

Update and implement the Management Plan for Clapham Common Woodlands (TSO 1)

Install interpretation boards to promote wildlife potential and woodland management practices (TSO 4)

Consider the use of transplanted Oak (NSE) for woodland under planting and around Green Waste Facility (TSO 3)

Suitable Species

Avenue and Boundaries - London Plane, Common Lime

Specimen Planting within Internal Areas – English Oak, Common Lime, Ash

Native Woodland Species e.g. English Oak, Ash, Birch, Holly and Hazel

7 Principles for Forming and Implementing the Action Plan

7 Principles for Forming and Implementing the Action Plan

7.1 Forming

7.1.1 The tasks formulated within the Action Plan are summarised as Action Points at Section 3. Specific tree works and tasks shall be derived from the on-going tree health and condition survey. The survey will identify the tree work requirements for the Common but also flag up the immediate priorities so that resources can be focused with particular attention to the tree with high amenity value. The combination of both the tree survey and the systematic replanting methodology, managed through the Council's tree data base, will form the basis for new planting programs.

7.1.2 The Action Plan tasks should be prioritized based on the Tree Strategy Objectives. The Council will inevitably initiate this process but consultation with and input from the Stakeholders is to be encouraged. This is to ensure that management tasks are organised and, where appropriate, funded by the framework of Stakeholders and that all tasks are related to the Tree Strategy Objectives. This will avoid the potential for duplicated or uncoordinated tree management.

7.1.3 Consultation with the Stakeholders will be most valuable before the annual tree planting program is set and following the tree condition survey. It is at these times most input will be required in order to agree new tree planting locations and for shaping decisions in relation to the Vision.

7.2 Implementation

7.2.1 The on-going consultation process will form the basis for existing and future partnership agreements between the Council and the Common's Stakeholders. Previous planting and management events have been undertaken by the Friends of Clapham Common in partnership, with Trees for Cities, and the Council will continue to encourage and support this involvement. Such events are necessary to engage the residents and users of the Common and are central to the successful implementation of the Action Plan.

7.2.2 Partnership agreements with the principal Stakeholders can be as simple as a plan to regularly meet and discuss programed tree works, or an agreement to mutually promote events through Council or residents groups' publications. Practical tasks, such as woodland thinning or teaching actives undertaken by local schools, can also be achieved through establishing partnership agreements. Methods of promoting existing partnership agreements and developing future ones can include:

i) Working parties for tree planting and woodland management
ii) Events, talks and guided walks
iii) Develop a Tree Wardens Scheme to assist in tree monitoring and identifying issues
iv) Ensure all interested groups and bodies are aware of planned work

v) Explore funding opportunities by local groups and bodies not available to the Council – Schools Awards for All, Landfill Tax funding
vi) Use of the Common as an 'outdoor classroom' for local schools (Appendix 9)

7.2.3 The allocation of resources to achieve the aims and objectives of the Tree Strategy are likely to change over time. However, defining existing funding streams and potential funding areas will be an important aspect in the formation and implementation of the Action Plan. Direct funding or off-setting costs through volunteer action can be derived from the following:

i) Public funds - likely to meet the majority of cost for Action Plan tasks
ii) Defined environmental gains in the Tree Strategy and Action Plan could be directly matched against planning 106 agreements
iii) Individual or business sponsorship of trees, tasks or events
iv) Fundraising events e.g. Friends of Clapham Common
v) The management objectives focus heavily on restoring the historic landscape and could potentially qualify for Heritage Lottery Funds.
vi) Grant applications to the Woodland Grant Scheme or DEFRA Stewardship Schemes
vii) Voluntary organisation – local volunteer centres, Duke of Edinburgh, BTCV and Woodland Trust
viii) Parks Event 'tax' for tree protection measures / remedial works
ix) Tree planting initiatives e.g. Trees for Cities and Tree Council
x) Community payback teams
xi) Corporate Action Days – specific tasks e.g. woodland management, tree mulching

8. Monitor and Review

8. 0 Monitor and Review

8.1 To ensure the efficacy of the Action Plan, it is important to monitor the progress of the Action Plan to ensure that the aims and objectives of the Tree Strategy are achieved. Monitoring the effectiveness of the Action Plan is only achievable if measureable outcomes are clearly assigned to each task.

8.2 Regular review of the Tree Strategy and the Action Plan is an important process. The review period will be set by the lead officer and stakeholders and used as a means to identify areas which may require further input or modification. This allows for outstanding elements to be reassessed and prioritized, or to update and discard those no elements longer applicable or achievable. The review process will identify any changes to Council policy or their aims, as well as highlighting any necessary modifications to the management principles, whilst accommodating any revised best practice.

8.3 Whilst the Action Plan is to be made up of tasks stretching up to ten years, it is suggest that monitoring be carried out on an annual basis, sensibly timed with budget allocation. A detailed review is also recommended at a five year midpoint.

Typical decay fungi on False Acacia tree requiring regular inspection and monitoring

9. Limitations

9. Limitations

9.1 Modelling of Tree Decline

The modelling of tree distribution, age and condition has been a desk-top operation, using the standard plans and data from Ezytreev and which has been manually transferred using digital CAD (computer assisted design) software for the production of more descriptive and informative plans. However, detailed modelling using a GIS system is recommended for an effective and more detailed visual analysis of tree population dynamics, tree cover projections and condition forecasting. This data could then better inform planting and maintenance programs for the future.