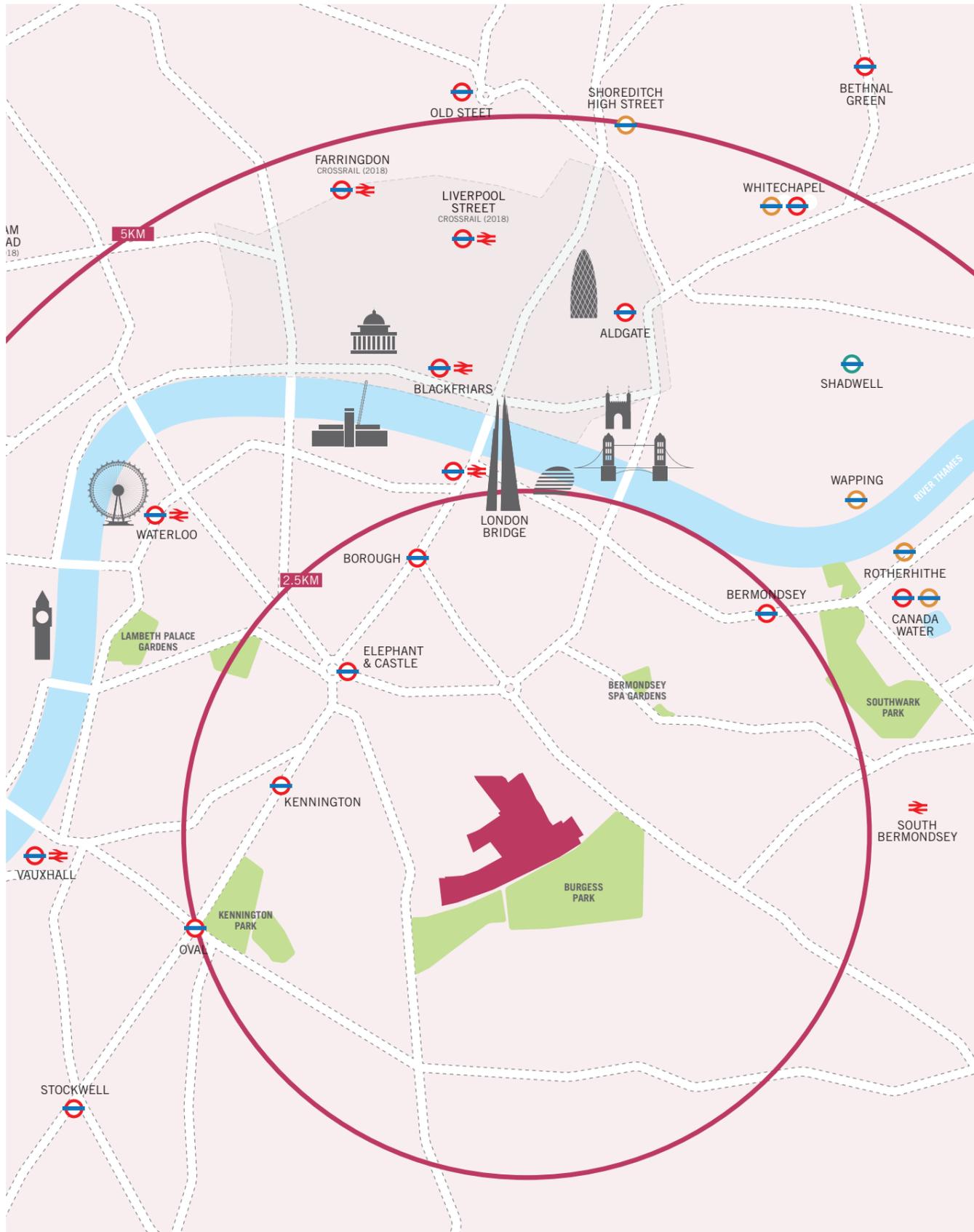


# Masterplan & First Development Site Application



# Tree Strategy

HTA Design LLP

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## 1.0 INTRODUCTION

Trees within the urban environment play an important role in determining the local distinctiveness of any area. As identified by the *Tree and Woodland Framework for London*, tree-lined streets and trees within squares and open spaces form important features in London's townscape as they have strong cultural associations, provide contact with nature in a predominantly built environment and also offer an educational resource for all generations. The Aylesbury Estate regeneration project respects these values and has used the principles identified within the framework to develop the tree strategy for the regeneration.

The creation of an urban forest character is the aspiration of the Aylesbury Tree Strategy. The retention of existing trees and the large number of new tree planting within the streets and open spaces will ensure that every house will look out onto at least one tree; softening the built form, providing seasonal character and introducing habitat into streetscapes to extend the park character of Burgess Park into new area.

## 1.1 PURPOSE AND STATUS OF THE DOCUMENT

The Tree Strategy has been prepared by HTA Design LLP on behalf of Notting Hill Housing Trust in support of the Masterplan Outline Planning Application and First Development Site Detailed Planning Application for the Aylesbury Estate regeneration (excluding sites 1a and 7), as defined by the Aylesbury Area Action Plan (AAP). This report sets out the existing and proposed tree strategy for the development in accordance with the requirement of A6.8 Landscape and Public Realm Design Guidance within the AAP.

**Aylesbury AAP Boundary with the Outline Masterplan and First Development Site highlighted**



## 1.2 BACKGROUND TO THE APPLICATIONS

In 2010 LBS adopted the AAAP which provides the planning policy context for the regeneration of the Aylesbury Estate. Early phases of the AAAP regeneration area have already been redeveloped (Site 1a) or are under construction (Site 7). In January 2014, Notting Hill Housing Trust (NHHT) was selected by Southwark Council (LBS) as the preferred developer to work in partnership with the Council in delivering the remainder of the regeneration of the Estate.

Two applications are being submitted as follows:

- **First Development Site Application (FDS Application):** Detailed Application for sites 1b and 1c; and
- **Masterplan Application:** Outline Application for the remainder of the Estate (Phases 2, 3 & 4 and site 10).

## 1.3 RELATIONSHIP TO THE APPLICATIONS

The Tree Strategy describes the proposals for existing and proposed trees within the area covered by the Masterplan and the First Development Site. The Strategy describes the design process undertaken by HTA Design LLP as project lead and landscape architect, Tamla Trees (arborist), and Southwark Council to determine the arrangement of existing and proposed trees within the sites to maximise the retention of good quality existing trees, provide adequate replacement trees, and ensure all new tree planting is attractive, provides amenity and minimises longterm management and maintenance issues.

The Tree Strategy is to be read in conjunction with the following documents:

- Masterplan Application Design and Access Statement
- Masterplan Application Landscape Statement
- Masterplan Application Parameter Plans
- Masterplan Application Design Code
- Masterplan Application Illustrative Masterplan
- First Development Site Landscape Statement
- First Development Site Landscape Drawings

## 1.4 SUMMARY OF THE PUBLIC REALM AND LANDSCAPE PROPOSALS

The vision for the new development is to create a new part of London that is knitted seamlessly into the surrounding city. With safe streets, attractive and well maintained open spaces and great cycle access, it will be a place that all households can make their home, right in the heart of London.

The public realm and landscape vision is to remove the physical and psychological barriers that signal the edge of the estate by creating a network of tree-lined streets that link to surrounding areas and attractive neighbourhoods around which communities will develop; focussed around their local park.

Creating attractive, legible and safe routes for pedestrians and cyclists that integrate into the surrounding streets is one of the key design principles of the masterplan. All streets have been designed to reflect the character of the surrounding 'traditional street' typologies.

Differences in the design character of the streets, parks and squares, coupled with the building typologies, will create interesting and legible neighbourhoods around which the residents will identify. Appealing, safe streets that are pedestrian and cycle prioritised and planted with regular street trees will link these neighbourhoods, encouraging movement within the area. In particular, east-west Community Spines and north-south Green Links will connect open spaces to destination locations within and beyond the area to create accessible, green and attractive places for residents and visitors.

## 1.5 SUMMARY OF THE TREE STRATEGY

An urban forest character will be created in the new development. The retention of existing trees and the large number of new tree planting within the streets and open spaces will ensure that every property will look out onto a tree. The trees will soften the built form, provide seasonal character and introduce habitat into streetscapes to extend the park character of Burgess Park into the area.

The design process reviewed the existing trees within the site to determine their health and amenity to understand their potential value within the new development. Site walkarounds with Southwark Council confirmed the number of existing trees to be retained based on their future health and the new development layout.

528 new trees will be planted within the Masterplan, which, when including the 140 existing trees to be retained, is an additional 291 trees to the number of existing trees currently found on the site. These will be planted within the streets, parks and squares. Additional trees will also be planted within the communal courtyards and back gardens, so that, post development, there will be a minimum of 668 trees within the masterplan.

215 new trees will be planted within the FDS, which, when including the 17 existing trees to be retained, is an additional 114 trees to the number of existing trees currently found on the site. Post development, there will be 232 trees within the FDS. These will be planted within the street, parks, squares and communal courtyards.

The proposed tree planting within the masterplan and FDS significantly increases the number of trees in the area to create an urban forest character in this part of South London.

**First Development Site Illustrative Masterplan**



**Key**

- ① **Westmoreland Square**  
Small urban square fronted by community facilities, featuring high quality paving, retention of one existing tree, new tree planting, possible playable water feature and sculptural bench
- ② **Westmoreland Park**  
Local park featuring dense canopy with low planting, sculptural bench seating and a playable space.
- ③ **Albany Road/Burgess Park Edge**  
Burgess Park extends into the site, encompassing a length of Albany Road and the landscape space to the building frontage. On-road cycle lanes are introduced and parking formalised with new street trees.
- ④ **Portland Street Park**  
A local park with a playable space, sports facilities, feature seating and soft landscape enhancing the existing trees.
- ⑤ **Green Links**  
Local streets with a wider street section that are enhanced with larger street trees and a Raingarden to provide strong visual and ecological connections with Burgess Park.
- ⑥ **Communal Courtyards**  
Communal courtyards are a shared facility for residents of the associated block and will feature a Doorstep Playable Space, gardens, seating, decking, and colourful, seasonal planting. These spaces will be flexible in use to facilitate the varied requirements of the residents.
- ⑦ **Block 1 Courtyard**  
Block 1 features garden spaces for the maisonettes and houses, as well as outdoor space for the community facility and a garden for the Extra Care units.
- ⑧ **Rear Gardens**  
Private rear gardens to houses.

## 2.0 POLICY REVIEW

The number of policy documents were reviewed in relation to retention of existing trees and the benefits of new tree planting within developments.

A summary of the key points follows.

Greater London Authority, 2011, ***The London Plan***

Policy 7.5 Public Realm of the London Plan requires that “opportunities for greening (such as through planting of trees and other soft landscaping wherever possible) should be maximised.” The Plan identifies that this will support the Mayor’s aims for two million trees to be planted in London by 2025 and, to secure additional greening in the Central Activities Zone (CAZ) to help mitigate the urban heat island effect (Policy 5.10).

Within Policy 7.21 Trees and Woodlands, the London Plan identifies that “trees and woodlands should be protected, maintained, and enhanced, following the guidance of the London Tree and Woodland Framework (or any successor strategy)” and that “existing trees of value should be retained and any loss as the result of development should be replaced following the principle of ‘right place, right tree’.” The Plan suggests that the assessment of an existing tree’s value should be derived “using a combination of amenity assessment (BS5837) and a recognised tree valuation method (CAVAT or i-tree) that also takes into account social, economic and environmental factors.” In terms of tree planting on development sites, The Plan suggests that a “cost benefit analysis that recognises future tree value should be used to support the case for designing developments to accommodate trees that develop larger canopies.”

Greater London Authority, 2005, ***Connecting Londoners with Trees and Woodlands: A Tree and Woodland Framework for London***, GLA

The Tree and Woodland Framework for London identified strategic initiatives to maintain and enhance London’s trees and woodlands as a vital part of the environment of Greater London. The Framework describes the current status of trees and woodlands in London and puts forward key aims, objectives and proposals to realise their contribution to the natural, built and managed environment, people, and the economy.

The key aims for trees and woodlands in London identified in the Framework include:

- A. To ensure trees and woodlands contribute to a high quality natural environment.
- B. To help shape the built environment and new development in a way that strengthens the positive character and diversity of London.
- C. Through people’s contact with trees and woodlands to help foster community and individual people’s well-being and social inclusion.
- D. To support the capital’s economy.

The objectives identify that many of London’s trees suffer from lack of management and replacement. They also acknowledge the need to plan for the impacts of climate change; with soil moisture likely to reduce in the summer, and storm events potentially happening on a more regular basis but also because trees can help to reduce the impacts of climate change by shading soils, park grassland, living spaces and streets and intercepting rainwater to reduce the rate and scale of eventual run-off.

The Framework acknowledges that developers play a valuable role as the key players in the majority of the land use changes in the London area and that they need to respect existing trees and, where appropriate, also incorporate tree planting within their new developments.

The Framework advocates a ‘Right Place Right Tree’ approach, which seeks to ensure new planting is appropriately located and designed. It identifies that the type of tree should be chosen to fit the environment once a site has been deemed appropriate for tree planting or colonisation. It provides a checklist that highlights the principles and issues which need to be considered to achieve sustainable enhancement of London’s tree and woodland resource.

Greater London Authority, 2012, ***Green Infrastructure and Open Environments: The All London Green Grid Supplementary Planning Guidance***

The All London Green Grid has been developed to provide a strategic interlinked network of high quality green infrastructure and open spaces that connect with town centres, public transport nodes, the countryside in the urban fringe, the Thames and major employment and residential areas.

Eleven Green Grid Areas (GGA) have been developed and partnerships established to promote cross boundary working. The partnerships have developed objectives and identified projects to produce a Green Grid Area Framework in each of the 11 Green Grid Areas. The Green Grid is to be delivered through the planning process for new development as well as by a range of stand-alone or area based projects.

The Aylesbury Regeneration area is located within South East London Green Chain Plus. The South East London Green Chain is a long established partnership between the London boroughs of Bexley, Bromley, Greenwich, Lewisham and Southwark, and is an extensive and reasonably well connected network of parks and open spaces which are linked via the Green Chain Walk. Burgess Park is the northern end of the Central London Link and the SPG suggests that connections between the open spaces north from Crystal Palace Park towards Burgess Park are promoted and enhanced for this link. There are no specific recommendations as to how the links are enhanced.

Greater London Authority, undated, **All London Green Grid: South East London Green Chain Plus Area Framework**

The Area Framework was developed to support the delivery of the All London Green Grid objectives by identifying how the All London Green Grid can be delivered at the landscape scale and across administrative boundaries. ALGG Area Frameworks expand on the implementation points and strategic opportunities identified in the All London Green Grid Supplementary Planning Guidance to the London Plan.

The Framework examines the local and strategic context of the South East London Green Chain Plus area to establish a distinct vision and set of opportunities. Its vision is to “improve connectivity to the Thames from the Southern Ridge green spaces and from the river corridors behind it to create a joined up, attractive network of green spaces and walks.”

The Aylesbury Regeneration is located just to the north of the Central London Link. The Area Strategy opportunity suggested for this link is to “promote and enhance connections between the open spaces north from Crystal Palace Park towards Burgess Park, including One Tree Hill, Sydenham Wells Park, Horniman Gardens, the Camberwell cemeteries, Peckham Rye Common and Park.” It identifies that the link has a number of open spaces that are not connected by a continuous green corridor and there is an opportunity to improve and strengthen links through the urban environment.

Although the Aylesbury Regeneration is not part of the Link, the regeneration of the estate provides the opportunity to continue the development of green links to the north with the potential for the link to eventually connect with the Thames.

Trees and Design Action Group (TDAG), 2011, **The Canopy, London’s Urban Forest: A Guide for Designers, Planners and Developers**

The Canopy was developed by the TDAG to encourage tree retention and planting within London by recognising their value to existing and new developments. It identifies that trees are facing enormous pressures in London as more street trees are being cut down than are being replaced and the value of trees is rarely considered in the cost-benefit analysis of developments. The guidance identifies that trees are assets which increase in value over time and that it is now possible to quantify these values in monetary terms and apply an economic analysis to the benefits of urban trees including increases in property values, energy conservation, air quality improvement, CO2 reduction and storm water control. The guidance also suggests technical solutions for planting trees in urban environments and new developments, such as for street trees, on podiums and roof garden.

Southwark Council, 2011, **Revitalise: Core Strategy**

The Core Strategy is a planning document that sets out Southwark’s long term vision, spatial strategy and strategic policies up to 2026.

Strategic Policy 11 Open Spaces and Wildlife identifies that Southwark will protect woodland and trees and improve the overall greenness of places, including through promoting green corridors, gardens and local food growing. The policy requires new developments to help meet the needs of a growing population by providing space for children’s play, gardens and other green areas and helping to improve the quality of and access to open spaces and trees, particularly in areas deficient in open space. They are achieving this by saving their design and conservation policies in the Southwark Plan which support their approach to protect and improving the greenness of areas through conservation areas and tree preservation and by new landscaping and planting schemes.

The Core Strategy recognises that trees make places more attractive and pleasant to be in, provide important habitat and act as wildlife corridors, and help tackle climate change by cooling areas and absorbing CO2. It identifies that new development needs to be appropriately designed so that they can be constructed and used in a way that allows trees to be cared for and protected.

Southwark Council, 2012, **Revitalise: Aylesbury Area Action Plan**

The Aylesbury Area Action Plan (AAP) is Southwark’s planning tool to guide the redevelopment of the estate. It contains a vision for the area, policies for its development, and a delivery plan for future investment.

The AAP does not mention the existing trees on the estate or whether they should be retained.

Within Section A6.8 on soft landscape, the AAP identifies that trees and plants should be selected that are appropriate for the local environment; that they must take into account the street hierarchy, the need for shade and wind protection, and the need to maintain daylighting into peoples’ homes, as well as the outlook from their homes. It suggests that consideration should be given to the use of semi-mature trees where it is desirable to give a street or space a feeling of maturity, that the planting should enhance the surrounding landscape, encourage biodiversity and should never be used as a tool to mitigate or remedy poor design.

London Borough of Southwark, 2013, **Southwark Streetscape Design Manual DS.501 Street Trees Revision A**

Southwark Streetscape Design Manual DS.501 Street Trees (SSDM) recognises the value of the borough's trees but also the challenges facing the borough due to the age of their street trees, climate change and the tendency to plant smaller trees in streets. It identifies that the expansion of existing tree cover is an important priority for the Highway Authority and the manual provides guidance on the proper planting design and construction to ensure the benefits of the trees are realised.

The SSDM requires a Tree Design Statement to be prepared and submitted during the manual's Phase C \*Detailed Design\* and - if it is undertaken - Phase B \*Outline Design\*. The Tree Design Statements must explain the design logic, including for species selection, rooting zone volumes, drainage measures, pit opening dimensions, means of achieving final surface grades, stabilisation measures, and canopy management. Supporting information (e.g. test results or the advice of specialist arboricultural advisors) and calculations (e.g. for rooting zone volumes, canopy cover/compensation and canopy management costs) should also be provided.

Within new streets and spaces, the SSDM requires that new street trees of a sufficient size to be installed to provide 27-40% projected canopy cover over the total surface area of the Highway 30 years after the proposed planting works are completed. However, the SSDM states, that if it can be demonstrated that it is not be feasible to introduce sufficient planting to achieve the required canopy cover, then planting within the Highway outside of the Area of Assessment may be allowed to contribute to this, either by the proponent or as a commuted sum (or similar) to the Highway Authority to do so themselves at some future point.

The minimum acceptable size of new trees depends on the width of the footway (or other non-carriageway area) in which planting is proposed and a table identifying the minimum projected canopy radius adjacent building facades is provided. The minimum canopy radius is 4.0 metres. The SSDM provides guidance on other design elements that

need to be considered when locating new trees, including passing widths for pedestrians beside tree pits, underground services, tree pit size and rooting zones.

The SSDM provides a tree palette of preferred species for use in Southwark's streets and spaces and requests that heavy standard trees (12-14cm girth) be used unless agreed with Highways. The Manual also requires that a diversity of species is provided to combat the threat posed by disease and climate change as follows:

Extract from Table 4 - Canopy diversity requirements

**1. Species diversity**

Tree planting proposals for the Highway should be developed so that, except for where (3) in this Table applies, at any point within a 200m radius there is

- ≤ 10% from any one species
- ≤ 20% from any one genus
- ≤ 30% from any one family

In addition, within a given street or space (measured junction to junction) unless a level 1 departure is agreed

- ≤ 3 trees of the same species may be planted immediately adjoining one another, be that along the same side of the street or to either side of the carriageway
- ≥ 2 genus should be present
- different types of trees should be mixed in with one another within a given street or space rather than planting each within distinct 'blocks'

**2. Benefit to bio-diversity**

≥ 33% of trees in any street or space should be from a species identified in the SSDM/SER/Tree palette as having significant biodiversity value

The SSDM provides detailed guidance on the design of tree pits, including the size of the pit at the surface and rooting zones underground, method of stabilising the trees, edging the tree pits, drainage, retaining the surrounding pavements and interfaces with extended rooting zones. It also advises on canopy management, calculating the water required during initial establishment, tree maintenance and the protection of trees and soils during construction.

The SSDM identifies that existing trees can only be approved for removal if a tree survey has been undertaken and the highways tree officer agrees that the tree can be removed. The Manual identifies the process that needs to be undertaken to agree when an existing tree can be removed, including providing detailed design drawings showing how the existing tree would be significantly compromised by new development.

Compensation for the removal of existing trees is required by the SSDM on a minimum like-for-like basis for both of the following:

- i. Projected Canopy Area - The lost canopy area of the existing tree being removed. That assessment should be based upon the size of both the existing and proposed new trees (having accounted for the growth of each) at a date 15 years after planting out of the new.
- ii. Stem Diameter - The Stem Diameter of the existing tree being removed. Neither the diameter of the existing tree nor the proposed compensatory trees shall be projected forwards for future growth.

If the tree that is being removed has either a remaining contribution of ≥ 20 years but < 40 years or is young, then the replacement planting for that tree should provide ≥ 125% of the canopy area of the tree it is proposed to remove (as opposed to like-for-like) and shall be ≥ 75m<sup>2</sup>.

If a tree being removed has either a remaining contribution of ≥ 20 years but < 40 years or is semi-mature, then the replacement planting provided for that tree should provide ≥ 150% of the canopy area of the tree it is proposed to remove (as opposed to like-for-like) and shall be ≥ 125m<sup>2</sup>.

The replacement planting can be installed under Section 278 or Section 38 works. If the quantity of replacement planting is insufficient, the proponent may provide commuted sums to make up any residual shortfall in compensatory canopy area so the Highway Authority can design and construct further compensatory planting within adopted highways in the surrounding area at a future time of their choosing. The values to be provided are:

- £4,000 for each increment of 50m<sup>2</sup> of canopy area (or part thereof) to cover the value of future works
- a further £4,000 pounds for each increment of up to 5 trees (or part thereof) to cover design and project management costs.

As well as the replacement planting, the SSDM requires that the Tree team within the Council's Public Realm division must be compensated for the residual of ¼ of the assessed monetary value of the tree established using the Capital Asset Value for Amenity Trees (CAVAT) assessment methodology following deduction of:

- i. all construction costs associated with any replacement planting
- ii. all basic maintenance contributions associated with any replacement planting

The sums to be deducted is to be agreed with approving officers using the Highway Authority and Public Realm 'Tree team's' own term contractor rates based on the agreed design for each installation. In addition, for each such tree an additional approval fee of £225 (inflation indexed to the financial year 2013-2014) must be paid to cover the time of officers and contractors in assessing such costs. That approval fee is non-deductable against the CAVAT value. Works shall be the physical works only and shall not include any traffic management, laboratory or other costs.

As most of the roads within the existing Aylesbury Estate are not adopted, the removal of the majority of trees within the estate will not be covered by the SSDM's tree replacement and compensation requirements. All existing trees within the estate have been surveyed.

Southwark Council Environment & Leisure Department Public Realm Division, 2013, Southwark Tree Management Strategy  
The Southwark Tree Management Strategy was prepared by Southwark Council in 2013 to inform residents how Southwark Council will manage its tree stock.

In relation to new developments, the Strategy identifies that Council protects existing trees from inappropriate pruning or damage to important trees through its Tree Preservation Order (TPO) register (Section 4.5). The strategy identifies how Council uses the TPO register and the fines if works are undertaken to TPO trees without consent. The Aylesbury Estate does not have any TPO trees so the new development is not affected by this process. However, the Strategy does identify that protocol document setting out the decision-making process for tree-felling applications should be drafted and approved by the Planning Division, Tree section and the Planning Committee. We are not aware that this protocol has been developed.

The Strategy also identifies a checklist of factors to be considered when choosing to plant new trees, based on the Tree and Woodland Framework for London principle of 'Right Place, Right Tree'.

### Southwark Council, 2013, **Southwark Open Space Strategy**

The Southwark Open Space Strategy is designed to maintain and improve the existing network of high quality open spaces to ensure that those that live and work in the borough experience the wide range of positive benefits associated with health and well-being, quality of life and cohesive communities that open space provides. It is to be read in conjunction with Southwark's Tree Management Strategy, amongst other policy documents.

A key policy of the Strategy is the development of green chains, networks, grids and links between areas of open space to help to promote sustainable travel by creating safe and attractive routes for walking and cycling, improving health by promoting active travel and contributing to improved biodiversity by providing increased habitat and migration routes for wildlife. The links are to be achieved by reducing the impact of traffic along certain routes with traffic calming measures, making safe places for people to cross roads and planting of shrubs and/or trees along streets to create a more pleasant environment for walking along, whilst also providing a more continuous network for wildlife. Different types of green links are suggested as follows:

- Green links - these are links which join one green space to another by extending the amount of green between the two.
- Quiet green routes – these are links which are lightly trafficked roads and streets used by cyclists with trees and other planting designed to slow car traffic and to improve and green the overall environment.
- Greened main roads - these are links that are often already heavily planted with mature trees.

The greening of streets by planting appropriate species of trees is a key part of the green links strategy as trees are recognised as providing 'aesthetic qualities' that soften hard edges of the built environment and '[assist] in limiting or buffering harmful emissions of air and noise pollution'. The Strategy suggests maximising the ecological and biodiversity benefits by introducing an appropriate

tree density of approximately 80 trees per linear km or 2 per 25m on each side of the street, whichever is the greater to provide a continuous coverage of tree crown cover for a typical London Plane tree.

### 3.0 TREE STRATEGY

Trees are an essential part of the overall design and fabric of the Aylesbury Estate regeneration. Retention of existing trees has been a key feature that has influenced the design of the FDS and Masterplan, with streets and open spaces being located to ensure the successful retention of existing trees. New tree planting complements and extends the existing tree planting within the streets and is used to add distinctiveness and character to open space areas.

### 3.1 VALUE OF EXISTING TREES

Existing mature trees provide added value by:

- Being a memory of the existing estate
- Providing mature height and canopy cover whilst new trees establish
- Providing habitat and ecological value

It is essential that trees that are being retained are healthy and have sufficient life expectancy to provide value within the new development. The design of the surroundings around existing trees within a new development must also be considered to ensure they have sufficient room and the right soil conditions to ensure their longevity. In order that these issues were considered, an arboricultural survey of the existing trees and site walkarounds with Southwark's tree officer were undertaken to review the health and life expectancy of the existing trees in relation to the proposed development, as detailed below.

An arboricultural survey to BS5837:2012 of the existing trees within the FDS and Masterplan area was undertaken by Elizabeth Greenwood in 2012 and 2013 under instruction of EC Harris on behalf of Southwark Council. Elizabeth Greenwood's survey of the masterplan area was not based on a topographical survey.

Following Notting Hill Housing Trust's appointment as the Development Partner for the FDS and Masterplan in 2014, Tamla Trees was commissioned to review and update the tree surveys for this planning submission. This work included reviewing Elizabeth Greenwood's tree surveys against the topographical survey that was completed by Terrain Land and Architectural Surveyors in July 2014. Some adjustment to the location and number of trees occurred as well as some changes to the categories of the trees as their health was determined to have deteriorated between the surveys.

None of the existing trees on the estate are covered by tree preservation orders or are part of a conservation area.

#### 3.1.1 Arboricultural Survey of Existing Trees: Process

The tree surveys accorded with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations". The standard recommends that an assessment of the amenity value of every tree on a development site is undertaken and outlines four categories in which trees should be placed for assessment purposes. These assessment categories can be simplified as:

- A Trees of high quality with an estimated remaining life expectancy of at least 40 years
- B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
- C Trees of low quality, with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter of below 150mm
- U Trees which have limited prognosis such as those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

These categories are subdivided into three sub groups:

1. Trees of arboricultural value, good examples of their species or unusual specimens
2. Mainly trees of landscape value, trees which are primarily of visual amenity
3. Trees with mainly conservational value for example veteran trees

As required by BS5837:2012, the tree surveys provided the following details about each tree on the estate:

- The species (English names and their scientific names), size and the approximate position of the trees within the site.
- Large shrubs or trees with stem diameter of more than 75mm at 1.5 metres

- The dimensions of the trees are the height, and the girth measured at 1.5 metres above ground level. The spread is measured at the four points of the compass, and this is represented on plan. The lowest branch on the trunk is measured from ground level and the crown height is measured from the lowest point of the foliage.
- The maturity was recorded and details of this classification are included on the tree survey sheets, namely Y- young, SM - semi-mature, EM - early mature, M - mature and OM over-mature.
- A description of the trees' condition includes any visual defects at the time of the survey. As this survey is conducted from ground level not all defects may be visible, and pathogens may not be apparent because of the season of inspection.
- General recommendations for each tree were outlined, which may need to be reviewed once development proposals are finalized.
- Estimated remaining contribution in years in view of the existing site conditions was classified as less than 10 years; 10 to 20 years, 20 to 40 years or more than 40 years.

### 3.1.2 Arboricultural Survey of Existing Trees: Masterplan

The key outcomes of Tamla Tree's update of the masterplan tree survey are as follows:

- There are currently 377 trees on the estate, of which only one is classified as a category A tree. The majority are category B and C, with approximately a third classified as category C under BS 837:2012.
- The trees are predominantly mature. A sustainable tree stock should have a much greater mix of Age Class distribution than is currently present and the redevelopment affords a real opportunity to deliver a lasting improvement to in both quality and age class distribution.
- The main visual contributions are from trees along Thurlow Street and Albany Road and the design has sought to retain these where possible.
- It is likely that much of the upper soil horizons are made of historical fill material.
- A number of category U trees were identified as structural dangerous and regardless of the development timetable these should be removed at the earliest convenient opportunity.

Refer to Tamla Trees' Masterplan Arboricultural Impact Assessment for more detail about the existing trees.

### Masterplan: Existing Tree Survey Categories (Tamla Trees)



**Table 3.1.1 Masterplan: Existing Tree Survey Outcome**

Category	Tamla Trees Tree Survey 2014
Category A	1
Category B	153
Category C	114 individuals 7 groups
Category U	95 individuals 8 groups
<b>Total</b>	<b>377</b>

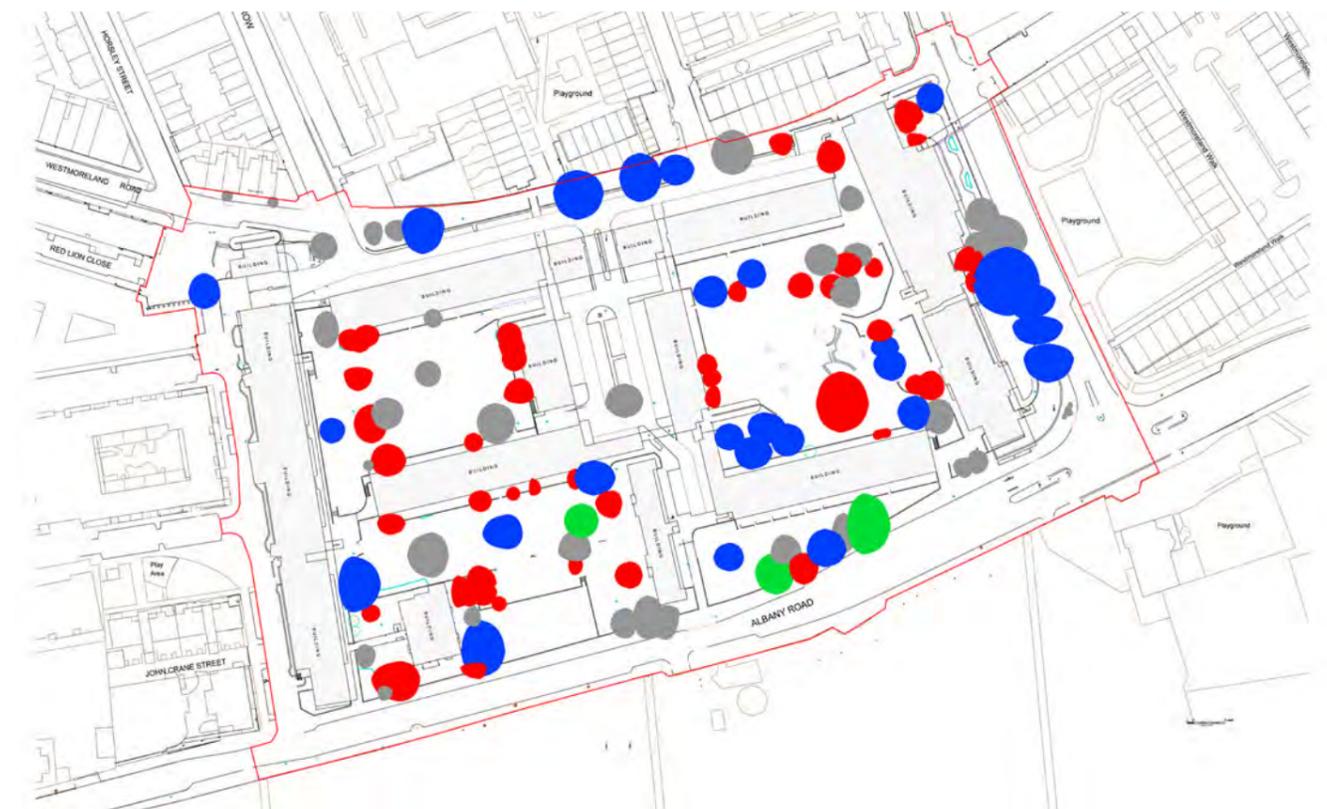
### 3.1.3 Arboricultural Survey of Existing Trees: First Development Site

The key outcomes of Tamla Tree's update of the FDS tree survey are as follows:

- There are currently 118 trees on the FDS site.
- The current tree stock is predominantly BS5837 category C and U (lower quality trees).
- The trees are predominantly mature. A sustainable tree stock should have a much greater mix of Age Class distribution than is currently present and the redevelopment affords a real opportunity to deliver a lasting improvement to in both quality and age class distribution.

Refer to Tamla Trees' First Development Site Arboricultural Impact Assessment for more detail about the existing trees.

**FDS: Existing Tree Survey Categories (Tamla Trees)**



- Key
- Existing Tree - Category A ●
  - Existing Tree - Category B ●
  - Existing Tree - Category C ●
  - Existing Tree - Category U ●

**Table 3.1.2 FDS: Existing Tree Survey Outcome**

Category	Tamla Trees Tree Survey 2014
Category A	3
Category B	26
Category C	33 individuals 2 groups
Category U	43 individuals 3 groups
<b>Total</b>	<b>118</b>

## 3.2 EXISTING TREES TO BE RETAINED AND REMOVED

### Masterplan Design Evolution

The existing trees have been reviewed in relation to the value they provide to the local distinctiveness of the area, their current health, projected lifespan and location in relation to the proposed development.

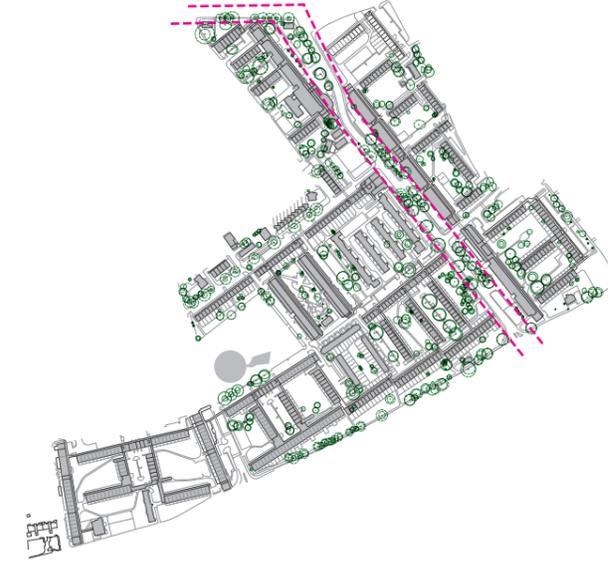
Early in the masterplan design process, it was noted that the existing trees could be separated into three categories:

- **Tree-lined Streets** – the canopies, rhythm, colour and texture provided by the existing trees within the streetscapes along Thurlow Street, East Street, Albany Road and Inville Road create a distinctive character to these streets. Their current health and projected lifespan also highlighted these trees as being of value and identified them to be retained within the masterplan. The street layout accommodates the existing alignments of these streets to allow the retention of these trees.
- **Key Groups** – key groups of trees within the existing courtyards of the Aylesbury Estate were highlighted as providing value due to their group character. These trees influenced the open space strategy of the masterplan, with parks located to retain these trees where possible.
- **Individual Trees** – particular trees with good form, life span and character were identified and opportunities for retaining them explored.

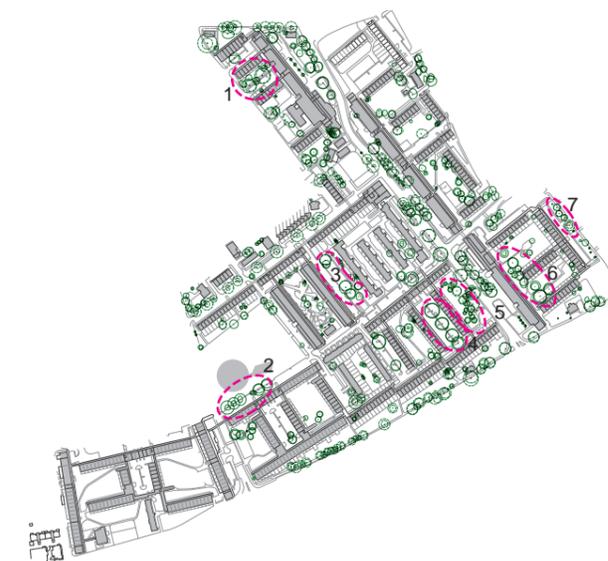
The masterplan design was adjusted to retain as many of the trees and tree groups identified as providing value.

### Analysis of existing trees in the masterplan

Alignment Thurlow Street / East Street



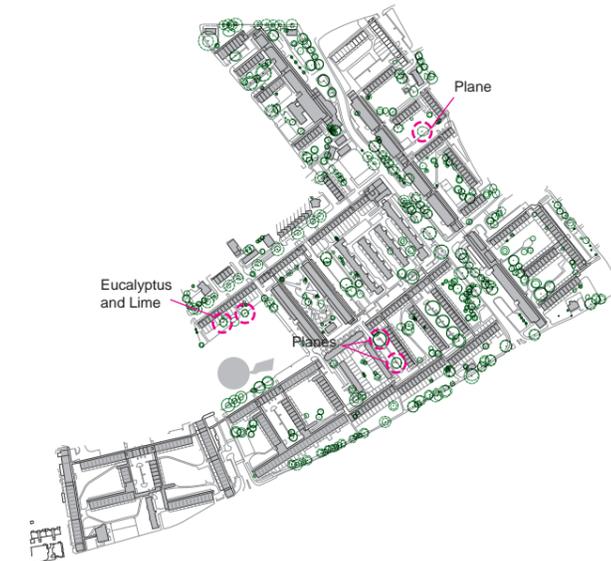
Key Groups



Alignment Albany Road



Key individuals



Alignment Inville Road



All alignments, groups and individuals combined



### First Development Site Design Evolution

There are 118 existing trees within the 4.4 hectares of the FDS; a high density of trees for an inner urban site.

The existing trees within the FDS are located around the site's edges on Westmoreland Street, Portland Street and Albany Road, and within the three courtyards created by the existing buildings.

The trees around the boundary of the site provide benefit and amenity to users of the streets as well as to the residents of the buildings as they contribute to the streetscape and their canopy provides screening value (refer Table 3.2.1). The majority of these trees are also A, B or C category trees and are therefore suitable for retention.

In contrast, the trees within the courtyards only provide amenity to residents of the buildings and have no discernible impact when viewed from the streets around the site. They were planted as part of the development in the 1970s and are located in an informal layout, responding to the informal paths and mounding in the courtyards. The mounding is likely to be fill material and has not provided a suitable soil rooting material for the trees as many are stunted and unhealthy, as can be seen by the large number of U category trees within the courtyards.

The outcome of this review and the development of the layout reveal that the FDS tree retention strategy follows the masterplan principles of retaining the existing trees along 'tree-lined streets' and key 'individual trees'.

### Site Walkarounds

Site walkarounds were undertaken on 27 March, 27 June and 3 July 2014 with Oliver Stutter, Southwark's Tree Officer, Yvonne Lewis, Southwark's Planning and Development Manager, Keiron Hart, Tamla Trees (Arborist), and Julia Finlayson, HTA Design LLP (Landscape Architect), to review and assess the existing tree categories as well as the trees to be retained and removed.

The FDS and Masterplan designs were adjusted following these walkarounds, with additional existing trees identified to be retained on Thurlow Street, Alvey Street, Missenden Park, Bagshot Park and Plots 4a, 8, and 12b. Some trees that had originally been proposed for retention within private gardens and courtyards were discussed, and their removal recommended due to potential on-going management issues for the future residents. A review of existing and proposed underground services has also influenced the existing trees to be retained, particularly within the FDS.

The outcomes of these discussions, as identified in Table 3.2.2, Table 3.2.3 and the accompanying diagrams, is summarised as follows:

- 140 of the 274 non-U category trees in the masterplan site will be retained
- 20 of the 66 non-U category trees on the FDS will be retained.

**Table 3.2.1 Visual Contribution of Existing Trees in FDS**

(Source: Tamla Trees, 2014, FDS Arboricultural Impact Assessment)

Location	Visual Contribution
Northern Boundary	Site edge trees with some canopy screening value and street scene amenity to Westmoreland Road
Eastern Boundary	Site edge boundary trees with screening value and street scene amenity to Portland Street
Southern Boundary	Site edge boundary trees contributing to the street scene of Albany Road

**Masterplan: Tree Retention and Removal Proposal**



**Table 3.2.2 Masterplan: Summary of Trees to be Retained and Removed**

	Category A	Category B	Category C	Category U	Total
Existing Trees Retained	1	117	22	0	140
Existing Trees Removed	0	36	98	103	237
<b>Total</b>	<b>1</b>	<b>153</b>	<b>120</b>	<b>103</b>	<b>377</b>

**FDS: Tree Retention and Removal Proposal**



**Table 3.2.3 FDS: Existing Trees to be Retained and Removed**

	Category A	Category B	Category C	Category U	Total
Existing Trees Retained	1	11	5	0	17
Existing Trees Removed	2	15	32	52	101
<b>Total</b>	<b>3</b>	<b>26</b>	<b>37</b>	<b>52</b>	<b>118</b>

### 3.3 PROTECTION AND ENHANCEMENT OF EXISTING TREES

#### Demolition and Construction Period

Existing trees that are being retained will be protected during site works to meet the BS 5837:2012 requirements. This includes:

- Locating site hoarding so that the physical stems of retained trees is located outside of the hoarding to significantly limit the risk of direct or indirect damage during demolition and construction.
- Compliant fencing will be used around existing trees at the edge of the root protection area to ensure the root protection area is not damaged by construction works.
- If access is required within this area, then the ground will be protected. Construction techniques using geoweb and geo-textile, in accordance with BS recommendations, can also be considered to minimize damage to trees and enable working space for demolition or construction within the root protection area of trees.
- The physical removal and replacement of hard standings under existing trees will follow a detailed Method Statement prepared by a qualified arborist.
- Foundation design will consider the retention of the existing trees. As piling is likely to be used in the new development, sufficient space will be required to allow the positioning and use of the piling rig without risk of direct or indirect damage to existing trees.
- The removal and installation of services within the root protection areas (RPAs) of trees will follow a detailed Method Statement prepared by a qualified arborist. This may include hand digging within the RPAs.

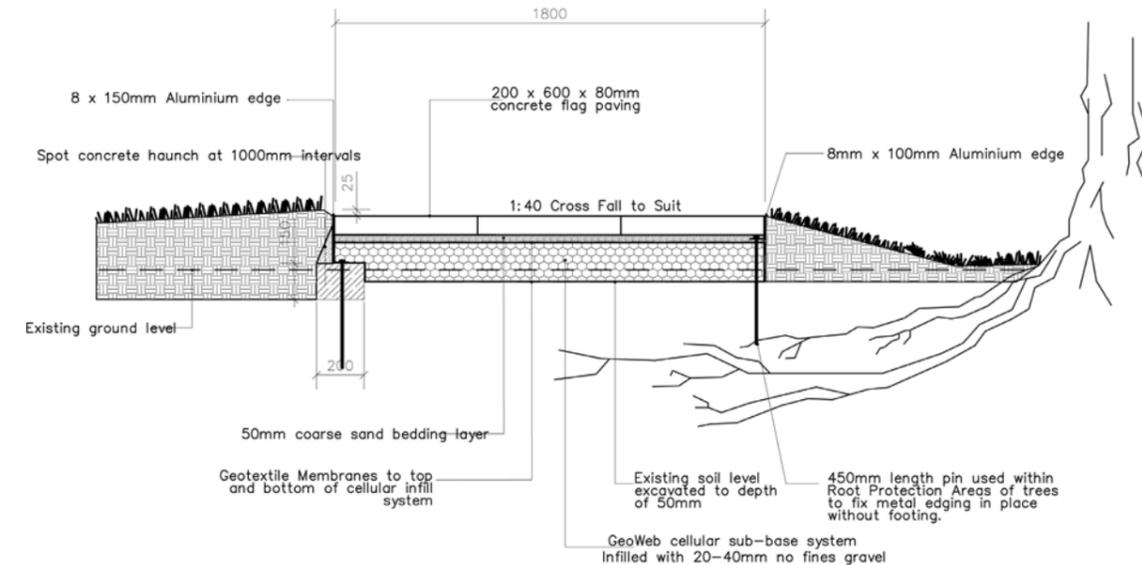
Existing levels within the root protection areas of trees should be retained. If existing levels need to be changed or the type of surface under the tree changed from soft to hard or vice versa, the design is to be co-ordinated with an arborist and suitable root protection measures used. If required, detailed root investigations should be undertaken as part of these works.

As part of the proposed works, the conditions of the existing trees will be reviewed and efforts made to enhance their potential survival through improvements to their soil conditions, relieving ground compaction and providing additional rooting areas more hospitable to root growth.

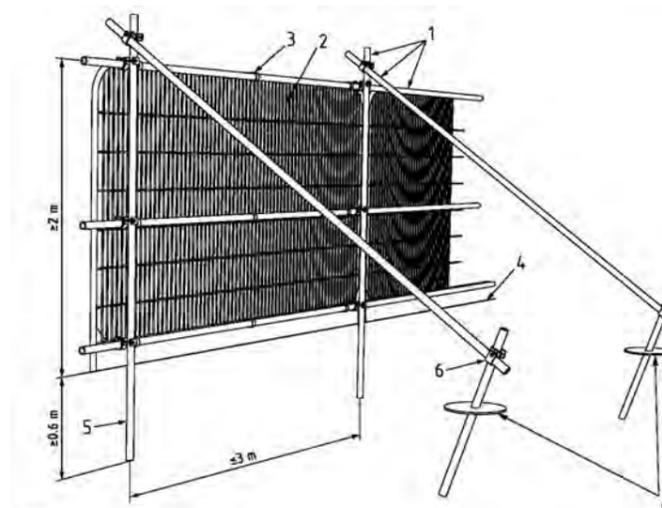
#### Post Construction

A tree management plan will be developed with Southwark Council to ensure the on-going maintenance of existing trees. This may involve regular cyclical pruning.

#### No Dig Path Construction Within RPA

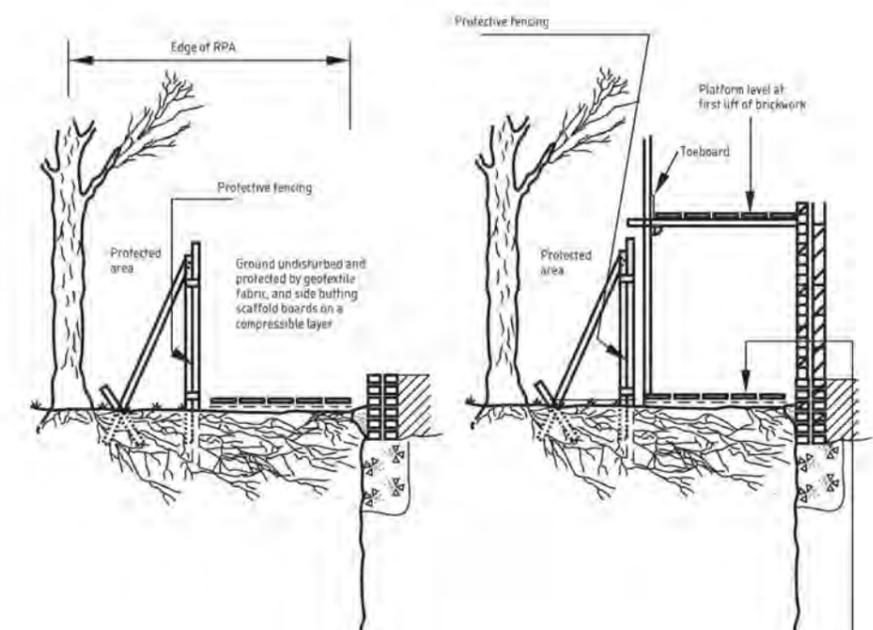


#### Default Specification for Protective Barrier



- Key
- 1 Standard scaffold poles
  - 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
  - 3 Panels secured to uprights and cross-members with wire ties
  - 4 Ground level
  - 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
  - 6 Standard scaffold clamps

#### Scaffolding within RPA



### 3.4 TREE REPLACEMENT STRATEGY

A review of policy documents reveals that there is no clear tree replacement strategy requirement that covers the Aylesbury Estate.

Southwark’s Streetscape Design Manual (SSDM) proposes the most comprehensive suggestion for existing tree removal compensation. Therefore, even though the majority of the existing Aylesbury Estate trees are not within highway land, the tree replacement strategy is based on the SSDM compensation proposal.

The strategy provides compensation for the removal of existing healthy trees on a minimum like-for-like basis for both of the following:

**Stem Diameter** - Except for U category trees, the stem diameter of the existing tree being removed at the time of removal is to be replaced with new tree stem girth.

**Projected Canopy Area** – Except for U category trees, the lost canopy area of the existing tree being removed is to be replaced with the equivalent new tree canopy. The canopies of both the existing and new trees are to be projected to a date 15 years after planting out of the new.

Tamla Trees provided an estimation of the projected tree canopies for the new and existing trees. The methodology used to calculate the projected canopy is as follows:

#### Existing Trees

- Remove all U category trees
- Utilise manifold software to ascertain the remaining tree canopy areas in square metres. This ensures overlapping canopies are accounted for.
- Export data to excel stipulating fields of Area, Tno & Species, Outcome (retained or removed) and BS Category
- Data sort on outcome
- Use excel to generate values

#### New Planting

- Use the canopy spread to generate canopy area in square metres for the proposed tree species.
- Use experience of tree growth to give an estimation of canopy spread (and thus area) in 15 years
- multiply the relevant figures by the planting numbers for each species.

As the tree species have not been determined for the masterplan, an average canopy area 5.8m<sup>2</sup> was used for the new trees planting. This was then projected to 16.5m<sup>2</sup> in 15 years time.

Due to the phasing of the masterplan, the proposed planting dates that have been used to calculate the projected canopy are identified in Table 3.4.1.

**Table 3.4.1 Projected Canopy Planting Dates**

	Planting Date	Number of years the existing and new tree canopy projected
First Development Site	2017	18 years
Phase Two	2020	21 years
Phase Three	2024	25 years
Phase Four	2027	28 years

#### Masterplan Tree Replacement Strategy

528 new trees will be planted within the Masterplan area, which, when including the 140 existing trees to be retained, is an additional 291 trees to the number of existing trees currently found on the site. These will be planted within the streets, parks and squares.

Post development, there will be more than 668 trees within the Masterplan site as additional trees will be planted within communal courtyards that have not been included within these calculations.

The current proposed tree planting in the Masterplan will provide an increase in the projected canopy coverage and a slight decrease in the quantity of tree stem diameter, as identified in Table 3.4.2.

The proposed tree planting within the Masterplan significantly increases the number of trees on the site which will provide an adequate replacement of the projected canopy within 15 years time of installation. Also, the projected canopy and stem girth do not include communal courtyard and private realm tree planting. This suggests that off-site compensation for the minimal loss of stem girth is not required.

**Table 3.4.2 Tree Removal Compensation: Masterplan Projected Canopy and Stem Girth**

	Quantity	15 year Projected Canopy Cover from time of planting (area in m <sup>2</sup> )	Stem Girth/dia (cm)
<b>Existing Trees Pre-development</b>	<b>377</b>	-	-
Existing Trees Pre-development (excluding U category trees)	274	22,015	37,421
Existing Trees Retained	140	14,452	24,209
Proposed Trees	528	8,712	13,200 (based on planting size of 20-25cm girth)
<b>Total Post Development Trees</b>	<b>668</b>	<b>23,164</b>	<b>37,409</b>
Difference between Pre and Post Development	+291	-	-
Difference between Pre and Post Development (excluding U category trees)	+394	1,149	-12
Potential Off-site Compensation	0	0	min. 12

### First Development Site Tree Replacement Strategy

215 new trees will be planted within the FDS, which, when including the 17 existing trees to be retained, is an additional 114 trees to the number of existing trees currently found on the site. Post development, there will be 232 trees within the FDS. These will be planted within the street, parks, squares and communal courtyards.

The current proposal for species and stock replacement tree planting on the FDS will provide a significant increase in the quantity of tree stem diameter but falls short of the required projected canopy coverage, as identified in Table 3.4.3.

Due to the physical constraints of the proposed site layout and the location of retained and proposed underground services, no further tree planting is possible in the FDS to cover the trees being removed under the tree replacement strategy.

The proposed tree planting within the FDS significantly increases the number of trees on the site which equates to a proposed stem girth provision far exceeding the existing, suggesting that off-site compensation for the loss of projected tree canopy should not be required.

**Table 3.4.3 Tree Removal Compensation: First Development Site Projected Canopy and Stem Girth**

	Quantity	15 year Projected Canopy Cover from time of planting (area in m2)	Stem Girth/dia (cm)
<b>Existing Trees Pre-development</b>	<b>118</b>	-	-
Existing Trees Pre-development (excluding U category trees)	66	5,974	7,464
Existing Trees Retained	17	2,431	2,323
Proposed Trees	215	3,274	6,397
<b>Total Post Development Trees</b>	<b>232</b>	<b>5,705</b>	<b>8,720</b>
Difference between Pre and Post Development	+114	-	-
Difference between Pre and Post Development (excluding U category trees)	+166	(269)	+1,256
Potential Off-site Compensation	0	269	0

### 3.5 PUBLIC REALM TREE PLANTING STRATEGY

An urban forest character is the aspiration of the Aylesbury Tree Strategy. To complement the existing retained trees, new trees will be incorporated within the streets, parks and squares to create a strong green structure across the development.

Creating attractive, legible and safe routes for pedestrians and cyclists that integrate into the surrounding streets is one of the key design principles of the Masterplan. All streets have been designed to reflect the character of the surrounding 'traditional street' typologies.

Neighbourhoods around which the residents will identify have been created through the establishment of different character areas defined by the design of streets, parks and squares and the building typologies. Appealing, safe streets that are pedestrian and cycle prioritised and planted with regular street trees will link these neighbourhoods, encouraging movement within the area. In particular, east-west Community Spines and north-south Green Links will connect open spaces to destination locations within and beyond the development to create accessible, green and attractive places for residents and visitors.

The street tree planting will reinforce the street hierarchy, emphasise the Green Links and Community Spine, and also provide continuity across the different character areas of the development. As well as creating attractive tree lined streets, the trees will provide shade, colour, seasonal variation and improve ecological value and biodiversity across the development. In summary, new trees will be planted in the following locations:

- Street trees will be planted in build outs between the parking or within bioretention areas on the Green Links. Street trees are typically provided every three parking bays for parallel parking and every five parking bays for perpendicular parking zones.
- Trees will be planted within the open spaces to reinforce the desired character of the park or square.

#### Proposed Tree Species

The planting of new trees within the development will use the Tree and Woodland Framework for London 'Right Place - Right Tree' checklist to ensure new planting is appropriately located and designed. The trees will be selected to:

- create interest and vary with the seasons
- be appropriate to the site conditions
- be low maintenance, and
- enhance the ecological and biodiversity value of the site

To reinforce the street hierarchy and ensure the trees selected are appropriate to their location, the masterplan has been divided into tree typologies and the characteristics and effects of the trees within each typology identified, as described in Table 3.5.1. Generally, the tree species chosen for the public realm have been taken from Southwark Council's 'SSDM-SER.Tree Palette' which provides a list of tree species acceptable to be planted in adopted streets and open space.

#### Masterplan Design Concept: Open Space, Green Links and Community Spine Network



Table 3.5.1 Tree Typologies

Tree Typology	Tree Characteristics / Effects	Planting Characteristics	Suggested species - Common Name
<b>Primary Trees</b>	Large scale trees with long life expectancy	Planting to complement existing trees. Limited use of species. Spacing to follow character of existing trees to achieve a regularity of treatment. Regular spacing where achievable.	Platinus x hispanica - London Plane Platinus orientalis - Oriental Plane Tilia cordata 'Greenspire' - Small Leaved Lime Quercus robur fastigiata 'Koster' - Cypress Oak Fagus sylvatica 'Asplenifolia' - Fern-Leaved Beech Metasequoia glyptostroboides - Dawn Redwood Liquidambar styraciflua - Sweet Gum
<b>Secondary Trees</b>	Medium to tall trees with formal habit	Medium to tall trees with formal habit. Regular spacing where achievable.	Fagus sylvatica 'Dawyck' - Fastigate Beech Acer campestre 'Elsrijk' / 'Streetwise' - Field Maple Fagus sylvatica 'Dawyck' - Fastigate Beech Gleditsia triacanthus - Honey Locust Prunus avium 'Plena' - Wild Cherry
<b>Tertiary Streets</b>	Small scale trees selected for seasonal interest.	Mixed species.	Prunus serrulata - 'Kanzan' - Japanese Flowering Cherry Betula pendula - Silver Birch Amelanchier arborea 'Robin Hill' - June Berry
<b>Bioretention Areas</b>	Water edge trees within bioretention areas.		Betula pedula - Silver Birch Alnus incana - Grey Alder Amelanchier lamarkii - Snowy Mespilus Pinus nigra 'Maritima' - Black Pine Prunus 'Accolade' - Cherry

Tree Typology	Tree Characteristics / Effects	Planting Characteristics	Suggested species - Common Name
<b>Park Trees</b>	Large scale trees with long life expectancy as feature trees.  Medium to small scale trees with varied habit for structural planting. Potential for fruiting characteristics to complement Community Gardens	Planting to complement existing trees where applicable.  Mixed species. Regular and informal spacing.	<p><b>Large Scale Trees</b></p> <p>Platinus x hispanica - London Plane Quercus robur- Common Oak Fagus sylvatica 'Purpurea' - Copper Beech Liriodendron tulipifera - Tulip Tree Metasequoia glyptostroboides - Dawn Redwood</p> <p>Medium to Small Scale</p> <p>Amelanchier lamarkii - Snowy Mespilus Betula utilis 'Jacquemontii' - Himalayan Carpinus betulus - Hornbeam Cercidiphyllum japonicum - Katsura Tree Gleditsia triacanthos - Honey Locust Parrotia persica - Persian Ironwood Prunus avium 'Plena' - Wild Cherry Robinia pseudoacacia 'Frisia' - False Locust</p> <p><b>Orchard Trees</b></p> <p>Prunus sp.- Cherry Pyrus sp. - Pear Malus sp. - Apple</p>

Examples of Proposed Trees



Liquidambar styraciflua - Sweet Gum



Malus sp. Apple



Gleditsia triacanthus - Honey Locust



Platinus x hispanica - London Plane



Betula utilis 'jacquemontii' - Himalayan Birch



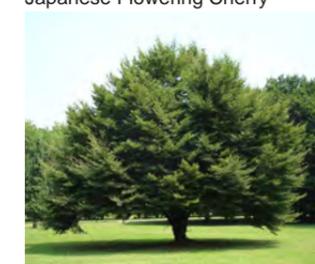
Liquidambar styraciflua - Sweet Gum



Prunus serrulata 'Kanzan' Japanese Flowering Cherry



Prunus subhirtella - Winter Flowering Cherry



Fagus sylvatica 'Dawyck' - Fastigate Beech



Robinia pseudoacacia 'Frisia' - False Locust

### Masterplan Public Realm Tree Planting

It is proposed to plant 528 new trees within the public realm of the Masterplan site.

#### Masterplan Public Realm Tree Planting Strategy



**Key**  
 ■ Primary Trees  
 ■ Secondary Trees  
 ■ Tertiary Trees  
 ■ Open Space Trees

#### Masterplan: Public Realm Tree Planting Locations



**Key**  
 ● Existing Retained Tree  
 ● Proposed Primary Tree  
 ● Proposed Secondary Tree  
 ● Proposed Tertiary Tree  
 ● Proposed Open Space Tree

### FDS Public Realm Tree Planting

It is proposed to plant 215 new trees within the public realm and private and communal courtyards of the FDS. Trees have been proposed within the public realm to create the desired urban forest character whilst following the design principles identified within the Masterplan, as described in Table 3.5.1.

Detailed coordination of the proposed tree planting and the retained and proposed services and drainage networks was undertaken during the development of the FDS design. To maximize the number of street trees, a review of the viability of moving existing services was undertaken to accommodate new trees. Areas where this has not been possible include locations of major strategic drainage infrastructure, Extra High Voltage electricity cables and retained fibre optic cable runs. The design of the proposed services and drainage networks has also considered the proposed tree planting.

### FDS Public Realm Tree Planting Strategy



### FDS Public Realm Tree Planting Schedule



Fagus sylvatica 'Dawyck' - Fastigate Beech

	Common Name	Species	Girth Size at Supply (cm)	Height at Supply (cm)	Form	Root Form	Ultimate Mature Height (m)	Total Number
●	Norway Maple	<i>Acer platanoides</i> 'Princeton Gold'	30-35	550-600	SM	RB	10-12	5
●	Grey Alder *	<i>Alnus incana</i>	16-18	450-500	EHS	RB	15-20	19
●	Fastigate Beech * **	<i>Fagus sylvatica</i> 'Dawyck'	20-25	500-550	SM	RB	15-20	14
●	Fern Leaved Beech * **	<i>Fagus sylvatica</i> 'Asplenifolia'	30-35	550-600	SM	RB	20-25	7
●	Silver Birch * **	<i>Betula pendula</i>	20-25	500-550	SM	RB	12-15	21
●	Sweet Gum	<i>Liquidambar styraciflua</i>	40-45	700-750	SM	RB	20-25	6
●	Honey Locust	<i>Gleditsia triacanthos</i>	20-25	500-550	SM	RB	15-20	17
●	London Plane *	<i>Platanus x hispanica</i>	40-45	700-750	SM	RB	20-25	13
●	Japanese Flowering Cherry	<i>Prunus serrulata</i> 'Kanzan'	30-35	550-600	SM	RB	8-10	9
●	Small Leaved Lime * **	<i>Tilia cordata</i> 'Green Spire'	40-45	700-750	SM	RB	15-20	12
●	Black Locust	<i>Robinia pseudoacacia</i> 'Frisia'	40-45	700-750	SM	RB	15-20	4

\* Species of high ecological value

\*\* Native Species

### FDS Private and Communal Areas' Tree Planting

Tree planting within the private and communal areas within the FDS site have been chosen to enliven and enhance these spaces whilst maintaining their usability. Species with lighter canopies and lower height have generally been chosen to avoid creating too much shade during the summer months and blocking light entering dwellings. Trees with architectural forms and multi-stemmed specimens will be interspersed throughout the communal gardens to improve the visual amenity and outlook for surrounding units.

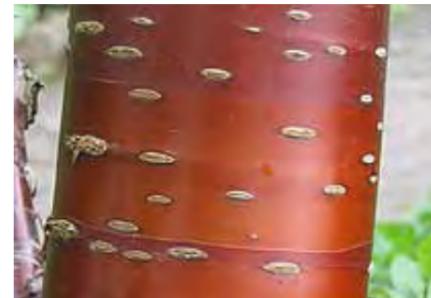
### FDS Private Realm Tree Planting Strategy



### FDS Private Realm Tree Planting Schedule



*Gleditsia triacanthos* - Honey Locust



*Prunus serrulata* 'Kanzan' - Japanese Flowering Cherry



*Prunus* 'Accolade' - Ornamental Cherry

	Common Name	Species	Girth Size at Supply (cm)	Height at Supply (cm)	Form	Root Form	Ultimate Mature Height (m)	Total Number
	Silver Birch * **	<i>Betula pendula</i> 'Dalecarlica'	30-35	550-600	SM	RB	12-15	1
	Himalayan Birch	<i>Betula utilis</i> 'jacquemontii'	30-35	550-600	SM	RB	15-20	13
	Snowy Mespilus *	<i>Amelanchier lamarkii</i>	-	300-350	Multi-Stem	RB	8-10	22
	Magnolia *	<i>Magnolia stellata</i>	-	300-350	Multi-Stem	RB	8-10	18
	Honey Locust	<i>Gleditsia triacanthos</i>	40-45	700-750	SM	RB	15-20	2
	Hankerchief Tree	<i>Davidia involucreata</i>	-	400-450	Multi-Stem	RB	12-15	12
	Maidenhair Tree	<i>Ginkgo biloba</i> 'Princeton Sentry'	40-45	700-750	SM	RB	15-20	10
	Pear * **	<i>Pyrus spp.</i>	16-18	450-500	EHS	RB	15-20	5
	Apple * **	<i>Malus spp.</i>	16-18	450-500	EHS	RB	15-20	6
	Cherry *	<i>Prunus spp.</i>	16-18	450-500	EHS	RB	15-20	4

\* Species of high ecological value

\*\* Native Species

### 3.6 NEW TREE PLANTING AND ESTABLISHMENT

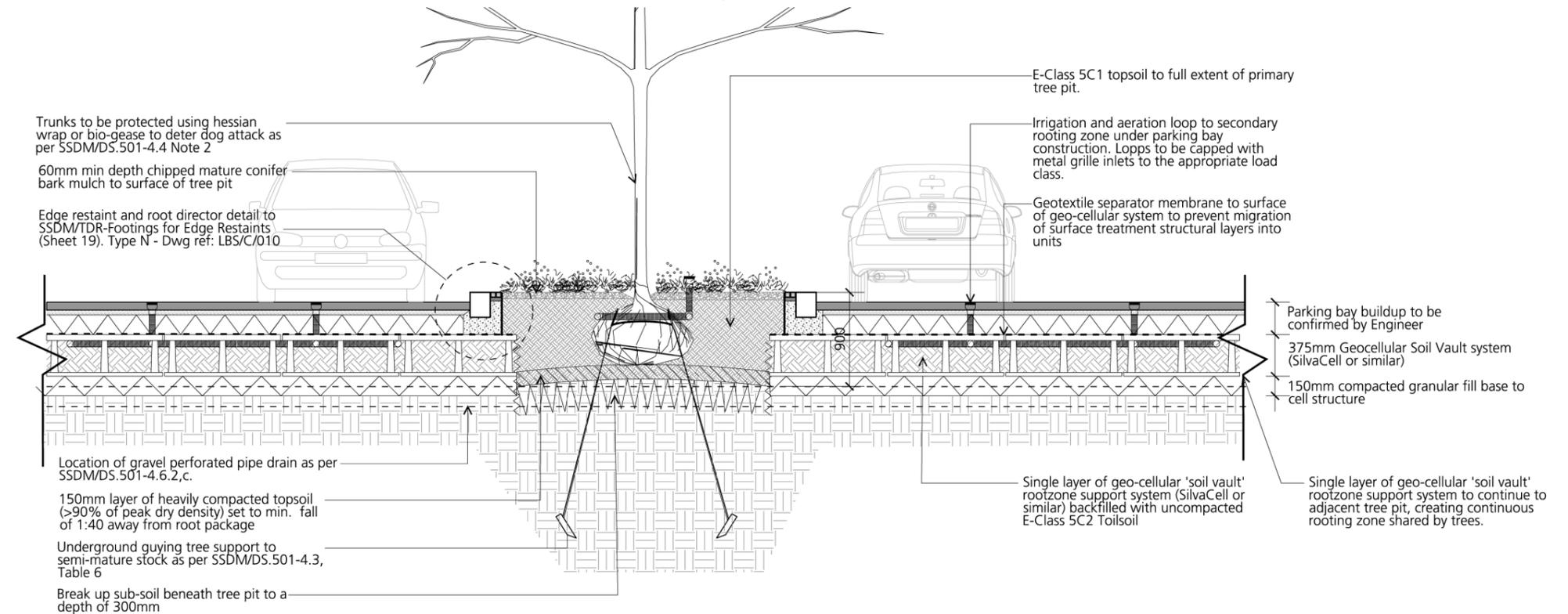
Providing the right tree in the right conditions to support new tree planting is imperative to create successful, tree-lined streets. The tree design within the Masterplan and FDS will maximise the likelihood of successful tree establishment by prioritising what is important – quality stock, adequate rooting zone volumes and composition, and positive drainage of tree pits.

In principle, tree pit details and surfacing will follow Southwark Council's guidance. Where possible, tree pits will be extended below ground to maximise the root zone, potentially connecting the trees, using a structural soil support system such as tree sand or 'Geo-cellular Soil Vault' systems.

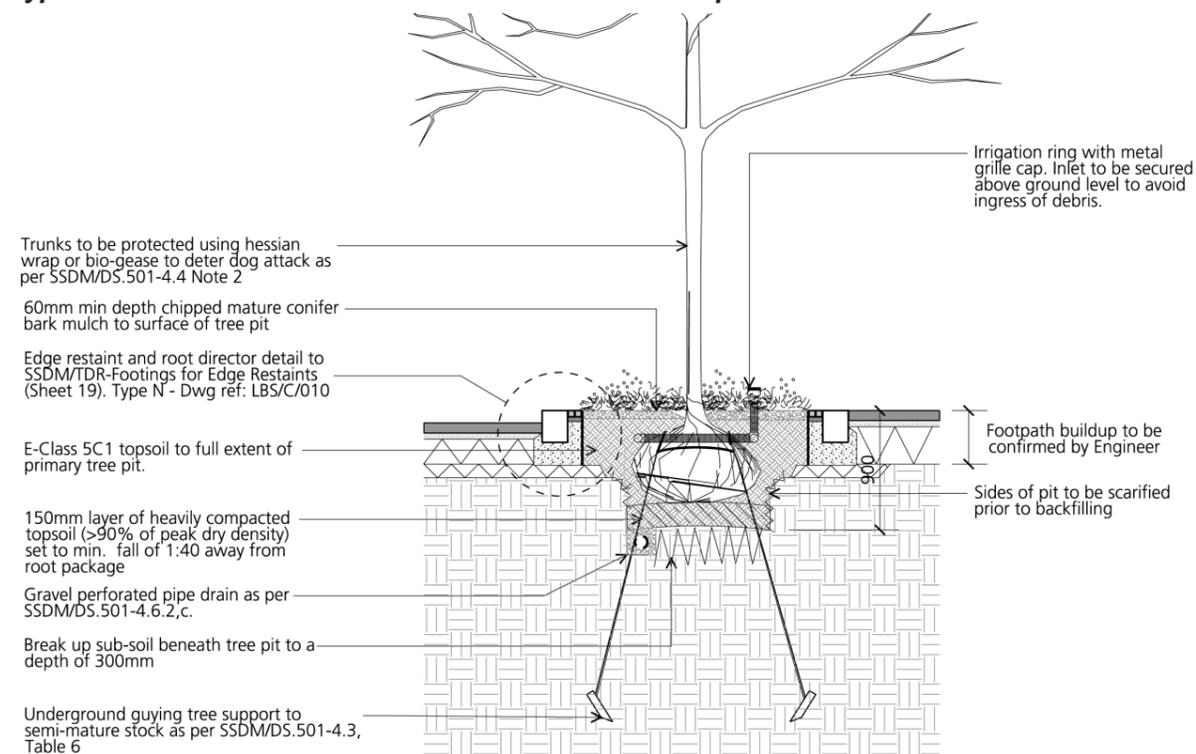
Semi-mature trees will be planted in streets and open spaces (minimum 20-25cm girth), as suggested by the AAAP, to provide impact upon installation and to reduce potential damage from vandalism. As this size is larger than the SSDM's suggested heavy standard trees (12-14cm girth), discussions with Southwark Council's public realm and tree officers will be required to agree the larger size.

Southwark Council's guidelines suggest the use of a simple wire-mesh guard, metal tree guard or bio grease to protect the trees from a combination of vehicle strike and dog attack. Whilst it is recognised that these issues are a concern, further discussions are to be undertaken with Southwark Council before the installation of these elements due to their potential on-going maintenance requirement. The design of the tree pit will be used to reduce the potential of vehicle strike by using wide tree pits and potentially double height kerbs. A review of recent tree planting around each development site should be undertaken in consultation with Southwark Council's tree officers to ascertain if dog attack remains a concern prior to the installation of tree guards.

**Typical Tree Pit Detail based on the SSDM Tree Pit Requirements - Long Section**



**Typical Tree Pit Detail based on the SSDM Tree Pit Requirements - Short Section**



## 4.0 CONCLUSION

An urban forest character will be created in the new development. The retention of existing trees and the large number of new tree planting within the streets and open spaces will ensure that every property will look out onto a tree. The trees will soften the built form, provide seasonal character and introduce habitat into streetscapes to extend the park character of Burgess Park into the area.

The design process reviewed the existing trees within the site to determine their health and amenity to understand their potential value within the new development. Site walkarounds with Southwark Council confirmed the number of existing trees to be retained based on their future health and the new development layout.

There are 377 existing trees in the Masterplan site area and 118 existing trees on the FDS. Of these, 140 of the 274 non-U category trees in the masterplan site will be retained, and 17 of the 66 non-U category trees in the FDS retained.

528 new trees will be planted within the Masterplan area, which, when including the 140 existing trees to be retained, is an additional 291 trees to the number of existing trees currently found on the site. These will be planted within the streets, parks and squares. Additional trees will also be planted within the communal courtyards and back gardens, so that, post development, there will be a minimum of 668 trees within the Masterplan area.

215 new trees will be planted within the FDS, which, when including the 17 existing trees to be retained, is an additional 114 trees to the number of existing trees currently found on the site. Post development, there will be 232 trees within the FDS. These will be planted within the street, parks, squares and communal courtyards.

The proposed tree planting within the Masterplan and FDS significantly increases the number of trees in the area. Across the FDS and Masterplan proposals, the increased number of trees will create an urban forest character in this part of South London.

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