

GLA – Green City Assessing London’s Tree Planting Potential on Local Authority Green Spaces

Prepared by:

The Mayhew Consultancy Ltd

30 Fair Lane
Robertsbridge
East Sussex
TN32 5AS

Tel: 07711 673138

www.cmarb.co.uk

AR/41515

August 2017

Contents

Section	Title	Page
1.0	Executive Summary	3
2.0	Project overview	6
3.0	Project aim	7
4.0	Project scope	8
5.0	Project method	9
6.0	Phase 1 - Questionnaire	10
7.0	Phase 1 - Overall response rate	10
8.0	Phase 1 - Responses to individual questions	10
9.0	Phase 1 - Estimates of planting potential	12
10.0	Phase 1 – Discussion / Conclusions	15
11.0	Phase 2 - Background	16
12.0	Phase 2 Case Study – London Borough of Ealing	16
13.0	Phase 2 Case Study – London Borough of Bromley	22
14.0	Phase 2 Case Study – London Borough of Barnet	34
15.0	Phase 2 - Discussion / Conclusions	39
16.0	Phase 3 - A methodology for tree planting potential	44
17.0	Project conclusions	47
Appendix A-1	Questionnaire feedback – Inner boroughs	
Appendix A-2	Questionnaire feedback – Outer boroughs	
Appendix A-3	Questionnaire feedback – Other organisations	
Appendix B-1	Individual potential tree planting figures – Inner boroughs	
Appendix B-2	Individual potential tree planting figures – Outer boroughs	
Appendix B-3	Individual potential tree planting figures – Other organisations	

1.0 Executive Summary

1.1 Introduction

This report was commissioned by the Greater London Authority (GLA) to determine the potential for local authority parks and green spaces to accommodate significant areas of tree-planting.

The report provides:

- an assessment of the level of knowledge within London boroughs of the amount of public land available for tree and woodland planting in London;
- complete case studies to provide more detailed assessments of potential planting sites¹; and
- an outline of a methodology to identify more systematically the potential land available for tree planting

1.2 Context

Despite being one of the largest cities in Europe, London is recognised as being a relatively green city with many green spaces and an extensive canopy of trees in woodlands, parks, gardens, and streets.

London’s tree cover is currently around 20 per cent.² The London i-Tree Eco study identified and quantified the many benefits this provides, including: lessening the impacts of climate change and tackling air quality, in addition to creating greener and more pleasant neighbourhoods and providing habitat for wildlife³. This points to the need for London’s tree cover to be maintained and increased.

Increasing tree cover in London from 20 per cent to 25 per cent, for example, would require planting on approximately 8,000 hectares of land. This would include, amongst other things, the planting of many more streets trees and encouraging Londoners to plant trees in gardens. However, the scale of planting required in order to increase tree cover significantly can be achieved only by extensive planting in local authority owned parks and green spaces, and on land in London’s Green Belt, much of which is privately owned.

1.3 The project

1.3.1 Phase 1 - Survey of London boroughs

Phase 1 consisted of sending surveys out to all London boroughs to ask whether they had identified land for tree and/or woodland planting, and if so how many trees they estimated could be planted. The responses are summarised in the body of the report, with the detail in Appendix A.

¹ The report also recognises that there are a number of physical, environmental and social factors which constrain the planting of trees and woodlands. Far more detailed work, including site surveys, planting plans, resident consultation and project planning and budgeting, would need to be carried out before any tree planting took place on the sites mentioned.

² https://www.london.gov.uk/sites/default/files/measuring_tree_canopy_cover_2015.pdf

³ <https://www.forestry.gov.uk/london-itree>

Most London boroughs responded. However, only half were able to provide an estimate of tree planting potential within the sites that they own and manage. By extrapolating the figures from the boroughs which were able to provide data a total of **1,355ha** of land was estimated as having tree planting potential. This would represent **15% of the area required** to increase London’s canopy cover to 25%.

Phase 1 highlighted the inadequacy and limitations of the current information with regards to the identification of potentially suitable land for tree planting.

1.3.2 **Phase 2 – Further assessment of sites in selected London boroughs**

Three boroughs - Ealing, Bromley and Barnet - were investigated in more detail. The aim was to test the assumptions made by borough officers when responding to the survey and to explore whether a more accurate estimate of the quantity of land available for tree planting could be achieved by a more focussed interrogation.

As a result:

- **15 hectares** of potential tree planting land was identified in Ealing by examining just four of the 147 borough owned sites in more detail;
- **24 hectares** of potential planting space was identified within just ten sites in Bromley assessed;
- **28 hectares** of potential planting space was identified within four sites in Barnet.

A more detailed assessment of selected sites in these three boroughs identified **57 hectares** of potential new tree planting. This can be compared to the 13 hectares (solely within Ealing) initially identified within these three boroughs’ original questionnaire returns.

This clearly demonstrates that the amount of land identified as having the potential to be planted with trees increases if a systematic examination of sites is undertaken and that a methodology for systematic assessment is required.

1.3.3 **Phase 3 – developing a systematic assessment methodology for identification of sites with potential for tree planting**

The exercise with the three boroughs showed that once sites were studied in a more detailed way, additional planting opportunities often became apparent as a result and the opportunities for **maximising the full potential** of sites can be considered and assessed, rather than an approach which starts with the fragmented infill of ‘surplus’ land. Sites can also then be considered as part of a wider network of green infrastructure, and be planted and improved as part of a longer-term programme of greening activity, rather than as isolated one-off projects.

Consequently, an outline of a practical and replicable methodology for the assessment and mapping of potential tree planting sites on local authority parks and green spaces own has been developed and included as a flow chart within this section.

1.4 **Conclusions**

- 1.4.1 Most London boroughs do not currently possess accurate information with regards to the tree planting potential of the land they own or manage. A lack of resources, mainly with regards to officer time, was cited as the main obstacle to the collection of planting potential information.

- 1.4.2 To significantly increase tree planting in London good baseline information is required with regards to land owned and managed by London boroughs that has the potential to be planted with trees. This needs to be collected and collated by the GLA in collaboration with the boroughs.

- 1.4.3 The report shows that there is significant planting potential on London borough green space sites. This can be revealed by a systematic assessment of sites using the methodology outlined in this report.

- 1.4.4 The report also recommends that the GLA could provide an on-line mapping facility to showcase suitable sites, and develop indicative planting costs to allow future projects to be scoped and planned.

2.0 Project Overview

- 2.1 London, in common with many other cities, aims to increase its canopy cover to provide a wide range of benefits, such as those identified and quantified in the recently published ‘Valuing London’s Urban Forest’.⁴
- 2.2 The previous Mayor’s Climate Change Adaptation Strategy (2011) included an objective to increase the tree canopy within the capital from 20% to 25% of total land area. Tree cover and other targets will be subject to review in the forthcoming consultation on the new draft London Environment Strategy. The current Mayor Sadiq Khan also committed in his manifesto to embark on a major tree planting programme.
- 2.3 The total land area of London is 1600km² of which 312km² is currently under tree cover, therefore in order to achieve the canopy target, as a very rough guide an additional area of approximately 8,800ha² (88km²) would need to be planted with trees. The canopy cover of trees planted will vary depending on a number of factors including the species and age of trees planted, the location and how they are maintained. Increasing London’s canopy cover will require further street tree planting, planting in gardens and other private green spaces, and allowing natural regeneration in areas adjacent to existing woodlands. But, clearly, planting on public land (especially local authority owned parks and green spaces) will be an important part of the strategy. This might comprise planting extensive new woodlands in suitable locations, but is more likely to entail planting copses, clumps, and individual trees across a wide range of amenity green spaces.
- 2.4 The exact areas and locations of the additional land that would be required have not been determined; although tree planting on land in public ownership (i.e. green spaces owned by the public sector - primarily the London boroughs) would be one obvious way of increasing canopy cover in London. However, there is no current London-wide data which can be used to estimate the extent to which this land-holding could contribute to meeting these targets.
- 2.5 The rationale for this canopy cover increase relates to a range of potential benefits, including: buffering the impacts of climate change, enhancing biodiversity, and maintaining London’s reputation as one of the greenest big cities.
- 2.6 The Mayor’s contribution to meeting the canopy cover target is through:
- Ensuring the London Plan provides a policy framework which encourages the protection and maintenance of trees and the planting of new trees and woodlands.
 - Supporting a partnership that encourages and co-ordinates tree planting and woodland management projects.

⁴ See Valuing London’s Urban Forest [http://www.forestry.gov.uk/pdf/LONDONI-TREEECOREPORT151202.pdf/\\$FILE/LONDONI-TREEECOREPORT151202.pdf](http://www.forestry.gov.uk/pdf/LONDONI-TREEECOREPORT151202.pdf/$FILE/LONDONI-TREEECOREPORT151202.pdf)

- Providing resources for tree-planting.
- Encouraging Londoners to protect and plant trees in private gardens and green spaces.

2.7 The following mechanisms have been put in place:

- London Plan policies 5.10: Urban Greening and 7.21: Trees & Woodlands.⁵
- The London Tree Partnership comprising the key agencies and NGO’s involved in tree and woodland initiatives in London.
- Tree Planting Grants available for 2016-7 and further details of the Mayor’s tree programme for 2017-2020 to be announced in summer 2017.

2.8 The Greater London Authority (GLA) does not, however, own or manage land on which to plant trees to help meet canopy cover targets for London. Consequently, as part of building the evidence base for the forthcoming London Environment Strategy, the GLA aims to gain a more detailed understanding of the scope for the canopy cover target to be met through supporting tree planting and woodland creation programmes on green space owned or managed by local authorities.

2.9 Achieving an increase in canopy cover will require a mix of policy and programme interventions, including an increase in the current rate of tree-planting on suitable land. The first task in achieving this is to assess the tree planting potential on green spaces and amenity land owned and managed by London’s local authorities and their partners.

3.0 Project aim

3.1 The aim of the project is to:

1. Provide an assessment of the current levels of knowledge within London boroughs as to the available land for tree and woodland planting in London.
2. Develop case studies of three boroughs in order to explore the range of sites potentially available.
3. Draw conclusions and provide recommendations with regard to establishing processes by which potentially available land could be systematically identified.

⁵ See: The London Plan <https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan>

4.0 Project scope

- 4.1 The project’s output will be the provision of a report which aims to identify the amount of local authority owned green space available for tree and woodland planting in London, and to suggest a template method by which current gaps in that knowledge could potentially be filled.
- 4.2 The focus of the project is on the potential for tree planting in ‘soft’ spaces, with no requirement to assess the potential for tree planting in streets or other parts of the hard-surfaced public realm. The primary objective is to identify the potential for planting of woodlands, groups of trees, or other features such as avenues that will create extensive areas of canopy cover over time.
- 4.3 Greenspace Information for Greater London (GiGL) has undertaken a habitat suitability mapping exercise which identifies where habitats (including woodland) could be expanded.⁶ However, only ecological criteria were taken into account in defining these areas. For the purposes of estimating the potential for tree and woodland planting in London, there is a need to understand the amount of public green space that could be planted that is not constrained by insurmountable physical, environmental or social factors, in addition to the ecological factors identified by GiGL.
- 4.4 Funding at sufficient levels to cover both initial planting and post-planting aftercare is clearly one of the major barriers to increasing tree-planting, and - as yet - no significant funding programme has been identified to accelerate the rate of tree-planting in London. However, identifying the scope for tree-planting on land owned and managed by local authorities can help build the business case for future funding programmes.
- 4.5 There is a recognition that there are a number of physical, environmental and social factors - not least the actual percentage of land in public ownership - which constrain the planting of trees and woodlands, irrespective of whether financial resources are available.
- 4.6 There is also a recognition that in order to achieve the long-term increase in canopy cover there will also need to be programmes designed to encourage and incentivise private land-owners (including home-owners) to plant trees, but assessing the potential for tree-planting on such land is outside the scope of this particular exercise (except where local authorities are working in partnership with land-owners to plant trees on private land).

⁶ See BAP Habitat Suitability Data <http://www.gigl.org.uk/our-data-holdings/habitat-data/bap-habitat-suitability-data/>

5.0 Project method

5.1 The project was broken down into three phases:

Phase 1 is an initial scoping exercise to determine the extent to which local authorities have existing information assessing the potential for tree-planting on green spaces and amenity land they own and/or manage. The aim of this exercise is to be able to estimate the area of public sector land potentially available for tree planting throughout London.

Phase 2 provides a more detailed assessment of tree-planting potential within three selected boroughs.

Phase 3 considers how a practical and replicable methodology for the assessment and mapping of potential tree planting sites on local authority owned land might be formulated through the development of a strategic methodology for tree planting potential across London.

6.0 Phase 1 - Questionnaire

- 6.1 For Phase 1 key officers with regards to tree matters in individual boroughs were identified from both the GLA and the London Tree Officers Association’s contacts. The officers were emailed and invited to complete a questionnaire, thus providing information regarding the potential for tree-planting on public land within their borough.
- 6.2 In addition to the thirty three individual boroughs, responses were also invited from The Lee Valley Regional Park Authority, The Thames Chase Trust and The Royal Parks Agency, as bodies potentially responsible for the planting of large numbers of trees on land in public ownership.

7.0 Phase 1 - Overall response rate

- 7.1 Of the thirty three boroughs and three organisations contacted thirty one returned completed questionnaires - giving a total response rate of 86%.
- 7.2 Eleven of the thirteen inner London boroughs returned completed questionnaires - giving a response rate 84.6%.
- 7.3 Seventeen of the twenty outer London boroughs returned completed questionnaires - giving a response rate 85%.
- 7.4 All three of the other organisations invited to respond submitted completed questionnaires.

8.0 Phase 1 - Responses to individual questions

A detailed list of respondents, the figures they provided and any qualifying comments they made is attached to this report at Appendices A1 - A3. A summary of those responses is given below.

- 8.1 **Question 1:** Has your borough or organisation undertaken any level of survey or audit of land within its ownership that could be potentially used for tree planting – excluding street trees?
- 8.1.1 Of the twenty eight boroughs which responded:
- Twelve (43%) said they had completed such a survey.
 - Fourteen (50%) had not undertaken such a survey.
 - Two (7%) had partially complete information.

- 8.1.2 None of the other organisations approached had undertaken such a survey.
- 8.2 **Question 2:** If you do not have this information, does your borough or organisation have any existing programme or plan to gather such information within the foreseeable future?
- 8.2.1 None of the boroughs who did not have the information indicated any intention to collect it in the foreseeable future.
- 8.2.2 The Thames Chase Trust indicated an intention as part of the England Community Forest programme.
- 8.3 **Question 3:** If you wish to collect such information but are unable to do so, what are the main barriers preventing you from doing so?
- 8.3.1 From the twenty responses received to this question the following potential barriers were identified:
- Thirteen (65%) cited resources, either financial, technical or staff.
 - Five (25%) indicated that they did not wish to collect such information or that it was a low priority.
 - Two (10%) suggested a lack of available land.
- 8.3.2 The returns indicate a willingness to collect planting potential information from over half of the boroughs, if resources could be made available to do so.
- 8.4 **Question 4:** What form does the tree planting potential information take?
- 8.4.1 Responses to this question were wide ranging in both content and detail.
- 8.4.2 Very few of the respondents were able to claim comprehensive knowledge of planting potential. Most reflected more varied levels of understanding and detail across the various departments within their organisations, and the degree to which strategic surveys had been undertaken or completed. A number of respondents also indicated knowledge of potential planting sites outside their organisation’s direct control; in this regard housing sites were often cited.

8.5 **Question 5:** How is the potential tree planting information stored?

8.5.1 Of the seventeen responses given to this question the following replies were received:

- Seven (41%) stated that the information was held electronically.
- Five (29%) additionally indicated that the information was held on a proprietary tree database – ‘Ezytreev’ or ‘Arbortrack’.
- Three (17.5%) said the information they had was digitally mapped.
- One (6%) referenced the GiGL habitat suitability data.
- One (6%) said the information was largely held as local officer knowledge.

9.0 **Phase 1 - Estimates of planting potential**

9.1 The respondents were asked to estimate the area of public land available within their individual areas that could potentially sustain future woodland, group or individual tree planting. Responders were asked to estimate the number of woodlands and groups in hectares, and express the total number of individual trees.

9.2 A detailed list of respondents, the figures they provided and any qualifying comments they made is attached to this report at Appendices B1 – B3.

9.3 Of the thirty one boroughs and organisations that responded seventeen (55%) were able to provide an estimate of tree planting potential within their respective areas, and fourteen (45%) were unable to do so.

9.4 From those boroughs and organisations that were able to provide an estimate, the following figures were received:

9.4.1 **Inner London boroughs:**

	Estimated woodland (ha)	Estimated groups (ha)	Estimated individual trees
Totals:	1	1	450

Note: The figures for the inner London boroughs reflect a small statistical sample. Of the thirteen inner London Boroughs ten provided returns. However, only one of those boroughs (Greenwich) was able to provide a quantified estimate of planting potential in woodlands and groups, and only two (Greenwich and the City of Westminster) were able to provide estimates of individual tree planting potential. The most common response was that the figure was ‘unknown’, or that the amount would be ‘minimal’.

9.4.2 **Outer London boroughs:**

	Estimated woodland (ha)	Estimated groups (ha)	Estimated individual trees
Totals:	48	27.5	5175

Note: The figures reflect a relatively small statistical sample because although seventeen of the twenty outer London boroughs returned completed questionnaires, only four of those boroughs reported having completed a tree planting potential audit and provided figures shown in the above table.

9.4.3 **Other organisations:**

	Estimated woodland (ha)	Estimated groups (ha)	Estimated individual trees
Totals:	864	0	450

Woodland: The estimated woodland planting is wholly from figures provided by Thames Chase. The figure relates to projected plantings calculated to achieve the Thames Chase Community Forest’s aim of 30% tree cover by 2030 in the London Boroughs of Havering and Barking & Dagenham, the two boroughs which are within the Thames Chase area.

Individual trees: The estimated individual tree planting is wholly from figures provided by the Royal Parks Agency.

9.4.4 **Total planting potential on local authority green spaces – Actual returns:**

	Estimated woodland (ha)	Estimated groups (ha)	Estimated individual trees
Inner London Boroughs	1	1	450
Outer London Boroughs	48	27.5	5,175
Other organisations	864	0	450
Totals:	913	28.5	6,075

9.4.5 **Woodland:**

94.6% of the potential woodland provision is taken up within the London boroughs estimate provided by the Thames Chase Trust.

9.4.6 **Groups:**

96.5% of the potential group provision is taken up by outer London boroughs.

9.4.7 **Individual trees:**

7.4% of potential individual tree provision is taken up by inner London boroughs.

85.2% of potential individual tree provision is taken up by outer London boroughs.

7.4% of the potential individual tree provision is taken up by other responding organisations.

9.4.8 **Total planting potential on local authority green spaces – Extrapolated across all boroughs:**

9.4.9 As has been noted above, although the total number of returns was statistically high at 86%, a significant number of these returns were unable to quantify or provide estimates of planting potential within their areas or boroughs; often citing that this information was simply ‘unknown’. As a statistical exercise, the table below represents the figures actually received extrapolated as an average across all the London boroughs; plus the figures received from the Thames Chase Trust and the Royal Parks Agency. Due to the inherent vagaries of extrapolation the figures should be treated with a degree of caution, but the aim is to provide a baseline estimate for tree planting potential across London.

	Estimated woodland (ha)	Estimated groups (ha)	Estimated individual trees
Inner London Boroughs (13)	13	13	2,925
Outer London Boroughs (20)	192	110	12,938
Other organisations	864	0	450
Totals:	1,069	123	16,313

- 9.4.10 For the purpose of statistical modelling within the project, the density of both groups and individual tree planting schemes has been set at a density of 100 trees per hectare; this reflects the use of larger stock commonly used in such planting schemes compared with those of woodlands.
- 9.4.11 Using the statistical model described above, and the returns supplied in Phase 1 of the project, the total *currently identified* projected planting capacity on land owned by local authorities in London is estimated to be 1,355ha². However it is likely that these figures are a **significant underestimate** and this will be tested in Phase 2 of the project.

10.0 Phase 1 – Discussion / Conclusions

The following conclusions can be drawn from the work undertaken in this Phase 1 of the Tree Planting Potential project:

- 10.1 Of the thirty three boroughs and three organisations contacted, thirty one returned completed questionnaires giving a total response rate of 86%.
- 10.2 Seventeen boroughs and organisations (55%) were able to provide an estimate of tree planting potential, and fourteen (45%) were unable to do so.
- 10.3 The responses show that 57% of boroughs either have no, or only partial information with regards to the extent of potentially suitable land that might be available for tree planting.
- 10.4 Returns from over half the boroughs indicated both an understanding of the potential relevance of such information, and a willingness to collect it. Of those boroughs which wished to collect such information but are unable to do so, thirteen (65%) cited resources, either financial, technical or staff, as being the main barrier to that collection.
- 10.5 In order to meet a tree canopy increase target of 25% of total land area in greater London, approximately an additional 8,800ha² (88km²) of trees will need to be planted - this figure equates approximately to the land area of the London Borough of Barnet at 87km², or the London Borough of Croydon at 85km².
- 10.6 When the planting site figures received in Phase 1 are extrapolated across all London boroughs, it suggests that a total of 1,355ha² (13.5km²) of tree planting land has been identified as being potentially available; this represents 15% of the area required to meet the 25% tree cover target.
- 10.7 **The work undertaken in Phase 1 of this project helps to provide baseline figures for planting potential on land owned by local authorities across London, but it also highlights the inadequacy and limitations of the currently existing information with regards to the identification of potentially suitable land. For example, almost half of boroughs were unable to provide an estimate of the potential for planting on the land that they own and, furthermore, the potential for planting on land owned by boroughs but managed by their housing, education and transport directorates, was rarely factored into the responses.**

11.0 Phase 2 - Background

- 11.1 A better understanding of the potential for tree planting on public land should enable the boroughs, the GLA and other organisations involved in tree planting in London to shape policy and promote future programmes – irrespective of whether that tree planting is realised through individual projects, or as part of more strategic city-wide targets. The purpose of Phase 2 of the project was to look at practical ways and models in which individual boroughs could collect and collate potential tree planting information.
- 11.2 The Phase 1 returns indicated that in over half the responding boroughs a lack of resources – rather than disinclination – was the main obstacle preventing the collection and collation of the potential opportunities for tree planting on land in local authority ownership. That being the case, it was considered that if resources were made available many boroughs would be both able and willing to undertake assessments of tree planting potential, although no clear method emerged with regards to how a borough might systematically achieve this.
- 11.3 Of the boroughs which returned Phase 1 surveys, it became apparent that Ealing had attempted to undertake some site-specific analysis of new tree planting sites. The borough was therefore identified as a potential Phase 2 project partner in the context of examining how the borough has approached this initial assessment process.
- 11.4 The London Borough of Bromley and the London Borough of Barnet were also selected as suitable candidates for Phase 2. Neither of these boroughs had strategically identified the planting potential of sites within their ownership and it was therefore thought that inclusion would provide a chance to initiate this process and to gauge the opportunities and obstacles which might subsequently arise.

12.0 Phase 2 Case Study – London Borough of Ealing

- 12.1 Ealing’s response to the Phase 1 questionnaire was completed by Dale Mortimer, the borough’s Tree Service Manager. The information returned indicated that following receipt of the original questionnaire Ealing had been prompted to undertake some work to formally identify potential tree planting capacity within the borough. Some locations had been identified and screen shot maps had been collated, but none of the information was systematically collected or recorded within a single data base, with much of it being held as notes, emails and as personal knowledge.
- 12.2 The information contained within Ealing’s return was of interest because it outlined a concerted effort undertaken by the borough to collect and collate potential planting site information. By inviting the borough to participate in Phase 2 the processes it had used to collect that planting information could be examined at greater detail. Once processed these could be used to inform the development of a site identification template which could potentially be adopted by other boroughs or organisations. Ealing agreed to participate in Phase 2 and Dale Mortimer was interviewed in February 2016 as part of that participation.
- 12.3 Ealing is an outer London borough located to the north of the river Thames on the western side of the capital. The area of the borough is 55.53km², with a population in

mid-2014 estimated at 342,118. It is a densely populated borough with 6,200 people per km².

12.4 Traditionally much of the developmental management of parks and open spaces across the borough has been undertaken through the activities of a ranger service. A team of up to twenty rangers has been employed in the past to undertake this work, although the current staff complement now stands at seven.

12.5 It was felt that the rangers’ historic role of providing a comprehensive site-focused service meant they possessed an unrivalled accumulation of local knowledge of individual sites across the borough (far in excess of that held for example by the arboricultural team). When new tree planting opportunities arise as funding becomes available, or when third party organisations outside of the borough are able to support tree planting initiatives, Ealing’s rangers tend to be the initial default consultees for the identification of potential planting sites within the borough. Further discussions are then held with parks and grounds maintenance officers in order to select suitable sites.

12.6 There is no standing database or list of sites identified within the borough as being potentially suitable for larger scale tree planting. As a consequence, such sites are identified on an ad hoc basis, as and when those planting opportunities arise. Such an approach does not mean that tree planting initiatives fail to materialise; recently completed schemes undertaken in the borough include:

- **Southall Park** – 20,000 trees were planted in 2013-14 with Tree Council funding. This was a community led scheme including the incorporation of community gardens and orchards.
- **Northolt Park** - 10,000 trees were planted in 2013-14 in partnership with Trees for Cities in a scheme involving 350 volunteers.
- **Blondin Park** - 10,000 trees were planted in 2014-15 in partnership with Trees for Cities in a scheme involving 400 volunteers.
- **King George’s Playing Field** – 20,000 trees were planted in 2015-16 in partnership with Trees for Cities.

12.7 **Ealing’s response to the Phase 1 Survey**

The receipt of the Phase 1 survey questionnaire prompted Dale Mortimer to consider the potential for strategically evaluating tree planting sites across the borough. An initial consultation with the rangers prompted them to consider the tree planting potential within a selection of the 147 parks and open spaces within Ealing.

12.8 In practice it proved to be a relatively easy task to initially identify twelve sites with good tree planting potential. The sites were marked up on aerial plans and their individual areas calculated. The exercise resulted in the identification of approximately 15ha² of potential tree planting land within the borough while looking at just 8% of the 147 available sites.

12.9 A selection of the identified sites, along with a summary of the criteria by which tree planting could be seen to provide positive enhancements to those sites are illustrated in the examples below:

12.9.1 **Land at Perivale Park**



The indicated area at this location was seen to be ‘unused’ in terms of formal recreational activity, unlike the sports pitches that can be seen to the east. At present the area is regularly mowed and maintained as amenity grassland.

Some tree planting has already occurred in the fenced area seen in the south east corner of the site, and it was considered that this could readily be extended across the whole of the identified area to form new amenity woodland.

12.9.2 Land at Mount Pleasant Fields



This site was selected because of the opportunity it presented to regenerate an existing arboricultural landscape feature within the open space. The identified area at this site includes an existing tree belt of mixed aged trees which has been denuded over recent years.

There may also be potential to develop the feature by broadening it equally along its length in a relatively formal manner, or by ‘scaloping’ its edges through the introduction of new tree planting if a more ‘natural’ or diverse edge was desired.

12.9.3 Land at Marnham Field



This site was initially identified as being surplus, little-used land which could be enhanced through the introduction of woodland tree planting. However, as the area was considered more closely, it became apparent that additional site specific factors could also help to justify an investment in tree-planting; these included the control of anti-social motorcycle riding and screening of the Council’s depot facility to the north.

This process of identification of the drivers for tree-planting often led to the consideration of other areas adjacent to - but outside - the originally identified site. At Marnham Field the land to the south west of the indicated area tends to lay wet – as evidenced by the areas of green grass growth in the scorched landscape. This area has proved difficult to maintain, even in summer, due to the bogging down of gang mowers, and it is now felt that new tree planting could potentially address this maintenance issue.

12.9.4 Land at 60 Trees Walk



This site presents a potential opportunity to convert an area of ‘surplus’ short-mown amenity grassland into a new area of urban amenity woodland.

Considered in this way, the site has enormous potential with existing boundary belts to three sides and the possibility of designing a planting scheme which provides the maximum amount of biodiversity interest, while retaining existing access routes and footpath network to underpin public access.

12.10 Planting potential

The planting potential identified in the above four Ealing sites, which in turn represents one third of those sites initially identified (See 11.8 above) is:

Perivale Park	2.42ha
Mount Pleasant Fields	0.31ha
Marnham Field	0.60ha
Sixty Trees Walk	1.81ha
Total:	5.14ha

13.0 Phase 2 Case Study – London Borough of Bromley

13.1 Given the generally positive results from the work undertaken at Ealing, it was decided to undertake a more systematic evaluation of sites across the London Borough of Bromley, which in Phase 1 had self-declared a limited knowledge of the planting potential of sites within its ownership.

13.2 Bromley’s response to the Phase 1 questionnaire was completed by Julian Fowgies the borough’s Arboricultural Manager. The information returned indicated that Bromley had no information with regards to potential tree planting capacity within the borough. There was awareness that potential tree planting capacity existed, but a lack of staff resources was cited as the main barrier to the collection and collation of that information.

13.3 Bromley is an outer London borough located on the south eastern side of the capital, and is the largest London borough by area at 153km². Approximately 30% of the land in Bromley is farmland, the highest figure of any London borough, and Westerham Heights located on the borough’s southern boundary is the highest point in London at 245m. Bromley’s population in mid-2014 was estimated to be 321,278, giving a density of 2,100 people per km².

13.4 The information contained within Bromley’s return was of interest because it represented a ‘clean sheet’ borough in terms of potential tree planting site identification, and one onto which Ealing’s experiences could be transferred and possibly developed. Bromley agreed to participate in Phase 2 of the project and this commenced with an interview with Julian Fowgies in February 2016. As a result of that meeting, it was agreed to undertake and record a process of identification of potential tree planting sites across the borough which could be replicated in other locations.

13.5 Assessing Bromley’s Tree Planting Potential

13.5.1 Assessment of baseline information:

The first task was the identification of baseline information with regards to the available resource. This was readily achievable as all the parks and open spaces were mapped and plotted on the GIS system as part and parcel of the grounds maintenance and asset management systems in place and as a result one hundred and twenty eight individual sites were identified across the borough, and all these sites were collated into a planting potential spreadsheet.

13.5.2 The next task was to divide the 128 sites into three categories:

- Sites which were considered to have good tree planting potential
- Sites which were considered to have possible tree planting potential
- Sites which were considered to have a low tree planting potential

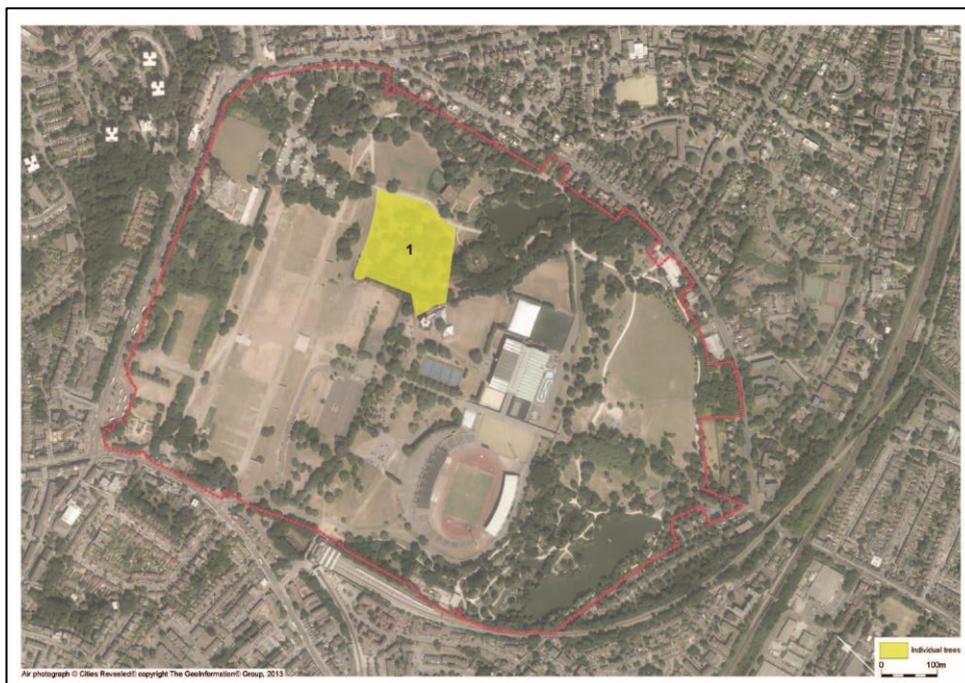
13.5.3 The initial site assessment was undertaken by Julian Fowgies and as a result of that assessment fifty four (42%) sites were considered to have a low tree planting potential following the first appraisal. The reasons given for this inclusion in this category included:

- 22 sites (41%) including existing woodlands, parks and open spaces were considered to be at full capacity
- 19 sites (35%) were considered to be too small
- 9 sites (16%) were considered to be too formal in design to accommodate additional tree planting
- 2 sites (4%) were identified as sports pitches
- 2 sites (4%) were identified as being 'unsuitable in character'

13.6 Completion of this selection process meant that 74 (58%) parks or open spaces throughout the borough owned sites were considered to have either 'good' or 'possible' planting tree potential.

13.7 Ten of those sites were then selected for closer scrutiny and this was undertaken as a desk exercise co-ordinated by the tree officer but including additional input from greenspace management colleagues.

13.8.1 **Crystal Palace Park**



Bromley's largest park is included within the Register of Historic Parks and Gardens of special historic interest in England (Grade II). It is an undulating site with woodland, open grassland, a children’s play area and extensive leisure facilities.

Due to the listed status of this park it was felt that the site’s planting potential was restricted to individual standard trees, within an area of existing ornamental woodland.

13.8.2 Glentrammon Recreation Ground



This is a small recreation ground which has been maintained by the council from the early 1930's. The park contains a children's play area and local sports facilities.

Two areas of potential woodland planting were identified along the park's eastern boundary, with the possibility of a single row avenue at the eastern end of the main footpath.

13.8.3 Goddington Park



Goddington Park is a large park of 64 hectares; its extensive facilities include football pitches, cricket squares, rugby pitches, tennis courts and all-weather playing surfaces. There are also two children’s play areas, and car parking.

Potential planting areas within this site are restricted due to the existing provision for extensive sporting activities. As a consequence, five discrete areas of copse planting were identified in the north eastern quadrant of the park, complementing similar existing planting in that area.

13.8.4 Grassmead Recreation Ground



Grassmead recreation ground is a small open space with amenity grassland and a children’s play area.

Two forms of potential planting were identified in this recreation ground. The first was an avenue running along the site’s south eastern path. Secondly group plantings were identified which were either new, or reinforced and extended existing areas of established tree cover.

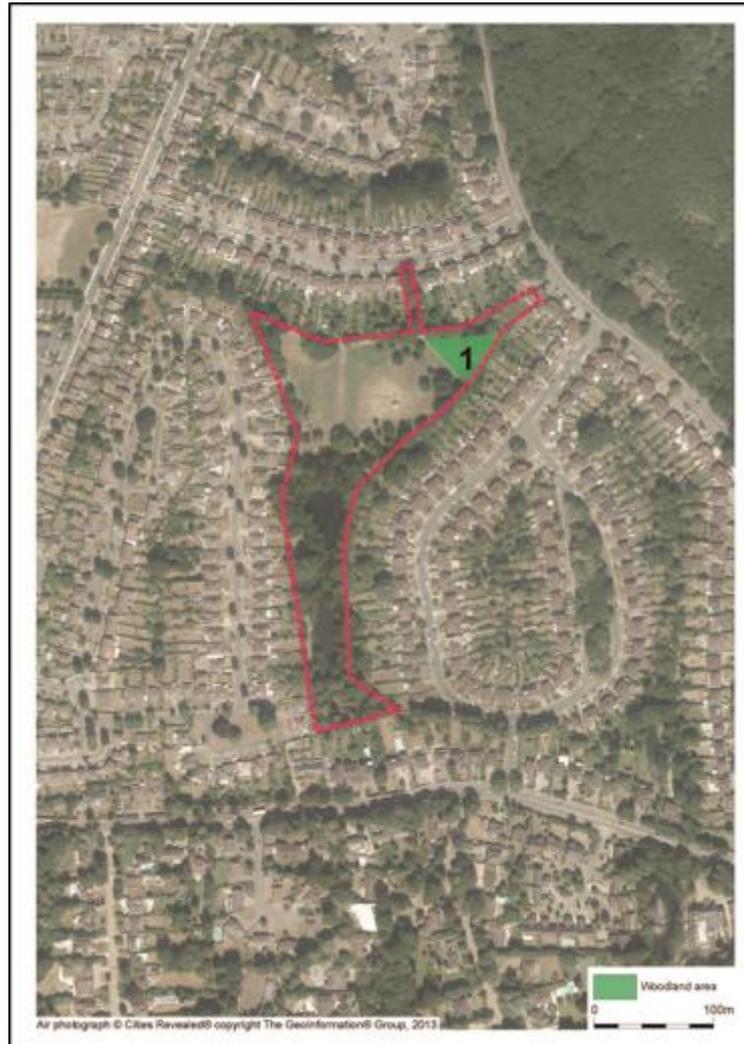
13.8.5 Havelock Recreation Ground



This recreation ground came into public ownership in the early 1960's having previously been a clay and gravel pit supplying the needs of a local brickmaking industry. The current site comprises of a large open grass playing area.

It was considered that the existing area of sparse tree cover along the site's northern boundary could be enhanced and extended through woodland planting.

13.8.6 Hollydale Recreation Ground



The park is formed from the former grounds of Hollydale, an 18th-century house built for the Kirkpatrick family. The grounds were extended considerably to east and west, and the small parkland and lakes were created, with a lodge and entrance drive with an avenue of lime trees, some of which remain. The council bought the house (which was subsequently demolished) and some of the land in 1933 for use as a public open space. The park now contains ornamental gardens with children’s play area.

A small, triangular area defined by an existing pedestrian path was identified as being potentially suitable for in-fill planting.

13.8.7 Norman Park



The land for Norman Park was acquired from A C Norman by Bromley Council in the 1930s. Norman Park is a large open space mainly given over to sporting activities, including an all-weather athletics track. Additional facilities include a children’s play area, football pitches and a car park.

A range of potential planting locations were identified including three areas of woodland – one in a location which tends to lie wet and therefore difficult to maintain, along with the opportunity to plant substantial lengths of hedgerow. There is also the potential additional benefit of improving the network of existing woodlands through new planting.

13.8.8 St Pauls Cray Country Park



The site consists of 40 hectares of land formerly used as a domestic land fill site until 1970s which has now been landscaped and designated as a country park encompassing areas of open common and woodland.

Five areas of potential new woodland planting were suggested at this site; two of those areas being identified as lying wet.

13.8.9 Scadbury Park



Scadbury Park is a Local Nature Reserve and a Site of Metropolitan Importance for Nature. It is over 300 acres, and is part of an extensive wildlife corridor together with Petts Wood and the Jubilee Country Park. It has large areas of ancient woodland, and its ponds have London's largest population of Great Crested Newts.

Three areas of potential amenity woodland planting were identified at this site, one of these (Area 1) has already developed to some extent into secondary woodland as a result of current management practice.

13.8.10 Whitehall Recreation Ground



Whitehall Recreation Ground is a largely level site surrounded by residential housing. The perimeter tarmac path is partly tree lined within semi-mature horse chestnuts, oak, lime and sycamore. To the south-west is a bowling green enclosed within tall privet hedges. The centre of the site is used for sports.

Two triangular areas of potential woodland planting were identified here to the north and south of the main pedestrian footpath. An additional area of potential woodland planting was identified to the north of the bowling green in a location known to lie wet. A short avenue was also proposed, located to the north east of the bowling green.

13.9 Planting potential

13.9.1 The total figures for planting potential identified in the ten Bromley sites is:

	Sites	Woods	Avenues	Hedgerows	Individuals
1.	Crystal Palace Park				264
2.	Glentrammon Recreation Ground	0.61	152m		
3.	Goddington Park	0.94			
4.	Grassmead Recreation Ground	0.78	225.5m		
5.	Havelock Recreation Ground	0.45			
6.	Hollydale Recreation Ground	0.15			
7.	Norman Park	3.36		1,210m	
8.	St Pauls Cray Country Park	3.25			
9.	Scadbury Hill	6.77			
10.	Whitehall Recreation Ground	0.5		92m	

Totals: 19.45ha 75.5 trees 1,302m 264 trees

13.9.2 Using a formula by which hedgerows are nominally calculated as being 1.5m wide, and where standard trees are planted at a density of 100 per hectare, the following figures emerge:

Woodland	19.45 ha
Standard trees	2.64 ha
Hedgerows	1.95 ha
Total:	24.04ha

On this basis, a total figure of 24.04 hectares of potential planting space was identified within these **ten** Bromley sites.

14.0 Phase 2 Case Study – London Borough of Barnet

- 14.1 Barnet’s response to the Phase 1 questionnaire was completed by Andy Tipping the borough’s Trees and Woodland Manager. The information returned indicated that while Barnet had not formally considered the question of potential tree planting capacity within the borough, they had planted 4,000 whips on four sites in 2000 to commemorate both the millennium and to represent one tree per child born in that year. Active consideration has also been given to the planting of further 3-5,000 whips in an attempt to both reduce grounds maintenance liability and to increase tree cover in parks with low pedestrian access. The borough has a large number of vacant tree pits in streets and that is where the focus tends to be at present when considering new planting as these sites are seen to have the most impact in terms of amenity, pollution management and urban improvement.
- 14.2 The London Borough of Barnet is a suburban Outer London borough. It is the second largest London borough by population with 331,500 inhabitants, and the fourth largest by area covering 86.74 square kilometres.
- 14.3 Like Bromley, the extent of baseline information with regards to planting potential was extremely limited, and as indicated above the issue had not previously been considered on a strategic level by the local authority. In order to initially assess Barnet’s tree planting potential on a site by site basis Andy Tipping consulted with colleagues within the council.
- 14.4 **Assessing Barnet’s Tree Planting Potential**
- 14.4.1 Following on from those internal discussions four individual sites were identified each of which it was considered had the potential to absorb a significant area of woodland planting.

14.5.1 Brickfield Lane, Arkley



This land within borough ownership had not been visited by the tree officer for a number of years. A reduction in management input has resulted in the regeneration of willow, oak and birch to form dense and established secondary woodland of considerable size. This area makes an interesting comparison with Scadbury Park in Bromley (See 12.8.9 above).

14.5.2 The Grange, Ridgeview Close



This area of land previously maintained as a sports ground was identified for its woodland planting potential.

14.5.3 Tudor Fields, Hadley



This sloping site was previously maintained as a football pitch. Following the discontinuance of that usage the site was included because of its potential to be planted as amenity woodland.

14.5.4 Brook Farm Open Space



Brook Farm Open Space is part of the Dollis Valley Green Walk which was developed and implemented by the London Borough of Barnet in 1992. It now forms part of Walk London’s extensive network of walks and provides a link in both the London Loop and the Capital Ring.

The area identified as potential woodland planting space comprises of a wet lying area – Site A, and an area of now unused sports pitch – Site B.

14.6 Planting potential

14.6.1 The total figures for planting potential identified in the four Barnet sites is:

	Sites	Woodland
1.	Brickfield Lane, Arkley	15.05
2.	The Grange, Ridgeview Close	3.90
3.	Tudor Fields, Hadley	2.83
4.	Brook Farm Open Space – Site A	3.20
5.	Brook Farm Open Space – Site B	3.37
	Totals:	28.35ha

14.6.2 Therefore, a total figure of 28.35 hectares of potential planting space was identified within these **four** Barnet sites.

15.00 Phase 2 Discussion / Conclusions

The following conclusions can be drawn from the work undertaken in Phase 2 of the project:

15.1 Potential availability of sites

15.1.1 The Phase 1 survey figures identified a potential for 49ha of woodland, 28.5ha of groups, and just over 5,600 individual trees to be planted on local authority owned land throughout the capital (see paragraph 8.4.4 above).

15.1.2 The low potential planting figures were explained to a degree by the Phase 1 survey showing that many boroughs just did not have the figures available – though many recognised the value of collecting such information if budgets and officer time constraints allowed.

15.1.3 The work undertaken in Phase 1 also highlighted:

- a) The inadequacy and limitations of the current information with regards to the identification of potentially suitable land for tree planting, and
- b) The amount of potentially available land equated to approximately 15% of that required to meet the proposed canopy increase target of 25%.
- c) The total of canopy cover would be less than the 15% figure identified as sites would not be wholly planted with woodland. Additional spaces for play, paths, and other habitats for example would also be required.

15.1.4 Phase 2 of the project examined just eighteen individual sites which were self-selected by the three case study boroughs; a selection therefore that represents a very small proportion of those boroughs total landholdings. Work on those eighteen sites identified a combined figure of **57.53ha** of potential new tree planting and clearly demonstrates that potential planting figures increase if a systematic examination of sites is undertaken.

15.1.5 **It is reasonable to assume that more potential tree planting sites would be identified if the systematic approach undertaken by the case study boroughs were replicated across the totality of their landholdings. If that exercise could then be mirrored by other boroughs there is clear potential for the total area of land identified to represent a significant increase on the 15% canopy increase target originally identified in Phase 1 of the project.**

15.2 Site selection - Current practice

15.2.1 The work undertaken with individual officers within Phase 2 of the project provided an interesting insight into the current process of land selection for larger tree planting schemes undertaken by the boroughs which tended to be characterised by the following factors:

- a) The process was usually initiated by outside funding bodies, rather than internal revenue sources within individual boroughs.
- b) The site selection was approached on an ad hoc basis, as and when schemes emerged.
- c) A primary driver in site selection was towards land that was considered to be ‘surplus’ - invariable areas of short mown amenity grassland - for which no ‘better’ usage could be found.

15.3 Site selection - Strategic benefits

15.3.1 One outcome of the work undertaken in Phase 2 was the rapid emergence of an understanding of the potential benefits of attempting to strategically assess borough wide tree planting potential through a more systematic consideration of the drivers and benefits of tree-planting on existing green spaces. These benefits could include:

a) Reductions in grounds maintenance liability:

It quickly became apparent that the adoption of a proactive approach to potential planting site selection could significantly impact on issues of grounds maintenance. Traditionally, this issue has tended to benignly concentrate on the extent to which ‘green desert’ amenity grassland could be taken out of cyclical maintenance and replaced with more biodiverse woodland habitat. However, a more proactive approach could look at areas which are historically difficult, and therefore more expensive, to maintain; such areas might include:

- Topographically challenging gradients
- Areas of poor or compacted soils
- Areas of poor drainage
- Areas of structural instability

b) Potential cost savings:

There is potential to quantify grounds maintenance savings on individual sites, particularly where challenging and therefore potentially expensive areas of maintenance are planted with trees and subsequently removed from maintenance contracts.⁷

c) Potential to address anti-social usage:

The site at Marnham Field in Ealing (See 11.9.3 above) suffered as a result of anti-social motorcycle riding which causes annoyance both to users of the open space and adjacent residents. Here, as in countless similar locations across the capital, Rangers attempt to control the extent and frequency of the anti-social behaviour, but this takes up a great deal of time and has little substantial result. However, the feeling which emerged during this process was that proactive tree planting in areas such as this - coupled perhaps with fencing and localised ground modelling - could be used to great effect to discourage anti-social behaviour. Such an approach could potentially bring with it substantial amenity benefit to park users, and cost savings in terms of Rangers’ time.

d) Enhancement of amenity:

A number of the sites had a variety of on-going issues of conflict between legitimate – usually recreational - activities occurring within open spaces and residential occupiers in adjacent properties. Common causes of grievance include complaints about noise, light pollution and a reduction in visual amenity. A proactive approach to potential tree planting provision could see allocations at many of these sites, with screening trees used in both external boundary and internal dividing belts, either introduced as new features, or used to widen or in-fill existing plantings.

e) Restoration of features:

Not all planting needs to be ‘new’ planting on grassland sites. Many existing arboricultural features within the urban landscape have declined or disappeared for a variety of reasons over the years. The example at Mount Pleasant Fields in Ealing (See 11.9.2 above) represents a largely intact but declining tree feature, which would benefit enormously from a fairly basic intervention of in-fill planting. This category of proactive allocation could also be broadened out to include the replanting of lost tree boundaries, orchards or woodland which may be barely discernible on the ground, or have been lost

⁷ See: ‘Trees or turf - best value in managing urban green space’ for useful and informative data related to maintenance cost comparisons between amenity grass and woodland. Published by The Woodland Trust and available as a free download at: <http://www.woodlandtrust.org.uk/publications/2011/05/trees-or-turf/>

altogether. Research into and the identification of such features also opens up the potential of community involvement, and potential funding as local history / planting projects.

f) Encouragement of positive engagement:

As described above, a proactive examination of potential planting sites soon leads to the emergence of a variety of drivers behind the selection of those sites; these may range from a financially motivated desire for grounds maintenance cost savings, to more community based aspirations to create a new orchard or woodland for example. The work suggests that the identification of a range of sites has the potential to provide a collective pool of tree planting potential from which any number of stakeholders might identify; those same stakeholders - be they council officers, community groups, or third party organisations - may then be able to attract their own funding and / or support for those specific schemes.

g) Attracting ‘smarter’ funding:

Most large scale tree planting schemes within the capital are currently funded and / or supported by third party organisations, and not directly by the boroughs themselves. The process is often linear in nature in that the organisations attract funding, individual boroughs are approached, sites are then identified to ‘fit’ the funding criteria, and the project is subsequently implemented. However, the strategic identification of potential planting sites which a borough might hold - and therefore be able to provide up-to-date information on the nature and extent of those sites - has the exciting potential to fundamentally transform the current funding model for the following reasons:

- It would enable funding bodies to fit existing funding streams to a variety of identified and quantified sites
- It would enable funding bodies to pro-actively seek additional funding streams linked to particular sites
- It would allow local authorities to pro-actively approach funding bodies with range of available and quantified sites
- It has the potential to allow local community groups or stakeholders to identify sites or projects of particular interest to them and thus attract their specific support

15.3.2 The list above is far from exhaustive, but it demonstrates some advantages of formulating a strategic approach to tree planting potential. It’s a method that can deliver the enhancements and quantifiable benefits described above, which are valuable and relevant in their own right. Crucially however, when understood in a strategic context, this approach can also be recognised as an *addition to* the established and widely accepted benefits of greening urban spaces, and therefore has the potential to provide a significant contribution to the effective promotion of tree planting within the urban realm. These additional benefits include:

a) A more positive selection process:

It means that searches for potential tree planting sites can be managed in a positive way, by removing the need for responsive ad hoc selections, initiated at the behest of third parties.

b) A more active selection process:

Selection can also become a more active process by which new sites or areas are added as and when problems / issues arise which could be addressed by tree planting.

c) Maximisation of potential:

The exercise showed that once sites were studied in a more detailed way, additional planting opportunities often became apparent as a result. Such an approach means that the opportunities for maximising the full planting potential of sites can be considered and assessed, rather than a more blinkered approach which might be predicated on fragmented infill of ‘surplus’ land. Sites can also then be considered as part of a wider network of green infrastructure, and be planted and improved as part of a longer term programme of greening activity, rather than as isolated one-off projects.

16.00 Phase 3 - A methodology for tree planting potential

16.1 The work undertaken in this project clearly illustrates the current gap in knowledge with regards to tree planting potential of land in public ownership across the capital. The views expressed by a majority of respondents to the Phase 1 survey recognise the importance of possessing such information, and the discussion at 14.3 above clearly outlines the range of potential benefits to boroughs, stakeholders and funding bodies that such information could bring.

16.2 Part of the working brief for Phase 3 of the project was to consider how a practical and replicable methodology for the assessment and mapping of potential tree planting sites on local authority owned land might be formulated. As a result of the work undertaken the following observations and recommendations are made:

16.3 Resource commitment

Although the value of collating planting site information has been demonstrably shown to increase the potential of actual tree planting on the ground, the resource commitment required to collect that information needs to be recognised and adequately planned for. The authors of this report are extremely grateful for the time and expertise freely given by officers in the case study boroughs. However, a constant backdrop to the collection of information from those officers was the impact on their existing workload, and the difficulty they would have in identifying additional resources to undertake strategic borough wide surveys of planting potential.

16.4 Identification of key individuals

Perhaps the most interesting finding in this respect was that the assumed ‘go to’ officers, namely the arboricultural officers, within an authority may not be best qualified to identify areas of planting potential. By default the question is designed to identify areas currently without trees, and because of that fact the arboricultural officers may not have a working knowledge of those areas. While arboricultural officers would clearly have a role in the ultimate delivery of planting schemes, this project showed that other officers involved with green spaces such as rangers, ground maintenance managers and staff tended to have the day to day knowledge of potential sites, and in particularly sites with issues around anti-social usage or difficult ground conditions, which could have the potential to be improved by strategic tree planting schemes.

16.5 Baseline information

The first task in any strategic assessment is to identify a definitive list of sites within the ownership of each borough. This borough wide exercise was trialled in Bromley and utilising the benefits of current mapping systems the identification and collation of land ownership information proved to be a relatively straightforward operation.

Once a definitive list had been produced the next task involved a desk exercise to identify those sites considered to have a relatively high, medium or low planting potential. Although a three tier delineation of sites was initially used, in practice the division was only really useful in the identification of sites with a low planting potential; and therefore ones excluded from further examination. As the process continued to develop, all of the sites initially identified as having high and medium potential provided

scope for further investigation and identification of planting potential, particularly when that

process included input from other officers as described at 14.2.2 above.

16.6 Site surveying

A fairly broad brush approach was taken to site surveys in all the case study boroughs. The extent of required information was the identification of baseline figures in terms of area, or individual tree numbers, and this could be readily achieved with a pen and paper approach undertaken as a desk exercise as at Bromley, through site visits as at Barnet, or a combination of both undertaken at Ealing. Examples of the base plans produced are replicated in the respective borough sections of this report.

16.7 Mapping

Transferring the surveyed information onto the mapping database was also a relatively straightforward operation and the process ultimately resulted in the production of a georeferenced suite of sites on which the type and extent of planting potential could be clearly seen and quantified.

The GLA have also advised that there is the potential to create an open source ‘tree-planting potential’ map to identify locations where major tree-planting could be achieved across London, based on a similar model being used to identify housing land (see: <https://maps.london.gov.uk/CallForSites/>)

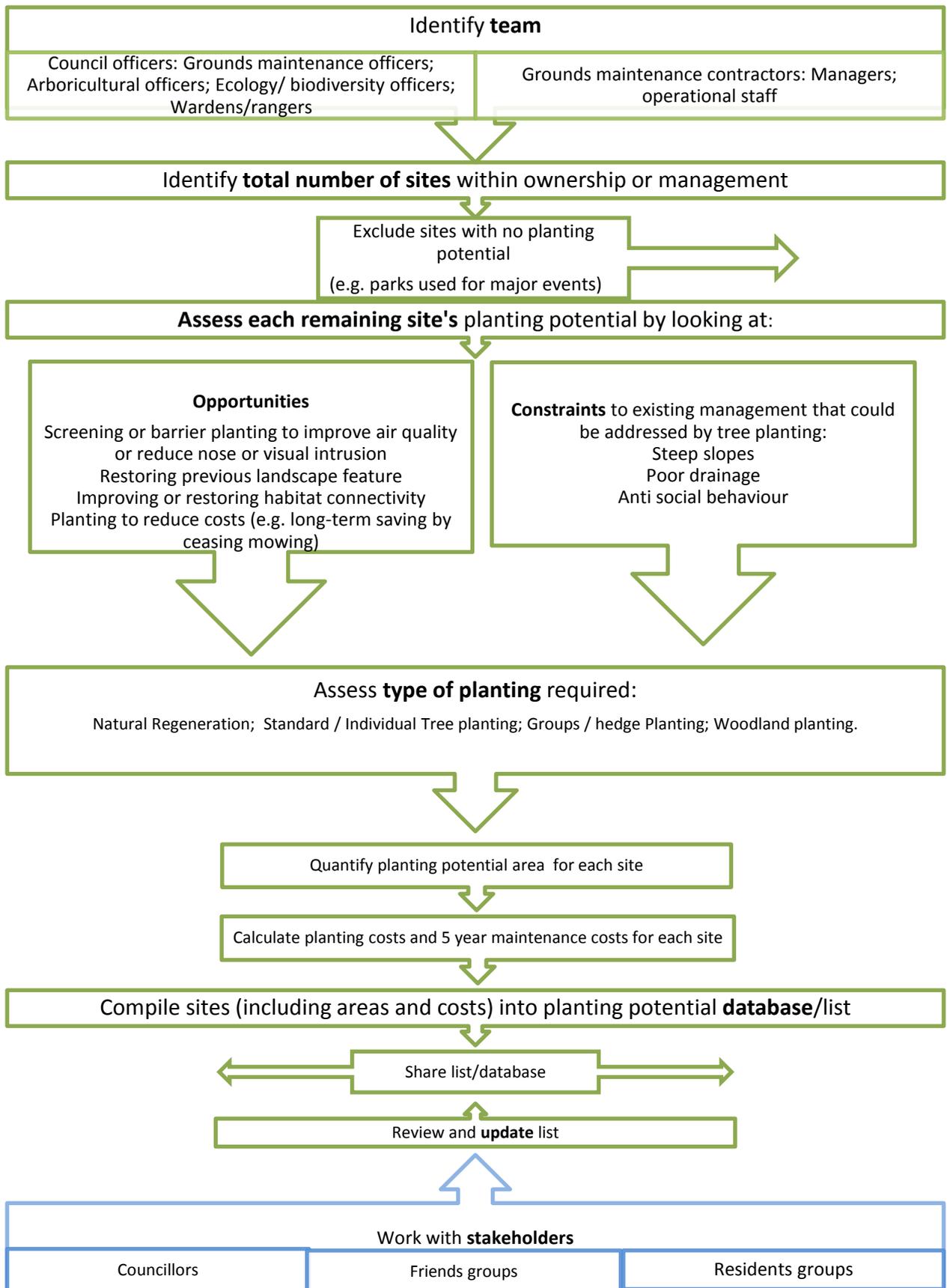
16.8 Costs / maintenance

A suggestion made during the course of the exercise was to include indicative costings for the proposals contained within each site. The figures would be both indicative and generic, but could serve as a useful indicator to funding bodies as to the range of costs across various sites, and thus providing an opportunity for specific funding streams to be tailored to individual projects.

In addition to the above, the importance of including future maintenance costs in any indicative figures was also emphasised by several responding officers. This approach would provide a baseline figure at the outset which gives a true indication of the cost of sustainably maintaining to establishment and independence new areas of tree and woodland planting.

16.9 Identifying tree planting potential: Flow chart

Part of the working brief for Phase 3 of the project was to consider how a practical and replicable methodology for the assessment and mapping of potential tree planting sites on local authority owned land might be formulated. This methodology is outlined in the diagram flow chart below:



17.0 Project conclusions

The following overall conclusions can be drawn from the work undertaken in this project:

- 17.1 If tree planting targets for London are to be achieved then baseline information with regards to potentially available land needs to be collected and collated.
- 17.2 Most London boroughs do not currently possess accurate information with regards to the tree planting potential of the land they own or manage.
- 17.3 The majority of officers approached appreciated both the importance and relevance of the collection such information.
- 17.4 A lack of resources, mainly with regards to officer time, was cited as the main obstacle to the collection of planting potential information.
- 17.5 The case study investigations show that potential planting information can be both collected and collated relatively easily by using a combination of officer knowledge and mainstream mapping technology.
- 17.6 There are potential benefits and cost savings which could result from the identification of land suitable for tree planting, and thus being taken out of regular ground maintenance.
- 17.7 There are clear potential benefits which could derive from Compiling a list of potential tree planting sites to enable relevant boroughs and/or third party organisations to apply for funding to support tree planting.
- 17.8 Specific information with regards to tree planting potential could also enable those funding bodies to take a more strategic and informed approach to funding tree planting and green space improvements in London.