
Vacant tree pits in London

London Tree
Officers Association
for
the Greater London
Authority

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1 Introduction

1.1 In his 2016 manifesto the Mayor of London pledged to embark on “a major tree planting programme across London, in partnership with businesses and the public sector.” It is anecdotally reported that there are large numbers of vacant tree pits in London which are thought to be viable for planting but do not contain a tree for one reason or another. In some cases this is likely to be because of a lack of resources – there is simply insufficient funding and staff in the local authority to replant. At the same time it is known that money for tree planting is, or has previously been, available from alternative sources such as Greater London Authority (GLA) and Mayoral grants, Section 106 contributions from developers and donations from citizens and businesses to name but a few.

1.2 If correct, these assumptions – that both the sites and the funding exist in London – would suggest that the key issue to overcome is one of coordination. How best to match up the vacant sites with the appropriate funding? In August 2017 the GLA commissioned the London Tree Officers Association (LTOA) to work on a project which would seek to answer this question. Using the collective pool of knowledge and experience amongst the tree officer community of London this would include assessing the scale of the problem, considering the barriers to overcoming that problem and exploring potential ways to identify and record vacant pits and identify potential funding streams with which to plant them. This report is the outcome of that work.

1.3 Although this report is about vacant tree pits and tree planting, it is important to note that any planting project must also consider the establishment and long-term success of the trees being planted. Planting trees without considering maintenance will never deliver the required results; this means that tree officers should be supported and given the right level of funding and resources to plant, maintain and establish trees for the long term environmental, economic and social benefits that they bring.

1.4 The LTOA was formed in 1982 and has a membership made up of local authority tree officers and an extensive range of associate members. The purpose of the association is to promote, support and enhance the urban forest and those who manage it. The LTOA also acts as an information network connecting tree professionals from London and the rest of the UK – as well as international colleagues – in order to share ideas and experiences about arboriculture and urban forestry. For more information about the LTOA see www.ltoa.org.uk

2 Scope

2.1 This project is London-specific and does not extend beyond the boundaries of Greater London. It has been developed in close collaboration with the GLA. Research and data-gathering was conducted via email, telephone interviews and face-to-face meetings as appropriate. The project brief as agreed with the GLA broke the project down into four distinct phases. Phase One included surveys and interviews. Phase Two was data analysis. Phase Three narrowed down the participants in the study to form a small group of potential pilot Boroughs for further engagement. Phase Four was the collation and presentation of the findings of the project.

2.2 There is an important distinction to be made throughout this project between **vacant** street tree pits and **potential** street tree pits. The authors understand that these terms – as well as the expression ‘tree pit’ itself – can be very hard to define and might mean different things to

different people. However, for the purposes of this project and this report they are each taken to have distinct meanings as follows:

- **Vacant street tree pits** are those pits in hard surfaces where a tree previously stood but which was subsequently removed and not replaced. The vacant pit might be fully empty or might contain a stump, but it will be a pit in which it is believed (if not known for certain) that a tree could be planted. In common tree planting terminology this might be described as replacement planting, as opposed to new.
- **Potential street tree pits** are those sites where there is no pit, where no tree has recently stood before, and where no trial excavations have been undertaken in order to establish whether or not the location is viable. However, based on a visual assessment it is believed that it might be possible to plant a tree there. This might be described as new planting, rather than replacement, and includes planting sites on grass verges.

3 Methodology

3.1 In order to gather some baseline data about the current state of play in relation to vacant tree pits in London a brief survey (henceforth referred to as the Survey) was developed by the LTOA and GLA and circulated to representatives of each of the 33 London Boroughs. The Survey was sent out in October 2017 and contained nine questions as follows:

- **Question 1.** How many vacant street tree pits are there in your Borough? Please state whether this is an exact number or an estimate.
- **Question 2.** Approximately how much does it cost you to plant a vacant tree pit? Please provide an upper and lower cost estimate if appropriate.
- **Question 3.** Do you know where all of the vacant street tree pits are located (GPS coordinated, location details etc..) and would/could you share this data for it to be published?
- **Question 4.** If your Borough has no or limited data regarding vacant tree pits, why is that the case?
- **Question 5.** In an average year how many vacant street tree pits do you plant up?
- **Question 6.** How many vacant tree pits on other local authority land (housing, parks, sports centres, schools etc.) are there in your Borough in addition to vacant street tree pits? Please state whether this is an exact number or an estimate.
- **Question 7.** What existing tree planting funding mechanisms do you use (for example revenue budgets, capital budgets, TfL, LIP, GLA grants, resident/business sponsorship, Section 106 etc.)?
- **Question 8.** Does your Borough CIL (Community Infrastructure Levy) currently contribute to tree planting in your Borough?
- **Question 9.** Would you be interested in working with the LTOA on the next stage of this project to investigate new approaches to public realm tree sponsorship?

3.2 Once the results of the Survey were received and analysed a working party was formed out of the pool of those Boroughs who answered Question 9 in the affirmative. Participants were invited based on the nature of their Borough and their answers to the Survey. A balance was sought which took into consideration criteria such as geography (inner/outer London, north/south, east/west London), quality of data, experience with sponsorship programmes, experience with CIL funding etc.

3.3 The final working party was comprised of Chris Colwell (Westminster), Richard Edwards (Croydon), Colleen O'Sullivan (Camden), John Parker (Transport for London), Becky Porter (LTOA), Gary Rimmer (Brent), Craig Ruddick (Richmond) and Andy Tipping (Barnet). The majority of discussion was undertaken via email but one face-to-face meeting was held on Monday January 29th 2018 for which all participants attended. This meeting generated much of the material contained within this report, which was written by John Parker.

4 Results

4.1 Out of the 33 London Boroughs (including the City of London) 24 responded to the Survey. The following section is a summary of some of the headline figures generated by the Survey.

Q1. How many vacant street tree pits are there in your borough? Please state whether this is an exact number or an estimate.

- 19201 in total, 800 per borough on average.
- Note that there were some significant outliers – one borough has zero vacant pits and one borough has 3000, for example.
- 11 respondents reported that their figures were estimates; this obviously calls the overall results into doubt.

Q2. Approximately how much does it cost you to plant a vacant tree pit? Please provide an upper and lower cost estimate if appropriate.

- On average the cost of planting a vacant tree pit was £307 per pit (excluding the City of London, as per the explanation below).
- An estimate of the total cost of planting up 19201 pits is therefore £5,894,707.
- There were extreme outliers on this question. The cheapest quote per pit was £85 and the most expensive £1250. The City of London reported that each pit costs £8000 to plant but this figure has been removed from the overall totals because a) they plant only extra heavy standards in very high-spec pits and b) they reported zero vacant tree pits. It is believed that the cheapest quotes – such as the reference to £85 – do not include any aftercare whatsoever and, in some cases, might not include the price of purchasing the tree.
- Very few boroughs specified the kind of pit they use or the size of tree they usually plant.

Q3. Do you know where all of these vacant street tree pits are located (GPS coordinates, location details etc.), and would/could you share this data for it to be mapped?

- 20 replied YES, they know where the pits are located. Three said NO. One was N/A (City of London – no vacant pits).
- All 20 happy to share their data.

- Some have GPS coordinates, some are stored on a database, some on maps, others on Excel.

Q4. If your borough has no or limited data regarding vacant street tree pits, why is that the case?

There were seven free-text written responses as follows:

- Little impetus to record this information.
- Base survey carried out in 1992 and has not been kept up to date.
- Sometimes trees are removed in emergency or storm situations and the database records are not updated.
- We need to utilise our database correctly.
- No reliable survey data has been collected.
- Records have not been accurately kept in the past.
- Lack of staff to monitor.

Q5. In an average year how many vacant street tree pits do you plant up?

- Total number given from all respondents was 4200.
- Average number was 233 vacant pits planted every year.
- Two respondents said that they did not know.
- Three respondents replied “100%”, indicating that they plant up all vacant pits every year.

Q6. How many vacant tree pits on other local authority land (housing, parks, sports centres, schools etc.) are there in your borough in addition to vacant street tree pits? Please state whether this is an exact number or an estimate.

- 13 respondents said that they did not have this information.
- Of the other 11 respondents, the total number of vacant pits on other land was 5609.
- This gives an average of 510 pits across the 11 respondents for this question.

Q7. What existing tree planting funding mechanisms do you use (for example revenue budgets, capital budgets, TfL LIP, GLA Grants, resident/business sponsorship, Section 106 etc.)?

Several respondents reported different funding sources, listed below:

- GLA: 13 respondents.
- LIP: 3
- Section 106: 13
- CAVAT/compensation: 3
- CIL: 7
- Revenue: 10
- Capital: 10
- Sponsorship/donations: 4

Q8. Does your borough CIL (Community Infrastructure Levy) currently contribute to tree planting in vacant pits?

- Four respondents reported that they do currently use CIL funding.
- Of the remaining 17 respondents, five indicated that they were planning to use CIL for planting vacant pits or are considering doing so.

Q9. *Would you be interested in working with the LTOA on the next stage of this project to investigate new approaches to public realm tree sponsorship?*

- 15 respondents said that YES they would be interested in working on the next stage of this project.
- 4 respondents said that they would have liked to, but had no time.
- 5 did not respond to this question.

Discussion

5 The scale of the challenge

5.1 It is difficult to judge with any accuracy the precise scale of the challenge involved in identifying all vacant street tree pits in London. Based on the answer to question 3 the situation is positive; 21 of the 24 Boroughs who responded to the Survey claim to know where their vacant tree pits are located. However, in answer to question 1 only 11 respondents stated that their reported number of vacant tree pits was exact as opposed to an estimate. It may be possible to resolve this discrepancy through additional correspondence with participants. Nine Boroughs did not respond to the Survey at all; the state of their data is therefore entirely unknown.

5.2 In order to create an accurate picture of the scale of the challenge it is likely that additional surveys will be required; certainly for the three Boroughs who reported that they don't know where their vacant pits are, and likely for some or all of the nine Boroughs which did not respond to the Survey. This could be achieved through commissioning a standalone survey for all vacant street tree pits to be identified and recorded (this survey would not necessarily need to be undertaken by tree specialists). Alternatively, in those Boroughs which have an imminent tree survey coming up, an additional attribute could be added to the survey specification to have vacant pits recorded.

5.3 There are various obstacles to commissioning surveys such as this. The primary problem appears to be resources; Local Authorities are under significant pressure and many tree officers report having to do more work with less funding. It is likely that many will lack the staff, funding and database to undertake a vacant tree pit survey. In some Boroughs it is felt that the political will is not there to support such an exercise. Tree officers with few resources may feel it is preferable to concentrate on maintaining what they already have to the highest possible standards rather than actively seeking opportunities to introduce new assets to their streets.

5.4 It is impossible to give an accurate estimate of how much it would cost to commission a survey of vacant tree pits due to variations between Boroughs in terms of size, number of vacant pits, contract prices etc. One approach might be to take the total length of pavement in a target Borough (looking at just those pavements where it is known that there have previously been trees), calculate how many miles it is reasonable for a surveyor to walk each day and then use an average contract day rate to determine how much it might cost to have a surveyor walk the length of every street (both sides) to identify and record vacant pits. There are a lot of variables involved in this, not least of all the number of pits which the surveyor identifies and in what format is the information to be recorded and processed.

5.5 Alternatively it may be possible to develop a mechanism for the general public to report vacant pits. This data would likely be incomplete, not entirely accurate and could take a long time to generate and coordinate, but would have the advantage of being relatively inexpensive to

operate once established. However, the costs of creating, publicising and supporting the system might be considerable. The definitions of what is/is not a vacant pit would have to be clearly communicated to participants. Another relatively low-cost option might be to engage an apprentice or BSc/MSc student to work on this as a project.

6 Identifying and recording vacant tree pits

6.1 The ideal method of identifying and recording vacant tree pits is to keep location records as and when existing trees are removed. If vacant pits are to be identified retrospectively then this can be achieved through routine inspections, whether as part of a wider survey (for example a tree inventory or the work undertaken by highways inspectors) or a stand-alone survey to look specifically for vacant pits. A database such as EzyTreev linked to a GIS mapping system is an effective way to record and display the data, although as a day-to-day tool a spreadsheet can also be suitable in lieu of a more expensive or complicated system.

6.2 Feedback from the Survey suggests that those Boroughs with good data are in possession of good systems and processes which are straightforward, easily understood and bought into by all team members. It must be easy to input and extract the data, and data must be kept up to date. Systematic and proactive recording of tree removal information, for example, will help ensure a more accurate database of vacant tree pits. Incorporating a requirement to identify and record vacant tree pits as part of the overall tree or highways inspection regime can be very effective.

6.3 For those Boroughs in possession of the required data in a suitable format it should be possible to upload the information onto the GLA London Tree Map (<https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/trees-and-woodlands/london-tree-map>), although the findings of the Survey suggest that many Boroughs do not currently have the required level of data in the required format. A more important question for tree officers is likely whether or not it is desirable to upload data onto the map. There are some clear advantages – it would make it easier to link potential sponsors with vacant pits, it would help demonstrate how the Mayor's canopy cover targets can be achieved and where resources could best be targeted etc.

6.4 However, there are also potential disadvantages – would existing sponsorship simply be diverted rather than new money actually being found? Would more resources be spent on areas which are already more affluent because they are where the most likely sources of sponsorship are to be identified? Would open data such as this increase pressure on tree officers who might be exposed to criticism from residents and councillors as to why their borough has so many vacant pits (or could this be a good thing)? The London Tree Map appears to be a viable tool for displaying data relating to vacant tree pits but additional details are required before this being fully endorsed and supported as a way forward. The LTOA is keen to work more closely with the GLA on this subject.

7 Community Infrastructure Levy

7.1 The Community Infrastructure Levy (CIL) is generated from funds paid by developers to the Local Authority in which they are working. There are two kinds of CIL:

- Strategic CIL forms the bulk of the money, and approximately 75% of funds collected can be spent borough wide, presumably with no geographical restrictions. In some Boroughs trees are included on the list of things that this money can be spent on as a priority.

- Neighbourhood CIL. Planning legislation states that 15% of funds collected are spent on projects agreed in consultation with local communities (or 25% of funds where a Neighbourhood Plan is in place). It is up to individual local authorities to develop their own process for consultation and allocation. The geographical distribution is determined to an extent by the location of the development which generated the funding in the first place, although these restrictions do not appear to be as tight as those relating to S106 funding.

7.2 Of the 24 Boroughs responding to the Survey only four reported that they have used CIL to fund tree planting as of January 2018. There could be various reasons for this, including a lack of awareness amongst tree officers that CIL money might be available, a lack of time and resources to prepare an application and a lack of political will/senior management support to seek funding. One key factor seems to be making the argument that trees are part of critical infrastructure – this might be helped through the implementation of a Local Authority Tree Strategy or via Natural Capital Accounting.

7.3 The four Boroughs which have previously used CIL reported different processes in each of their Local Authorities. Broadly speaking the process seems to be that an application for funding, supported by the local community and local Councillors, is submitted to the Borough CIL officer. Applications are reviewed at a senior level – by Councillors or a Capital Board – and a decision made accordingly depending on local criteria and national guidelines. CIL cannot be used to fund projects which would ordinarily have been covered by a revenue budget.

7.4 In order to maximise the potential of this funding tree officers are recommended to identify who is responsible for CIL in their Borough and to establish their local procedure, what money is available and how decisions relating to funding allocation are made. It is further recommended that the LTOA work with the GLA to raise awareness of CIL amongst tree officers and to produce guidelines to assist with funding applications.

7.5 There is also a wider issue about capital funding. The 75% CIL pot is only for capital assets. Some Boroughs consider trees to be a capital asset; some don't. This lack of consistency could cause problems for some Boroughs and tree officers. It is worth tree officers finding out from their commercial colleagues whether or not their Borough regards trees as a capital asset.

8 Sponsorship

8.1 Commercial and residential sponsorship of tree planting can often be seen as a good alternative for traditional Local Authority funding models. Benefits include the money saved on the purchase, planting and establishment of the trees and the fact that such programmes can increase community/business engagement and foster a sense of ownership in the community.

8.2 There are also some significant potential drawbacks to sponsorship. If taken too far the sense of ownership created by sponsorship can become a sense of entitlement, with those funding the trees insisting they be allowed to specify their own tree, potentially conflicting with the advice of the tree officer. This has to be managed carefully. One criticism was that this method of funding can increase social divisions and inequality; more affluent areas are able to contribute more money and therefore receive more trees, canopy cover and ecosystem services.

8.3 A common observation from tree officers is that the time and work involved in coordinating multiple sources of funding for relatively low values can be extremely onerous. This situation should be considered in the context of the fact that many tree officers have lost administrative

support over the past decade and are now required to do significantly more paperwork than has previously been the case. The Survey revealed that only four of the 24 respondents currently fund tree planting through sponsorship, which suggests that there are currently barriers to effectively employing such a system.

8.4 One potential way to coordinate sponsorship payments and reduce the workload on tree officers would be investigate the possibility of setting up larger pots of money. Traditionally it seems to be the case that tree planting sponsorship is undertaken on a very local level; a Residents' Association might try to sponsor trees on their street, or a commercial property might offer to fund a tree immediately outside of their premises. Larger pots of money could be created based on, for example, ward boundaries; all sponsorship for a given area paid into an account for that whole area which is then invested in tree planting as appropriate by the tree officer. This could significantly reduce the administrative burden but would still ensure a local connection.

8.5 Existing organisations could be engaged to help with the development of these pots, such as Business Improvement Districts, 'Friends of' groups and Residents' Associations. By involving these groups and explaining the benefits of the system it would be hoped that sponsorship levels would not fall. This would also assist in promoting the scheme.

8.6 Lessons can be learned from existing sponsorship models such as that employed in Lewisham. In simple terms this scheme has the resident association coordinate the sponsorship, take the money and scope the validity of the pit for the Local Authority. The Local Authority then arranges the planting and secure money from the residents association to undertake the necessary works. The residents association is responsible for watering the tree.

9 Other innovative funding streams

9.1 Several other methods of funding – existing and proposed – were mentioned in the Survey responses, some more innovative than others. These included (in no particular order):

9.2 *Section 106 contributions.* Planning obligations agreed between a developer and Local Authority under Section 106 of the Town & Country Planning Act 1990 (as amended). This might include an amount of money set aside for tree planting and associated maintenance. Section 106 funding was a common source of money according to the participants in our survey.

9.3 *Grant funding.* Grants specifically bestowed for tree planting from organisations such as the Greater London Authority (GLA). In 2016/17 the GLA and Mayor of London provided £750,000 in grant funding for tree and woodland planting across London. Several respondents reported using grants as a source of funding for tree planting.

9.4 *Transport for London (TfL) contributions.* TfL provides funding to Boroughs for improvement works, including tree planting. The most common method is via Local Implementation Plan (LIP) funding, whereby TfL provide financial support for Boroughs to implement the Mayor's Transport Strategy.

9.5 *Compensation.* A valuation system such as CAVAT (Capital Asset Valuation of Amenity Trees) can attribute a monetary value to trees which can be used as the basis of compensation payments in the event of removal. This money can then be reinvested into tree planting in mitigation for the losses.

9.6 *Crowdfunding*. This typically involves raising money via a large number of small donations from the general public, often making use of social media. In the context of this survey crowdfunding was mentioned as a potential source of funding rather than one which is actually being used at the current time.

9.7 *Civic pride projects*. In some Boroughs it is possible to make applications for civic pride project funding, supporting initiatives which meet local priority objectives. In some cases tree planting may qualify for a funding application; it is worth exploring what opportunities are available in your local area.

9.8 *Carbon credits*. This is a system whereby businesses or organisations fund tree planting in order to ‘offset’ some of the carbon dioxide which is generated as a result of their corporate activities. Carbon credit-related tree planting typically seems to be undertaken in more rural areas and often involves woodland planting. However it could be applied to urban tree planting.

10 Potential tree pits

10.1 For the purposes of this report the term ‘potential tree pit’ is defined as those sites where there is no pit, where no tree has recently stood before, and where no trial excavations have been undertaken in order to establish whether or not the location is viable. However, based on a visual assessment it is believed that it might be possible to plant a tree there. This might be described as new planting, rather than replacement, and includes planting sites on grass verges.

10.2 The attraction of developing a database to hold information about all potential tree pits in London is obvious; it could be of significant strategic use in planning where trees could be planted in the future. However, the construction of such a database would be an immensely complicated task and would not necessarily generate a useful tool because the accuracy of the data would likely be very limited. In reality it would be possible to display where it was believed that pits could be created, but not where trees could actually be planted.

10.3 There is a huge range of variables to consider when identifying a potential tree planting location. This includes width of footway, proximity of the site to adjacent structures, street furniture and existing vegetation, parking bays and bus stops, sightlines and overhead services to name but a few. All of these potential restrictions must be taken into account before a site can be deemed to be suitable for tree planting.

10.4 Those sites which seem to meet the requirements in relation to above-ground restrictions may yet prove impossible to plant due to underground restrictions. These include basements, ground conditions and – most importantly – underground utilities. The position of underground utilities (and other features such as basements) can sometimes be indicated by surveying the footway for service covers, but these are not always a reliable indication. Scanning for utilities can provide a clearer indication still, but in order to be 100% sure about whether or not it is possible to plant a tree in a specific location a trial hole must be excavated.

10.5 To create a database listing all potential pits it is likely that a full ground survey would have to be undertaken by a competent arboriculturist to identify all locations where it looks possible to plant street trees based on above-ground restrictions and the presence of service covers etc. This would cost a significant amount of money to do and once completed the information would be immediately out of date as the situation on the ground changes, for example due to footway realignments, cycle line creation and the introduction of new infrastructure.

10.6 If the survey described in 10.5 above were possible then in order to give a full picture then all proposed sites would require a trial excavation to determine viability for planting. This would, once again, cost a significant sum of money. Once completed a mechanism would have to be developed through which these potential tree pit sites could be protected to avoid the space being utilised for other purposes. It is unlikely that an effective mechanism such as this could be established and adhered to by all stakeholders – different Local Authority departments, developers, utility companies and any other third parties which might work on the highway.

10.7 TfL is currently developing one solution to this problem in the shape of a potential tree pit app. This app uses existing TfL asset data and establishes a set of criteria for the system to follow, such as minimum of X metres away from the kerb; minimum of Y meters away from bus shelters and so on. By entering in a significant range of criteria a map can be created which shows those spaces which in theory – according to the data entered – could accommodate a tree.

10.8 The TfL app has several limitations which are currently being worked on. It is only as good as the data which is entered into it, which for TfL is very accurate in terms of TfL assets (all of which have coordinates attached) but lacking in relation to third party assets such as existing trees next to the TfL network or – crucially – the presence of underground utilities. Early trials of the app are promising, but it will still be necessary to undertake site inspections and trial holes to determine whether or not the sites are viable for planting.

10.9 In conclusion it would take a vast amount of time and money to create a meaningful database of potential tree pits. Even if this were possible the data would immediately be out of date and it is unlikely that it would be possible to protect the viable sites which had been identified to ensure that they would be available for planting in the future. It is therefore the recommendation of this report that the resources required to pursue such a project would be better spent elsewhere at the current time.

11 Recommendations

11.1 Based on the outcomes of the Survey and subsequent discussions with the LTOA Vacant Tree Pit Working Party, this report makes the following four recommendations for next steps:

Recommendation One: A walking survey of one pilot London Borough be costed and undertaken in order to assess the situation in that Borough and to give an indication into an appropriate methodology and scope for such a survey were it to be rolled out more widely (this Borough should be one with good existing database records).

Recommendation Two: Guidelines should be developed in the use of CIL as a source of funding for tree planting; these guidelines should be aimed at Local Authority tree officers and other interested stakeholders and should summarise the current knowledge, legislation, regulations and best practice.

Recommendation Three: The possibility of setting up a central sponsorship fund in one Borough should be investigated, in which all donations are collected in one place for the tree officer to manage as appropriate. The effectiveness of this trial should be closely monitored.

Recommendation Four: Closer collaboration between Boroughs should be encouraged and facilitated, particularly with a view to assisting those Boroughs with poor data quality/quantity to improve their situation with advice from those Boroughs with good data.

12 References and links

12.1 The following is a non-exhaustive list of references and links which might be of interest in the context of this report.

Greater London Authority: *Greener city fund*.

<https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/greener-city-fund>

Greater London Authority: *London tree map*

<https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/trees-and-woodlands/london-tree-map>

London Borough of Lewisham and the Brockley Society: *Street trees for living*.

<https://brockleystreettrees.blogspot.co.uk/>

London Tree Officers Association: *Homepage*.

<https://www.ltoa.org.uk>

London Tree Officers Association: *Capital Asset Valuation of Amenity Trees (CAVAT)*.

<https://www.ltoa.org.uk/resources/cavat>

Transport for London: *Local Implementation Plans*.

<https://tfl.gov.uk/corporate/publications-and-reports/local-implementation-plans>

Davies, Helen: *Challenges for tree officers to enhance the provision of regulating ecosystem services from urban forests*.

<https://www.sciencedirect.com/science/article/pii/S0013935117304942>

13 Contact

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