

MAYOR OF LONDON



London Environment Strategy CONSULTATION Response

The Trees and Design Action Group (TDAG) is an open collaborative forum facilitating cross-sector and cross-disciplinary dialogue and projects promoting the role of the urban forest throughout the United Kingdom. The group shares the collective vision that the location of trees, and all the benefits they bring, can be secured for future generations through better collaboration in the planning, design, construction and management of our urban infrastructure and spaces.

Established in 2007 as a not-for-profit and apolitical collaborative forum, TDAG incorporated as a charitable trust in 2013. Its membership, online publications and information are free. This approach enables TDAG to assimilate ideas and knowledge independently of organisational hierarchy, profit or commercial interests.

TDAG response contact details:

Sue James, Chartered Architect
for the Trees and Design Action Group
suejamesriba@gmail.com

For further information on TDAG and good practice documents visit: www.tdag.org.uk

Overarching Questions

1. Do you agree with the overall vision and principles of this draft London Environment Strategy?

Yes – but we need to recognise that we are already falling short of previous targets – so what is the action plan?

2. To achieve the policies and proposals in this strategy, which organisations should the Mayor call upon to do more (for example central and local government and businesses) and what should the priorities be?

National government must give clear direction for local government to develop policies and create favourable conditions for business support.

3. Do you agree that this draft London Environment Strategy covers all the major environmental issues facing London?

Yes – but need to consider imported carbon – as do national carbon performance targets.

New buildings with significant mass or height need to undergo pre-planning, contextual model testing to avoid unintended / undesirable micro-climate and other adverse effects on streets, spaces and surrounding areas including existing and newly planted trees (e.g. loss of daylight; loss of sunlight; solar glare; wind turbulence; noise; obstruction of key views; etc)

4. There are a number of targets and milestones in this draft London Environment Strategy, what do you think are the main key performance indicators that would demonstrate progress against this integrated strategy?

We need to have measurable performance targets for green/blue infrastructure as well as for buildings.

5. What are the most important changes Londoners may need to make to achieve the outcomes and ambition of this strategy? What are the best ways to support them to do this?

Central must be behaviour change and the understanding that off-setting carbon etc is not a realistic or sustainable option. Reducing personal vehicular transport use, making greater use of public transport, walking and cycling more are critical to changing London's environment as well as all the behaviours relating to consumption, waste etc.

These changes need to be encouraged through planning, design and management decisions that facilitate more sustainable choices and makes them attractive, rather than simply relying upon regulatory interventions. A considered combination of carrot and stick (with emphasis on the carrots) will be most effective.

Air Quality

- 1. Do you agree that the policies and proposals outlined will meet the Mayor's ambitions for air quality in London and zero emission transport by 2050? Is the proposed approach and pace realistic and achievable, and what further powers might be required?**

'Healthy streets' means what it says on the tin – this includes changing attitudes to personal transport (whatever the source of fuel) so that street space can be reapportioned for more walkers and cyclists to use safely.

Encourage and promote flexible working, including homeworking and digital communications, to reduce regular commuting related to employment, thus reducing overcrowding, congestion and peak time pressures. Fiscal and planning policies would need to be aimed at employers to encourage remote working and developers to provide for home office space and neighbourhood hubs.

- 2. Do you agree with the Mayor's policies and proposals to raise Londoners' awareness of the impacts of poor air quality?**

Yes, in principle

- 3. Do you agree with the Mayor's policies and proposals to safeguard the most vulnerable from poor air quality?**

Yes, in principle

- 4. Would you support emergency measures, such as short-term road closures of vehicle restriction during periods of worst air pollutions (normally once or twice a year)?**

Yes – and permanent road closures where appropriate such as heavy pedestrian use...Oxford Street, Regent's Street etc...

- 5. Do you agree with the proposed approach to reducing emissions from non-transport sources (including new buildings, construction equipment, rail and river vehicles and solid fuel burning)?**

Yes, but have concerns about wood stoves – there are no 'carbon free' wood stoves. <http://www.environmental-protection.org.uk/policy-areas/air-quality/air-pollution-law-and-policy/using-wood-and-coal-for-home-heating/> "Emissions of local air pollution from a modern wood fueled appliance are, however, usually higher than those of an equivalent gas fired appliance. The environmentally friendly choice therefore really depends upon where you live. If you live in a rural area where the air is relatively clean a wood fueled system may be the best option, whilst if you live in an urban area with poor air quality a gas-fired system may be the best choice environmentally."

It should be possible for a city-wide urban forest strategy to contribute positively to the wood fuel economy beyond London's boundaries and to the wood product economy more generally.

6. Please provide any further comments on the policies and programmes mentioned in this chapter.

The role of green infrastructure and air quality: it is vital that this is clearly understood. TDAG will shortly be producing guidance on this in association with the University of Birmingham and Lancaster University. Whilst street trees may intuitively be perceived as contributing to cleaner air, there are technical issues relating to factors such as crown density and form, airflow, pollen counts, etc. which need expert consideration to obtain optimal results.

Green Infrastructure

1. The Mayor's ambition is to make London a National Park City. What should the attributes of a National Park City be and what would we need to achieve for it to be considered successful?

Presumably the National Park City would give greater policy support to the need for green space to be protected and provided throughout the capital.

Moreover, it would enable a landscape (townscape?) led approach to be applied within an urban context, placing a tangible value on the ecosystem services that can be delivered through Green Infrastructure, where buildings and structures incorporate natural assets to contribute to a greener city, together with a reappraisal of the design and management of all open space, including streets and incidental, left over, or marginal spaces. It would also have the potential to encourage the application of a new mindset to the design and management of all new development within the London area.

We can learn from abroad. Singapore is now marketing itself as a 'City within a Garden' with awe-inspiring structures and spaces. There are now established examples in China, Italy and France of vertical forest architecture. Arguably, these provide more sustainable, iconic landmarks for living in than most of the recent high rise buildings in London. The Vauban suburb of Freiburg shows how people, transport and high density buildings can co-exist with greenspace, lush planting and incidental recreation and play opportunities everywhere.

The South Downs National Park Authority has recently published its pre-submission Local Plan¹. This is a groundbreaking, landscape-led plan, with a strong emphasis on the importance of natural capital delivering ecosystem services and the promotion of green infrastructure networks. This may be a useful point of reference for London's National Park City ambitions as, exceptionally for a UK national park, the South Downs includes urban as well as rural areas within its sub-regional scope, serves a catchment population of many millions (including parts of London and the coastal conurbations) and is the eighth largest planning authority in England.

The principle of a National Park City could potentially be supported by National Parks UK and a range of influential interest groups, but would almost certainly require new national legislation and policies to enable a formal designation and ensure appropriate and special planning and management interventions. The existing statutes and policies that relate to the protected status of national parks would not easily translate to the London context. However, there is a precedent in tailoring legislation for particular National Park circumstances in the priority purpose given to navigation in the Broads. London's interests

¹ <https://www.southdowns.gov.uk/planning/national-park-local-plan/>

might be more complex, but where there's a will there could be a way.

The Sandford principle of placing conservation above public enjoyment, which applies to all UK National Parks, would probably need to be modified for London, perhaps substituting 'sustainability' for 'conservation' as a guiding priority objective.

2. In what ways can the Mayor help to ensure a more strategic and coordinated approach to the management of London's network of parks and green spaces?

Establish a Joint Strategic Partnership with representatives from all London Boroughs, Royal Parks and Corporation of London to encourage and enable a more coordinated approach to management and information exchange. Would benefit from involving both Members and officers. This body would ideally work closely with the proposed London Green Spaces Commission.

3. Do you think the proposed policies and programmes will ensure London's important wildlife is protected and enhanced?

Increasing biodiversity is difficult – perhaps some of the brownfield sites should be better protected from automatic development and seen as potential green areas as they are often more biodiverse than so called 'green spaces'.

4. Do you think the proposed policies and programmes will be effective in increasing London's tree canopy cover?

- Trees in London are viewed as a major constraint by many developers and property owners because of their associated risk of causing subsidence damage. TDAG recommends that all new buildings (esp. residential development) on London's expansive clay soils should be constructed on foundations that are designed to accommodate nearby tree and plant root growth and water uptake. Subsoil shrinkage or heave movement is a major constraint on tree planting and a significant cause of existing tree loss, as it can cause subsidence damage and structural failure where conventional <1m deep strip footings are used. Suitable alternatives, which represent good economic value when considered in whole life costing, and when applied routinely, are piled or raft foundations, which can be designed to provide long term stability and support which is compatible with nearby root systems.
- This would require a regulatory intervention to ensure higher standards of foundation design as a norm on such soils. This might arguably be achieved via the planning system, through conditions, but would more effectively be applied via amendments to Building Regulations. These would substantially reduce the disruption, inconvenience and costs to owners, occupiers and insurers, and would provide greater resilience of structures in case of drought (as may more frequently arise due to climate change), whilst enabling greater compatibility with tree and shrub establishment in close proximity to buildings. This would not only allow for more new planting and retention of existing trees, but would reduce risks associated with self-sown trees and other unmanaged phenomena.
- Remind London Boroughs that under S197 of the 1990 Planning Act, they have a **duty** to consider the planting and protection of trees when granting a planning permission. This opportunity to promote tree planting is often ignored where there are no existing trees affected or where the development does not appear to raise obvious landscape implications.
- Ensure that all new trees proposed via landscape or tree conditions relating to

planning permissions are protected by Conditional TPOs, which take effect at the time of planting (*see Model Order in 2012 TPO Regulations*). Any trees proposed / required as part of a planning permission are presumed to have a strategic value which merits the long-term protection and management afforded by a TPO, rather than simply relying upon a 5 year maintenance condition.

- At the moment London's canopy cover is about 21% (i-tree Eco survey) but, of course, this is not evenly distributed.
- A first step is to achieve greater distribution of canopy cover especially in areas of deprivation which can coincide with other aspects of deprivation.
- If there is a 10% increase proposed, does this mean achieving 31% through the Greater London area?
- The present target is not ambitious and there is no indication that it is based on data or scientific evaluation. For example, one could model projected canopy growth of the existing stock and find that a greater % could be achieved simply via this route, but there is no evidence that this has been done. Loss and recruitment rates need to be known, factored in and – arguably - improved through better management. The carrying capacity of London for tree canopy cover could be calculated. The replacement of small stature trees with large, could be factored in.
- While it is not TDAG's preferred approach, if above ground space is restricted then note that fastigate (columnar or upright growing) trees can add substantially to volume of canopy (and therefore beneficial transpiration, gas exchange, particulate filtering, precipitation interception, wildlife value, etc.) without necessarily increasing canopy diameter / spread. Advantages are reduced above ground spatial requirements, lower light and view obstruction. Root space and compatibility with buildings remains a requirement.
- Great effort required to re-adopt existing tree pits
- Achieving canopy targets by 2050 means planting the right trees in the right place now and ensuring that they thrive for the long term.
- In terms of urban forest impact for cooling etc – geographical location and anticipated climate changes are obviously relevant...Washington DC, for example, is aiming for a canopy cover of 40%.
- What is the expectation for London's changing climate and what is the statistical confidence for any scenarios put forward?

5. How best can natural capital thinking be used to secure greater investment in the capital's green infrastructure?

- Work with central government to mainstream valuations of indirect benefits of GI (e.g. air, water soil, health, recreation, wellbeing, etc.) into whole life costings. Seek to develop mechanisms to enable Payments for Ecosystem Services (under consideration by Defra for landowners, foresters and farmers in rural context, esp. post Brexit – could also be applied to urban context – esp. in a National Park City)

6. Please provide any further comments on the policies and programmes mentioned in this chapter.

Detailed TDAG response to the Green Infrastructure Section

1. Note that Green Infrastructure is not synonymous with green space, although it clearly embraces this - together with other natural assets and systems that form components of a multi-functional network that provides a wide range of ecosystem services that create an attractive, comfortable, resilient, sustainable and life-supporting environment.
2. Promote policies (and guidance) for Borough LPA's Development Management that **any** new development, regardless of scale, can contribute to wider GI delivery. Examples applicable to small scale / householder development could include bat boxes, rainwater barrels, permeable paving, green walls and roofs, tree planting, new public access, etc.
3. Canopy cover discussed under the specific question above.
4. Yes – integrated approach is vital and these needs to cut across all the Mayor's strategies.
5. Specifically integrated delivery needs to engage a wider range of stakeholders including:
 - Planning – strategic and development
 - Highways – streets, car parks, other transport corridors and public realm offer multiple opportunities to contribute to GI, via tree planting, permeable surfacing, shared surfaces, landscape treatment of marginal space, etc.
 - Public health interests
 - Green space officers
 - Tree officers
 - Utilities – designing the underworld to enable intelligent management of underground space is critical
 - Water companies
6. The London i-tree Eco survey told us much in broad terms about the capital's trees. However that is only doing part of the job, it is now critical that a Greater London Urban Forest Strategy is put in place.

An adjunct to this is that every borough carries out its own i-tree Eco survey and prepares not only a robust tree strategy but a borough wide urban forest management plan – feeding into London-wide urban forest strategy.

7. Integrated budgets – the i-tree Eco survey showed a number of quantifiable ecosystem services delivered by trees and other research has shown the benefits that trees can bring for many social, environmental and economic aspects of urban living such as health benefits, there does not appear to be sufficient cross-departmental budgeting at national or local level so that part of the health budget can be put to funding trees and green space to achieve the health benefits that these can provide and so create the savings that the health department could make – probably well in excess of the investment provided. More work is urgently needed in this area.
8. Green space factors – what approach will be taken regarding implementation? What is the anticipated take up and implementation at project level to ensure delivery, having learned from the broad canopy cover target featured in the previous plan which didn't provide a very effective means to influence decision making, primarily made at borough level in respect to new developments?

TDAG is undertaking work on this in its forthcoming document *Trees, Planning and Development: A Guide for Delivery*. Of course its focus is on trees and will consider:

- The type of weighting that allows for such an approach to be effective in respects to making the most of trees to create sustainable places. (ie. the focus won't be about

tree numbers but rather, where trees are the right answer, is the system conducive to that solution being chosen)

- What makes it practical to use / enforce, and how arboricultural input is being brought in (when relevant) in that process
- How issues of off-site planting are managed and how can be tied to a 'green fund' that can finance compensatory interventions in the public realm.

Trees, Planning and Development will strongly advocate the need for Local Plans to feature, in addition to the typical protection measures, clear standards for new planting (whether articulated as part of a green space area factor or via other form of quantitative targets (such as number of trees per new dwelling, or per floor area of commercial development, or canopy cover targets for different development profiles, etc.)). The TDAG guide will most likely advocate a range of options to suit different local authority profiles.

9. What we do know is that green spaces of various sizes relative to both residential and commercial areas are desirable for improved health and well-being. This is of increasing concern in areas of greater density where populations can be increased without due care to provide green space. Should there be some kind of requirement for green space provision locally and accessible if not on the site itself? Equally a requirement to contribute to the Greater London urban forest/tree canopy?
10. Tree species selection – this is important both for the right trees in a changing climate and also to achieve the right mix of species for future resilience. The ideal urban forest has a good range of species, age etc.
11. Is there an opportunity for productive woodlands within the Greater London National Park? See contributions to wood fuel outside London area and wood-based products (both as bulk fibre and smaller-scale craft-based inputs) more generally.
12. 60% of London's trees are in private ownership and yet make a major contribution to the urban forest – canopy cover, reducing the UHI etc. Should there be incentives to help private tree owners to protect their existing trees? More use could be made of TPOs.
13. Given the vital and beneficial role that trees can contribute to resolving so many of our urban challenges, should all trees be protected unless there is good reason to demonstrate the need for removal – basically disease rather than a preference not to invest in design to accommodate them?
14. Provision for long-term management resources, including both funding and skills, must complement the creation of new GI assets and the retention / protection of existing assets to ensure that they continue to deliver their planned sustainability objectives. For example, urban trees require frequent maintenance attention as they become established, occasional expert inspections during their mature lifespans and significant skilled resources to dispose of them as they reach the end of their safe lifespan.
15. There are potential GI network links beyond the London Green Grid area to the GreenArc (well-supported in Hertfordshire and Essex), Kent Downs and Surrey Hills AONBs. Collaboration and liaison in delivering links beyond the GLA area of interest would help in building GI capacity and effectiveness in delivering benefits.

Climate Change Mitigation and Energy

- 1. Do you agree that the policies and proposals outlined will meet the Mayor's ambition to make London a zero carbon city by 2050? Is the proposed approach and pace realistic and achievable?**
- 2. To achieve the Mayor's zero carbon ambition we estimate (between now and 2050), up to 100,000 homes will need to be retrofitted every year with energy efficiency measures. Do you agree with the Mayor's policies and proposals to achieve his contribution to this? What more can central government and others do to achieve this?**
- 3. Which policies or programmes would most motivate businesses to reduce energy use and carbon emissions?**
- 4. Please provide any further comments on the policies and programmes mentioned in this chapter, including those in the draft solar action plan and draft fuel poverty action plan that accompany this strategy.**

District heating – see work in Stockholm where tree waster is used to create biochar for tree planting and a bi-product is a district heating scheme. We need to join up our thinking and be bold.

Climate Change Adaptation

- 1. Do you think the Mayor's policies and proposals are sufficient to increase London's resilience to climate change?**
- 2. Do you agree with the Mayor's policies and proposals to make Londoners, more aware of the risks of climate change, like overheating in buildings and flooding following heavy downpours?**
- 3. Do you agree with the Mayor's policies and proposals to reduce water demand and leakages in London?**
- 4. What do you see as the biggest opportunities to tackle climate change risks in London and how can the Mayor support this?**
 - Need to take a more Urban Climate Impact Assessment approach to designing for present and future climates.
 - Not just the use of green infrastructure and local microclimate based masterplanning, but a London-wide, policy-based requirement at the development management stage of planning to include a climate impact assessment for all proposed new developments.

- The overall canopy cover and urban forest can have a significant impact on the urban heat island effects and regional cooling as well as the more local benefits of canopy cover.
- This is another reason to ensure that policies are integrated – green and blue infrastructure, transport and building design.
- The use of SuDs in all new developments regardless of size as well as retrofitting SuDs as part of the London wide approach to surface water management.
- Review management of existing marginal land associated with transport, waterway and utility corridors and installations; car parks, storage, circulation and access spaces, etc. to identify opportunities for introducing **and managing** natural assets / systems including tree (and other vegetation) planting, permeable surfaces, SuDS, wildlife, recreational and amenity provision. TfL could play an important role in this.