

The greenest city in the world

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The draft London Plan and Environment Strategy both contain big ambitions for the capital. Morgan Taylor scrutinises the proposals

The draft [London Plan](#) was published by the capital's mayor Sadiq Khan last November. It aims to build on the progressive policies set out in the Greater London Authority (GLA)'s draft [London Environment Strategy](#) from August, putting into practice the environmental commitments made by the mayor in his election manifesto. Combining policy on London's biggest environmental challenges, these documents seek to make London 'the greenest city in the world', while meeting formidable housebuilding targets.

Air quality is high on the agenda, alongside green infrastructure, waste, climate change adaptation and mitigation, energy, and noise pollution. Integrated, multifunctional solutions are encouraged – a progression from previous policy documents, which largely addressed different disciplines on individual merit.

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Under the plans, the capital would be a zero-carbon city by 2050, and will have increased green space cover to more than 50% in area. The Environment Strategy contains the first solar action plan for London while the ambitious [National Park City](#) concept would finally be realised, albeit with a risk of gimmickry.

A strategic approach

The final London Environment Strategy, due for publication later this year following public consultation last autumn, represents the first policy document to offer an integrated response to every aspect of London's environment. This holistic approach was largely welcomed by environment groups such as [London Wildlife Trust](#) as well as industry bodies. The document focuses on the following 4 strategic approaches.

- **Low-carbon circular economy:** this rethinks the dogma of growth at any cost, too often adopted by industry, and instead encourages the growth of London's low-carbon and environmental goods sector.
- **Smart digital city:** this encourages the application of novel technologies in achieving our environmental goals.
- **Green infrastructure and natural capital accounting:** the way we value our nature and green space is rethought from a financial and social perspective.
- **The healthy streets approach:** a framework for measuring human health and experience is to be embedded in planning decisions.

These approaches inform policy in 2 of the significant chapters in the draft London Plan, [chapter 8](#) on green infrastructure and the natural environment and [chapter 9](#) on sustainable infrastructure. This new draft plan, released for a public consultation in November that ran until 2 March, represents a substantial political statement from the mayor, and could prompt significant shifts in London construction trends; suburban development would be prioritised, with an onus on affordable housing, as would strategic green space planning.

The key sustainability issues and likely implications on future planning scenarios are discussed below.

Air quality

Poor air quality costs the London economy ?3.7bn annually. The capital also sees 9,000 premature deaths each year from the impacts of air pollution, with 20% of primary schools located in areas that breach legal nitrogen dioxide limits; these impacts also disproportionately affect the most vulnerable communities, underlining social inequality in the capital.

The strategy therefore focuses first on empowering the public through a campaign of education and outward communication on air-quality impacts, and improved monitoring and reporting standards will be implemented to help our understanding of the issues. Vulnerable members of society will enjoy new protections, such as being able to use the planning system to ensure that schools and other public buildings are not located in areas of poor air quality. Funding will also be available to clean up the air around schools in polluted areas.

Key measures in the strategy include the phasing-out of fossil-fuelled vehicles, prioritising action on diesel, and promoting more sustainable travel options; the city aims for zero emissions from road transport by 2050. In areas where legal air-quality limits are exceeded, all development proposals must provide evidence to show that any emissions related to combined heat and power (CHP) generation will be equivalent to or lower than those of an ultra-low nitrogen oxide gas boiler, while there will also be new protocols and tools that seek to improve indoor air quality in new developments. Both the strategy and draft London Plan consider a new 'air quality positive' standard, which will require new buildings to clean the air they circulate and emit.

The draft plan emphasises the need for new buildings to contain integral measures to improve air quality, and design out exposure to poor-quality air and noise. Reductions in emissions should be achieved on site; however, where appropriate, off-site measures to improve local air quality may be considered. The draft plan also identifies 187 air-quality focus areas, where mean annual limits for nitrogen dioxide are exceeded and there is high human exposure to the gas.

The key issue here is that currently planned measures to reduce air pollution may not resolve all the issues, and even greater efforts are required. Further guidance will be published on both 'air quality neutral' and 'air quality positive' standards, as well as on reducing construction and demolition impacts.

The mayor places a significant emphasis on the need to engage with the national government to make improvements in air quality happen. While some national action is as a result of EU legislation, it is enacted at national level by the government. National policy approaches will need to be aligned and attitudes to air-quality obligations improved so as not to undermine the prospect of a zero-emission London.

Green policy and biodiversity

London already has a relatively progressive biodiversity policy, with many boroughs requiring net gains in biodiversity, as well as enforcing rigorous green infrastructure design obligations through the supplementary policy base.

The key tenets of these new documents relating to green infrastructure and biodiversity include:

- a green infrastructure approach ? boroughs are to produce multifunctional strategies that address specific environmental and social challenges;
- enhanced and extended green belt;
- continued protection for designated sites and protected or notable habitats and species, with enhancements considered from the start of the development process;
- making London into the first National Park City;
- increasing London?s green cover to more than 50% in area by 2050;
- continuing to conserve and enhance the capital?s biodiversity; and
- valuing London?s natural capital resource, investing in green infrastructure and embedding these concepts in the planning approach to ensure net gains.

New development must avoid fragmenting existing green space, reduce storm water run-off rates by using sustainable drainage, and include new tree planting or features such as green roofs to mitigate any unavoidable loss. Development must provide new green space and establish how impacts to it are offset through the application of an urban greening factor.

Elsewhere in the plan, housebuilding policy encourages use of vacant plots and gardens for new development ? meaning that increased compensatory green infrastructure is required, when read in the context of chapter 8.

These are not new concepts, but the plan firmly embeds biodiversity in strategic decision-making and contains policies that would see positive outcomes for people and wildlife alike. This pushes urban biodiversity conservation to the landscape scale ? as opposed to the current, relatively haphazard, site-by-site approach ? while linking people?s needs with those of nature.

Crucially, the draft recognises biodiversity loss as a globally important issue, and will trigger the need for more quantifiable, evidence-based interventions to protect it.

Climate change and energy

The strategy?s approach to climate change mitigation understandably concentrates on greenhouse gas emission reductions, defining the zero-carbon trajectories up to 2050. Key stages along the zero carbon pathway include:

- Adapting 5-year carbon budgets to reflect changing circumstance or technology. GLA-orientated carbon budgets would thereby be aligned with those created at a national level under the [Climate Change Act 2008](#) .
- Updating the energy hierarchy set out in the current London Plan to:
 - **be lean:** use less energy and manage demand during operation and construction;
 - **be clean:** exploit local energy resources such as secondary waste heat, and supply energy efficiently and cleanly; and
 - **be green:** generate, store and use renewable energy on site.

- Further tightening of the first stage of the energy hierarchy to require more stringent energy efficiency standards. On-site energy performance must continue to meet a 35% emissions reduction under [Part L of the Building Regulations 2013](#) ; based on supporting documents for the last London Plan, this is the theoretical limit for on-site emissions reduction that can be achieved by most building types.
- Developments should be required to manage energy demand throughout the construction and operational phase, prioritising local energy sources, and local air quality should represent a significant consideration in determining energy supply.
- All London boroughs will be required to create, monitor and report on the performance of individual carbon offset funds, which will accept payments from developments that cannot achieve zero-carbon performance on site.
- A solar action plan should be created that looks to:
 - maximise solar technologies on GLA group buildings and land;
 - encourage further solar installations through the use of the planning system;
 - help Londoners retrofit solar technologies with support and funding;
 - provide information to help decision-making on solar proposals; and
 - call on national government to set up a national policy framework to unlock solar energy potential.

Adapting to climate change

The resilience of communities and London's ecosystems is a key theme throughout the strategy, with the threat of climate change factored into all of the disciplines given that the interconnectedness of risks and responses is widely acknowledged.

Specific adaptation measures concentrate on education and management of climate change risk for business and infrastructure providers, reduction of flood risk, protection of water supplies, and preparation of public services, people and infrastructure for extreme heat events.

Key actions in the strategy that may influence development include:

- a revised regional flood risk appraisal and approach to flood risk in new development, including the use of integrated water management strategies;
- setting more ambitious sustainable drainage system requirements for new development as well as encouraging green infrastructure;
- improving water efficiency in new development through augmented policy in the new London Plan, specifying high water efficiency standards ? with a maximum of 105 litres per person per day for household water consumption ? at the planning stage; and
- implement policies in the new plan that minimise the risk of new development overheating and reducing its contribution to the urban heat island effect through passive cooling or green infrastructure design and thus providing more shade at street level.

The draft plan requires that local plans and development proposals should respond to issues related to climate change. The [Central Activity Zone](#) is highlighted, given its risk of a more intense urban heat island effect, alongside its increased vulnerability to surface water flooding. The heat island effect is specifically addressed through draft policy SI4, seeking high-quality design to reduce overheating.

The ability for London to adapt to inevitable climate change is inherently linked to the other environmental issues in the strategy. Connecting the city's view of green infrastructure and the health of its residents, for example, will require consideration of a changing climate and

how resilience can be integrated into what is built for future generations.

Summary

A clear thread throughout the draft strategy and London Plan is a multidisciplinary response to the capital's key environmental risks. New green space should not be provided for biodiversity or amenity use alone, but should form part of wider air quality improvement, flood risk reduction and mitigation of the urban heat island. All these elements will be enforced through more rigorous planning policy embedded in the finalised plan, which is due for publication in 2019.

The plan also seeks to see a housebuilding boom, with 650,000 homes set to be constructed by 2029, 50% of which should be affordable. This comes at the cost of policies that restrict building in gardens and limits on development density – 2 actions that seem at odds with the environmental credentials elsewhere in the plan. The design of, and approach to, future development in London will therefore need to be innovative, factoring in forward-thinking technology alongside multifunctional natural interventions. In this respect, green infrastructure represents an all-encompassing solution.

Developers and design teams will have an obligation to set standards beyond the minimum requirements, acting as world leaders in climate change mitigation and adaptation. It's likely to be a challenge, but a rounded approach that takes account of both financial and natural capital gains is the only realistic option in creating sustainable, and accordingly profitable, urban communities.

One risk is that these policies may lack teeth when it comes to implementation and be a bit late where it really matters, particularly when it comes to air pollution and biodiversity loss. The mayor's green agenda also risks being undermined by City Hall's slow progress in fossil fuel divestment. Nonetheless, these documents prove that being green needn't come at a cost to business – and in fact stands to benefit significantly those who live and work in the capital.

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Further information

- Related competencies include: [Planning](#) , [Sustainability](#)
- This feature is taken from the [RICS Land journal](#) (April/May 2018)
- Related categories: [Neighbourhood planning](#) , [Environmental management and policy](#) , [Environmental and energy infrastructure](#)