



THE LONDON PLAN 2021

(Policies SI 2 & SI 4)

Introduction

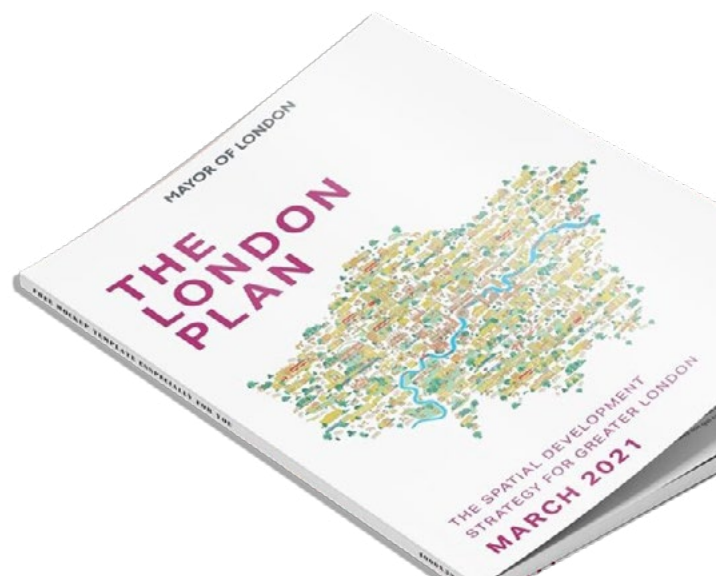
The London Plan is the statutory Spatial Development Strategy for Greater London prepared by the Mayor of London in accordance with the Greater London Authority Act 1999 (as amended) (the GLA Act) and associated regulations. The Mayor of London, Sadiq Khan, said in his foreword in the new London Plan “This new London Plan marks a break with previous London Plans, represents a step-change in our approach and serves as a blueprint for the future development and sustainable, inclusive growth of our city”.

The London Plan 2021 (which is the third since it was first published in 2004) was formally published and adopted on 2 March 2021, four years after its first inception. It’s planned to set the structure for how London will develop over the next 25 years. It appears at a challenging time for London as it seeks to create a new post-Brexit identity and continue its global position, whilst emerging from the Covid pandemic.

The structure of the new London Plan has been changed from previous versions. As sustainability engineers, we will review in this article the policies in Chapter 9 – Sustainable Infrastructure. (In previous versions these policies were in Chapter 5 – London’s Response to Climate Change.) In particular we will review policies SI 2 Minimising greenhouse gas emissions, and SI 4 Managing heat risk.





Everything we need to know about policies SI 2 and SI 4

If you are an architect, developer, building services engineer or a sustainability engineer it will be very important to be familiar with these two policies, so that your energy strategy meets planning requirements at design stage, and achieves the necessary carbon reductions.



Policy SI 2 Minimising greenhouse gas emissions

In line with the London Plan, major developments are expected to be net zero-carbon by incorporating a series of measures outlined in the following energy hierarchy:

-  Be lean: use less energy and manage demand during operation through fabric and servicing improvements and the incorporation of flexibility measures
-  Be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly by connecting to district heating networks
-  Be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site
-  Be seen: monitor, verify and report on energy performance through the Mayor's post construction monitoring platform. (Please note that the final 'Be Seen' energy monitoring guidance and 'Be Seen' reporting template are expected to be published in summer 2021)

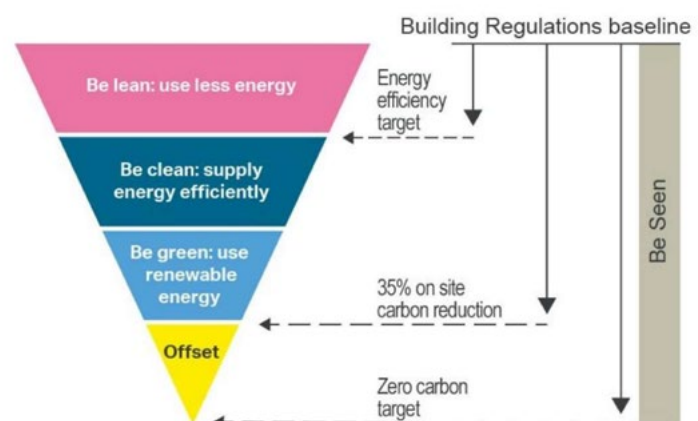
Carbon offsetting

If the net zero-carbon target cannot be met on site and the GLA is satisfied that on-site savings have been maximised, then the annual remaining carbon emissions figure is multiplied by the assumed lifetime of the development's services (e.g. 30 years) to give the cumulative shortfall. The cumulative shortfall is multiplied by the carbon dioxide offset price to determine the required cash-in-lieu contribution. Boroughs are expected to use the recommended carbon offset price of £95 per tonne of carbon dioxide or to set their own based on local viability evidence.

The Mayor's London Plan Viability Study assumes a carbon offset price of £95 per tonne of carbon dioxide for a period of 30 years. The GLA will regularly review the recommended carbon offset price.

The London Plan energy hierarchy

- Major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy:
- A minimum on-site reduction of at least 35 per cent beyond 2013 Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:
 - Through a cash in lieu contribution to the borough's carbon offset fund, or
 - Off-site provided that an alternative proposal is identified and delivery is certain.
- Boroughs must establish and administer a carbon offset fund. Offset fund payments must be ring-fenced to implement projects that deliver carbon reductions. The operation of offset funds should be monitored and reported on annually. Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions. Development proposals referable to the Mayor should calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.
- To meet the zero-carbon target, an on-site reduction of at least 35 per cent beyond the baseline of Part L of the current Building Regulations is required. The minimum improvement over the Target Emission Rate (TER) will increase over a period of time in order to achieve the zero-carbon London ambition and reflect the costs of more efficient construction methods. This will be reflected in future updates to the London Plan.



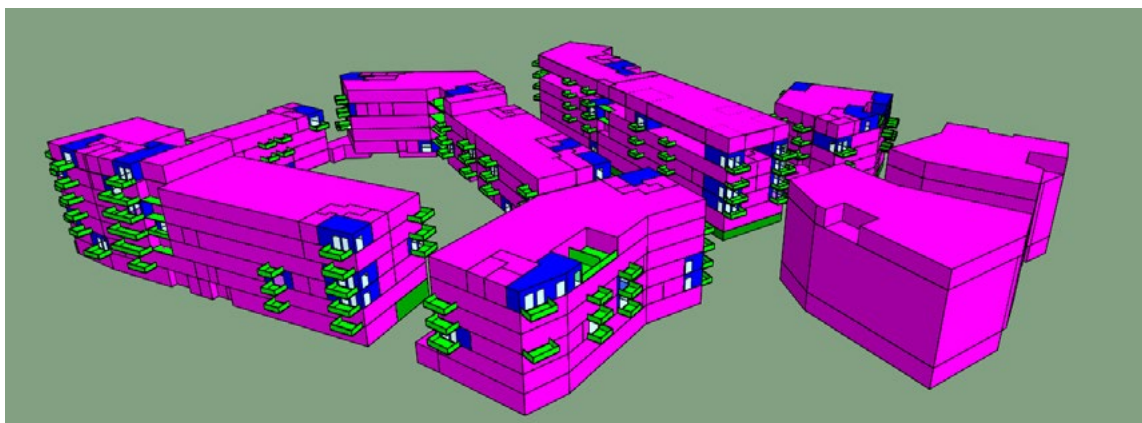
Policy SI 4 Managing heat risk

It is essential to recognise potential overheating risk in residential accommodation early on in the design process and then combine appropriate passive measures within the building envelope and building services design to mitigate overheating and reduce cooling demand in line with London Plan Policy SI 4. The points below are a summary of Policy SI 4 in new London plan 2021

Development proposals should minimise adverse impacts on the urban heat island through design, layout, orientation, materials and the incorporation of green infrastructure.

Major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the following cooling hierarchy:

1. Reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure
2. Minimise internal heat generation through energy efficient design
3. Manage the heat within the building through exposed internal thermal mass and high ceilings
4. Provide passive ventilation
5. Provide mechanical ventilation
6. Provide active cooling systems.



Summary

- ✓ Minimum performance standard for passive improvement (Be Lean)- 10% for residential development and 15% for non-residential development
- ✓ A minimum on-site reduction of at least 35% based on current Building Regulations.
- ✓ Developers will be expected to maximise opportunities for on site electricity and heat production from renewable and low carbon technology
- ✓ Carbon offset price of £95 per tonne of carbon dioxide for a period of 30 years. Applies to new build non-domestic as well as domestic.
- ✓ Minimising greenhouse gas emissions requires whole life carbon (WLC) assessments.
- ✓ The new requirement to monitor and report on energy performance for at least 5 years (Be Seen)
- ✓ Overheating requirements more rigorous

References

De, S. A. L., Ategy, S. T. R., & Gre, F. O. R. (2021). the London Plan (Issue March). www.london.gov.uk

Greater London Authority. (2020). Energy Assessment Guidance. October, 14–14. www.london.gov.uk

JDSUPRA. (2021). The shape of things to come: adoption of the new London Plan. <https://www.jdsupra.com/legalnews/the-shape-of-things-to-come-adoption-of-4529476/>

Page one photo by https://unsplash.com/@giamboscaro?utm_source=unsplash&utm_medium=referral&utm_content=creditCopyText> Giannmarco on https://unsplash.com/s/photos/london-city?utm_source=unsplash&utm_medium=referral&utm_content=creditCopyText> Unsplash

Page five photo by https://unsplash.com/@fasbytes?utm_source=unsplash&utm_medium=referral&utm_content=creditCopyText>Fas Khan on https://unsplash.com/s/photos/london-sunset?utm_source=unsplash&utm_medium=referral&utm_content=creditCopyText>Unsplash