

Sadiq Khan (Mayor of London)
New London Plan
GLA City Hall
London Plan Team
Post Point 18
FREEPOST RT JC-XBZZ-GJKZ
London SE1 2AA

1 March 2018

Dear Mayor of London

Consultation on Draft New London Plan

1. I am writing on behalf of Clean Air in London (CAL) to respond to the Mayor of London's consultation on the Draft New London Plan (NLP). Thank you for the opportunity to do so.
2. CAL is a voluntary organisation which campaigns to achieve urgently and sustainably full compliance with World Health Organisation (WHO) guidelines for air quality throughout London and elsewhere. Further information about CAL can be found at <https://cleanair.london/>.
3. CAL is independent of any government funding, has cross-party support and a large number of supporters both individuals and organisations. CAL provides a channel for both public concern and expert opinion on air pollution. This submission provides both general and expert comments in response to the Consultation.

Summary

4. CAL supports the NLP in as far as it goes.
5. However, CAL considers that the severity of the air pollution problems in the London, including breaches of air quality limit values and high energy use, combined with its iconic status, show the need and opportunity for London to take a more ambitious path to: comply fully with air quality limit values as soon as possible; achieve the relevant United Nations' Sustainable Development Goals (SDGs); and achieve Science Based Targets for reductions in carbon emissions. London should be an 'exemplar'.
6. Of particular concern, CAL urges you to take immediate steps to ensure that energy policy does not undermine the significant and continuing air quality improvements that are being achieved by your action to reduce harmful exhaust emissions from transport. CAL is extremely concerned about emissions from gas engine combined heat and power units (never mind those that burn biomass or other fossil fuels). You need to review and amend urgently *inter alia* the heat/energy hierarchy to address this problem. New policies and measures to control energy emissions must apply London-wide, not only in areas exceeding legal limits, because these CHP units can cause sharp increases in nitrogen dioxide (NO₂) concentrations e.g. as has reportedly happened around St Bartholomew's Hospital in the City of London.

7. This letter submits comments and evidence to demonstrate the ‘deliverability’ of this approach.
8. CAL is submitting as evidence work done by MSc students studying in the Centre for Environmental Policy at Imperial College London on sustainability in Knightsbridge. Please find attached their excellent final report dated 9 May 2017 which should now please be included in the NLP’s evidence base (attached). Please also include the Opinion on ‘Air Quality Directive 2008/50/EC and Planning’ by Robert McCracken QC for CAL dated 6 October 2015 in the NLP’s evidence base (attached) (noting the small amendment beside his signature on the final page). CAL would be like to give oral evidence to the Examination in Public if requested.
9. CAL draws your attention to the Knightsbridge Neighbourhood Plan which is currently undergoing examination. It includes exemplary environmental, energy and sustainability policies. I Chair the Knightsbridge Neighbourhood Forum. See:

<https://www.westminster.gov.uk/NP-knightsbridge>

10. CAL submits the following updates and further information:

Air pollution levels

11. Concentrations of particulate matter (PM_{2.5} and PM₁₀) and nitrogen dioxide (NO₂), a toxic gas, in London are monitored by the London Air Quality Network and Air Quality England/Ricardo Energy and Environment and reported here:

<https://www.londonair.org.uk/london/asp/publicstats.asp>

http://www.airqualityengland.co.uk/site/latest?site_id=KC3

12. NO₂ concentrations in London exceeded the WHO’s hourly guideline of 200 micrograms per cubic metre (ug/m³) in many places in 2017. The legal limit is 18 exceedances in a calendar year. Annual mean concentrations of PM_{2.5} and NO₂ also exceeded respectively their WHO guidelines and for NO₂, the legal limit of 40 ug/m³. These legal limits have been in legislation since 1999 to be complied with by 2005/2011 and 1 January 2010. See your own report on PM_{2.5} exposure.

<https://www.london.gov.uk/press-releases/mayoral/every-londoner-is-exposed-to-dangerous-toxic-air>

13. Improvements have been seen in January 2018 compared to January 2017 but it would be premature to consider this trend reliable since recent weather has been unusually wet and windy.

Health risks

14. According to the latest Public Health England data, deaths attributable to annual mean concentrations of fine particles (PM_{2.5}) in London were still the highest in England in 2015 at 5.6%:

<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data-page/3/gid/1000043/pat/6/par/E12000007/ati/102/are/E09000002/iid/30101/age/230/sex/4>

Legal breaches

15. You will be aware that the UK Government is facing determined legal action to enforce NO₂ laws in the UK Courts and through infraction action by the European Commission to comply with NO₂ limit values ‘as soon as possible’:

<https://www.clientearth.org/welsh-government-admits-high-court-no-plan-air-pollution-unlawful/>

<https://www.clientearth.org/uk-minister-discourages-diesel-pollution-deadline-looms/>

http://europa.eu/rapid/press-release_STATEMENT-18-508_en.htm

Draft New London Plan

16. CAL is pleased to see that the NLP aligns key aspects of its air quality policies (Policy SI1 Improving air quality) to the requirements in Directive 2008/50/EC on ambient air quality and cleaner air for Europe. This approach is consistent with advice from Robert McCracken QC to CAL dated 6 October 2015 (attached).

<https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-new-london-plan/chapter-9-sustainable-infrastructure/policy-si1-improving-air-quality>

https://cleanair.london/app/uploads/CAL-322-Robert-McCracken-QC-opinion-for-CAL_Air-Quality-Directive-and-Planning_Signed-061015.pdf

17. CAL considers that the NLP can and should aim at achieving relevant SDGs and other ‘outcomes’ without imposing unrealistic requirements on all development immediately. Also that the NLP offers an opportunity or path for London to take charge of its own destiny e.g. by not relying, as the Mayor is doing on government action to decarbonise the national energy network. Please see:

MQT 2018/0377 dated 22 February 2018

London Plan and carbon reduction targets (2)

http://questions.london.gov.uk/QuestionSearch/searchclient/questions/question_297923

Caroline Russell

In answer to my question 2018/0107, are you saying that you expect the draft new London Plan to achieve only 55 per cent of the emissions reduction needed to make London a zero carbon city by 2050, with decarbonisation of the energy grids by national action needed to achieve the remainder?

Answer

The Mayor

To get to zero carbon by 2050 requires national action, including the decarbonisation of energy grid, estimated to deliver 45 per cent of the emissions reduction needed. The remaining 55 per cent can be met through the combination of measures set out in our draft London Environment Strategy, incorporating policies and proposals from the draft Transport Strategy and draft new London Plan. However, much of this action is reliant on appropriate powers and funding being made available to London.

MQT 2018/0105 dated 18 January 2018

London Plan and UN Sustainable Development Goals

http://questions.london.gov.uk/QuestionSearch/searchclient/questions/question_297519

Caroline Russell

Has your draft London Plan been tested against necessary outcomes, such as achieving the 169 targets underpinning the United Nation's Sustainable Development Goals by 2030?

Answer

The Mayor

The London Plan has been subject to an Integrated Impact Assessment, which incorporates the statutory and non-statutory requirements of Strategic Environmental Assessment (SEA), Sustainability Appraisal (SA), Equalities Impact Assessment (EqIA), Health Impact Assessment (HIA), Community Safety Impact Assessment (CSIA), and Habitats Regulation Assessment (HRA). Collectively, these assessments require the consideration of a range of social, economic and environmental issues which are specific to London's circumstances. The IIA and HRA are published on the GLA website and any comments on them should be submitted by 2 March 2018.

MQT 2018/0107 dated 18 January 2018

London Plan and carbon reduction targets

http://questions.london.gov.uk/QuestionSearch/searchclient/questions/question_297521

Caroline Russell

Are the energy policies in your draft London Plan sufficient to reduce greenhouse gas emissions in line with the level of decarbonisation required to keep global temperature increase below two degrees Celsius, compared with pre-industrial temperatures, as described in the Fifth Assessment of the Report of the Intergovernmental Panel on Climate Change (IPCC AR5)?

Answer

The Mayor

My commitment to make London a zero carbon city by 2050 reflects the decarbonisation needed to keep global temperature increases below two degrees Celsius. The energy policies in my draft London Plan follow through on this commitment, setting a requirement for all new major developments to be net zero-carbon.

However, with 80 percent of today's buildings still likely to be standing by 2050, it is critical that these properties are retrofitted with energy efficiency and decarbonisation measures and London's transport becomes zero emission to meet my zero carbon ambitions. My environment and transport strategies set out how I will use my powers to do this, but it is vital that government follows my lead and develops supportive national policy and funding. Indeed, to get to zero carbon requires national action, including the decarbonisation of energy grids, to deliver a 45 percent of the emissions reduction needed.

Specific policies

CAL submits the following technical comments and evidence on three specific policy areas.

Policy T3 'Transport capacity, connectivity and safeguarding', Policies T6.1-T6.5 inclusive on 'Parking' and Policy T7 'Freight and servicing'

18. CAL would like these policies to be more ambitious. Sustainable development should require financial and other contributions towards the provision of local sub-stations. Please therefore amend these policies and also mention 'import' and 'export' of electricity to/from electric vehicles (EVs) and other energy units explicitly. This infrastructure can be provided through s106 agreements and other planning obligation monies.

19. The uptake of EVs is expected to lead to significant electricity demand growth. For example, National Grid expects EV charging to be a major contributor to increasing peak electricity demand, particularly in the 2030s. By 2050 EV's are expected to comprise 11% of annual electricity demand in National Grid's "Consumer Power" *Future Energy Scenarios* dated July 2017 (FES 2017). See pages 42 and 43:

<http://fes.nationalgrid.com/media/1253/final-fes-2017-updated-interactive-pdf-44-amended.pdf>

20. This is expected to increase the demand on local electricity distribution networks, requiring upgrades. UK Power Networks (UKPN) is the Distribution Network Operator (DNO) in London. Please see their recent Consultation Report titled *Future Smart – A smart grid for all: Our transition to Distribution System Operator* (DSO):

<http://futuresmart.ukpowernetworks.co.uk/wp-content/themes/ukpnfuturesmart/assets/pdf/FutureSmart-Consultation-Report.pdf>

UKPN's DSO Priority 5 is to 'Prepare and facilitate the uptake of electric vehicles' (page 55).

21. UKPN and other operators are looking to innovate:

https://www.ofgem.gov.uk/system/files/docs/2017/11/active_response_fsp_v3.1_public.pdf

22. In CAL's opinion, developers should ensure that they:

- a. secure sufficient network capacity for electrical vehicle charging (import capacity);
- b. consider securing sufficient network capacity for electric vehicles to export to the grid (export capacity).

Ovo Energy (an electricity supplier) and Nissan (a car manufacturer) have already announced a new collaboration to accelerate the adoption of home battery storage in the UK (2 October 2017):

<https://www.ovoenergy.com/ovo-newsroom/press-releases/2017/october/nissan-and-ovo-announce-a-new-collaboration-to-accelerate-the-adoption-of-home-battery-storage-in-the-uk.html>

This is an excellent example of 'vehicle-to-grid' technologies, which are expected to increase as electric vehicle adoption increases. Electric vehicle batteries have the potential to contribute to balancing the electricity network and providing electricity storage to enable the integration of increased intermittent renewable energy generation (wind/solar); and

- c. engage with the local DNO, UKPN in London, before submitting a planning application to ensure that the electrical designs are consistent with current best practice and future-proofed as far as possible.

23. CAL would like the NLP to refer explicitly to the need to address the export of electricity from vehicles.

Policy S11 'Improving air quality' (page 320)

24. CAL strongly supports the NLP's alignment of its 'Improving air quality' policy to the legal requirements of Directive 2008/50/EC. Please however go further and adopt an holistic approach to reducing local air pollution and greenhouse gases.

25. CAL would like the Plan to require the design and implementation of development to meet the expected needs of local people, including residents and occupiers within the development, long after the developer has sold their interest in the property.

26. Please include the following wording in the 'Improving air quality' policy on indoor air quality:

New development and substantial refurbishment of existing buildings (medium and larger) must demonstrate that it is designed to ensure that indoor air quality complies with the latest WHO

guidelines for short and long-term air quality including particulate matter (PM_{2.5} and PM₁₀), nitrogen dioxide (NO₂), carbon monoxide (CO), formaldehyde and volatile organic compounds (VOCs). Carbon dioxide (CO₂) concentrations in indoor air should also be considered.

27. A new British Standard called BS EN 16798-3:2017 replaces BS EN 13779:2007. This new standard gives an easy reference table to link WHO maximum pollution exposure levels to indoor and outdoor pollution levels.

From this table is easy to calculate the required minimum air filtration efficiency for ventilation filters to deliver clean air into buildings.

There are also much more accurate recent ISO filter test standards to ensure close to real life air filter performance for particles and gases.

For the first time it is now possible to offer guidance by referencing these standards: BS CEN ISO 16890:2016 and BS CEN ISO 10121-2:2013.

28. Please refer to the latest standards for indoor air quality in SI1:

- BS EN 16798-3:2017
- BS CEN ISO 16890:2016
- BS CEN ISO 10121-2:2013

It should also refer to: the need to follow best practice internationally; and separately to Building Regulations 2010 ‘F1 Means of ventilation’ e.g. ‘Appendix A: Performance-based ventilation’ and Appendix D: Minimising ingress of external pollution into buildings in urban areas’ which set out certain requirements for indoor air quality e.g. NO₂:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/468871/ADF_LOCKED.pdf

Policy SI2 ‘Minimising greenhouse gas emissions’ and Policy SI3 ‘Energy infrastructure’

29. CAL would like these policies to support more explicitly:

- i. Zero local emissions to air now
- ii. Minimum regulated energy use
- iii. Minimum unregulated energy use
- iv. Maximum renewable energy generation on-site
- v. Maximum proportion of renewable energy generation off-site for residual needs
- vi. Future-proofed provision of battery storage to optimise import and export of electricity

30. CAL draws the Mayor’s attention to written evidence submitted by the City of London to the current Parliamentary inquiry into ‘Improving Air Quality’:

<http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/environment-food-and-rural-affairs-committee/joint-inquiry-into-improving-air-quality/written/72427.pdf>

31. CAL is alarmed by the recent trends towards: wood burning (in stoves or illegally in open fireplaces) within the gas grid; decentralised generation using fossil fuels (e.g. combined heat and power and gas boilers); and the use of standby diesel generators as a source of profit. All these activities will have an adverse impact on the health of local people and must be phased out.
32. Of particular concern, CAL urges you to take immediate steps to ensure that energy policy does not undermine the significant and continuing air quality improvements that are being achieved by your action to reduce harmful exhaust emissions from transport. CAL is extremely concerned about emissions from gas engine combined heat and power units (never mind those that burn biomass or other fossil fuels). You need to review and amend urgently *inter alia* the heat/energy hierarchy to address this problem. New policies and measures to control energy emissions must apply London-wide, not only in areas exceeding legal limits, because these CHP units can cause sharp increases in nitrogen dioxide (NO₂) concentrations e.g. as has reportedly happened around St Bartholomew's Hospital in the City of London.

Zero air emissions

33. With a few exceptions, there is no longer any need to burn fossil fuels in cities. CAL considers that all new development and local vehicles should be powered solely by electricity generated from on-site or off-site renewable energy. Developers adopting this approach are highly likely to comply fully with the policies above.

Minimise energy use

34. Developments should avoid installing cooking, heating and/or water heating appliances which consume or combust fossil fuel. This means that the heating technologies installed are likely to be electrical in nature.
35. In order to minimise energy usage developers should be encouraged to maximise the efficiency of installed heating/cooling appliances. Air and/or ground source heat pumps are likely to meet these criteria, offering much improved efficiency over electrical (resistive) heating; the best heat pumps use 80% less electricity than resistive heaters.
36. The UK Government's Committee on Climate Change (CCC) envisages at least 2.5m heat pumps in buildings by 2030 in its recent report titled '*An independent assessment of the UK's Clean Growth Strategy – From ambition to action*' dated January 2018 (see Box 2.4 on page 12):

<https://www.theccc.org.uk/wp-content/uploads/2018/01/CCC-Independent-Assessment-of-UKs-Clean-Growth-Strategy-2018.pdf>
37. The CCC's report also addresses the need to upgrade the energy performance of the UK's building stock (page 57), the phasing out of fossil fuel heating (page 59) and new low-carbon electricity generation (page 60).
38. The UK National Grid's '*Future Energy Scenarios*' (FES 2017) report concludes that residential gas boilers will need to reduce from 22 million in 2017 to 7 million by 2050 in order to meet carbon

reduction targets at least cost. The housing stock will also need to be 40% more thermally efficient by 2050.

Maximise renewable energy (on-site and off-site)

39. CAL requests that a definition of Renewable Energy including only energy that produces zero local air emissions. This definition is appropriate because of local air quality issues and the urgent need to reduce greenhouse gas emissions in London and elsewhere.
40. CAL recommends that a minimum threshold should be placed on the 'Coefficient of Performance' (efficiency) of 'heat pumps' in order for them to classify as renewable. Where possible the electrical load of the heat pumps should also be met by on-site renewable energy generation (such as rooftop solar PV).
41. CAL recommends that a definition of renewable energy should also include 'geothermal technologies', noting that these are currently in an early stage of commercialisation in the UK.
42. Exemplars in the UK include:
 - a. Passivhaus Trust which provides examples of energy efficient buildings:
<http://www.passivhaustrust.org.uk/>
 - b. The Crystal in East London which demonstrates a combination of energy efficient and renewable energy technologies and sustainability in buildings:
<https://www.thecrystal.org/>
43. Generators in buildings should only be used in genuine emergencies. This is consistent with the recent legislation laid by Defra to implement the Medium Combustion Plant Directive (MCPD):
<https://theenergyst.com/medium-combustion-plant-directive-takes-diesel-back-dsr>
44. The MCPD forms part of the European Union's (EU) Clean Air Policy Package (2013) for medium sized combustion plants with emissions of between 1 and 50 MWth input. The MCPD limits the levels of pollutants that can be emitted from these small and medium sized generating plant.
45. Defra has also included in the legislation measures to ensure that back-up generators are only used for back-up purposes and not to participate in the electricity market; note that this definition includes the 'wholesale market', the 'capacity market' (CM) and the provision of 'grid services' (such as STOR).
46. Please see also excellent work being done by Adelaide City Council in Australia as part of its commitment to being carbon neutral by 2025:

Sustainability Incentive Scheme - reimbursement for installation of water and energy devices

<http://www.cityofadelaide.com.au/your-council/funding/sustainable-city-incentives-scheme>

Solar Savers – upfront payment for purchase and installation of solar PV on low-income and rental residential properties

<http://www.cityofadelaide.com.au/your-council/funding/solar-savers-adelaide>

City Switch Green Office – provides advice and a network for businesses to cut down their emissions profile

<http://www.cityofadelaide.com.au/your-council/funding/cityswitch-green-office>

Electric vehicles – charging hub at 109 Franklin Street

<http://www.cityofadelaide.com.au/explore-the-city/city-travelling-transport/green-travel/electric-vehicle-charging-points>

Building upgrade finance

The Building Upgrade Finance (BUF) mechanism assists building owners access long-term finance at competitive fixed interest rates to improve energy, water and waste efficiency of existing commercial buildings and undertake upgrades to heritage buildings.

47. CAL strongly recommends that the NLP include a requirement for medium and larger development inclusive to obtain or match the equivalent of:

- a. BREEAM Outstanding rating (less than top 1% of UK new non-domestic buildings (innovator))

<https://www.breeam.com/>

- b. and/or the WELL Building Standard® Gold or Platinum Certification

<https://www.wellcertified.com/en/explore-standard>

...or show that the development would meet the requirements of these standards if full ‘credit’ were given for relevant scoring if it complies fully with ‘Healthy air’ and ‘Renewable energy’ policies along the lines described above.

48. Cundall is an exemplar with its London office becoming the first project in Europe to achieve the WELL Certification at the Gold Level (28 November 2016):

<http://www.cundall.com/News/Our-London-office-becomes-first-project-in-Europe-to-achieve-WELL-Certification.aspx>

Neighbourhood Management Plan and Community Infrastructure Levy

49. CAL supports proposals for the spending of monies arising from planning obligations as far as they go. However, CAL urges the NLP to be bolder in enabling the Mayor of London's so-called ultra-low emission zone to be bigger, stronger and smarter much sooner than planned e.g. by 1 January 2020. Please also address the need and opportunity for electricity infrastructure in Policies and proposed principles and projects for the spending of planning obligation monies.

Close

50. Please contact me if you have any questions. CAL would like to give oral evidence to the Examination in Public if invited to do so.

Yours sincerely

Simon Birkett
Founder and Director
Clean Air in London

Enclosures