

Sadiq Khan  
Mayor of London

Via email: [LondonPlan@london.gov.uk](mailto:LondonPlan@london.gov.uk)

23 Feb 2018

Dear Mr Mayor

Comments on draft London Plan

BSRIA is a membership based Research and Technical Organisation with significant expertise in improving the quality of the built environment. We have a strong focus on sustainable development; our mission is to Make Buildings Better, which we deliver through undertaking research, testing, market intelligence, calibrating and hiring instrumentation, information dissemination and training.

We are particularly supportive of the Mayor's aspiration to make London a zero carbon city, although we believe that given the Paris Agreement and imperative of reducing carbon swiftly, this should be brought forward to 2030. This will also support better performing buildings, help develop skills and businesses in the Capital, and support London's position as a world-leading city.

Our comments are largely aimed at supporting and enhancing the liveability of London and helping to reach the carbon target quickly and cost effectively. We have set our comments out alongside the policies and paragraphs to which they relate.

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**Policy GG1 (E):** "Ensure that new buildings and the spaces they create are designed to reinforce or enhance the legibility, permeability, and inclusivity of neighbourhoods, and are resilient and adaptable to changing community requirements"

ADD: "*and to climate change*" – this is a critical part of resilience and adaptability.

**Policy CG2:**

COMMENT: we do not support densification as a stand-alone policy, and feel that as the policy is currently set out, it could be interpreted in this way. The consequences of poor quality densification and the continually reducing size of homes is of significant concern as regards peoples' wellbeing (overcrowding, unable to socialise, overheating, lack of access to open space, disease, noise). Design criteria should be included in any densification policy. Opportunity Areas and boroughs should be mandated to require post occupancy evaluation in new, high density developments and to report on the outcomes, in order that lessons can be learned from such developments and can inform future updates of the London Plan and local plans.

**Policy GG3 Creating a healthy city**



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"F Ensure that new buildings are well-insulated and sufficiently ventilated to avoid the health problems associated with damp, heat and cold."

COMMENT: This policy needs to reference design measures to prevent damp, heat and cold rather than solutions to fix them when they occur. Overheating is an increasing problem which can be significantly improved by good design of facades, fenestration AND building services. Currently consideration of building services is often left too late in the design process (ie after facades, floorplates and layouts are determined at planning) which disables passive control measures and requires powered solutions. Para 3.1.3 helps but suggests building shell design rather than the interiors and detail and services which we recommend should have equal emphasis.

#### **Policy GG6 Increasing efficiency and resilience**

"Ensure buildings and infrastructure are designed to adapt to a changing climate, making efficient use of water, reducing impacts from natural hazards like flooding and heatwaves, and avoiding contributing to the urban heat island effect"

COMMENT: To really increase efficiency going forward, London needs to look at creating local networks of buildings when they are owned by separate organisations. This will enable the sharing of locally generated energy, stored water, and heat. This is not just a matter for major developments, and may be significantly more cost and performance efficient than larger scale networks.

#### **Policy SD1 A(4)**

COMMENT: we suggest avoiding the use of the word "his" as there may be a female Mayor of London before 2041 – the duration of this plan. We can aspire, anyway.

#### **Policy SD1 B(3)**

COMMENT: This policy is particularly important, and we would like to see increased emphasis on the need to safeguard space for activities which are essential to sustainable communities – e.g. waste management / resource reclamation, leisure activities etc. etc. which residential developers often do not factor in and may oppose.

**Para 2.1.4** which follows this policy needs to be a lot stronger as to what constitutes a collaborative consultation. Many so badged are essentially publicity or consultation without meaningful opportunities for stakeholders to be involved. 10.2.3 helps but there needs to be more assessment as to whether an genuinely collaborative process has been satisfied before outline permission is sought. Planning conditions should include requirements for additional collaborative processes for detailed design matters, and measures to lock in matters agreed through collaborative processes at the construction stage.

**Para 2.1.6** healthy streets and active travel require environments that are conducive to physical activity. More thought needs to be given to climate change resilience, shading, cooling, rain water management and wind sheltering. An SPG on this matter may be helpful.

#### **Policy SD6 Town centres**

COMMENT: we recommend that this policy should require provision of electric charging for vehicles.

**Paragraph 3.1.9**

BSRIA strongly endorse this paragraph. We suggest that it could go further and mandate that CAT A speculative offices are not fitted out as it is often “for show”, and much of this (brand new) equipment and fit out gets stripped out and put in a skip when a tenant arrives and wants something different.

**Policy D2 Delivering good design**

COMMENT there is a missing element on mapping energy demand and generation in the area, looking at how waste heat can be used from / to another building and how local generation can be accommodated and shared in a building network.

COMMENT : We strongly support Policy D2 but suggest that design review should also include energy matters, as design of the building and energy strategy for the building should be intrinsically linked to achieve efficient, comfortable, low carbon buildings.

COMMENT: Policy D2: we note that independent design review forms part of the Design for Performance (also known as NABERS) methodology for delivering buildings that perform in practice as they do during the design. We recommend that the Mayor supports pilot projects using the Design for Performance methodology in larger developments as initial studies are showing very good results.

**Policy D8(3)**

COMMENT: This policy needs to refer to the importance of good architectural, façade and building services design as many of the challenges (noise from water services, unwanted heat from water pipes and heat gain from poor fenestration and facades) are often ignored at the planning stage when floorplans and layout are agreed. That constrains the building services engineers to powered cooling and unnecessary resource use.

**Paragraph 3.12.2**

COMMENT: BSRIA supports the “Agent of Change” principle.

**Policy D13 – Noise:**

COMMENT: We anticipate tall buildings and denser developments will feature multiple demographics and ages, with different expectations for noise levels and activities in a building.. Much more attention needs to be given to noise insulation within buildings, as well as from the outside in.

**Policy SI2 (Minimising greenhouse gas emissions) A:**

CHANGE: BSRIA recommends that line A is altered as follows (*italics* show additions) :  
“A Major development should *have zero carbon emissions in operation by 2030.*”

ADDITION: We recommend the following addition to the energy hierarchy in this policy: “4) *BE SEEN – MONITOR, VERIFY AND REPORT ON ENERGY PERFORMANCE IN USE*” to help close the performance gap between designed and operational performance.

**Policy SI2 B:**

CHANGE : We recommend the following deletion to firm up this requirement: “ Major development should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy and ~~will be expected~~ to monitor and report on energy performance”.

**Policy SI2 C:**

CHANGE: We recommend the following deletions to firm up this policy: “C In meeting the zero-carbon target a minimum on-site reduction of at least 35 per cent beyond Building Regulations is expected. Residential development should ~~aim to~~ achieve 10 per cent, and non-residential development should ~~aim to~~ achieve 15 per cent through energy efficiency  
It may not always be possible in practice for developments to achieve Air Quality Neutral standards or to acceptably minimise impacts using on-site measures alone. “

**Policy SI2**

ADDITION: we recommend a new clause S12E: “*Referable schemes should quantify whole life carbon through a nationally recognised carbon life cycle assessment (C-LCA) and demonstrate actions taken to reduce lifecycle carbon after the initial analysis*”

**SI3 Energy infrastructure (D)**

CHANGES: We propose the following changes:

“D Major development proposals within Heat Network Priority Areas should have a communal heating system

1) the heat source for the communal heating system should be selected in accordance with the following *low carbon* heating hierarchy:

a) connect to an *energy sharing network through the capturing and reusing of waste heat and/or use of local secondary heat sources*

b) *connected to local existing or planned heat networks where it is demonstrated to be running efficiently, the cost of heat to occupants is comparable to the national average for heating costs, and there is a zero emissions transition plan in place to ensure that the development achieves zero carbon emissions in operation (if it is not already fossil-fuel free),* c) generate clean heat and/or power from zero-emission sources

d) use fuel cells (if using natural gas in areas where legal air quality limits are exceeded all development proposals must provide evidence to show that any emissions related to energy generation will be equivalent or lower than those of an ultra-low NOx gas boiler)

e) use low emission combined heat and power (CHP) *where suitable for the size and demand of the development* (in areas where legal air quality limits are exceeded all development proposals must provide evidence to show that any emissions related to energy generation will be equivalent or lower than those of an ultra-low NOx gas boiler)

f) use ultra-low NOx gas boilers –

G) *If the development uses fossil fuels then a zero emissions transition plan must be in place to ensure that the development achieves zero carbon emissions in operation by 2030.*”

“~~Boroughs are encouraged to~~ SHOULD request **energy strategies** for other development proposals where appropriate. As a minimum, energy strategies should contain the following information: ...

k. Proposals to minimise ~~the embodied carbon in construction.~~ **WHOLE LIFE CARBON**”

**Policy SI4 Managing heat risk clause B:**

ADDITION:

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

- 1) minimise internal heat generation through energy efficient design
- 2) reduce the amount of heat entering a building through orientation, shading, albedo, fenestration, insulation and the provision of green roofs and walls

**INSERT: AVOID UNWANTED HEAT GAIN FROM DOMESTIC HOT WATER THROUGH CAREFUL ROUTING OF INTERNAL HOT WATER PIPEWORK, HIGH STANDARDS OF HOT WATER PIPE INSULATION AND WELL THOUGHT OUT SITING OF HOT WATER STORAGE TANKS. THIS SHOULD INCLUDE CONSIDERATION OF CIRCULATION AND SHARED SPACES WITHIN THE BUILDING ENVELOPE.**

- 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.

**NOTE:** For health reasons it is vital that internal ducting can be inspected and cleaned to avoid the build-up of dust, microbes and pathogens. This is often missed in new buildings.

#### **Policy S17 Reducing waste and supporting the circular economy**

**ADDITION:** This relates to earlier comments regarding para 3.1.9

We suggest that this policy should go further and mandate that CAT A speculative offices are not fitted out as it is often “for show” and after purchase or lease agreements are signed much of this (brand new) equipment and fit out gets stripped out and simply put in a skip to provide a “clean” building as the new owner / tenant wants something different. Rather than physically fitting out the office, developers could use mock-ups, virtual technologies or comparator buildings.

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We trust this feedback is of use to you and would be very happy to discuss any element further should you so wish.

Yours sincerely



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