Response to London Plan re Transport

S Charles 2nd March 2018

Policy T6.1 Residential Parking	G. To ensure that there is space for disabled people, and people who need personal transport for other reasons eg work materials, young children who cannot use car shares a higher allocation is needed than 1 for 3% of dwellings. At that density it is not possible to minimise distance etc or meet legitimate demand. However the spaces should be reserved for electric vehicles, with facilities for charging from renewable sources.
Policy T6.2 Office Parking	Where parking is justified the spaces should have access to electric charging facilities, supplied by renewable sources.
Policy T 6.3 Retail Parking	Where parking is justified the spaces should have access to electric charging facilities, supplied by renewable sources.
Policy T6.4 Hotel and leisure uses parking	Where parking is justified the spaces should have access to electric charging facilities, supplied by renewable sources.
T7 Freight and Servicing	T7 should contain strong policies to enable consolidation of deliveries to a non residential space with clean deliveries to homes, offices, pick up points etc by electric van or cargo bikes.

Ch 9 Sustainable Infrastructure

SI1 Improving Air Quality
We support the principles of SI1 to ensure that new developments should not adversely affect air quality, either during construction, or for residents after they move in.

Additionally at A 4) During the construction phase there should be monitoring and spot inspections of the air quality at each construction site – independent, but paid for by the developer, with power to halt work when infringements are discovered to prevent localised exposure. And at 6) no statements that air quality cannot be achieved should be accepted until an air quality professional, independent but paid for by the developers has reported.

SI2 Minimising greenhouse gas emissions.
We support the work conducted by the London Energy Transformation Initiative (LETI) that is based on the experience and knowledge of top building professionals from London and across the world, and included in our submission where indicated.
We support the LETI recommendations (their changes in brown) to amend SI1 to:
Policy SI 2 - Minimising green house gas emissions A. Major development should have zero carbon emissions in operation by 2030. This means reducing carbon dioxide emissions from construction and operation, and minimising both annual and peak energy demand in accordance with the following energy hierarchy 1) Be lean... 2) Be clean... 3) Be green... 4) Be seen: monitor, verify and report on energy performance in use.
B. 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 [text removed] to monitor and report on energy performance.
C. [text removed] A minimum on-site reduction of at least 35 per cent beyond Building Regulations is expected. Residential development should [text removed] achieve a minimum of 10 per cent, and nonresidential development should [text removed] achieve a minimum of 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: 1) through a cash in lieu... 2) off-site... ”
E. Referable schemes should quantify whole life carbon through a nationally recognized Carbon Life Cycle Assessment (Carbon-LCA) & demonstrate actions taken to reduce lifecycle carbon informed by this analysis.

With supporting text now:
9.2.9 to be: The move towards zero-carbon development requires comprehensive monitoring of energy consumption and carbon emissions to ensure that planning commitments are being delivered. Major developments are required to monitor and report on energy performance [text removed] to the Mayor for at least five years via an online portal to enable the GLA to identify good practice and report on the operational performance of new development in London.
9.2.10 g to be: To anticipate infrastructure capacity challenges for a growing London, submit proposals for energy demand management and reductions in peak energy demand
9.2.10 h to be. Demonstrate how energy consumption and carbon emissions post-construction will be monitored monthly and reported annually (for at least five years).

9.2.10 to be: i. Proposals explaining how the site has been futureproofed to achieve zero-carbon on-site emissions in operation by 2030.
9.2.10 k. Proposals to demonstrate actions taken to minimise whole life cycle carbon

Additionally LETI recommends:
• all new buildings should have zero carbon emissions in operation by 2030. The full meaning of zero carbon and a long term action plan will need to be formed to ensure this goal is achieved. This differs from the GLA net zero carbon definition. The SPG should contain clarity on a long term plan to achieve zero carbon emissions in operation.
• Provide a link to the most up-to-date carbon factors for consultants to use in energy reports alongside the dated Building Regulation Part L values.
• Request the use of an alternative kWh/m2 metric for comparison of energy demand between developments. Seek to adopt a kWh/m2 metric in future policy.
• Request the calculation of unregulated energy/CO2 . Building Regulation Part L and planning carbon targets currently ignore unregulated carbon.
• Request that applications consider: plant space; demand response readiness; energy storage; natural ventilation readiness; glazing tech/fabric upgrade readiness; design for low temperature systems including larger radiators, underfloor heating and use of heat pumps, etc.
• Quantitative demonstration of future proofing should be encouraged.

SPGs should include:
- A clear list of required figures for applicants to monitor, collect and submit. This should include frequency of data collection and submission.

• Proposals for energy monitoring of major new developments during the first five years of operation should measure the following, in order of priority:
1. Base building energy use: regulated energy uses defined by Building Regulations. This correlates with the responsibilities of the developer, their designers, contractors and building managers.
2. Whole building energy use: regulated and unregulated energy uses to capture the total carbon footprint relating to London's objective to become a zero carbon city.
3. Energy used directly by each occupier in a multi-let non-domestic building: this is the difference between the whole building energy use and base building energy use; measuring it gives agency to non-domestic tenants to manage their contribution to the total carbon footprint. For domestic buildings this is dealt with as part of the base and whole building energy use.
• Examples of data collection methods for non-domestic buildings such as display energy certificates (DEC) and landlord energy ratings (LER). Note that DECs mask the activities of individual tenants in multi occupier buildings, so should be complemented by base building ratings and individual outputs from each tenant.
• Request data on efficiency and energy usage to be disclosed from heat networks specifically.
• Request the reporting of energy and carbon per person and per m2 .
• Refer to current Islington Council policy for examples of monitoring in practice.

LETI can provide detailed content for SPGs on the topics of Demand Management and Embodied Carbon. They suggest that the GLA provide a simple online tool and database to

provide simplicity and consistency to Boroughs on lifecycle carbon – based on EN 15978 methodology.

As well as the LETI recommendations - sound building should not be demolished without submitting calculations showing CO_2 emissions for one scenario for the new development, including the demolition of the existing building, and a second scenario for refurbishment of the building. It will be in terms of Global Warming Potential (as specified in EN 15804) i.e. in 'kg CO_2 equivalent.' Where kg CO_2 equivalent is significantly higher for the demolition scenario the application should be refused, unless there are more significant advantages.

LETI also suggests that the GLA provides Energy Advocates to Boroughs to write their SPGs, similarly to the GLA Design Advocates, and that there should be more transparency and consistency on the collection and use of cash-in-lieu offset funds.

SI3 Energy Infrastructure

LETI suggests that D should be:

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 using of waste heat and/or use of available local secondary heat sources.

b. connect to a local existing or planned heat network where it is demonstrated to be running efficiently, the cost of heat to occupants is comparable to national average heating fuel 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 (examples include: solar technologies, heat pumps and energy storage powered by renewables).

d. use low emission combined heat and power (CHP) (where suitable for size and demand of development) or ultra-low NOx gas boilers (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). 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.

LETI's suggestions for SPGs are:

- Promote efficient low or zero carbon solutions for each development size and type. This will change over the lifetime the technology is installed for. The inclusion of heat networks should not override all other decision making processes.
- Provide guidance on appropriateness of heat networks to new development that is outside heat network priority areas or has low heat demand. Guidance could suggest applicants skip to part c. of the heating hierarchy where applicable.
- Ask applicants to be clear on assumed local air quality impacts/ limits and estimate likely annual energy costs to see if they represent a risk in terms of fuel poverty.

- Request the disclosure of heat network carbon factors used for calculations and during the lifetime of the operation of the plant. This is essential to understand the assumptions made by applicants and whether they are realistic.
- Provide links to guidance on low temperature heat networks and energy sharing within and between developments.
- Where heat pumps are proposed by applicants, encourage a shift away from high global warming potential (GWP) refrigerant use.
- Where LETI's suggested policy wording (above) is adopted, include a definition of an 'energy sharing network' and the requirements of a 'zero emissions transition plan'.

And GLA actions:

Update the London Heat Maps to include current plant and in-use efficiency data on heat networks. • Create strategic plans with local authorities for heat network opportunity areas. This should not be left to developers to determine, there is a strategic role here.
• Lobby government to class heat network infrastructure as a nationally recognised utility.
• Provide support for local authorities to follow-up on zero emissions transition plans and ensure implementation.

Policy **SI4 Managing Heat Risk**, **SI5 Water Infrastructure** and **SI6 Digital connectivity infrastructure** are supported.

SI7 Reducing waste and supporting the circular economy
We support the aims of these policies.

SI8 Waste capacity and waste self-sufficiency
We generally support these proposals, especially the zero waste export from London by 2026. Additionally we would require that every Borough adopts consistent recycling requirements for residents to avoid low recycling rates due to misunderstandings from London's frequently moving population.

C. Where new waste facilities are in the process of approval or construction they should be considered in light of the targets at 9.7.3. eg 65% recycling composting by 2030 and construction, demolition, excavation 95% recycling by 2020. If a planned waste facility is not designed to maximise recycling eg plastic extraction and for clean energy from waste and anaerobic opportunities then it should be redesigned before proceeding. Green gas maximisation should be designed in before any new capacity is built. See https://alansenergyblog.files.wordpress.com/2016/07/final-the-green-gas-book_96pp_v5.pdf for the way forward.

D. this should also apply to upgrading existing sites.
3) the target for carbon intensity of electricity produced should be better than 400g of CO_2 carbon intensity floor, especially by removing plastic from the feedstock and being set up to take all forms of suitable waste such as used frying oil, coffee, fatbergs etc.

Table 1: Carbon intensity factors for each fuel type and interconnector import [2][3].

Fuel Type	gCO_2/kWh Carbon Intensity
Biomass†	120
Coal	937
Dutch Imports‡	474
French Imports‡	53
Gas (Combined Cycle)	394
Gas (Open Cycle)	651
Hydro	0
Irish Imports‡	458
Nuclear	0
Oil	935
Other	300
Pumped Storage	0
Solar	0
Wind	0

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'Carbon Intensity' - National Grid December 2017

9.87. To enable the regular reviews of capacity to be constructive new waste facilities should be based on a modular design, so that, as waste reduces, they are not oversized, risking incentive to reduce waste.
SI9 Safeguarded waste sites and **SI10 Aggregates** are supported.

SI11 Hydraulic fracturing (fracking) Not allowing this in London is supported

SI12 Flood risk management and SI13 Sustainable drainage
We support these policies, particularly the B 2) green roofs and C re impermeable paving on front gardens and driveways.

SI14 Waterways – strategic role
A policy should be added to always consider unculverting Londons underground streams where appropriate. Upstream misconnections of sewage should not be used as a reason to leave these assets hidden. Where such culverts contain sewage enforcement should be firm and effective.

SI15 Water transport
We support these policies, except the sections on moorings should specify that only low carbon fuel and electricity should be provided. Vessels docking with high air pollution should be banned. The same point applies at: **SI16 Waterways – use and enjoyment** and **SI17 Protecting London's waterways** at E. and 9.17.3.

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Please find my personal response to The London Plan ch 9 and ch 10 in the attached word documents.

Smarter KPIs submitted are:

1. **Transport**

KPI Transition to electric vehicles
Measure increased number of Londoners being aware of location of electric charging points and therefore
prepared to consider purchasing an electric

2. **Air Quality**

KPI reducing exposure to air pollution
Measure increased number of Londoners being aware of ways to reduce their exposure including London T-charge, school
exclusion zones, hybrid & electric buses
Measure Spot checks on construction sites that show that, each year, there are fewer contraventions of Air Quality limits

3. **Public Realm**

KPI improving public realm
Measure number of new schemes that contribute to encouraging active travel and discourage travel by car
by creating a sense of place and facilitating movement for pedestrians and cyclists

KPI protection of Green Belt and Metropolitan Land – replace the one in the consultation with:
Measure loss of annual xx CO2 kg equivalent sequestration prevented, compared to expected loss of GB and MOP without the policy

4. **Environment**

KPI Carbon Emissions through new development - – replace the one in the consultation with:
Measure Annual CO2 kg equivalent reductions including unregulated carbon (based on the kWh metric recommended by LETI) compared to
reductions expected under previous building regulations metric. (all new developments not just those referred).

Note that, for new developments, I strongly support the recommendations of the London Energy Transformation Initiative at https://docs.wixstatic.com/ugd/252d09_b693dc7f0eba49cda769ca6d0ab70df0.pdf and also their initiatives to request that the GLA provides support to boroughs to ensure that building going up from now do not result in wasted energy and greenhouse gases over their life spans.

Regards