Sustainable Infrastructure

Minimising greenhouse gas emissions, energy infrastructure and managing heat risk

(Policies SI2, SI3 and SI4) (Matters 67)

Written submission of the Environmental Services Association (Reference ID 1154)

The Environmental Services Association (ESA) is the trade association which represents the UK's waste management and secondary resources industry. ESA's members provide a wide range of essential resource management services to the public and private sectors.

The UK's waste and secondary resource industry is leading the transformation of how the UK's waste is managed. An industry with an annual turnover of £11billion, our Members have helped England's recycling rate quintuple in the last decade and provide 12% of the UK's renewable electricity.

Would Policies SI2, SI3 and SI4 assist in creating a healthy city in accordance with Policy GG3 and provide an effective strategic context for the preparation of local plans and neighbourhood plans?

The high level principles of the policies – improved energy efficiency; a transition towards zero carbon; and mitigating London's heat island effect – are consistent with policy GG3 and are capable of guiding the preparation of local and neighbourhood plans.

How would they affect the implementation of Policies GG4 and GG5 on delivering the homes Londoners need and growing a good economy?

Clearly the Mayor would need to be more active in planning, funding and working collaboratively with local authorities and others in increasing the uptake of district heating schemes to ensure the delivery of new homes and London's economy are more closely aligned with the Plan's zero carbon objectives.

Are these policies and their detailed criteria justified and necessary and would they provide an effective basis for development management? In particular:

a) In seeking to minimise greenhouse gas emissions does Policy SI2 provide sufficient clarity about the zero-carbon target and how and when it is to be achieved? Is the target justified and consistent with national policy and other policies in the draft London Plan? Are all the criteria and supporting text necessary?

Policy SI2 A clearly sets out the steps that should be taken by proponents of major development in seeking to deliver zero carbon development.

While zero carbon is clearly a laudable target few developments are currently zero carbon (or would be capable of achieving zero carbon over the Plan period) and are not capable of generating 100% of energy needs on site. The Plan should therefore aim to encourage development that is energy efficient and increasingly able to meet its energy needs from renewable or low carbon sources (whether this be generated off or on-site).

From our interpretation of policy SI2 the Mayor appears to do just that and has adopted a phased approach to meeting the zero carbon target. The target is not an absolute target (for this Plan period) with policy A and section 9.2.5 suggesting that major development proposals could meet the target through emission *reductions* against a baseline (part L of the Building Regulations). Further reductions against the baseline would be achieved through future updates of the Plan. Achievement of a BREEAM rating appears to be one practical means in which a major development proposal can demonstrate the necessary reduction beyond the target emission rate of Part L (section 9.2.6).

At face value, the Plan's 2050 zero carbon target, while laudable, is nonetheless inconsistent with the National Planning Policy Framework (NPPF) which supports the delivery of *renewable* and *low carbon* infrastructure (a position unchanged in the amended 2018 NPPF). If our interpretation (above) of SI2 is correct the zero carbon target should not be considered (or applied) as an absolute target and, in practice, *low carbon* energy generating technologies could continue contributing to London's energy needs. This is consistent with policy elsewhere in the Plan which recognises and supports Energy from Waste (policy SI3 (B3)). However, the concern is that within the rhetoric and numerous references in the policy to 'zero carbon' the environmental benefits of low carbon energy generating infrastructure, such as that provided by Energy from Waste will be overlooked in favour of alternative energy generating stations capable of delivering zero carbon emissions. The merits of Energy from Waste might therefore be questioned (or dismissed) by a local Borough intent on holding out for electrification of the heat network in meeting the needs of a new major development proposal.

We note scope for potential ambiguity in interpretation of the zero carbon target. We agree that major development should be *net* zero carbon and while this is correctly noted in policy A, reference to 'net' appears to have been dropped from all subsequent references to the target within the remainder of Policy SI2. Reference to 'net' is important, allowing major development to achieve the target by meeting its energy needs from renewable and low carbon sources supplied off-site where this cannot be met on-site.

b) How are unregulated emissions and whole life-cycle carbon at Policy SI2 DA and DB to be calculated and is this justified?

There are numerous approaches and methods deployed in carrying out a life-cycle analysis of carbon emissions and for major waste management development, such as Energy from Waste, the carrying out and reporting of such is common practice as part of the Environmental Statement accompanying a planning application.

c) Are the provisions in Policy SI3 relating to energy masterplans justified? Should they be limited to large-scale development locations and is the list of items to be identified comprehensive?

We welcome acknowledgement in policy SI3 B3 that opportunities to utilise heat from Energy from Waste plants should be a key consideration in the preparation of energy masterplans.

There is certainly merit in requiring energy masterplans for the largest development locations. Large scale development provide an 'anchor' for major heat loads and which helps reduce many of the potential barriers to the wider uptake of heat from (Energy from Waste) CHP. A source of major and reliable heat load, such developments would help mitigate the costs of installing a heat network

which, once in place, would likely provide a more attractive prospect for other, smaller developments within the vicinity to then connect to the network. On this basis we therefore have no issue with energy masterplans being limited to large scale development opportunities. We would, however, suggest that such development should be defined in the Plan (thresholds of number of new dwellings or office/industrial floor space might assist) and crucially, some steer offered on how the relevant criteria of an energy masterplan would be enforced by the Boroughs.

The importance of energy masterplans should not be underestimated: unless the London Plan can provide the planning policy framework to help deliver the associated heat network infrastructure and heat customers in the right place most Energy from Waste plants will likely remain "CHP ready" but nonetheless operate in electricity-only mode. A viable and deliverable heat offload would of course be necessary to meet the carbon intensity floor (stated in 9.8.11).

d) Are the provisions in Policy SI3 relating to major development proposals within Heat Network Priority Areas justified? Is the sequence and content of the heating hierarchy justified having regard, amongst other things, to greenhouse gas emissions?

We welcome the Mayor's commitment to increase the development of heat network infrastructure in London and the requirement for proponents of major development in Heat Network Priority Areas to utilise district heating should certainly help towards the aim. However, in stipulating the various provisions for a low temperature heating system the Mayor should take care to avoid setting an unrealistically high bar. While laudable, ambition and stipulations of an 'ideal standard' are more suited to a Strategy document (such as the London Environment Strategy) than the London Plan which, as a landuse planning document, needs to maintain some sense of practical reality.

There appears to be a disconnect between the heating hierarchy (Policy SI3 D1) and supporting text 9.3.2A. Connection to an existing or planned local heat network sits at the very top of the heating hierarchy and yet (new) section 9.3.2A casts doubt on the environmental credentials of existing CHP systems.

It is worth noting that not all existing (or planned) CHP systems are gas-fired. In line with the waste hierarchy, once economically recyclable materials have been collected, Energy from Waste remains the best option for treating residual waste. As well as putting waste to further use, thereby upholding the principles of the Circular Economy, it provides sufficient reliable, decentralised, low-carbon electricity to power homes and businesses and could support more low-carbon local heat networks recommended within the Government's Clean Growth Strategy. Of the 40 Energy from Waste sites in the UK, 8 are currently exporting heat (with one such site in London).

Modern advances in Energy from Waste have also significantly improved performance efficiency and plants have to meet very strict environmental standards and emission limits. Performance and efficiency can be further improved as the plant exports heat. In 2015, Energy from Waste produced 0.71% of the UK's NOx emissions[1] and levels of particulate emissions were also low (0.03% of the UK's total PM_{10})[2].

[1] National Atmospheric Emissions Inventory (NAEI)

[2] National Atmospheric Emissions Inventory (NAEI)

We understand the Mayor's ambition to move towards zero carbon heat sources but this is a long term objective which is unlikely to be fully realised within the draft Plan period and there should therefore be stronger recognition (and support) for low carbon sources of heat that help London towards this transition.

We note a potential anomaly in policy SI3 D, with reference to the requirement for "communal" heating systems in Heat Network Priority Areas. Some Energy from Waste CHP plants are built to supply one single heat customer only (normally a large industrial development). Admittedly, examples of such are relatively rare and most CHP schemes are designed to meet the needs of the wider local, community but policy SI3 D should not preclude a single, large heat-load customer from benefitting from its own CHP scheme.

Section 9.3.4 correctly notes that heating networks should be designed to facilitate future connections. In a similar vein, policy SI3 might be further improved by stipulating that new development proposals (within Heat Network Priority Areas) should be designed to be 'CHP enabled'.