

Anglia Square Appeal

Dr Andrew Boswell, Climate Emergency Planning and Policy, June 28th 2019

1 CLIMATE CHANGE AND ENERGY

- 1 Chapter 14 of the revised NPPF (“Meeting the challenge of climate change, flooding and coastal change”) requires that the planning system should support the transition to a low carbon future (NPPF2/148); shape places in ways that contribute to radical reductions in greenhouse gas emissions (NPPF2/148); and support renewable and low carbon energy and associated infrastructure (NPPF2/148). New development should be planned for in ways that can help to reduce greenhouse gas emissions, such as through its location, orientation and design (NPPF2/150); and identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for collocating potential heat customers and suppliers (NPPF2/151).
- 2 The development lacks and positive environmental vision that would support these NPPF objectives. Maximising the optimal amount of renewable energy, and best performing building fabric, should be in the ‘design DNA’ of the development, and there is simply no evidence that it has even been considered.
- 3 The JCS3 policy requires 10% of energy in new developments to be from on-site renewable or decentralised sources (the ‘Merton Rule’). However, the Merton Rule dates from 2003, and there is ample evidence that JCS3 is out of date and much higher requirements are achievable and can be found in other local plans. For example, the London Plan, where new developments’ carbon emissions must be 35 per cent lower than the baseline of Building Regulations, which in practice means roughly 35 per cent of energy must come from on-site renewables.
- 4 The developers provide an aggregate energy saving of 23% from 3 sources: construction measures, energy efficiency, renewable energy. From the Energy summary report at Table 9 of their report, the renewable energy element would appear to be 18%, however this largely comes from Air Source Heat Pumps (ASHPs) in the commercial part. This renewable energy level for the domestic part is solely from PV on the 9 houses, is much less than 10%, and does not meet JCS3 for the domestic part of the development.
- 5 A net zero emissions target has now been legislated in the UK, and the UK Chancellor’s 2019 Spring statement phased out of natural gas as a domestic heating fuel with no gas installations in new builds after 2025.
- 6 The development nevertheless includes over 1200 gas combi boiler systems: these will not even be legal for the latter phases of the project. Other options for water and space heating should be considered:
 - The developer dismissed a possible district heating system based on Ground Source Heat Pumps (GSHPs) and says that there is an insufficient area for boreholes. A local expert has advised me that use of GSHPs with ‘Shoebox’ heat pumps in high density developments has a proven track record, both for the direct supply of high-density housing, blocks and wider area developments utilising loops and boreholes for heat capture. I am advised that there are solutions to the technical and financial

issues that the developer's have not properly consider, and the Energy Statemen should be reworked.

- Even if, after such analysis, a GSHPs district heating system proved unviable, then electric heating systems should be considered over gas. When supplied with 100% renewable electricity, these are cost-effective, provide carbon savings supporting climate change mitigation, and contribute to improved local air quality.
- 7 The developer has dismissed solar PV electricity panels except for the 9 townhouses and dismisses solar thermal panels due to lack of roof top space and shadowing of sunlight in the design. Ultimately a different design is required, which designs-in solar panel access: this would meet the requirements of NPPF2/150b that New development should be planned for in ways that can help to reduce greenhouse gas emissions, such as through its location, orientation and design. However, I am advised by an expert that, even in the current design:
- consideration should be given to side cladding of solar panels for both electricity and hot water
 - bladeless vertical axis wind turbines should be considered give the wind access of the tall buildings.
- 8 The design of building fabric should be aiming towards passivhaus standard. Norwich City Council rightly blow their own trumpet about their own developments designed to this standard, and appear to be happy to let commercial developers work to very different standards, as in this case. I have contacts for experts in heritage, sustainability, and climate change adaptation for evidence in this area.
- 9 In summary, the development should be refused because:
- I. It is contrary to Chapter 14 of the revised NPPF, and NPPF2/148, 150 and 151 therein.
 - II. The domestic part of the development does not meet the JCS3 policy for 10% renewable energy although the overall development does.
 - III. The project schema for gas boiler installation becomes illegal for phases of the project post-2025. However, gas should be not be installed from the outset, and viable alternatives to it for space and water heating have not been properly assessed.
 - IV. The development is unambitious and much greater on-site renewable energy should be designed in. District heating and GSHPs have been cursorily dismissed.