Simon Templeton
Architect
44 Molyneux Street, London W1H 5JD
T 020 7724 6264
M 07768 960 588
s.templeton@btinternet.com

5.0 References.

Camden Council

Camden Local Plan 2017

Camden Climate Action Plan 2020-2025

Camden Local Plan Policy CC2 Adapting to Climate Change

Camden Planning Guidance Energy Efficient and Adaptation
January 2021 Additional guidance on policy CC1

Green Action for Change (2012-2020)
Camden's environmental sustainability plan

Mayor of London

London Plan Policy 5.9 Overheating and Cooling

Creating benchmarks for cooling demand in new residential developments. Commissioned by the Mayor of London
July 2015

Background Research.

The Camden Local Plan ensures that Camden's planning policies continue to respond to changing circumstances up to and including 2032

'Section 8. Sustainability and climate change' encourages all developments to meet the highest feasible environmental standards. New developments in Camden are expected to be designed to min-

Simon Templeton
Architect
44 Molyneux Street, London W1H 5JD
T 020 7724 6264
M 07768 960 588
s.templeton@btinternet.com

imise energy use and CO2 emissions in operation through the application of the energy hierarchy.

The energy hierarchy is a sequence of steps that minimise the energy consumption of a building. Buildings designed in line with the energy hierarchy prioritise lower cost passive design measures, such as improved fabric performance over higher cost active systems such as renewable energy technologies, Refer to the 'Camden Planning Guidance on sustainability'.

The Council will discourage the use of air conditioning and excessive mechanical plant.
In addition to increasing the demand for energy, air conditioning and plant equipment expel heat from a building making the local microclimate hotter. Where the use of this equipment is considered acceptable by the Council, the proposal will be expected to provide an appropriate level of mitigation towards cooling

Basically passive measures need to be given priority before active measures such as comfort cooling.

The energy Hierarchy

1.0 Be Lean *use less energy*
Proposals must demonstrate how passive design measures including the development orientation, form, mass, and window sizes and positions have been taken into consideration to reduce energy demand, demonstrating that the minimum energy efficiency requirements required under building regulations will be met and where possible exceeded.

2.0 Be clean *supply energy efficiently*
The second stage of the energy hierarchy ‘Be clean’ should demonstrate how the development will supply energy efficiently through decentralised energy.

3.0 Be Green *use renewable energy*
The Council will expect developments to achieve a 20% reduction in carbon dioxide emissions from on-site renewable energy genera-

tion (which can include sources of site related decentralised renewable energy),

The Mayor of London "seeks to reduce the impact of the urban heat island effect in London and encourage design of places and spaces to avoid overheating and excessive heat generation"

Simon Templeton
Architect
44 Molyneux Street, London W1H 5JD
T 020 7724 6264
M 07768 960 588
s.templeton@btinternet.com

New developments to submit a statement demonstrating how the London Plan's 'cooling hierarchy' has informed the building design. Any development that is likely to be at risk of overheating (for example due to large expanses of south or south west facing glazing) will be required to complete dynamic thermal modelling to demonstrate that any risk of overheating has been mitigated.

Active cooling (air conditioning) will only be permitted where dynamic thermal modelling demonstrates there is a clear need for it after all of the preferred measures are incorporated in line with the cooling hierarchy. However it is accepted that some sustainable design measures may be challenging for existing buildings in conservation areas.

Policy 5.9 of the 'London Plan on Overheating and Cooling' requires design teams to follow a cooling hierarchy in developing their designs to reduce both the risk of overheating and the energy demand associated with active cooling in new developments. Overheating in existing dwellings is likely to become an increasing issue as more homes are retrofitted to reduce heating demands in winter, without due consideration for the impacts on internal conditions in summer.

The effects of overheating, are amplified in London where increasing air temperatures are exacerbated by the urban heat island effect and higher development densities, and unfavourable external conditions (noise and air quality) which result in dwellings being harder to ventilate.

A reasonable response to the requirement set in London Plan policy 5.9 to "reduce potential overheating and reliance on air conditioning

systems and demonstrate this in accordance with the [...] cooling hierarchy".

The cooling hierarchy includes:

• Minimise internal heat generation through energy efficient design;

• Reduce the amount of heat entering a building in summer through orientation, shading, albedo, fenestration, insulation and green roofs and walls;

• Manage the heat within the building through exposed internal thermal mass and high ceilings;

• Passive ventilation;

• Mechanical ventilation; and

• Active cooling.

Simon Templeton
Architect
44 Molyneux Street, London W1H 5JD
T 020 7724 6264
M 07768 960 588
s.templeton@btinternet.com

Simon Templeton
Architect
44 Molyneux Street, London W1H 5JD
T 020 7724 6264
M 07768 960 588
s.templeton@btinternet.com