

Addition to the Design and Access Statement,

2019/2550/L 10 St George's Terrace

I have investigated the scope to adopt the passive measures and went to a meeting on the 19th September with the IEA (international Energy Agency). The IEA is the global body which leads the dialogue and data collection on the policy routes to the Paris Accord. The Sustainability team were talking about how to get to those targets by policy choices in the major economies.

Afterwards I spoke to a couple of the main speakers on the platform - one had just installed a heat pump like mine, as a more sustainable solution, so they can't be too bad! I raised the point about the cooling function and he said the great advantage of a heat pump versus a fan for cooling can pre-cool a room so that you are using energy at non-peak times, smoothing energy usage. This is impossible with a fan, which can only be used when you need it, so on hot days can cause peaks of energy usage across an area. He said the reality is that people will use cooling equipment of some type as the climate heats (especially in old houses, I might add) and so it is about finding a sustainable solution to doing so.

Further proposals were also explored, such as,

- Water based cooling systems reduce the need for air conditioning by running cold water through pipes in the floor and/or ceiling to cool the air. (Addressed below)
- Evaporation cooling could also be investigated, this cools air through the simple evaporation of water. (as above)
- Ground source cooling. Ground source cooling is provided by a 'ground source heat pump' in the summer the ground stays cooler than the air and the difference in temperature can be harnessed for cooling. (not possible)
- Exposed concrete slabs can provide natural cooling. This leaves internal thermal mass (concrete slabs, stone or masonry which form part of the construction) inside a building exposed so that it can absorb excess heat in the day and slowly release it at night. (not possible)
- Developments could adopt a natural 'stack effect' which draws cool air from lower levels whilst releasing hot air (not possible)

He pointed to the Committee on Climate Change as a source of advice, where heat pumps are "a low-regret option":

<https://www.theccc.org.uk/2018/09/10/cleaning-up-the-uks-heating-systems-new-insights-on-low-carbon-heat/>

As outlined in section 3.14 of the local Plan Policy CC2. A water-based cooling system requires cooling towers, condenser water pumps, reservoirs of cooling fluid, and make-up pumps. Unfortunately the structure of the building, its Grade II listed status and the flat's positioning on the sixth floor – too high for Virgin to be willing to cable! – have provided significant obstacles. The solution we have found, the MSZ-EF35VE2-B/S/W, has the following ErP Energy Efficiency Class ratings:

Heating: A++ /
Cooling: A+++

With regard to CC2 in section 8.3, I have taken a very active role in planting trees as close to the house as possible, in my role working with Camden Council, helped by the Conservation Volunteers, in managing St George's Terrace Gardens, including being responsible for tree planting projects under a £5K grant from the Mayor of London and also winning a number of green spaces grants. Total grants won over recent years total close to 10K.

My sixth floor terraces carry as many plants as the weight allows, but these have proved insufficient to stop the top floor being unbearably hot, even with all windows open. High ceilings would be a huge help but raising the roof level would not be allowed in this listed building. This application was made only after all other measures had been carefully considered.

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