

Appendix 5 – Smart City and Utilities

1. This paper summarises the potential policy approaches which could be taken in relation to Smart City and utilities provision.

Context

2. To support and maintain its role as the world's leading financial and business centre, the City needs to ensure provision of excellent utilities infrastructure. Total City employment is forecast to increase from 505,000 in 2016 to 575,000 by 2036. Furthermore, resident population is projected to rise to 10,400 by 2036, a 26% increase from 2016. This highlights the need for upgrading and expansion of the City's utility infrastructure.
3. The dense concentration of businesses means that high demand is focused in a restricted geographical area. Energy demands are increasing, particularly to provide upgraded ICT systems required by the City's financial and business services, and air conditioning to counter increased warming. The growth of electric powered vehicles, including zero emission taxis, will lead to further significant energy demands.

Current policy position

4. The current Local Plan seeks to facilitate the provision of new utilities infrastructure, to minimise the demand for power, water and other utility services, and to protect existing essential infrastructure. This is to ensure that the functioning and growth of the City's business, resident, student and visitor communities is not limited by provision of utilities and telecommunications infrastructure.
5. The policy highlights the need for capacity projections to take account of climate change impacts, as well as identifying a range of infrastructure requirements to be delivered alongside and prior to occupation of new developments in the City.
6. Developers are required to demonstrate that there will be utility infrastructure capacity both on and off the site, to serve the development during construction and operation. Developers are also required to utilise existing pipe subways where possible to avoid any further congestion of the sub-surface or lengthy disruption to the highway and street network

Utilities infrastructure provision

7. The City relies on a range of utilities to function as a global financial and business centre, and to meet the needs of its residents, businesses, students and visitors. However, the sub-surface is congested with cable routes which results in less space for accommodating new infrastructure.

8. With the City's need to be digitally well-connected and responsive, the demand for utilities infrastructure will inevitably increase. An assessment of a building's connectivity could be encouraged by requiring a wired certification such as WiredScore, which rates commercial buildings on their connectivity ranging from internet speed to mobile connections. It helps ensure that buildings will fit the needs of tenants today and in the future.
9. Current developments are required to provide basic infrastructure in terms of digital connectivity which then enable occupiers to install the actual connections after the building's completion. The Local Plan could require that full fit out be provided at the development stage so that buildings are ready to move into by potential occupiers. Although this would have benefits for occupiers, it could be difficult to implement in schemes that are not pre-let and where the specific requirements of the end occupier are therefore unknown at the time of completion.
10. The Sub-Committee is asked whether it agrees that the Local Plan should:
 - a. **Seek ways of securing high quality, innovative digital connectivity to ensure the City remains a world leading international financial centre;**
 - b. **Require the provision of digital infrastructure within new buildings prior to occupation, beyond that which is currently provided.**
 - c. **Introduce a wired certification to rate the connectivity of commercial buildings. If so, should this be Citywide or just focused in the Eastern City Cluster?**

Pipe subways

11. The current policy has had limited success because the costs associated with the construction of new pipe subways is considerable and they involve land that is usually not within the control of individual landowners.
12. While some funding of pipe subways could come forward through private investment, it is likely that public funding would be needed to significantly expand the current network. It is considered that the focus should therefore be on linking up existing pipe subways in the City to provide a strategic cohesive approach to utilities provision. The Local Plan could include a policy to require or encourage developments to link up to existing pipe subways where feasible.
13. **The Sub-Committee is asked whether it agrees that the Local Plan should require existing pipe subways to be utilised and linkages between pipe subways where feasible.**

Smart City initiatives

14. The rapid advancement of technology in areas such as robotics and artificial intelligence is likely to have profound impacts on all large cities. It is not possible as yet to fully understand what the implications will be for the City of

London, nor how such changes should be reflected in land-use policies. Ensuring that the City's utilities infrastructure is fit for purpose and forward looking, particularly in terms of IT connectivity, should provide the digital framework within which Future or Smart City innovation can take place. It is, therefore, considered that the new Local Plan should be supportive of the use of innovative technologies to address urban problems such as congestion and pollution, reflecting the leadership role which the City Corporation is taking on these issues.

15. **The Sub-Committee is asked to comment on the role that the Local Plan can play in stimulating and supporting the Future/Smart City agenda in the City.**