

Committee(s): Streets & Walkways Sub Committee	Date: 21 st May 2018
Subject: Replacement of non-electrified street furniture to support City of London Wireless Concession	Public
Report of: Director of Built Environment	For decision
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Summary

This report seeks Members approval to replace selected existing 3 metre non-electrified street furniture columns (housing road signs / cigarette bins) with taller columns between 6-8 metres, to support the Wireless Concession agreement signed between the City Corporation and the City's wireless delivery partner Cornerstone Technology Infrastructure Ltd (CTIL) to deliver 4G (and eventually 5G) "small cells" to improve mobile coverage at street level. It is expected that following the initial deployment of 400 4G small cells by March 2019 there will be a need for additional locations to host further 4G small cell infill and future deployment of 5G cells once network roll out commences post 2021. The replacement of 3 metre street furniture columns with 6- 8 metre columns, will play a key part in enabling the timely roll out of 5G small cell infrastructure, to ensure that City businesses, residents and visitors will be amongst the first in the UK to benefit from 5G technology.

Recommendations:

- i. **That Members grant approval to replace selected 3 metre columns with 6-8 metre columns, where required, to facilitate the housing of 4G and 5G small cell equipment to improve mobile coverage across the Square Mile.**

Main Report

Background

1. Many parts of the Square Mile suffer from patchy 4G mobile coverage owing to the sheer volume of users trying to connect the network, coupled with the difficulty in getting signal penetration due to the City's historic narrow streets and dense urban environment. In maintaining its reputation as a world business centre, the City is seeking to provide the optimum environment for businesses, workers, visitors and residents, and it is therefore fundamental that all users have access to world class mobile connectivity.
2. The Department of Built Environment has established a "Gigabit City" programme being led by the City Property Advisory Team (CPAT) to improve wired and wireless connectivity across the Square Mile. In taking forward the wireless element of the programme the City Corporation has signed a 15 year contract with

Cornerstone Technology Infrastructure Ltd (CTIL) in March 2017, to deliver world leading wireless coverage (Wi-Fi and mobile) across the Square Mile using City owned street furniture (street lighting columns, CCTV columns and electrified signposts).

Gigabit City programme – Wireless Concession

3. The Wireless Concession has already delivered a world leading free to use gigabit Wi-Fi network (at no cost to the City Corporation) using 156 street furniture locations which went live in September 2017, and currently has over 100,000 users.
4. The second phase of the project is for the roll out of “small cells” to improve 4G mobile coverage at street level. This is now underway with 59 already having been built and a further 341 small cells being mounted on the City’s street furniture by Q1 2019. This will be the largest concentration of small cells deployed anywhere in the UK. Whilst O2 is currently the only mobile operator installing small cells in the Square Mile, CTIL expect other mobile network operators to follow suit for 4G services and eventually 5G (the next generation of mobile standards) in the next few years.
5. 5G will offer greater data speeds and will be heavily reliant upon small cells to ensure optimum coverage at street level. The City Corporation is committed to becoming an early adopter of 5G to support future mobile phone usage and future technologies such as smart city applications and it is expected that there will be significant demand for small cells be installed on City owned street furniture post 2021 (once 5G standards have been internationally ratified).
6. The Wireless Concession promotes the City as an exemplar in providing world class wireless infrastructure, to support agile working and future adoption of smart cities applications. The London Assembly Regeneration Committee’s *“Digital Connectivity in London”* report published on 29th June 2017 recognised the leading role of the City Corporation in delivering a world leading wireless infrastructure across the Square Mile.
7. It is important that the Square Mile is in a state of readiness for the roll-out of 4G cells and for when 5G becomes available. Under the Wireless Concession CTIL has been granted exclusive use of City owned street furniture for the provision of wireless services, however CTIL has since undertaken an audit of existing City street furniture and found that many of the assets are either in the wrong location to provide optimum coverage (requiring relocation) or are not tall enough to ensure that equipment can be mounted at a height where there will be no signal interference with buses, trees and other structures on the highway.
8. As the roll out of 5G evolves beyond 2021, it is widely anticipated that due to the growing requirement for small cells to support 5G, and the limited number of street furniture locations in areas such as the Square Mile, there will be a need to house small cells on building elevations facing the street. This would require a widening of current planning legislation around the number of antennae permitted to be housed on a building (under the General Permitted Development Order 2015), and

this is likely to be a future work stream for the City Corporation in line with partner organisations such as the GLA.

9. CTIL has identified a number of existing 3 metre street furniture columns owned by the City Corporation, (currently housing either non-electrified signage or cigarette bins), which could potentially be replaced with 6-8 metre columns to allow the housing of small cells, to enhance 4G and eventually 5G coverage in these areas. Many of these 3 metre columns are in locations where there is an absence of other street furniture which impacts on the ability to improve mobile signal in these areas, and it is considered that the replacement of columns will allow for enhanced network coverage in poorly served areas. All costs of replacing the 3 metre columns with taller columns and all associated civil works and electricity connections would be borne by CTIL.

Protocol for deployment of posts

10. It will be necessary to establish a protocol for replacement of posts and deployment of 4G / 5G cells to ensure that there is firstly a clear on-going need for the post to host street signage and that secondly there are no major planned programmes of enhancement to be undertaken by the City Corporation that could impact on the future location of the post. Posts would only be able to be replaced where there remains a clear highway need for a post in that location.

Conclusion

11. The City has for several years suffered from substandard mobile coverage, which must be improved if the Square Mile is to remain competitive as a global business centre. The Wireless Concession agreement with CTIL presents a unique opportunity to create attractive market conditions for mobile operators by offering street furniture assets to encourage widescale roll out of cutting edge wireless technology. It is considered that the replacing of 3 metre columns with 6-8 metre columns would reinforce the City Corporation's position as a global business centre and to be recognised as an exemplar in the delivery world leading wireless connectivity.

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