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| <b>Committee(s):</b>   | <b>Date:</b>                  |
| IT Sub Committee   | 2 <sup>nd</sup> November 2018 |
| <b>Subject:</b><br>Gigabit City programme update                         | <b>Public</b>                 |
| <b>Report of:</b><br>Director of Built Environment                       | <b>For information</b>        |
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### Summary

This report seeks to update Members on the progress of the Gigabit City programme being led by the City Property Advisory Team (CPAT), which aims to improve wired and wireless connectivity in the Square Mile.

Openreach is deploying “Fibre To The Premises” (FTTP) to all areas of the Square Mile (at no cost to building owners), offering speeds up to 1 gigabit per second (100 times faster than standard copper broadband, 12 times faster than superfast broadband) at affordable prices. Whilst 60% of the Square Mile is now enabled for FTTP, Openreach is struggling to identify and engage building owners (to seek their consent to install FTTP) due to the complex nature of building ownership in the City. CPAT has recently secured funding to appoint a specialist property agent to identify the owners / managing agents of unknown buildings so that they can be approached by Openreach and the required consent gained.

The City of London Wireless Concession, signed with Cornerstone Technology Infrastructure Ltd (CTIL) in March 2017, has already delivered a world leading gigabit Wi-Fi network, (which has over 100,000 users), and will boost mobile network coverage and capacity through the installation of 200 “small cells” providing enhanced mobile coverage at street level by Q1 2019. The Wireless Concession will also present attractive market conditions for mobile operators, which will ensure that the Square Mile is amongst the first to benefit from 5G when it becomes available in 2021. CTIL has committed to undertaking an outdoor 5G trial in the Square Mile beginning in early 2019.

### Recommendations:

- i. **Members are asked to note the contents of this report for information.**

### Main Report

1. The “Gigabit City” programme (formerly called the Superfast City programme) being led by the City Property Advisory Team (CPAT) seeks to bring about world leading wired and wireless connectivity in the Square Mile by:

- Securing investment and quick deployment of new fibre broadband infrastructure to offer speeds of up to 1 gigabit per second at affordable price points.
- Working with wireless delivery partner CTIL, to build unparalleled world class wireless networks (Wi-Fi, 4G and 5G post 2021) within the Square Mile using City owned street furniture assets and buildings, to ensure that mobile “black spots” become a thing of the past.

## **Wired connectivity**

### *Fibre To The Cabinet (FTTC)*

2. Openreach has now completed their roll out of “Fibre To The Cabinet” (FTTC), also known as superfast broadband, in 37 locations across the Square Mile, offering enhanced broadband speeds of up to 80 megabits per second. The FTTC roll out predominately covers only the larger residential and small business clusters in the City, and buildings with less small office or residential units have not been able to benefit from the FTTC deployment.

### *Fibre to The Premises (FTTP)*

3. CPAT has engaged over 50 broadband operators to encourage them to invest in wide spread roll out of Fibre To The Premises (FTTP) which uses “full fibre” optic infrastructure and can provide speeds of up to 1 gigabit per second. So far the cost and physical challenges associated with installing new fibre optic cables under the highway in the City, (and further difficulties in securing road closures and street permits) has discouraged the majority of operators, and only Openreach has committed to deploying FTTP across the City of London at no cost to building owners of tenants and which will use existing ducts (avoiding the need for street works).
4. Openreach does however require a wayleave to be signed by the landlord in order to connect a building to FTTP, and owing to the complex ownership structures applied to many buildings in the Square Mile, Openreach is struggling to identify landlords of buildings, to approach them asking for consent. Openreach has enabled 60% of the Square Mile for FTTP and has expended significant resource in trying to contact landlords, however to date very few buildings in the Square Mile have been connected to FTTP.
5. CPAT has used all City Corporation media channels to engage building owners, the City property industry, small businesses and residents to increase awareness of FTTP. Similarly the Chairman of Policy & Resources has written to all City property agents outlining that without the required take up, Openreach is likely to postpone installation works of FTTP in the Square Mile in order to focus on other parts of the UK (given their pressing delivery targets imposed by Government).
6. In order to assist Openreach in overcoming this significant barrier to deployment of FTTP, CPAT has secured funding from the Priorities Investment Pot (approved by RASC on 04/10/18) to appoint a specialist property agent to identify unknown building owners (or their managing agents) to support Openreach in seeking the

necessary consents to connect buildings to FTTP.

### **Connecting CoL Housing Estates**

7. The City Corporation has completed an expression of interest exercise to select 3 fibre broadband operators (Community Fibre, Hyperoptic and Vision Fibre Media) to provide affordable gigabit fibre broadband to the City's 3000 flats across Golden Lane, Middlesex St estates and outlying housing estates in other London Boroughs by the end of 2018. CPAT is leading the coordination of installations with the Department of Community & Children's Services across the 12 estates, (expected to be completed within 2019), and considering solutions to reduce disruption to residents (such as appointing a single contractor to act for all 3 operators) are being considered.

### **Standardised Wayleave / Barriers Removal Award**

8. CPAT and Remembrancers have worked alongside the City Law Society and the British Standards Institution to develop a standardised wayleave toolkit to speed up installation of broadband services, which has been downloaded several thousand times and is being used routinely across the property and telecoms industries. The wayleave has recently been revised to reflect changes to the new Electronic Communications Code. City of London and City Law Society has recently been awarded the "Barriers Removal Award" at the Connected Britain Awards 2018 for the standardised wayleave toolkit.

### **Wireless connectivity**

9. The City of London has entered into a 15 year contract with Cornerstone Telecommunications Infrastructure Ltd (CTIL) to undertake a Wireless Concession to address existing issues with patchy 4G and WiFi coverage across the Square Mile.
10. 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.
11. The second phase of the project is to roll out "small cells" to improve 4G mobile coverage at street level. This is now underway with over 100 small cells already having been built and a further 100 small cells being mounted on the City's street furniture by Q1 2019, which represents the largest concentration of small cells deployed anywhere in the UK. The City of London and CTIL was recently awarded the "Wireless Connectivity Award" at the Connected Britain Awards 2018 for the gigabit Wi-Fi and small cells deployment in the Square Mile.
12. 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. CTIL will be installing a 5G outdoor trial in the City in 2019.

13. CTIL has reviewed the feasibility of connecting the outdoor areas of the Barbican and Golden Lane estates with the Wi-Fi and small cells networks using lighting columns on the estates. However a lack of Line of Sight with other Wi-Fi and small cell equipment on surrounding streets has prevented these areas from being connected.
14. 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 to be installed on City owned street furniture post 2021 (once 5G standards have been internationally ratified). CTIL will be installing a 5G outdoor trial in the City in 2019.
15. 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 29<sup>th</sup> June 2017 recognised the leading role of the City Corporation in delivering a world leading wireless infrastructure across the Square Mile.
16. 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. 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.

## **Conclusion**

17. Whilst the Square Mile has a world class telecommunication infrastructure for those businesses that can afford it, the City has lagged behind other global and UK cities in the provision of affordable gigabit broadband. The securing of Openreach's investment in FTTP is expected to overcome this problem, however the lack of engagement from building owners presents a significant hurdle in ensuring delivery of "full fibre" infrastructure. It is expected that the appointing of a specialist property agent to identify unknown building ownerships can overcome this issue and allow all of the Square Mile to benefit from FTTP.
18. The Wireless Concession granted to CTIL has already put the City Corporation ahead of the game in delivering a world leading free to use public gigabit Wi-Fi network and being the first in the UK to deploy a network of 4G small cells. The concession will also provide attractive market conditions to encourage greater investment from mobile operators so that the Square Mile will be an early adopter of 5G networks in 2021.

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