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By email only
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Three's response to Ofcom's Dark Fibre Consultation

1. This is Three's response to Ofcom's consultation on adding dark fibre to the remedies for business connectivity markets, published on 23rd November 2017.
2. Three supports Ofcom's plans to ensure regulated widespread access to dark fibre, which is critical to the roll-out of 5G and the evolution of UK mobile networks in general.
3. Three's views, which are set out below, address: (i) why dark fibre is crucial for 5G roll-out; (ii) the benefits of dark fibre capped at 1 Gbps; and (iii) the need to introduce uncapped dark fibre at the earliest possible opportunity.

Widespread regulated access to dark fibre is crucial to the timely roll-out of 5G

4. Three's 3G and 4G network is currently supported by backhaul solutions provided by [REDACTED].
5. These existing solutions are not suitable to support 5G use cases such as 4k video, enhanced download speeds and the Internet of Things. Going forward solutions are required that are:
 - *Scalable*: data consumption is forecast to continue to grow by [REDACTED]. To maintain low prices to customers, solutions are needed that support this growth without a corresponding escalation in cost;
 - *Flexible*: we require a network architecture with the technical flexibility to meet strict latency requirements for the introduction of 5G services.

6. Three is therefore [REDACTED], and regulated access to dark fibre is one of the major building blocks of [REDACTED].
7. As shown in Figure 1 below, Three is currently in the process of [REDACTED]

Figure 1 [REDACTED]

[REDACTED]

8. [REDACTED].

Dark fibre access capped at 1Gbps offers benefits

9. Prior to the revocation of the BCMR 2016 dark fibre access remedy, Three had planned to [REDACTED].
10. One of the principle benefits of dark fibre in high capacity areas is the ability to scale-up transmission capacity, [REDACTED], as traffic increases without the associated increases in annual rental that would be incurred with active EAD circuits. This de-coupling of costs from capacity is a key enabler of the cost-effective densification of our RAN that is required to support 5G.
11. While dark fibre access capped at or below 1 Gbps does not facilitate the de-coupling of cost and capacity, in principle the following other benefits would still apply:
 - *Equipment cost savings:* for links that do not require aggregation it is possible to connect dark fibre directly to the network terminating equipment on RAN sites. MNOs are therefore able to realise savings on the cost of equipment that is included in the price of EAD circuits.
 - *Power and space savings:* the removal of superfluous equipment otherwise used in the provision of EAD circuits (as described above) offers additional benefits to MNO which face specific constraints on space and power availability on RAN sites.
 - *Increased reliability:* the reduction in network termination equipment used on dark fibre circuits will reduce the scope for equipment-related faults, resulting in more reliable circuits with fewer points of failure.
12. Given Openreach has already incurred and recovered (through the Leased Line Charge Control) the cost of bringing a dark fibre access product to market, the benefits outlined above justify the introduction of the capped dark fibre remedy proposed by Ofcom in this consultation

Ofcom must prioritise the introduction of uncapped DFA at its 2019 BCMR

13. Three remains firmly of the view that uncapped dark fibre access offers the greatest benefits to CPs and consumers, both in terms of innovation and cost savings.

14. While Ofcom's plans to introduce regulated access to BT's Ducts and Poles¹ should increase the availability of commercially supplied dark fibre in the longer-term, uncapped regulated dark fibre is crucial to safeguard the introduction of 5G services to the benefit of UK consumers in the short to medium term.
15. We therefore urge Ofcom to prioritise the introduction of dark fibre access across all bandwidths in its 2019 review of the Business Connectivity Market.

¹ To be implemented via its ongoing Wholesale Local Access Market Review