BT's response to Ofcom's consultation

"Dark Fibre Consultation:
Consultation on adding dark fibre to the remedies for business connectivity markets"

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NON CONFIDENTIAL VERSION

Foreword

On 23 November 2017, Ofcom published a consultation ("the DFA Consultation") on proposals to add a Dark Fibre Access ("DFA") remedy to the package of remedies ("the BCMR Temporary Conditions") which it had already imposed on BT for the period up to 31 March 2019 in markets for the provision of wholesale leased lines at bandwidths at and below 1Gbit/s (1G) in specific geographic markets.

The DFA Consultation also seeks views on the definitions of these markets and findings of Significant Market Power ("SMP") in them, which were made using Ofcom's emergency powers under the Communications Act 2003: these were set out in a Statement also published on 23 November 2017 entitled "Business Connectivity Markets – Temporary SMP conditions in relation to business connectivity services" ("the 2017 BCMR Statement").

BT welcomes the opportunity to respond to Ofcom's DFA consultation. This document provides BT's specific comments as a potential purchaser of DFA services[1] from Openreach to Ofcom's Dark Fibre consultation published on 23 November 2017[2]. Our comments here are limited to the imposition of DFA as a remedy. We do not cover Ofcom's questions on market definition and significant market power and these are dealt with in a separate response from Openreach.

BT supports and endorses the views expressed by Openreach in its response to the DFA Consultation: BT shares all the views expressed by Openreach on the issues under consultation. As noted in the Openreach response, Openreach has consulted with BT on the preparation of that response, given BT's position as parent company of Openreach, and given that (i) the SMP remedies under consultation would directly apply to BT plc and (ii) BT plc was the appellant of the CAT appeal of the previous BCMR decision (and would be the appellant of any appeal of a decision following this DFA Consultation).

In addition, BT has contributed to the substance of the Openreach response as supplier of services to Openreach (in accordance with the provisions of, and consistent with the spirit of, the DCR Commitments).

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[1] Throughout this document any references to BT relate to BT's views as a potential purchaser of dark fibre services from Openreach unless otherwise stated
[2] Dark Fibre Consultation. Consultation on adding dark fibre to the remedies for business connectivity markets. Published by Ofcom on 23 November 2017. "DFA Consultation"

Introduction and Summary

1. As a potential purchaser of DFA from Openreach, BT does not welcome Ofcom's DFA remedy as proposed. First, Ofcom's proposals introduce significant uncertainty into this market. CPs need a clear, predictable and stable regulatory environment to justify investment in network infrastructure. Ofcom's proposal to mandate dark fibre for use at limited bandwidths for a temporary period does not provide this.

2. Second, Ofcom assumes providers are ready to sell dark fibre based products. However, this is not the case. BT halted its development once Openreach announced it was not going to launch dark fibre. Instead, we have been engaging actively with Openreach and industry peers in the development of alternative active access and backhaul products. In any event, since then, our systems and processes have changed, and so have our field force resourcing plans so restarting is neither simple nor easy.

3. Finally,[✂]³. Limiting the scope of the dark fibre remedy to Lower Bandwidth CISBO services reduces its commercial attractiveness. For a number of our product lines the business case is not there.

4. The remainder of this response elaborates on each of these points in turn. We have attempted to provide as much information and detail as possible at this stage, given the limited time available to us. It is disappointing that Ofcom did not inform or engage with industry prior to this consultation, particularly given the proposal to introduce what is effectively a new remedy into the market with significant repercussions.

Ofcom's proposals do not provide CPs with the clear, predictable and stable regulatory environment they need to justify infrastructure investment

5. Ofcom has set out a clear desire for dark fibre to be available for CPs to purchase by 1 April 2018. However, it is proposing a remedy only for a limited one year period. Whilst we agree with Ofcom that potential purchasers who had readied their operations to take a dark fibre product need clarity on the course of regulation⁴, Ofcom's proposals provide neither clarity nor certainty for purchasers of dark fibre.

6. Even if Ofcom decides, at the end of this consultation, to introduce dark fibre, this would only be for a short period. Ofcom has already launched its next review of the business connectivity market. This review will continue until April 2019, at the end of which Ofcom may or may not come to the same conclusion on dark fibre, and the scope of the remedy could be further amended, or removed altogether.

7. An uncertain regulatory regime makes investment planning incredibly difficult, if not virtually impossible. In this environment, BT as a purchaser is faced with a choice between investing and focusing resources on developing services based on a new active Openreach product, or re-direct these to dark fibre.

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³ [✂]
⁴ Para 1.14 of the DFA consultation.

8. In an uncertain environment, the risk is that CPs will do neither, for fear of committing funds to spend money on the "wrong" development and the "wrong" network technology deployment. This would have the opposite effect to Ofcom's stated desire to promote efficiency[5].

9. Customers would be presented with the option of selecting a product which might only be available for a very short period of time, or the terms of supply may change significantly. Contract periods of three years or more are the norm for 1G services. It is therefore highly unlikely that customers will want to commit for this length of time when product availability is not secure over this timeframe.

10. In addition, it is normal for larger customers in the wholesale environment to want to approve any new equipment or technology used in a service, even if they do not directly interface with it – this is mandatory for most large carriers and MNOs. In practice, this would mean a test period and little volume demand in the first year for any new dark fibre product. We would not expect carriers to spend the time and effort to go through type approval of a new service technology that may not be supported in the longer term.

11. All in all, we believe Ofcom has underestimated the costs associated with the uncertainty created by this proposal and the likelihood of this uncertainty deterring take up. In order to derive any commercial benefits in 2018/19[6] BT would need to incur the cost of restarting development before Ofcom issues its final statement on this consultation. Given the array of possible outcomes, this does not provide CPs with a secure environment to make strategic commercial decisions on long term infrastructure investment.

12. We encourage Ofcom to change its course of action, and instead consider the appropriateness and necessity of a dark fibre remedy as part of the next Business Connectivity Market Review (which is already underway). This would allow the case for this remedy to be fully considered and tested with stakeholders – including its scope if necessary.

Ofcom incorrectly assumes providers are ready to sell dark fibre based products and have largely completed this work

13. Ofcom states that telecoms providers are keen to purchase dark fibre from Openreach and have invested in systems and processes to use it[7]. BT had made substantial investments to prepare ourselves to consume dark fibre from Openreach. However this work stopped in August 2017, before completion, once it became clear that Openreach was not going to launch a dark fibre product[8]. At that point, we decided to work with industry and Openreach on a number of Statement of Requirements (SoRs) and developments to their active product portfolio. These include:

   a) OSA Filter Connect - in September and October 2017, Openreach held a series of bi-laterals with CPs to better understand their current and future connectivity

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[5] Para 1.8 of the DFA consultation
[6] I.e. the period for which Ofcom proposes to mandate DFA
[7] Para 1.3 of the DFA consultation.
[8] On 15 August 2017 Openreach issued a General Industry Briefing announcing their intention not to launch DFA on 1 October 2017
(https://www.openreach.co.uk/orpg/home/updates/briefings/ethernetservicesbriefings/ethernetservicesbriefingsarticles/eth02817.do)

requirements for Very High Bandwidth services. In response to CP feedback, Openreach has launched a consultation on the creation of a hybrid active / passive version of their Optical Spectrum Access (OSA) product.

b) Phase synchronisation of 10G EAD – a BT SoR to add a 'phase synchronisation' timing feature to Ethernet Access Direct (EAD) 10G services to support Mobile Network Operators' 4G and mostly 5G backhaul network requirements. This SoR was supported by mobile operators.

c) Access to EAD Operations, Administration and Maintenance (OAM) data – a BT SoR for Openreach to develop the capability to offer Ethernet Service OAM functionality on their Ethernet Access Products. This will allow customers to use enhanced diagnostics and performance insight, removing the need to raise faults into Openreach to gain access to performance information.

d) Cross-product resilience options – Openreach are currently undertaking a commercial assessment in consideration of offering cross-product Resilience Option 2 (RO2) for EAD, OSA/OSEA and Ethernet Backhaul Direct (EBD). This capability would help CPs to meet customers' requirements for resilient Ethernet access to BT's network.

e) EAD fibre route maps – Openreach are undertaking final testing of a Route Maps dialogue service tool to provide CPs with the ability to search for the routes of their applicable point-point fibre-based services and visualise them on geographical maps.

f) OSA enhancements for VHB services (5WCA) – Openreach has announced the launch of a new wavelength card option within the Optical Spectrum Access (OSA) product set which supports up to 5 x 10G wavelengths.

g) Named Engineer for Ethernet services – Openreach are assessing the requirement for CPs to request a Named Engineer to attend on a fibre fault in order to reduce 'No Access' visits for Data Centres and secure business sites.

14. Further, since the halt in dark fibre it has become clear from industry discussions that there is now less of a business case for EMP[9] adoption for large CPs, like BT, who invest in a B2B gateway[10].

15. As mentioned above, the uncertainty created by Ofcom's proposals makes it very difficult for BT to choose and allocate development resource between active and passive products at this point. It is both costly and impractical to operate on a twin track, and such an approach risks incurring significant wasted resources for us and indeed other CPs.

16. First, readying our operations for consumption of dark fibre today is not just a matter of picking up where we left off and would require additional activities. For example:

a) Any testing of provision and repair processes previously undertaken would have to be run again in the form of regression testing. This is because our base systems and processes have changed since the development of dark fibre based products was halted. We would need to integrate the systems and process into an environment that has different defined parameters than the previous dark fibre access product. Therefore we

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[9] Openreach's Equivalence Management Platform
[10] This has been discussed at the Ethernet Transformation Steering Group (ETSG). The issue was raised by [✁] and supported by others at the November 2017 ETSG.

would have to do regression testing before deploying changes to systems and processes and then need to undertake field trials to prove the changes were successful.

    b)   [✂].

17. Notwithstanding the above, the reduction in the scope and time period of the proposed dark fibre remedy would lower volumes and significantly reduce any economies of scale achievable when mobilising a national field force to service dark fibre-based products.

18. Second, even if we decided to restart the work, [✂]. This, when coupled with the uncertainty and risks described above, further undermines the case for restarting the work at this point in time.

19. Third, the timelines now proposed by Ofcom do not allow for a testing window between Openreach and industry as was previously agreed in industry fora. This increases the risk of successful adoption to all involved with potential implications for customer experience for end users.

20. Finally, we also note that the proposed scope of the dark fibre proposition has changed – being now limited to bandwidths of 1G and below. Ofcom expects Openreach to ensure compliance via contractual restrictions. Leaving aside the difficulties associated with this for Openreach, this is likely to require CPs to make equipment and systems available for inspection. We have not had the opportunity to assess in detail what this means for BT, but it could potentially result in processes for access, including physical access, to equipment. This increases the risk of disruption of live services either by intrusive inspection or inadvertent movement of cabling.

21. It is also not clear what impact this may have on i) security accreditation, as increased access is required for different purposes, or ii) customer contracts and service agreements which may require reworking. This would require careful consideration and discussion with Openreach and our customers to determine how best to proceed.
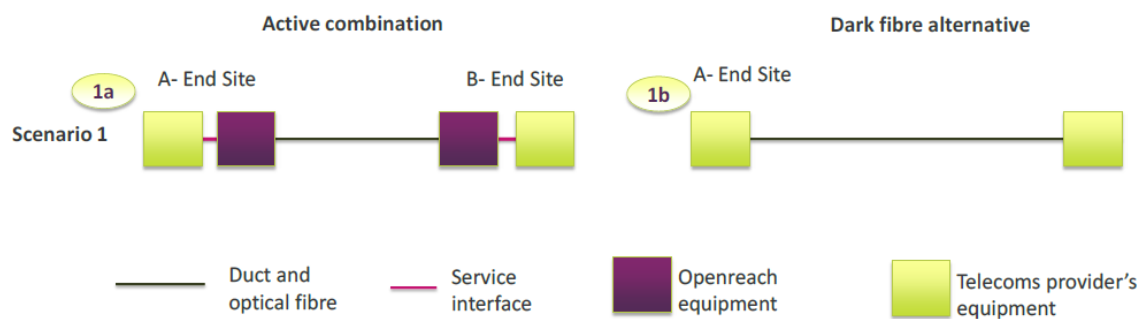

Ofcom's proposal for a dark fibre access remedy for Lower Bandwidth CISBO services restricts its commercial attractiveness

22. BT disagrees with Ofcom's assertion that "*the case for dark fibre is clearer than it was under the BCMR 2016*" and "*the benefits of dark fibre remain significant, even in circumstances where BT may decide to limit the use to services of 1Gbit/s or below*"[11].

23. On the contrary, reducing the scope of the dark fibre remedy to Lower Bandwidth CISBO services reduces its commercial attractiveness. [✂].

24. Therefore it would no longer be commercially viable to introduce dark fibre for a number of our product lines. This makes the business case harder for the remaining product offerings given lower overall volumes. It also reduces the economies of scale achievable for the support structure needed to support dark fibre based services as opposed to purchasing Openreach active products.

25. In addition, the cost differential stated by Ofcom at 1G is not particularly compelling, taking into account the systems, process and testing investment costs which may be for a limited period.

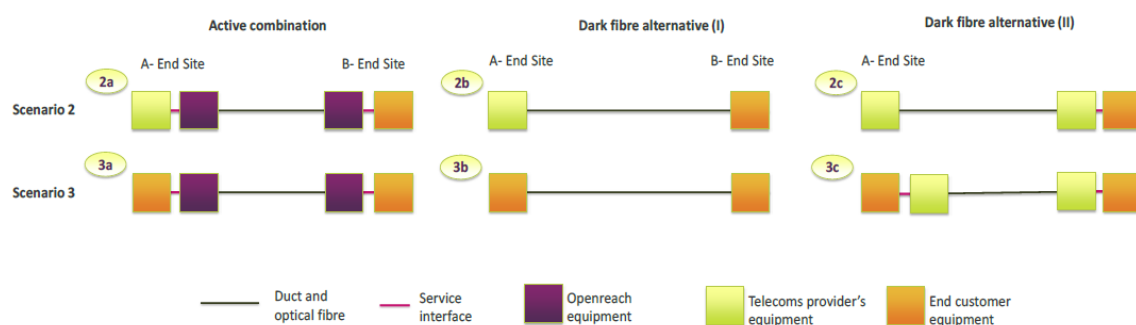[11] Para 1.12 of the DFA consultation

26. As proposed, BT's view is that dark fibre is not an attractive proposition for many of our product sets (e.g. Optical and Point to Point Ethernet). As a result, the commercial benefits are severely reduced or marginal for bandwidths up to and including 1G. Ofcom's analysis does not appear to recognise that the increase in unit costs is a result of substantially lower volumes for activities such as field force mobilisation. In practice, it may make more sense for BT to prioritise other developments over consuming and launching dark fibre based services. Put simply, the benefits of a lower price are unlikely to outweigh the costs associated with consuming the product given the volumes in question and potential use cases.

27. In assessing the benefits, risks and costs of the proposed dark fibre remedy Ofcom has identified a number of potential scenarios for changing equipment between active and dark fibre services. These are shown in figures 4.1 and 4.2 (reproduced below)

Figure 4.1: Change in equipment between active and dark fibre services

Source: Ofcom.

Figure 4.2: Change in equipment between active and dark fibre services

Source: Ofcom.

28. BT Wholesale operates an aggregated VLAN based fixed national Ethernet portfolio similar to that described in scenario 2a in figure 4.2. However, all the scenarios show a point to point access link, whereas the A-End equipment for Wholesale Ethernet services would be shared across multiple dark fibre deployments.

29. [✂]

30. It is also worth noting that a CPs edge nodes will typically be deployed with different technology (optical interfaces). To take advantage of dark fibre it would be necessary to operate a mixed estate of interface types holding a wide range of optical plug-ins to be used with a wide range of

vendors' equipment. This could lead to stranded assets, under-utilisation of multi-port cards and negative environmental impacts[12] which are ultimately passed on to end users in the cost of services.

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[12] Such as increased space and power requirements