

Question 1: Do you agree with our preliminary framework for considering the case for passive remedies?

Hyperoptic agrees that a review in relation to the competition of the supply of leased lines services in the UK is both valuable and timely. Such a framework should promote and ensure effective and sustainable competition in downstream markets.

For the avoidance of doubt, our response assumes that PIA will continue to be provided and regulated roughly the same way it is currently.

Any remedy must either ensure that access is provided to both the dark fibre and the duct infrastructure or must place an obligation on BT Openreach to provide access to dark fibre wherever requested to do so and at cost based pricing level. This will be the most effective way to increase competitive coverage in the UK and this should be the priority objective of this review.

Restriction of any remedy to a dark fibre offering without a coverage obligation will only be effective in increasing bandwidth for the purposes of consolidating existing capacity because the investment case is likely to mean that the majority of dark fibre will be available at a backhaul or core network level. This will mean that growth in coverage at the access layer will be impacted unless an obligation is placed on BT to supply dark fibre wherever requested. A cost-based remedy that allows both access to duct and dark fibre, that is available throughout, and in all areas of the UK, will be the most effective way of fostering competitive investment into and growth in infrastructure coverage at all network levels.

Pricing levels for a dark fibre only remedy could also be higher than active alternatives if value based pricing is applied and this would limit the effectiveness of any such remedy. A cost-based remedy that allows both access to duct and dark fibre, that is available throughout, and in all areas of the UK, will be the most effective way of fostering competitive investment into and growth in infrastructure coverage. If Openreach is obliged to provide access to dark fibre wherever requested with cost based pricing then duct access (above and beyond what is already offered by PIA) may not be necessary. Furthermore, the geographic scope of any remedy should not be defined by the presence of other operators' networks. Using London as an example, there are areas where other operators' networks are present, but this should not mean Ofcom designate the whole of London as a competitive market. Any concern from BT regarding a reduced ability to recover common costs as a result of the introduction of a passive remedy should be offset but the overall increase in volume possible due to the increase in use of such remedy by CP's.

Question 2: Do you agree with our preliminary views on the potential benefits of passive remedies? Please provide evidence to support your view.

Hyperoptic note the benefits listed within the review included:

- Allocative efficiency, Productive and Dynamic efficiencies. Both these focus of the assumption the CP would maximise their efficiencies through the use of existing dark fibre, not via the operational flexibility of provisioning their own fibre via existing duct. The paper notes that "An important factor in driving incentives to invest and innovate is that firms have the opportunity to recover investments, including investments which once made are sunk. This is why consideration of passive remedies should consider the opportunity to recover efficiently incurred costs, including costs which might be sunk

and/or common across many services”. It could be misconstrued that this consultation is being progressed to investigate a manner in which Openreach overspending can be recovered from third-parties

- Competitive impacts (the effect on competition at different points in the value chain), Distributional effects (an assessment of which consumers might be better off, and which worse off), and the regulatory consequences to ensure availability of services throughout the United Kingdom are important. Hyperoptic reason that a sustainable methodology is to ensure CPs have the ability to deploy their own dark fibre, this ensuring passive remedies are not limited to that infrastructure already deployed by the incumbent. As national coverage of future proof technology is Ofcom’s primary focus, CPs will significantly augment this policy if access to duct infrastructure as well as dark fibre is permitted.

Question 3: Do you agree with our preliminary views on the impacts and risks of passive remedies? Please provide evidence to support your view.

Hyperoptic note the arguments that “Passive remedies would not be available immediately and may take some time to introduce, and where if introduced, passives remedies may take some time to become established”, can again be mitigated by allowing access to existing duct such that CPs can deploy their own supportable infrastructure. This significantly reduces timely operational activities related to shared convergence of multiple CPs network activities on a single dark fibre. In addition this methodology will reduce any added complexity regards the management of dark-fibre arbitrage.

Question 4: What are your views about the potential impact of passive remedies on the pattern of common cost recovery and the associated distributional impacts?

Ofcom highlight capital costs of trenches and ducts, optical fibre, electronic equipment, land and buildings, along with some specific and general operating costs. With the right passive remedies in place, investment into infrastructure and coverage should increase to offset any risk to BT’s ability to recover common costs.

Question 5: Do you agree with our initial view that mobile backhaul and fixed broadband backhaul are likely to be the primary applications with significant demand for passive remedies?

Hyperoptic note that there is significant demand within London and the UK for ‘high-speed’ broadband. Commercially viable strategies which further enhance the ability for CPs access those communities currently underserved will continue to reduce evidenced *digital exclusion*.

If available, Hyperoptic would make use of dark fibre and/or duct access to offer a differentiated 1 Gig FTTB solution to more homes than can be done using existing active products given their high operating costs.

Question 6: What benefits might duct access offer over dark fibre and vice versa? Is there a case for having both remedies?

Refer to question 1 – restricting remedies to dark fibre only should include an obligation on BT to provide Dark Fibre to any requested location. In the absence of such an obligation, there is a strong case for having both remedies in place to maximise the flexibility for CP’s to innovate.

Question 7: If passive remedies were restricted to particular product types or geographic areas how might this affect the usefulness and benefits of the passive remedy?

Any restriction regards the product types offered to CPs or the geographic areas opened are likely to impact a CPs business case for adoption. One area of note regards geographic area was OFCOM stated primary aim to ensure availability of services throughout the United Kingdom. Given the variety of service providers with vastly diverse business models any restrictions would offer benefits

to some and cons to others. Remedies should be available without restrictions for use by any legitimate service provider.

Question 8: What arrangements would be appropriate for the supply of new infrastructure for passive remedies?

In our observations of the market the primary shortfall is the ability for incumbent supplier to meet demand. If CPs were permitted access to duct infrastructure in which to provision dark-fibre cabling this would significantly reduce one of the main perceived bottlenecks. Further definition is required regards any operational matrix in relation to key activities such as the identification, design, installation and ongoing maintenance of circuits and duct. OFCOM to confirm whether BT to remain the 'owner' of ducting infrastructure and therefore all associated installation and/or maintenance must be coordinated by the CP via Openreach at a published cost, or will CPs be given 'rights' to install and maintain allocated duct routes

Question 9: Do you agree with our initial views about the non-discrimination arrangements for passive remedies?

Yes. In relation to an appropriate form of non-discrimination obligation, and in the absence of such any such existing obligation OFCOM highlight BT would have the incentive to provide the passive remedy on terms and conditions that favour its own downstream divisions (e.g. price based discrimination where BT might effectively charge competing providers more than the amount charged to its own downstream divisions. There could also be non-price discrimination where BT prioritised its own requirements (including provisioning and fault repair) or provided the same services but within different delivery timescales. At face value it would appear that if BT are able to positively bias their own downstream market then this does little to ensure effective and sustainable competition between CPs

Question 10: In light of the trade-offs identified, which broad options on pricing do you consider would be most appropriate for passive remedies and why? Please also provide details if there is another pricing approach you consider would be appropriate in light of the considerations identified in this section.

Hyperoptic note that OFCOM identify that "passive remedies may provide an opportunity for CPs to deliver some of the dynamic benefits with lower levels of infrastructure duplication", and that "if the passive remedy price is 'too high' relative to the active price, this could disincentivise take-up of passive remedies (potentially forgoing dynamic benefits). Passive remedies should permit access to both duct infrastructure and existing dark fibre at a price set to motivate CPs within the market. One of the observations made which impacts the timely provision of telecommunications infrastructure to clients is the state of the Openreach duct infrastructure. Some mechanism must be established that were a CP were to attempt provision of their infrastructure within an existing Openreach duct, and that duct were found to be faulty, any remedy 'provided by the CP' must be recoverable from Openreach.

Question 11: If a value-based (active minus) approach to pricing dark fibre were adopted, what do you think would be an appropriate active wholesale product (or products) to reference?

Hyperoptic believe that the commercial framework for dark fibre and duct access must be cost based rather than value based to ensure the most efficient spend of capital for investment is made by all competing players. It is our view if Value based pricing were used to determine pricing that dark fibre would be priced significantly and extortionately higher than lit services. This would be counterproductive to the aims of any passive remedy.