



Zayo's response to the

Physical Infrastructure
Market Review Consultation

February 2019

Non-Confidential Version

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1 Introduction

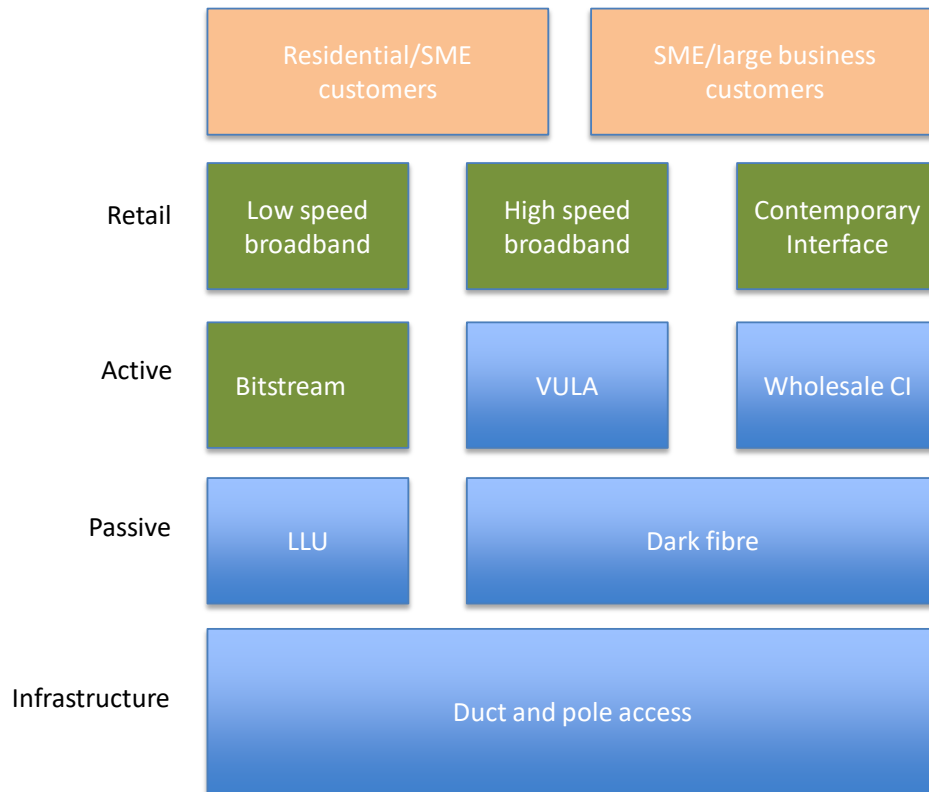
- 1.1.1 Zayo Group is the global leader in communications infrastructure, including fibre and bandwidth connectivity, colocation and cloud services to the world's leading businesses. Zayo's high performance fibre network and strategic partnerships provide access to key international markets in 25 countries. Zayo was founded in 2007 and is headquartered in Boulder, Colorado, with European headquarters in London and Paris.
- 1.1.2 Zayo's UK fibre optic network spans more than 600,000 fibre miles and connects over 130 data centres via routes including alongside national gas pipelines and within London's sewer system. Zayo provides many customers with dedicated fibre connections utilising a combination of on-net, new construction and off-net leased fibre. Zayo extends its network to customer premises principally with self-installed new-build fibre as well as purchased and leased dark fibre.
- 1.1.3 Zayo is a member of the Infrastructure Inventors Group (IIG) and has contributed to the responses to these consultations submitted by the IIG and is in full agreement with the contents of the IIG submission.
- 1.1.4 This individual set of responses, therefore, does not repeat points made in the IIG submission. Issues covered in this response are in addition to those in the IIG submission.

2 Executive Summary

- 2.1.1 Zayo welcomes Ofcom's proposals to remove usage restrictions for the duct and pole access (DPA) remedy through the application of the DPA remedy in the physical infrastructure (PI) market, upstream from the wholesale local access market (WLAM) and the business connectivity market (BCM). The physical infrastructure market review (PIMR) will ensure that access to the passive physical infrastructure is independent from the use of the network created for downstream markets.
- 2.1.2 The current inconsistencies between how access to PI is regulated, depending on which downstream market the deployment is intended for, is causing market distortions and damaging infrastructure investment incentives. Some of Zayo's main competitors are able to use the DPA remedy under the current 'mixed use' restrictions, as they happen to be offering broadband services as well as point-to-point fibre connections for business and local authorities. Those operators benefit from a reduction in construction costs as well as in the time to provide service, giving the competitive advantages introduced solely due to the regulatory remedy structure.
- 2.1.3 Despite welcoming the removal of the usage restrictions, Zayo, is very concerned that the Physical Infrastructure Access (PIA) product that is currently being developed by Openreach is not fit for purpose. There are numerous aspects of the PIA product that appear to be designed to make the product difficult to use, rather than making it fit for scale deployment.
- 2.1.4 Zayo has invested considerably in participating in the development of the PIA reference offer (RO) even though it at present cannot use the product. This is because Zayo has direct experience of how helpful a PIA-style product can be. Zayo's experience of using duct and pole access in France for nearly 10 years has demonstrated the importance of getting the product right. In the last three years, Zayo invested 12 times as much in France than in the UK and the main reason for that is that in France it uses third party infrastructure for more than 90% of its new build.
- 2.1.5 Zayo believes that the relatively loose provisions for non-discrimination in the wholesale local access market review (WLAMR) in March 2018 and extended (although apparently in a diluted form) in the PIMR, are at the core of that problem.
- 2.1.6 The PIA reference offer (RO) negotiation process (from April 2018 till now) is evidence of how Openreach has sought to make the product as unfriendly as possible for its customers and has created an RO that results in PIA customers having materially different terms for using Openreach's PI, then Openreach itself (or downstream BT businesses).

2.1.7 Zayo believes that the root cause of Openreach’s behaviour in the PIA RO negotiation process lies in the fact that Openreach is vertically integrated across three layers of access products. That is illustrated in the diagram below:

Vertical Relationships in Copper and Fibre Broadband Markets



Blue boxes indicate where Openreach is active

- 2.1.8 Openreach has a clear incentive (and the RO negotiation has demonstrated that it also has the ability) to act in a manner that has the objective of frustrating the implementation of Ofcom's DPA remedy.
- 2.1.9 Zayo does not believe that improvements to an obligation to not unduly discriminate will be a sufficiently strong and robust long-term instrument to prevent Openreach from frustrating the development of a PIA product that is fit for purpose and suitable for scale deployment. In the long term, Zayo recommends either functional separation of the PI part of Openreach from the rest of the business, or the forming of a separate company that owns only the physical infrastructure.
- 2.1.10 In the short term, Zayo proposes a number of changes to the proposed PIMR regulatory remedies to overcome the most overt instances of discrimination. Those changes can be introduced over a pre-specified period of time and would not prevent the lifting of usage and geographic PIA restrictions immediately upon the publication of Ofcom's final PIMR Statement.

3 PIMR Introduction

- 3.1.1 As a member of the IIG, Zayo contributed actively to the development of the IIG response to the PIMR consultation. Zayo agrees with the contents of the IIG response and this response should be read alongside the IIG response. To the extent possible, this response does not repeat points made in the IIG response, but is complementary to it.

4 PIMR product and geographic market definition

- 4.1.1 Zayo refers Ofcom to the relevant sections of the IIG response. Zayo has no further comments in relation to the PIMR product and geographic market definitions, other than as articulated in the IIG response.

5 PIMR SMP analysis

- 5.1.1 Zayo agrees with Ofcom's conclusion that BT has SMP in the PI market across the UK, except in Hull.
- 5.1.2 Zayo has carefully reviewed and believes that the analysis presented by Ofcom is correct. As an IIG member, Zayo as contributed actively to the IIG response and the majority of our views are represented in the IIG response.
- 5.1.3 Zayo particularly agrees that Ofcom is correct in its focus on BT's network ubiquity and the effect of that in the PI market. The substantial advantages to BT in the form of lower costs and shorter service provision times are such that it is not possible for competing providers to compete fairly in the relevant downstream markets (whether wholesale or retail).

BT's position in relevant downstream markets

- 5.1.4 Zayo believes it is important that it is recognised that the reason Ofcom has found over time that some markets have become effectively competitive, is largely due to regulatory remedies applied upstream for those markets. Therefore, even where BT has been found to not have SMP in certain product or geographic markets, such a finding is only possible due to remedies imposed at intermediate levels between PI and the relevant downstream market. Without those remedies in place, BT would most likely enjoy a position of SMP across all markets.

- 5.1.5 For the purpose of the PI market analysis, given that the PI market is the furthest upstream market, it is therefore appropriate that any competition identified in downstream markets, (which is dependent on other remedies) is not relevant to the competition assessment in the PI market.

BT's position in the PI market

- 5.1.6 Zayo considers that Ofcom's analysis of BT's position in the PI market clearly demonstrates that other operators that control PI networks, including Virgin Media which is the 2nd largest PI network in the UK, do not impose a competitive constraint on BT, even if it were to offer access to its PI (which Zayo notes it has no apparent intention of doing).

Absence of countervailing buying power

- 5.1.7 Zayo agrees strongly with Ofcom's conclusion that operators wishing to purchase access to BT's PI network do not have any countervailing buyer power at all.

Competition concerns arising from BT's SMP in the PI market

- 5.1.8 BT's dominance in the PI market has a strong influence on all downstream markets. Regardless of potential downstream remedies, designed to overcome downstream competition concerns in those markets, the root cause of what would be BT's dominance across all fixed markets in the absence of regulation is its dominance in the PI market.
- 5.1.9 A clear fit-for-purpose Equivalence of Inputs (EoI) PI remedy could remove the need for complex downstream remedies and truly open the UK for competition in fixed electronic communications services.

6 PIMR Remedies

General Remedies

- 6.1.1 Zayo agrees with the contents of the IIG submission with regards to the suitability of the Access to Infrastructure (ATI) regulation as an alternative to DPA and in particular that the ATI does not provide a suitable access platform for scale deployment of new networks and that the lack of non-discrimination provisions in the ATI makes it entirely unsuitable as a remedy to prevent the abuse of market power.

Requirement to provide network access on reasonable request and for operators to request new forms of access

- 6.1.2 Zayo agrees with Ofcom's assessment that this remedy is necessary, even though a specific access remedy is also imposed. Not having this more flexible remedy could result in substantial delays to the development of new forms or access or changes to the current form of access, with consumers suffering as a consequence of innovation being stifled.
- 6.1.3 Zayo, however, considers that the current general access remedy should be improved. It is our experience from the PIA RO process that the current statement of requirements (SOR) process is not customer focused and is in many instances used by Openreach to delay the introduction of the changes requested for as long as possible.

Requirement to not unduly discriminate

- 6.1.4 In addition to the points raised in the IIG response, Zayo sets out below, complementary points and analysis.
- 6.1.5 Zayo has participated actively in the PIA RO negotiation process since April 2018. It is evident that, despite Ofcom's intention in the WLAMR Statement that the non-discrimination obligation should result in EoI in all but name, that is not what has transpired in reality. The reality is that the PIA RO has inequality embedded within it between PIA customers and BT/Openreach itself.
- 6.1.6 Below is our analysis of how the current situation has arisen and what Zayo believes Ofcom needs to do to rectify it.
- 6.1.7 Ofcom appears to consider in its proposed "no-undue discrimination" obligation and its reasons for taking this approach (as set out at pages 51 – 55 of the consultation document) that the cost of introducing EOI would be disproportionate, and therefore proposes a "no undue discrimination" obligation. However, Ofcom proposes to interpret this requirement "in relation to network access as requiring strict equivalence in respect of processes and sub-processes that contribute to the supply and consumption of network access..." (4.35).
- 6.1.8 Ofcom does not propose an up-front obligation on Openreach to justify all instances where processes and systems used by Openreach are different to those used by other operators. Instead, it proposes to monitor BT's behaviour and performance. Zayo considers that this approach will prove inadequate and seems to be at odds with the non-discrimination provisions set out in the WLAMR in March 2018 paragraph 3.46, which stated:
- "we will interpret the no undue discrimination SMP condition in relation to PIA as requiring strict equivalence in respect of all processes and sub-products that contribute to the supply and consumption of duct access, with discrimination permitted only in cases where BT demonstrates that a difference in respect of a specific process step or sub-product is justified."*
- 6.1.9 Zayo has experienced in the PIA RO negotiation process since April 2018, that the relatively strongly worded non-discrimination provisions in the WLAMR have largely been ignored by Openreach. When operators have requested parity with BT/Openreach in how they access and use Openreach's physical infrastructure, such requests have been met by statements that Openreach will not productise its own use of its network and that KPIs will be sufficient to demonstrate non-discrimination.
- 6.1.10 Zayo believes that Openreach has strong incentives to discriminate, as BT had before the functional separation of Openreach. Further, Openreach will continue to have the means to discriminate and remedies put in place will not be enough to prevent it from harming its downstream competitors. It is Zayo's view that the proposals set out by Ofcom in the PIMR are insufficient to prevent Openreach from discriminating against its downstream rivals. Our reasons for coming to this conclusion are twofold.
- 6.1.11 Firstly, at a strategic level, Openreach's position as the vertically integrated provider of (1) PIA, (2) dark fibre access (DFA) and (3) wholesale Contemporary Interface (CI) products undermines the original purpose of creating Openreach as a separated entity and transfers to Openreach the incentive to discriminate, that used to lie within the BT Group as a whole. The integration of these three products in Openreach are a retrograde step, taking the structure of the industry back to the days before the Telecoms Strategic Review undertaken by Ofcom in 2004/05.

- 6.1.12 Secondly, although Zayo has accepted, in its response to the WLAMR, that EOI would be disproportionate, our experience since then has shown how Openreach has been willing and able to game the looser requirement to its own advantage. Zayo is therefore of the view that Ofcom needs to be more assertive in its implementation of the no undue discrimination requirement. Rather than a further relaxation of the interpretation of undue discrimination, Ofcom should take the opportunity of the PIMR to strengthen the approach to non-discrimination to ensure equivalence of outcome even if strict EOI is not mandated.
- 6.1.13 Further consideration on each of these points is provided below.

Vertical Integration and Separation

- 6.1.14 In Ofcom's 2004/05 Strategic Review of Telecommunications (TSR), Ofcom established that the vertical integration of BT was one of the key problems in the market, deterring competitive investment and sustainable competition. Ofcom concluded that the "no undue discrimination" remedy that had been available was inadequate to address the competition problems caused by economic bottlenecks.
- 6.1.15 In a highly critical sentence in the second TSR consultation document, Ofcom stated that competing operators who rely on BT for access "*have experienced twenty years of:*
- *Slow product development;*
 - *Inferior quality wholesale products;*
 - *Poor transactional processes; and*
 - *A general lack of transparency"*¹
- 6.1.16 To address this problem, Ofcom not only proposed EOI, but also a set of organisational changes to BT known as "functional separation". The core element of this separation was the creation of Openreach as a separated business unit in which management and staff were remunerated in a manner that reflected only the performance of Openreach and its responsibility to deliver EOI². This separation of management incentives was supposed to break the link between the preferences of Openreach's management and the performance of the rest of BT.
- 6.1.17 Ofcom's Strategic Review of Digital Communications (DCR), held in 2015, found that BT still had an incentive to indulge in what it termed "strategic discrimination", for example in the design of its network. The DSR resulted in the "legal separation" of Openreach as a separate company within the BT Group, under the governance of a Board consisting of BT and independent Directors.
- 6.1.18 The purpose of both functional and legal separation was to change the incentives of Openreach so that it had no incentive to discriminate in favour of BT's downstream divisions and against BT's rivals in downstream markets. This purpose is summed up in Tropina et al (2010), which states:

¹ Ofcom (2004) Strategic Review of Telecommunications: Phase 2 Consultation Document, para. 1.19

² Ofcom (2005) Final Statements on the Strategic Review of Telecommunications and Undertakings in Lieu of a Reference under the Enterprise Act 2002, para. 5.36

- 6.1.19 *“Regardless of the form [of separation] that is adopted the motive is the same, namely, to resolve the tensions that exist within industries characterised by containing both competitive and non-competitive elements.”*³
- 6.1.20 Cadman (2010) describes functional separation as a means to implementing EOI rather than an end in itself⁴ and de Bijl (2005) says that the key argument in favour of separation is that it eliminates the vertically integrated dominant firm’s incentives to raise rivals’ costs through non-price discrimination⁵.
- 6.1.21 All these authors agree that a vertically integrated firm with market power in the upstream bottleneck has the incentive and ability to foreclose downstream markets to competition. Separating the upstream business from the downstream elements will remove such incentives and so should result in a more level competitive playing field downstream. This was also the original motivation of Ofcom to impose functional separation and behind the recent change to legal separation. Ofcom’s proposal document to establish legal separation was entitled *“Strengthening Openreach’s strategic and operation independence”*.
- 6.1.22 However, the combined effect of the PIMR and BCMR is that Openreach will be responsible for supplying PIA, DFA and CI products. It will, therefore, once again be vertically integrated: selling products at all levels of the value chain to the very firms with which it competes downstream. Openreach is already in a similar position to this in the WLA market where it has been selling PIA for a number of years, although there has been very little take up of the product.

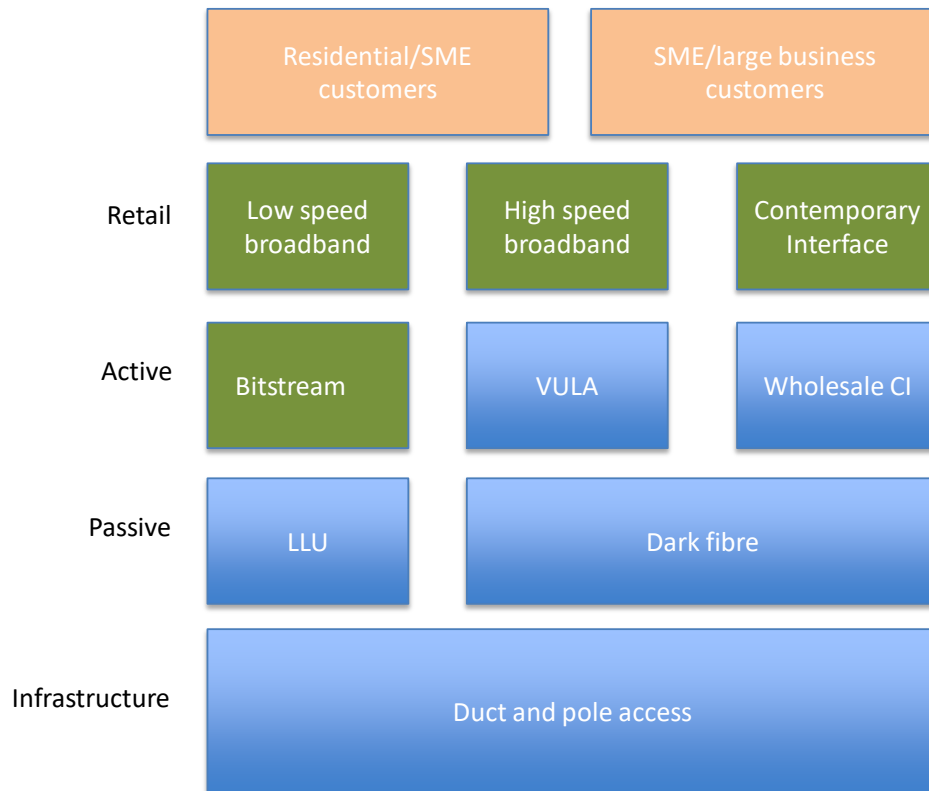
³ Tropina, T., Whalley, J., & Curwen, P. (2010). Functional separation within the European Union: Debates and challenges. *Telematics and Informatics*, 27(3), 231-241.

⁴ Cadman, R. (2010). Means not ends: Deterring discrimination through equivalence and functional separation. *Telecommunications Policy*, 34(7), 366-374.

⁵ De Bijl, P. W. (2005). Structural separation and access in telecommunications markets. *Journal of Network industries*, (2), 95-114.

6.1.23 What this means is that the incentives to discriminate, which functional and legal separation were supposed to remove from BT, have been transferred to Openreach and are just as strong as those incentives were before the CDR. The illustration below of the different levels in the fixed broadband market, shows that Openreach (in blue) is active in three out of four levels.

Vertical Relationships in Copper and Fibre Broadband Markets



Blue boxes indicate where Openreach is active

6.1.24 Zayo is concerned about this apparent reversal of policy by Ofcom, which led the world in the separation of the upstream business unit that controls the enduring economic bottleneck. Coming so soon after agreeing the legal separation of Openreach in the DCR, Zayo now sees Openreach as being given the very incentives to discriminate, that separation was supposed to remove.

6.1.25 Such behaviour is possible, not just in theory, but in practice, as Zayo and other CPs have direct experience of such behaviour, which is described below.

The Behaviour of BT

6.1.26 Zayo has direct experience of the discriminatory behaviour of Openreach in the provision of PIA. Zayo refers Ofcom to the IIG response to the BCMR and PIMR and specifically to paras. 13.1.7 – 13.1.29 where the IIG sets out its experience of Openreach’s behaviour in the current PIA negotiations. Zayo, as a member of the IIG, fully endorses these comments and wishes them to be considered part of this response.

Proposed Solutions

- 6.1.27 As discussed above, Openreach not only has the ability to behave in such a manner, but also the incentive to do so because it is selling products both to Zayo (and other investors) and in competition with Zayo. This goes against the fundamental principles of separation as Openreach has a clear incentive to discriminate against its own customers and it is willing and able to do so.
- 6.1.28 Rather than accepting that Openreach is a vertically integrated company with market power at the upstream level (presently at all levels), with all the same incentives to discriminate found in such structures, our view is that Ofcom should seriously consider creating a “Duct Co” as a legally separated company within the BT Group, or even as a structurally separate independent company, that provides PIA on equal terms to Openreach and to other network builders such as Zayo.
- 6.1.29 “Duct Co” could be similar to Openreach in that it is a separated provider of the most upstream input, ducts and poles, only. It would not be involved in providing any products downstream of PI. “Duct Co” would provide access to all operators, including Openreach, on terms as close to EOI as possible. “Duct Co” should be a legally separated division of BT, subject to the same mix of internal and external governance as the current version of Openreach.
- 6.1.30 Such a move would restore the level playing field that removes the incentives for Openreach to discriminate and so create a more competitive downstream market.
- 6.1.31 If such a move is not feasible, then Ofcom should consider the functional separation of the provision of PIA products. This functional separation should closely match the original functional separation of Openreach as set out in the 2005 Undertakings⁶. The functionally separate “Duct Co” would also be under the obligation to provide all downstream customers on terms very close to EOI.
- 6.1.32 Functional separation is a less powerful tool to remove the incentive for discrimination than a “Duct Co”, but it would be considerably better than the arrangement that will emerge from this PIMR and BCMR.
- 6.1.33 The solutions set out above should be reviewed and implemented as soon as practically feasible. In the interim, however, recognising that they would take some time to implement, it is imperative that Ofcom makes all efforts to strengthen the current non-discrimination provisions for PIA.
- 6.1.34 The changes proposed need not delay the removal of the usage and geographic restriction of the remedy, as the work to improve conditions can be undertaken after the unrestricted product is launched.
- 6.1.35 Zayo believes that Ofcom should include in the PIMR Statement an obligation for BT to specifically ensure that BT’s/Openreach’s terms of using its own passive infrastructure (ducts and poles) should not differ from the terms on which the PIA product is offered to other operators. This does not mean that BT/Openreach would have to consume PIA in the short term but Zayo does believe that that it is necessary in the longer term to eradicate Openreach’s incentives to discriminate), but that its ability to use the passive infrastructure is no better than that which applies to PIA users. Below are some specific proposals for areas which should be addressed as a priority:

⁶ Op cit. footnote 2

1. Currently, a CP cannot serve a customer it has passed with its network until it has submitted its build completion pack and received a licence from Openreach. To ensure that CPs are not disadvantaged by this rule, relative to how BT can use its network, BT needs to establish a rule that imposes the equivalent restriction on BT. Non-discrimination could be achieved through estimating the average build period for a CP (the PIA RO sets a maximum duration of six months), perhaps four months, and impose that timeline on BT for the provision of service to a customer where it does not already have a fibre connection. The issue could also be addressed by removing the restriction on CPs.
2. Currently a CP cannot perform a Network Adjustment (NA) repair on Openreach's infrastructure until Openreach has approved that repair as a NA. Although it has not as yet been formalised in the RO, Zayo understands that Openreach will commit to 5.5 working days to do this (0.5 working days to acknowledge the request and 5 working days to assess the repair, set a date by which Openreach can repair it and quote a price for the repair (from Openreach's standard price list)). The non-discrimination could be achieved by imposing the same process on Openreach – this is a system where EoI could potentially be implemented very early on, as Openreach has assured CPs that it goes through a very similar process itself. Openreach has proposed that CPs could potentially over time gain a 'trusted partner' type of status, which might reduce the level of verification required by Openreach (perhaps paper-based only, rather than site visits). Openreach has explained that it has experienced a lot of problems with its subcontractors wanting to perform repairs that may not be strictly necessary. Thus, it would be reasonable to assume that currently Openreach itself cannot be considered a 'trusted partner'.
3. Currently CPs must comply with every single line of Openreach's technical and operational documentation, but there are no obligations for Openreach to do so at all. It would be very difficult to monitor Openreach's performance, but a reasonable level of non-discrimination could be achieved by Openreach committing to the same level of compliance for all NAs it performs for CPs and for any work performed by Openreach after April 1st 2019. Openreach has extensive audit powers under the RO, it may not be sensible for CPs to have similar audit powers, but it would be reasonable that a CP that observes work done by Openreach that is not compliant, can note this and that there should be consequences for Openreach not having complied.
4. Consequences of non-compliance with the RO are substantial for CPs. A single breach (which could be a very minor non-compliance with technical or operational rules) means that Openreach can refuse to accept orders for NAs, for example. These terms are entirely unreasonable and, as they clearly do not apply to Openreach (even if point 3 above were addressed), Ofcom should mandate that Openreach cannot refuse any PIA service for any other reason than a material breach. Zayo understands that CPs must be accountable for compliance with the terms of the RO, but those terms as presently set out are entirely unreasonable. That in itself constitutes significant discrimination against CPs as the product becomes unusable and unpredictable. Whereas for Openreach the use of its own passive infrastructure is simply business as usual.
5. The current draft RO provides that minor non-payment incidents constitute a material breach and therefore Openreach can refuse service and, in some instances, terminate the agreement. Zayo agrees that CPs must be accountable to pay the

monies due for using PIA services, but the charging and invoicing framework is yet to be documented by Openreach and current users of PIA have experienced unpredictable invoicing and payment processes. Such conditions may lead to processing delays in CPs and thus missing payment deadlines, and it is therefore unreasonable that missing two or more payments constitutes a material breach with very significant consequences. Zayo believes that the invoicing and payment processes need a running in period, as has been agreed for forecasting and the application of SLGs, of one year, during which payments missed for less than 30 days would not constitute a breach. Openreach's own use of the network as regards payment terms is not a comparable as there are no actual payments. Whilst Zayo understands and agrees that CPs must be held accountable against fair payment terms, it is important that these terms are checked for reasonableness as it could potentially become a means of discriminating against all operators other than Openreach to whom the terms do not apply.

- 6.1.36 The IIG response sets out a number of examples of where the PIA RO negotiations have failed to arrive at reasonable outcomes, instead resulting in highly discriminatory provisions and conditions in the RO. Those are not repeated here, but some additional issues are described below:

Forecasting

- 6.1.37 The forecasting framework in the PIA RO that is due to be launched on April 1 2019, is not suitable for PIA customers using PIA solely or primarily for what is currently categorised as 'secondary use' (point-to-point fibre connections). Operators providing such services rarely know more than three months in advance where they will be delivering connections, so to impose a six-months forecasting rule, that applies to months 4 through to 9 from the date of invoice, is not reasonable. Zayo doubts that BT's/Openreach's own provision of point-to-point fibre services are planned more than three months in advance, but as BT is a provider of all electronic communications services, their point-to-point services 'drown' in its overall network deployment plans.
- 6.1.38 There is a proposal that service level guarantees (SLGs) will not be applicable if an operator's PIA use deviates from its forecast beyond pre-specified limits. Given that the provision of point-to-point services is particularly sensitive to delivery delays, it is clear that it is not proportionate to 'punish' PIA customers that use the service for point-to-point connections only, just because they cannot forecast their requirements nine months in advance. Zayo believes that the forecasting framework needs to be reviewed as soon as possible after the current usage restrictions are removed.
- 6.1.39 Additionally, Zayo considers that the forecasting requirements Openreach is imposing on PIA customers does not reflect the benefits to Openreach of receiving such forecasts. Openreach has not demonstrated that the level of use anticipated by other operators will be such that it would significantly affect Openreach's resource planning. For example, Openreach is refusing to introduce a tolerance level that includes Openreach's own consumption of physical infrastructure. That is, Openreach has accepted that if an operator either over or under forecasts for a period in a specific area, then there are no consequences of the total forecast from all PIA customers for that period and that area is met within a +/- 10% tolerance level, but Openreach is refusing to have the tolerance level refer to the total use of Openreach's physical infrastructure (that is, PIA customers and Openreach itself, rather than just PIA customers).

6.1.40 Zayo and other CPs agree that they need to supply forecasts to the extent that those forecasts are genuinely required by Openreach to undertake resource planning, but by insisting that its own use of the physical infrastructure is excluded from the industry tolerance, Openreach is exaggerating the impact of over or under forecasting by PIA customers and seeks to impose consequences, in the form of no SLGs being applicable to work undertaken by Openreach for the individual PIA customer that has not met its forecast.

6.1.41 The IIG response comments on the following components of the proposed set of general remedies:

- The ability to connect customers during a network deployment
- The linking of NoI Orders for the purposes of calculating the Network Adjustment Fund available to the competitive operator
- The compliance with Engineering Principles and other requirements of the RO
- Transparency and KPIs
- Requirement to publish a Reference Offer
- SLAs and SLGs
- Requirements to notify charges, terms and conditions; technical information; Regulatory Financial Reporting; Accounting separation; Cost accounting; and Quality of service requirements
- Implementation timeframe

6.1.42 Zayo fully supports the analysis set out in the IIG response and this response should be read alongside the IIG response.

Pricing and regulatory financial reporting

6.1.43 Zayo notes that Ofcom proposes that BT should apply internal transfer charges in its regulatory financial reporting⁷ and that, where it does so, its pricing should be set such as to cover such transfer charges⁸. Zayo agrees with those proposals, but has severe concerns that the proposed pricing of inter-exchange dark fibre as set out in the BCMR consultation is not consistent with those principles. Zayo's concerns and analysis are explained in Annex 1 to this response.

7 Quality of Service remedy

7.1.1 Ofcom proposes to impose a general remedy to allow it to specify Quality of Service (QoS) standards on Openreach for the PIA service, but is not at present proposing any such specific QoS standards.

7.1.2 Specifically, as there are presently no SLAs for the performance of specific types of NAs by Openreach, Zayo believes that minimum service levels should be introduced to provide a level of transparency and predictability for PIA customers that depend on Openreach performing

⁷ [RFR consultation para 4.42.

⁸ See PIMR paragraph 4.39.

certain NAs in order that they can reach customers sites and meet SLAs in end customer terms and conditions.

8 PIMR Specific remedies

- 8.1.1 Zayo considers it critical that unrestricted DPA is made available as not doing so distorts investment incentives between the WLA and the BC markets. Zayo, therefore, welcomes Ofcom's proposal to do so and looks forward to working with Ofcom, the OTA and other stakeholders to make this a reality.
- 8.1.2 The IIG response presented a thorough analysis on the specific remedies proposed by Ofcom and, with the exception of how the PIA charges are set, Zayo has no further comments in this area.

9 Network adjustments and ancillary services

- 9.1.1 Zayo's views and analysis of issues relating to NAs and ancillary services are set out in the IIG response.
- 9.1.2 We have sought to avoid replication of points between this response and the response submitted by the IIG, so this response should be read along-side the IIG response.
- 9.1.3 Zayo does want to highlight its strong concerns in relation to the NA process proposed by Openreach. The process appears to be designed to make the NA process as complex and unwieldy as possible to disincentivise PIA customers from using the NA process and instead perform the necessary repairs at their own cost.

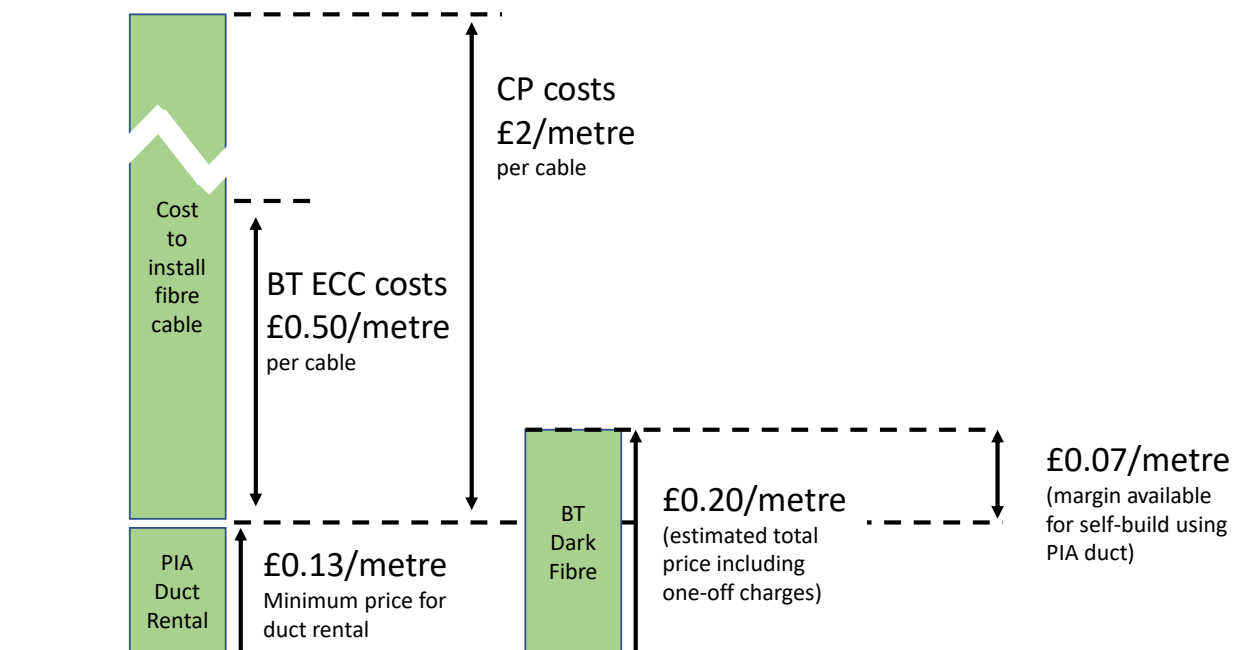
10 Wayleaves

- 10.1.1 Zayo believes that all available relevant wayleave information should form part of the standard PIA product, including information about the start and termination dates of the agreement. This information will assist the operator in assessing the suitability of the particular PIA product. Openreach, on the other hand, considers that any wayleave information it may hold that is relevant to a PIA order, does not form part of the PIA product. Consequently, Openreach provides no wayleave information as part of the standard PIA product.
- 10.1.2 BT does offer a service, charged by the hour and uncapped, to search its archives for relevant wayleave information. If an operator uses this service, BT only provides information about whether a wayleave exists and (potentially) details of the wayleave grantor(s), nothing more.
- 10.1.3 Wayleaves entered into since December 2017 have a new sharing provision. As a minimum, Openreach should provide information about any wayleaves dating after December 2017 to ensure that PIA customers benefit from the sharing provisions, where applicable
- 10.1.4 Zayo urges Ofcom to change the explicit DPA scope to ensure that wayleave information (where available) is provided, subject to any legal restrictions on such provision.

11 Annex 1: Non-discrimination in price setting - impact on BCMR

- 11.1.1 This annex considers the pricing of PIA services in the context of non-discrimination, and the inter-relationship between unrestricted PIA and the BCMR proposal for interexchange dark fibre. The issues raised in this annex should therefore be considered by the Ofcom teams responsible for both the BCMR and the PIMR.
- 11.1.2 Zayo notes that Ofcom requires that BT should apply internal transfer charges for its own use of its physical infrastructure⁹ and that, where BT charges itself internal transfer charges, these should be consistent with the charging principles applied to charges paid by CPs, to the extent that a different approach cannot be justified.¹⁰ Zayo also notes that Ofcom states that EoI is the most appropriate form of non-discrimination obligation for network access, although strict EoI is relaxed where there are practicality and cost issues in achieving it¹¹.
- 11.1.3 Zayo is concerned that Ofcom's stated requirements for non-discrimination in the PIMR are not consistent with the pricing for inter-exchange dark fibre proposed in the BCMR. Figure 1 below shows the relationship between PIA duct rental and dark fibre pricing.

Figure 1: PIA and dark fibre pricing



- 11.1.4 The current minimum price for duct rental using PIA is £0.13/m; this assumes duct of 3+ bores and makes no allowance for ancillary charges, so represents a best case (lowest price) as in reality single and 2-bore ducts are likely to be encountered, and ancillary charges will be incurred.
- 11.1.5 Ofcom's estimated price for inter-exchange dark fibre is £0.20/m¹². This suggests that the headroom available for the costs of fibre installed into BT duct is £0.07/m; this is very much

⁹ RFR consultation para 4.42

¹⁰ PIMR para 4.39

¹¹ PIMR paras 4.30-4.33

¹² Using Ofcom's assumptions of 7.1km average circuit distance and 3 year service duration.

a maximum figure, and increased PIA costs would severely reduce or eliminate the headroom (for example, single-bore duct PIA costs £0.28/m, which would result in negative headroom).

- 11.1.6 Zayo further notes that the current price charged by Openreach to install blown-fibre cable and tube in existing ducts is £5.57/m. If capitalised over 20 years, this amounts to £0.28/m annual depreciation charge; even without considering operational costs such as repair and maintenance, this is clearly much higher than the maximum headroom available of £0.07/m. While it is understood that Openreach may utilise more than one fibre pair in each cable, and that this would result in a lower cost per fibre pair, it seems unlikely that the non-competitive inter-exchange routes where dark fibre would be mandated would require fibre utilisation of greater than 4 pairs per cable, which would be the level required to ensure a bare minimum of economic space between the prices of PIA and dark fibre remedies.
- 11.1.7 [X]. Zayo believes that this highlights a fundamental inconsistency between the pricing of dark fibre proposed in the BCMR, and the EoI principles that are intended to apply to Openreach in the way it sells duct access and dark fibre to itself for the provision of active and passive services.
- 11.1.8 As stated in our response to the BCMR, Zayo believes that the introduction of inter-exchange dark fibre at the same time as unrestricted PIA is not justifiable, and would have a negative effect on infrastructure competition. Our analysis here further reinforces that view; if dark fibre were to be introduced in the same locations as PIA, then it is necessary to ensure that prices are set in an economically rational way, such that competing operators are able to make consistent build-buy decisions at different levels in the value chain.
- 11.1.9 One way to achieve this would be to set the dark fibre prices at REO costs, using a fibre cable utilisation that could be reasonably assumed by a new investor in inter-exchange infrastructure. An alternative may be to use a modified EEO approach, using BT's costs but adjusted for competitive economies of scale. In either case, it would be necessary to ensure that the approach Ofcom adopted for PIA and dark fibre pricing allowed Openreach to comply with EoI (in principle, even if not explicitly in the short term). It seems clear that the proposed approach does not allow that, and that the proposed dark fibre price is too low.
- 11.1.10 Zayo believes, in order to determine an appropriate level for dark fibre pricing, Ofcom would need to conduct a great deal more analysis. This would need to include a consideration of inter-exchange fibre cable utilisations currently achieved by BT, utilisations that could reasonably be expected by CPs and usage of different types of duct.