CityFibre

# Response to Ofcom consultation on DPA pricing

## Non-confidential version

**Submitted to Ofcom by CityFibre Infrastructure Holdings PLC**

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## Contents

# Additional submission by CityFibre in relation to Ofcom's WLAMR consultation published March 2017

## 1 Executive Summary

1.1.1 CityFibre welcomes Ofcom's work on creating a pricing framework for PIA which can encourage the use of PIA at scale. The availability of fit-for-purpose PIA services, without usage restrictions that make its deployment uneconomical, is a significant enabler of infrastructure competition through the development of new full-fibre networks in the UK.

1.1.2 CityFibre has recently completed the only large scale trial of PIA in the UK in Southend where a total of 62.5 km fill-fibre network was constructed with substantial parts of this using PIA. and has substantial hands-on experience from that trial which we are pleased to share with Ofcom in this response and through further correspondence if required to support Ofcom's analyses.

1.1.3 Naturally, the pricing of PIA services plays a large role when CPs determine whether to build new networks and whether to do so using PIA where possible or completely self-build, so CityFibre has a keen interest in ensuring that PIA pricing is set in a manner that encourages efficient use of the PIA services and which provides efficient build or buy signals to CPs. PIA services and charges must be reviewed in the context that CPs will inevitably have to engage in some level of self-build to complement the PIA services. It is therefore important the prices are reflective of the benefits offered by PIA – that is, access to Openreach's economies of scale and scope in the use of the physical infrastructure and the potential shortening of network deployment timeframes from not needing to construct entirely new physical infrastructure.

1.1.4 CityFibre agrees with the majority of Ofcom's proposed principles for setting the PIA charges, but has a number of substantial concerns generally falling into 4 categories:

1. An undue focus on putting prices and products in place for the short term in order to get an improved PIA service portfolio into the market as quickly as possible, and setting charges that rely on unsupported Openreach assumptions, some of which Ofcom states are unlikely to be reasonable and sustainable;
2. Ofcom's proposal to retain 25mm subducts as the smallest chargeable unit;
3. Ofcom's proposals for how to recover PIA-specific costs including network adjustment costs and PIA productisation costs;
4. The actual proposed levels of costs and prices, which CityFibre considers inappropriate based on the experience from our recently completed PIA trial in Southend.

1.1.5 CityFibre is concerned that Ofcom repeatedly refers to creating certainty for the duration of this forthcoming charge control period. But for CityFibre and other new network builders, the use of PIA constitutes a long-term commitment. It is therefore not sufficient to say that a certain approach is acceptable for the duration of this charge control period as it is unlikely to have a significant impact during that period. Once the decision to use PIA is made, users are tied into a long-term commitment to rent the relevant facilities. Once construction is commenced or completed, the decisions are genuinely irreversible in all practical senses of the word. Therefore, whilst CityFibre supports Ofcom's objective of moving the PIA process forward as quickly as possible, it is critical that pricing decisions are made using a reliable and transparent data set and that there are very limited risks of the pricing changes in a material

manner in the future. CityFibre would therefore much prefer to see prices set at a realistic level now, than the very low prices proposed by Ofcom which we fear are not sustainable and which at the presently proposed level would distort rational build or buy decisions.

1.1.6 Ofcom's proposal that 25mm sub-ducts should be the smallest chargeable unit when using Openreach's physical infrastructure will, in our view, not encourage efficient utilisation of this scarce resource by Openreach or CPs. It could in fact incentivise perverse outcomes and tactical behaviour by CPs. We consider this proposal to be contrary to the principle of encouraging efficiency and only allowing recovery of efficiently incurred costs by the regulated entity. Allowing more efficient CPs to pay less for the use of Openreach's physical infrastructure than BT would use to deliver the same services, because BT is still relying on an old copper network which requires more duct space, is entirely consistent with good economic practice and provides good incentives to Openreach to move to more efficient technologies as soon as practicable.

1.1.7 Ofcom's proposed cost recovery method – that is, to recover network adjustment costs and PIA productisation costs across all SMP products using Openreach's physical infrastructure – results in artificially low PIA rental prices. Whilst CityFibre plans to be a large consumer of PIA services and as such would be a beneficiary of the lower PIA prices, it also expects to have to construct a significant portion of its new full-fibre networks as independent self-built physical infrastructures to achieve the most efficient and optimal network architecture. It is important that the pricing of PIA services does not distort the build or buy evaluation process. Pricing PIA services artificially low would likely result in such a distortion and could result in less full-fibre deployment across the country. Artificially low PIA prices can encourage inefficient entry, for example by CPs that can only deploy networks where PIA is usable, but for technical and financial reasons cannot deploy self-build networks. CityFibre encourages Ofcom to reconsider its proposed cost recovery approach to produce costs that reflect the actual benefits of using Openreach's physical infrastructure (e.g. economies of scope and scale), but where the incremental costs of PIA are recovered only across the connections that use a fibre-based service.

1.1.8 CityFibre recently completed a PIA trial in the town of Southend and now has detailed information about the level of network adjustment costs incurred, how these costs break down in accordance with Ofcom's proposed three cost categories and how CityFibre's actual costs compare to the costs that would be calculated by Ofcom using Openreach's current PIA prices for the relevant ancillary services. These data show that Ofcom's estimated category A costs are significantly lower than the reality, with Ofcom's estimate at £3.700 and the actual costs [✂] if using Openreach's PIA price list as proposed by Ofcom. They also show that category B costs are significant at approximately [✂] using CityFibre's internal costs and [✂]when using the Openreach PIA price list, and that certain kinds of category B costs should always be covered by the rental charges. Finally, but very importantly, our data shows that Openreach's current charges for ancillary services (category A and B network adjustment services) are [✂] and therefore they should not be automatically accepted by Ofcom and imputed into the calculations of costs to be included in the PIA rental prices.

1.1.9 CityFibre wants to work with Ofcom to ensure that the new PIA product is fit-for-purpose and that the prices are sustainable and give efficient build or buy incentives to CPs and to Openreach itself. Whilst the overall objectives and principles applied by Ofcom are in support of these goals, some of the specific proposals are not and as such CityFibre urges Ofcom to engage in continued discussion and analysis to improve the prospects for wide-spread full fibre network deployment across the UK.

## 2 Introduction

### *2.1 About CityFibre*

2.1.1 CityFibre provides fibre connectivity services through designing, building, owning, and operating fibre optic network infrastructure. The Group is a wholesale operator of fibre networks in towns and cities outside London which provide open access, shared fibre infrastructure that enables gigabit-capable connectivity for service providers and mobile network operators, who in-turn deliver digital connectivity solutions to their end customers spanning the public sector, business, mobile operator and residential markets.

2.1.2 CityFibre operates across the UK, and currently has full fibre optic metropolitan area networks in 42 towns and cities including: Aberdeen, Bristol, Coventry, Edinburgh, Glasgow, Manchester, Milton Keynes, Peterborough, and York. Furthermore, the Company owns and operates a long-distance fibre-optic network that interconnects 24 of its current towns and cities. In York, we are a partner in a joint venture that has constructed a Fibre to the Premises (FTTP) network connecting homes, small businesses and public buildings.

2.1.3 CityFibre is a provider of 'full fibre' infrastructure, meaning there is no copper or co-axial cable used for the provision of data connectivity services in CityFibre's networks. This sets it apart from other infrastructure competitors, who rely heavily on legacy copper and co-axial cables connecting to premises on all but a small percentage of their networks.

2.1.4 CityFibre has recently securing equity funding to commence rollout of FTTP during 2018 in up to 10 towns and cities, totalling not less than 1 million homes. We expect to complete that phase of network build by 2020. This is the first phase of our FTTP rollout to homes. We will at the same time be expanding our network rollout to a further 8 cities. During 2019 and 2020, we plan to commence a second phase of FTTP rollout within that expanded 50 city footprint, giving us the potential subject to obtaining further funding to expand FTTP to circa 5.0 million premises by no later than 2024.

2.1.5 CityFibre's network is constructed to provide high capacity fibre infrastructure that serves four primary market verticals:

- Public sector – fibre connectivity to council buildings, schools, hospitals, CCTV;
- Business – fibre connections to enterprises and SMEs;
- Mobile operators – fibre connections to mobile base stations and small cells for 4G and future 5G mobile services; and
- Consumers – fibre connections to homes. The York trial, referred to above, is a first step in what we expect to be a substantial expansion of our networks to deliver 'full fibre' (FTTP) in a growing number of the towns and cities where we have physical presence (see below).

2.1.6 As at 31 December 2016, CityFibre operated 2,244 kilometres of metro local access duct and fibre networks across 42 towns and cities, as well as a 1,139 kilometres national long distance network connecting 22 towns and cities to data centres in London and the UK regions, as illustrated in the map below.


*2.2* *Why DPA pricing is important to CityFibre*

2.2.1 CityFibre currently plans to deploy full fibre networks in a minimum of 10 towns and cities in the UK over the forthcoming charge control period. Where feasible, CityFibre plans to use BT's PIA product to reduce up-front capital investment needed and to speed up the network deployment process.

2.2.2 CityFibre has already submitted a full response to Ofcom's earlier DPA consultation as well as to the WLAMR consultation and the consultation relating to Openreach's quality of service. In our response to these consultations we included important caveats that we may need to modify our responses once we have seen Ofcom's DPA pricing proposals, we do not, however believe this has been the case.

2.2.3 It is important that Ofcom understands that, whilst CityFibre (and other operators investing in full fibre networks) welcome Ofcom's efforts to turn PIA into a fit-for-purpose wholesale interface that can be used at scale to facilitate full-fibre network deployment across as much of the UK as possible, we still expect that we will need to engage in a substantial amount of full network construction, building separate physical assets such as ducts, poles and fibres. Using PIA constitutes a trade-off with our 'well planned city' network architecture and build principles: in some cases, the deviation from those principles needed to make use of PIA makes this an unattractive choice. The DPA remedy therefore needs to function alongside full network construction and we will need to evaluate the balance between the benefits of PIA (reduced capex and faster roll-out) and its drawbacks such as the reduced efficiency of construction crews and equipment, due to the stop-start nature of construction to complement the use of Openreach's assets where feasible. It is therefore important that the pricing of PIA services is set at a level that realistically reflects the benefits of using the existing physical infrastructure and not set at an artificially high or low level which distorts build or buy signals to the long-term detriment of consumers and the overall UK economy.

### *2.3 The Structure of this response*

Section 3 discusses Ofcom's general approach to setting the PIA rental charges cap;

Section 4 discusses the detailed proposals for setting the rental charges cap;

Section 5 discusses Ofcom's proposals for how to set a financial limit for network adjustments to be included in the PIA rental charges; and

Section 6 presents the lessens and data collected from CityFibre's recent PIA trial in Southend.

## 3 Ofcom's approach to setting the IA rental charges cap

3.1.1 CityFibre welcomes Ofcom's intention to set the level of PIA pricing such as to "*avoid undermining network investment*"[1], and agrees that Ofcom needs to adopt a pragmatic approach in order that the enhanced PIA product can be developed and launched as early as practicably possible to support the deployment of fibre networks.

3.1.2 In earlier consultation responses, we have welcomed Ofcom's pragmatic approach to ensuring a 'good enough' DPA remedy in this charge control period as opposed to a perfect remedy that will not be available until very late in the day. Nonetheless, investment in full fibre networks is a long-term commitment and it is imperative that the pricing set by Ofcom's proposals and subsequent final decision on the PIA pricing structure and level is sustainable over the longer term. Whilst understanding that Ofcom cannot fetter its discretion regarding future decisions, CityFibre is concerned that Ofcom's approach may be unduly focused on the presentation of a short-term solution at the potential cost of longer term stability and overall transparency, both of which are critical in reducing the regulatory risks of these substantial long-term investments. In simple terms, we would prefer a robust methodology to be adopted now that is unlikely to lead to price shocks in later charge control periods, even if this means slightly higher pricing than proposed.

### *3.2 The transitional approach*

3.2.1 Throughout the consultation document[2], Ofcom refers to its proposed solutions being of an interim nature, that is, the pricing approach is transitional due to Ofcom not having access to all the costing data required to set charges in a more transparent manner.

3.2.2 Ofcom also refers repeatedly[3] to its desire to provide certainty for the period of the charge control period. And whilst it also states that the transitional approach is consistent with Ofcom's "*Long term strategy to promote greater network competition*"[4], it seems clear that the actual cost recovery approach could change substantially for the next charge control period once more and better costing data is available to assist Ofcom in setting prices that best match that approach.

3.2.3 Each city network needs to be designed to either use PIA or not, and the designs need to reflect what specific PIA services should be deployed in each network. For example, whether the network will use primarily overhead lead-in PIA services, duct access for the distribution network and/or underground lead-in facilities. The prices of the individual PIA services (and the process for using them) are critical inputs to deciding whether and, if so, which PIA services to use in each network. Once the design is made, it is extremely costly to change it and this would almost invariably cause substantial delays to network roll-out.

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[1] See for example PIA pricing consultation paragraph 3.4.

[2] See for example PIA pricing consultation paragraphs 3.7.

[3] See for example PIA pricing consultation paragraphs 3.6, 3.7, 3.29.1, 3.42, and 3.49.

[4] See PIA pricing consultation paragraph 3.8.

3.2.4 Changes to the level and structure of PIA charges which impact the viability and attractiveness of using PIA services relative to full self-build, would therefore cause significant disruption to deployment of full fibre network. From a practical perspective, this may, perversely, make CityFibre less likely to make extensive use of PIA than if we had reasonable confidence about a longer-term price trajectory.

*3.3* *Reliance on Openreach's products, prices and assumptions*

3.3.1 In a number of places throughout the consultation, Ofcom states that, although it does not think that Openreach's approach seems correct or although Openreach cannot produce any underlying rationale for why it has chosen to structure a product or set a price in a particular manner, Ofcom has chosen to retain Openreach's current product/pricing approach[5].

3.3.2 CityFibre considers that, although it is important that an improved portfolio of PIA services and processes is introduced as soon as possible, the risk arising from setting prices using methodologies Ofcom either does not understand or which Ofcom appears to disagree with is considerable. This is both because it will influence the decisions by CPs in the short term on whether to use PIA, but also because it signals the probability of potentially significant changes to products and prices resulting from the next market review when Ofcom has access to more data and has had more time to undertake its own studies.

3.3.3 As explained above, decisions of whether and (if so) how to mesh the use of PIA into the network construction of full fibre networks are long term decisions which either cannot be changed once made, or can only be changed at substantial cost and large delays to the network roll-out schedules. CityFibre is therefore concerned that Ofcom may have erred too much on the side of getting an improved PIA offering launched quickly at the cost of some potentially large long-term issues arising from subsequent changes to the PIA products and prices. This response highlights specific examples of where this maybe the case.

[5] See for example PIA pricing consultation paragraphs 3.45 and 3.47 to 3.49.

## 4 Setting the rental charges cap

4.1.1 Ofcom proposes, in line with its proposals in the April 2017 DPA consultation, that:

- Price regulation of PIA services is required for the next charge control period and likely longer than that;
- The current basis of charges does not provide investors in new full fibre networks with sufficient certainty of the level of rental charges; and
- A cap on rental charges is the most appropriate form of price regulation for PIA rental charges.

4.1.2 CityFibre agrees with Ofcom's assessment in this regard. Transparency, consistency and predictability are important for the reduction of investment risks, where a potentially substantial part of the network deployment depends on the access to Openreach's physical assets in the form of PIA services.

4.1.3 Ofcom proposes that the cap (for each separate rental product) is applied from the beginning of the charge control period (i.e. there will be no glidepath) and that the cap should be updated for inflation each year. CityFibre agrees that to have the maximum impact on network construction during the charge control period, the cap should be applied from the start of the charge control period. It should be noted, however, that CityFibre's agreement to the principle of the one-off adjustment of the rental charges at the start of the charge control period, does not mean that CityFibre agrees with all the changes (and the underlying cost recovery methodologies) that Ofcom proposes to the rental charges.

4.1.4 Ofcom proposes to set separate caps for each rental charge. CityFibre agrees with this approach. Although there may be some benefits from aggregating some products, the use of PIA at scale is yet to happen and such aggregation should be made based on actual experience of how the products are used through large scale deployment.

4.1.5 CityFibre also agrees with Ofcom that Openreach's current product portfolio is the only reasonable starting point for determining what services Openreach should be obliged to offer. It is, however, important that there is a robust and transparent process for having these services amended or new services added in order that CPs can make the most efficient use of the existing physical assets possible during the charge control period, rather than having to wait for new services to be mandated in the next market review decision. To that effect, CityFibre proposes that Ofcom should reserve the right to seek further adjustments to the Reference Offer within this charge control period if, for instance, major new product categories arise from further work to develop features such as overhead lead-ins.

4.1.6 Given that new PIA services are likely to be developed and launched during the charge control period, CityFibre agrees with Ofcom's proposal that the current basis of charges should be applied to such new services and that prices for the serviced covered by the charge cap should be adjusted as and when appropriate to ensure that Openreach does not over-recover costs.

*4.2* *Calculation of maximum charges*

4.2.1 Ofcom proposes to use the latest copper valuation for setting the price cap on PIA rental charges[6], but has not included that valuation in the calculation performed for this consultation. As copper value can vary substantially, it is possible that the move to a new valuation could have a material impact on the final charges and CityFibre believes Ofcom should use all available up-to-date information when consulting on charge levels on such critical services. CityFibre there requests that Ofcom issues a revised consultation including the up-to-date copper valuation.

**The use of 25mm subduct for calculating rental caps**

4.2.2 In our response to the April 2017 DPA consultation, we explained that we consider the use of a 25mm subduct to calculate the rental caps for duct-related products to be inappropriate. Ofcom also acknowledges that a number of other respondents objected to that point[7].

4.2.3 Using a 25mm subduct as the smallest charging unit for duct space will give perverse incentives to CPs. For example, a CP only needing a much smaller duct may well opt for a 25mm duct as this may mean that there remains no space for any other CP to use the duct, thus limiting the level of competition that can be supported by PIA, to the detriment of consumers.

4.2.4 Ofcom suggests that the efficiency benefits of introducing charges for smaller subducts (e.g. incentivising CPs to be efficient in the amount of duct space they use) are outweighed by the risk that CPs will not pay 'enough' for their use of Openreach's physical infrastructure relative to the value they can deliver through the smaller ducts[8]. CityFibre is deeply concerned at this approach, which effectively means that technology innovation and improvement is not rewarded if the incumbent is still using old technologies. CityFibre considers that charging less for smaller subducts could provide an incentive to Openreach to start upgrading its access networks across the country from copper to fibre. Such an incentive would be entirely in line with Ofcom's general duties to encourage efficiency and innovation as well as with government policies to see widescale FTTP deployment by 2025.

4.2.5 If CPs' (including Openreach) use of new technologies (e.g. fibre instead of copper) causes the overall occupation of BT's ducts to be reduced, then that should not cause a problem. On the contrary, it would ensure that the facility was available for new market entry. There may be a transitory period during which Openreach would pay more than other CPs, due to its larger subducts used for copper, but that is consistent with providing incentives for efficiency and innovation. CityFibre finds it deeply troublesome that Ofcom dismisses this approach without any further analysis. CityFibre considers that Ofcom's proposed approach rewards inefficiency and encourages CPs to game the system with the result of potentially reducing the level of competition that can be supported by Openreach's existing physical infrastructure.

4.2.6 In an effort to partially overcome the negative effects of its proposal to use 25mm ducts as the minimum charging unit, Ofcom proposes to change Openreach's current practice of charging

[6] See DPA pricing consultation paragraph 3.29.2.

[7] See footnote 46 of the DPA pricing consultation.

[8] See DPA pricing consultation paragraph 3.34.

the 25mm subduct rental for each cable or subduct a CP puts into Openreach's ducts with a rule that Openreach can only charge more than 1 25mm subduct rental if the total cross-sectional area used by a CP (for potentially multiple cables and/or subducts) exceeds 25mm[9]. Whilst Ofcom's intention is laudable (i.e. that a CP should not pay for more space than it uses and to avoid Openreach over-recovering its costs by charging multiple 25mm subduct rentals where it only has the space for 1), the effect could be to discourage CPs from using subducts (use of which is considered good practice) and the practical implementation of this rule would likely be fraught with complications and liable to generate disputes. This rather 'crude attempt to overcome the effect of using the 25mm subduct as the smallest charging unit only serves to highlight the problems caused by that policy. Fixing the core problem by mandating that rental charges for smaller subducts be introduced would be a far superior solution. Allowing for the use of smaller subducts would also likely reduce the amount of 'loose' cables CPs put in the Openreach ducts to circumstances where that is the most appropriate technical solution, rather than to save PIA rental payments.

**Lead-in charges**

4.2.7 Ofcom proposes to continue Openreach's current approach by which a CP must either remove its lead-in cable when an end customer churns off its network, or continue to pay the rental charges[10]. It seems to CityFibre that this arrangement is likely to be a powerful deterrent from using Openreach's lead-in ducts and therefore not in line with Ofcom's strategic objective to make as much as Openreach's physical infrastructure available to competing CPs on terms to incentivise the CPs to build new full fibre networks without duplicating physical infrastructure unless necessary.

4.2.8 In reality, it is likely that the fibre installed by the first CP that provides full fibre services to an end customer could be reused by future CPs to whom the end customer moves over time. As it is not planned that Openreach must remove its copper connection to the end customer in order to make room for the new fibre connection, there is no opportunity cost of leaving the new fibre alongside the copper, making it available to whichever CP the end customer choses to contract with at any point in time. Effectively, once the new fibre is in place to the customer's premises, it could become part of the Openreach network.

4.2.9 CityFibre therefore believes it would be much more equitable that a CP only pays for the lead-in rental while it has an active end customer connection. It is likely that once a customer has had a fibre connection they will not wish to go back to copper, and therefore the fibre connection will very likely be in constant use from the first connection. To force CPs to remove old fibres and reinstall new ones when a customer churns is inefficient and does not seem to serve any economic, technical or practical purpose.

4.2.10 Ofcom's rationale to leave the current arrangement in place for the duration of this charge control period because the level of churn is unlikely to be high in that period, given the relatively low number of FTTP connection anticipated in the period[11] is misguided. Whilst the actual levels of churn may not be a problem during this charge control period, CPs will make

[9] See DPA pricing consultation paragraphs 3.36 – 3.38.

[10] See DPA consultation paragraph 3.42.

[11] See DPA pricing consultation paragraph 3.42.

the decision on whether to use Openreach's lead-in ducts based on a much longer planning timeframe. As there is no guarantee that Ofcom will change this charging practice in the next market review decision (if that were so, why not simply change it now?), CPs will have to assume that they will be facing the lead-in charges in perpetuity – which is clearly not an attractive proposition.

4.2.11 On a practical level, if the use of the fibre connection does not pass from one CP to another when a customer churns, does the new CP therefore have to remove the old fibre before installing its own? And could Openreach effectively be collecting multiple lead-in rentals for a single connection to an end customer?

4.2.12 Although the points made above relate to Ofcom's position in relation to lead-in ducts, CityFibre considers the same principle to be equally applicable to overhead lead-ins. If a hybrid (Siamese) cable is used for the lead-in to accommodate both copper and cable, it would not make sense for a subsequent CP to have to replace that.

**Box-related products**

4.2.13 Whilst supporting the principle of pragmatism in the interest of producing a new improved PIA product as soon as possible, CityFibre finds it unsatisfactory that Ofcom simply accepts unsupported assumptions from Openreach. In any event, it would seem that the charging for box-related products is directly linked to the use of the 25mm subduct as the smallest charging unit. The evident weaknesses of that approach is set out in some detail below and a change of that approach would necessitate a review of the methodology and assumptions underpinning charges for box-related products.

4.2.14 CityFibre encourages Ofcom to set charges that are based on clear and transparent underpinning analysis and principles. It is important to understand that many decisions of whether to use PIA are beginning to be made during this charge control period and cannot then be practicably changed later. A short term 'make-do' approach will have significant long-term consequences. Whilst the pricing for box-related products on their own may not be a deciding factor, the cumulative materiality of the several instances where a short-term make-do approach is proposed by Ofcom could certainly influence such decisions.

**Pole-related products**

4.2.15 Based on experience in Southend, CityFibre believes that the pole-related products in the PIA product portfolio will be an essential component of the portfolio. If the pole-related processes and pricing are not configured in such a way as to make the use of poles and the connection of end customers smooth and financially viable, then the overall benefits of the new PIA product will be substantially diminished. CityFibre has very severe concerns about Ofcom's current proposals for the overhead lead-in processes. Unless those processes are amended to enable CPs to become actively involved in the adjustment work and to provide acceptable and reliable timeframes for customer connections, CityFibre is unlikely to use overhead lead-in services at all.

4.2.16 A detailed discussion of our concerns with Ofcom's proposed overhead lead-in processes is under production and will be provided separately to Ofcom as soon as it is available.

*4.3* *Calculation of the network adjustment costs component*

4.3.1 CityFibre agrees with the principle that the current charging structure results in discrimination against CPs, when compared to Openreach itself, as all network adjustment costs resulting from PIA usage are charged directly to the CP through ancillary charges, whereas any network adjustment costs incurred by Openreach's own use are recovered across all users of the infrastructure. CityFibre therefore supports Ofcom's principle that the network adjustment costs caused by PIA usage and those caused by Openreach's own use of the physical infrastructure should be recovered in the same way, such as to remove the discrimination.

4.3.2 CityFibre also agrees in principle with Ofcom's proposal to create an allowance for network adjustment costs to be included in the PIA rental charges, although we have concerns relating to how some costs are calculated and over which products they are recovered. These concerns will be set out in subsequent sections of this response.

4.3.3 A significant concern relates to the manner in which the network adjustment costs are recovered. Ofcom proposes that the costs should be recovered from all SMP products that use the physical infrastructure over the review period [12], but CityFibre considers this to be erroneous as only broadband users that use a fibre-based service will benefit from the network adjustments made and it is also the provision of those services that causes the costs to be incurred. It could be argued that all users will ultimately benefit, but it is extremely unlikely that the level of network adjustments caused by the use of PIA products to deliver full fibre networks, would have been incurred if Openreach simply continued to provide copper-based services.

4.3.4 Ofcom's six principles of pricing and cost recovery are set out below:

1) Effective competition - the mechanism for cost recovery should not undermine or weaken the pressures for effective competition.
2) Cost causation - costs should be recovered from those whose actions cause the costs to be incurred at the margin.
3) Cost minimisation - the mechanism for cost recovery should ensure that there are strong incentives to minimise costs.
4) Distribution of benefits - costs should be recovered from the beneficiaries especially where there are externalities.
5) Practicability - the mechanism for cost recovery needs to be practicable and relatively easy to implement.
6) Reciprocity - where services are provided reciprocally, charges should also be reciprocal.

Examining Ofcom's proposal to recover the costs of network adjustments from all SMP products that use the physical infrastructure results in customers using copper services only paying towards the PIA-related network adjustments, costs which would not be incurred to provide copper services. Below, we examine Ofcom's proposal against Ofcom's own 6 principles:

[12] See DPA pricing consultation paragraph 3.50.

| Cost principle | Assessment of Ofcom's proposed allocation method. | CityFibre comments |
|---|---|---|
| Effective competition - the mechanism for cost recovery should not undermine or weaken the pressures for effective competition. | Ofcom's proposed method reduces the amount of network adjustment costs included in the PIA charges to a minimum. This should encourage competition as the PIA product will be cheaper than if the costs were allocated using the principle of cost causality or distribution of benefits, for example. | Whilst CityFibre understands that a low-priced PIA remedy may encourage competitors to use PIA, this approach appears in direct contradiction to Ofcom's overriding principle in the WLAMR that "Today's customers must not pay for tomorrow's network[13]".<br><br>**Ofcom's proposed recovery method appears to CityFibre to be an explicit cross-subsidy from consumers of copper-based services to consumers of fibre-based services.**<br><br>Additionally, as the amount of usable duct and pole infrastructure will vary considerably between towns and cities across the UK (and that the condition of the ducts and poles are discovered after the CP has decided to deploy its full-fibre networks in a specific town), the cost of network construction will likely vary highly between different locations. This would be the result of two separate Ofcom proposals:<br><br>Firstly, the cost recovery method as discussed above, and<br><br>secondly, Ofcom's proposal to not include all (or a considerable portion of) network construction costs (for in-filling Openreach's |

[13] See CityFibre's response to the WLAMR consultation paragraph 9.26 and 9.27

| Cost principle | Assessment of Ofcom's proposed allocation method. | CityFibre comments |
|---|---|---|
| | | network where necessary) in the financial limit to be recovered through the rental charges[14].<br><br>Further, setting an artificially low PIA rate reduces the incentive for CPs to build any network where PIA is not usable and could lead to patch-work networks coverage of cities and much more limited full-fibre deployment than would otherwise be the case. This would simply be because the costs differential between PIA and non-PIA build would be so high that it would not be viable to deploy consistent pricing across these categories. |
| Cost causation - costs should be recovered from those whose actions cause the costs to be incurred at the margin. | Ofcom's proposed cost recovery method does not satisfy the cost causation principle. To satisfy the cost causation principle the costs should be recovered from fibre-based services only as it is the deployment of fibre that causes the costs to be incurred. | Although this would result in an increase in PIA rental charges, CityFibre considers this to be a more appropriate and sustainable cost recovery method. |
| Cost minimisation - the mechanism for cost recovery should ensure that | It is by no means certain that Ofcom's proposed method will satisfy the cost minimisation principle. It is, for example, very possible that the ability to recover network adjustment costs from customers using copper-based services | |

[14] See paragraphs 5.25 and 5.26 of this response.

| Cost principle | Assessment of Ofcom's proposed allocation method. | CityFibre comments |
|---|---|---|
| there are strong incentives to minimise costs. | would cause Openreach to feel less pressure to minimise costs as the costs are distributed across such a large customer base as to be hardly significant.<br><br>It is also unlikely that this recovery method will encourage CPs to minimise the costs of adjusting Openreach's network as these CPs are unlikely to be large consumers of copper-only wholesale/access services.<br><br>Spreading the costs across such a large base could cause all parties to be less sensitive to the need to minimise costs. | |
| Distribution of benefits - costs should be recovered from the beneficiaries especially where there are externalities. | In the case of PIA-related network adjustments, cost causation and distribution of benefits are closely linked and it is clear that Ofcom's proposed cost recovery method does not result in those costs being covered by the customers who benefit from those costs being incurred (i.e. the customers using fibre-based broadband services). | CityFibre considers that when cost causation and distribution of benefits align, this constitutes a very strong rationale for adopting the cost recovery method that satisfies these two parameters. |
| Practicability - the mechanism for cost recovery needs to be | There does not seem to be any particular practicability reasons for why Ofcom has chosen its specific cost recovery method, nor can we | |

| Cost principle | Assessment of Ofcom's proposed allocation method. | CityFibre comments |
|---|---|---|
| practicable and relatively easy to implement. | identify any practicability obstacles in deploying other methods including cost causality and distribution of benefits. | |
| Reciprocity - where services are provided reciprocally, charges should also be reciprocal. | This PIA service is not reciprocal, so this principle is not applicable in this context. | |

4.3.5 The analysis above sets out clearly that Ofcom's proposed cost recovery method would cause market distortions and is a means of artificially reducing the PIA charges to a level that simply does not reflect the costs in providing the service. As explained above, this potentially well-meaning effort to reduce the PIA charges as much as possible would be likely to have material adverse effects on the infrastructure investment incentives overall.

4.3.6 CityFibre urges Ofcom to reconsider the cost recovery method to be deployed for the network adjustment cots to more appropriately reflect cost causation and distribution of benefits as well as encouraging cost minimisation.

4.3.7 A further concern in relation to Ofcom's indicative calculation of the relevant network adjustment costs and the resulting indicative rental charges is Ofcom's assumption of the number of premises passed by new infrastructure using PIA, during this charge control period. In the WLAMR consultation document, Ofcom makes very conservative assumptions about the number premises that will be passed by FTTP networks during this charge control [15], significantly below the £0.5m[16] assumed for competitive CPs in this consultation. Further, FTTP premises networks deployed in the forthcoming charge control period are likely to have a significantly lower level of PIA usage than in subsequent charge control periods. This is simply because the new PIA products will not be available until at least 1 year into this forthcoming charge control and network planning, which will need to incorporate any use of PIA, is done approximately 6-12 months before actual network construction commences. Any PIA use in the forthcoming charge control period is therefore likely to be primarily based on the current PIA products and processes, which Ofcom acknowledges to be dysfunctional and not suitable for deployment at scale.

4.3.8 Based on the factors set out above, CityFibre believes Ofcom's estimate of premises passed by new networks using PIA to be an overestimation of what is likely to materialise. A reduction in that number would reduce the total amount of network adjustment costs to be recovered through the PIA rental charges (£134m)[17] and the resulting rental charges.

4.3.9 We have attempted to understand Ofcom's calculation of total of £9m to be recovered over the three year charge control period to cover network adjustment costs[18] and the additional conclusion that this results in an annual total charge of £7m[19], but we have not succeeded in doing so. Along with a number of other sections of this consultation document, this section

[15] CityFibre strongly disagrees with Ofcom's assumptions in the WLAMR consultation as set out in some detail in our response to that consultation. There is however an important difference between estimating the total number of premises that will be passed by FTTP networks in the forthcoming charge control period and the assumption of how many of those premises will be passed by FTTP networks built using PIA. The current status of the PIA product means that most FTTP network build in this forthcoming charge control period are likely to be built without the use of PIA.

[16] See DPA pricing consultation paragraph 3.52.

[17] IBID.

[18] See DPA pricing consultation paragraph 3.52.

[19] See DPA pricing consultation paragraph 3.52.

appears to be particularly difficult to follow. Understanding how Ofcom has calculated the costs to be recovered through the PIA rental charges is a critical for us to be able to provide informed feedback on Ofcom's proposals.

### *4.4 Productisation costs*

4.4.1 CityFibre does not dispute Ofcom's calculations of the productisation costs, but disagrees with the principle that the productisation costs should be recovered across all SMP products using the physical infrastructure.

4.4.2 The analysis set out above in relation to the recovery of network adjustment costs is largely also applicable to the productisation costs, only the case for not recovering the PIA productisation costs from consumers of copper-based services is even stronger than for the network adjustment costs. Whilst there may be an argument that network adjustment costs could benefit all users of the infrastructure (although the majority of the adjustments made for PIA would not be required for BT to continue to offer copper-based services), there is absolutely no argument that the productisation costs can in any way be considered to provide any benefits to consumers of copper-based services. Nor can it ever be argued that the consumption of copper-based services could cause any PIA productisation costs to be incurred.

4.4.3 CityFibre considers Ofcom's proposed cost recovery method inappropriate. Despite being a potentially large consumer of PIA services, the distortions caused by imposing artificially low PIA charges are such that CityFibre strongly recommends that Ofcom implement a more appropriate cost recovery method as set out above in relation to the recovery of network adjustment costs.

4.4.4 Figure 3.2 in the DPA pricing consultation is a visual representation of the changes Ofcom proposes to make to the current PIA rental charges[20]. That figure starts with the current PIA charges and then removes the PIA productisation component (the network adjustment charges are not currently included in the rental, but charged separately as ancillary charges), which reduced the rental charge by almost 50%. Ofcom then make two minor changes to reflect updated cost data and updated physical infrastructure information, resulting in a further small reduction of the rental charge. Having thus more than halved the current rental charge, Ofcom then reintroduces the costs of both network adjustments and PIA productisation, which brings the rental charge to less than half the original rental charge (£0.29 compared to a starting point of £0.6). **The reduction by >50% of the rental charge is therefore almost entirely due to Ofcom's chosen cost recovery method and the new price includes costs that were not previously included[21]**.

4.4.5 Whilst CityFibre hopes to consume large amounts of PIA, it is important that the balance between building with PIA and self-build is not distorted. Ofcom's proposed cost recovery does result in such distortion.

[20] Using the single spine duct as an example.

[21] The network adjustment costs which are today charged separately to the CP using the PIA service.

*4.5* *Commencement of rental charges and minimum duration*

4.5.1 Ofcom proposes that Openreach and industry should develop rules for when rental can be charged if all network adjustment has not been completed[22], which in principle is acceptable to CityFibre, but we do believe that Ofcom needs to provide some guidance to ensure that negotiations are productive and not unnecessarily protracted.

4.5.2 CityFibre particularly suggests that Ofcom proposes the following guidance:

(1) Where Openreach is performing the network adjustments, then rental should not be chargeable until all adjustments are completed, except in exceptional circumstances; and

(2) Where the CP performs the network adjustments a timeframe should be agreed and if adjustment are not completed by that time, rental charges can be chargeable unless the CP can produce evidence that the delays are outside its direct control.

[22] See DPA pricing consultation paragraphs 3.67 – 72.

## 5 Setting a financial limit for network adjustment costs allowance included in rental charges

5.1.1 CityFibre agrees with Ofcom's proposal that a substantial part of the network adjustment costs that arise from using PIA services, should be recovered from both BT and non-BT customers and through rental charges, rather than on an ad-hoc basis. Ofcom has identified the competitive distortion arising from BT being able to recover its incremental costs of FTTC and FTTP deployment across its entire customer base and a CP having to pay all costs directly through ancillary charges, despite the fact that BT and its customers also will benefit from the improved physical infrastructure.

5.1.2 As set out above, CityFibre considers Ofcom's chosen cost recovery methods to be inappropriate, but that does not mean that we disagree with the principle that the costs should be distributed in a manner that corrects the market distortions arising from the current charging structures.

5.1.3 CityFibre also agrees that there should be a limit for which costs should be included in the rental charge and which should remain as ancillary charges. For example, it is important that any activities that could be most effectively and efficiently done by the CP itself should not be included in the rental charge[23] so as to ensure that CPs have incentives to only use the Openreach infrastructure where that is the most efficient solution. Ofcom's proposal to separate the current ancillary service into three categories (A, B, and C) is also sensible and appears in principle to support the principle of encouraging economically efficient behaviour by all parties.

5.1.4 Ofcom suggests that Openreach should not have an obligation to relieve congestion where premises are served by lead-ins which are directly buried or are installed in ducts too small to accommodate an additional cable[24]. Whilst CityFibre agrees with this proposal as regards lead-in cables, it would be helpful to have clarity that Openreach would have an obligation to relieve congestion where it has used directly buried cable in other parts of the network than the lead-in sections. CityFibre considers it appropriate that relieving congestion where directly buried cable is used should be mandatory and not subject to Ofcom's proposed rules in relation to the distance the CP requires and/or the size of the subduct requirement by the CP.

5.1.5 Placing the costs of building new physical infrastructure in those situations on the CP, would revert to the situation which Ofcom is seeking to remedy by recovering the network adjustments across a larger group of users then only the users of PIA-based services. If Openreach were to assume responsibility for overcoming the problem caused by directly buried cables, then these costs would also be distributed along with other category A network adjustment costs and CityFibre considers this to be entirely appropriate.

[23] Please note that this does not include remedial work done by the CP on Openreach's network, but network constructed by the CP instead of using the Openreach physical infrastructure.

[24] See DPA consultation paragraph 4.28.

*5.2* *CityFibre's experiences from Southend Trial*

5.2.1 CityFibre's experience in Southend[25], however, shows that Ofcom's proposed categories and distribution of elements between the categories needs to be adjusted. Annex A provides a detailed analysis of our experience from the Southend trial, below we summarise these and provide our conclusions and recommendations for how to adjust the proposed network adjustment cost recovery within rental charges.

5.2.2 Our experience in Southend has been that the level of Category A costs, [✂]are higher than those estimated by Ofcom. It is possible that Ofcom's estimates are national averages, including both rural and urban areas, whereas the level of occupation of ducts and poles in towns and cities (where PIA will primarily be used) is much higher than for rural areas and it is more likely that chambers will be full or ducts collapsed due to higher levels of activity on the networks (in the form implementation of FTTC and other network upgrades/repairs and connecting/disconnecting individual customer premises).

5.2.3 It should be noted that the costs actually incurred by CityFibre to perform the category A network adjustments were in fact substantially lower than the amount that results from applying Openreach's current PIA pricing to the activities undertaken. Annex A provides a full comparison of the costs actually incurred by CityFibre, compared to the costs resulting from applying the Openreach prices. Whilst the costs of performing the category A network adjustments will vary across different parts of the UK, and the Openreach prices most likely reflect a national average, CityFibre considers that the difference between some of the rates [✂] Openreach rates are so large that we consider it entirely inappropriate for Ofcom to simply apply the current Openreach rates without checking that they reflect efficiently-incurred costs.

5.2.4 Having identified these significant differences, we have reviewed Openreach's incentives at the time the current prices were set. Network adjustment is currently charged directly to the CP using the PIA service. The higher these charges are, the more risky and less attractive it would be for CPs to use PIA. The risk that very high network adjustment charges will apply can be a significant deterrent from using the product. From this very quick high level analysis and the large differences between the costs incurred by CityFibre and Openreach's charges, we conclude that Openreach had strong incentives to set the ancillary charges for network adjustment as high as possible to prevent the use of PIA at scale. We also conclude that, as Ofcom's objective is now to encourage large-scale PIA deployment, the use of Openreach's current ancillary charges is not appropriate.

5.2.5 Regardless of whether CityFibre's or Openreach's costs/prices are applied, the Category A costs in Southend were above Ofcom's estimates of category A costs of £3,700 per kilometre[26] and would either eat up virtually the entire network adjustment allowance (which includes a 50% uplift on the £3,700 to enable some recovery of category B costs as well) leaving no scope for covering any Category B costs, or would indeed far exceed the full proposed allowance if BT's current PIA charges were to be used. Although there are likely to be differences in the level of adjustment required in different cities across the country, CityFibre considers it wrong that there should be a risk that even Category A costs may not be covered by the allowance included in the rental charge. The risk that some category A and all category B costs would need to be

[25] Where CityFibre has constructed 62.5km of full-fibre network using the current PIA services where available.

[26] See DPA pricing consultation paragraph 4.43.

covered directly by the CP itself through ancillary charges goes directly against Ofcom's own stated objective of creating a more level playing field between BT and other CPs using the Openreach infrastructure, and would constitute a strong deterrent from using the PIA product at scale.

5.2.6 Further, category B costs, primarily in-filling Openreach's physical network where it is congested or damaged, were substantial. For category B activities which CityFibre believes should be included within the financial limit[27], we estimate a cost of approximately £6kkm[28]. Ofcom's proposal to uplift the already low estimate of category A allowance by 50% to cover allowable Category B costs is therefore clearly much too low to have any significant impact on CP's incentives to reuse Openreach's existing infrastructure.

5.2.7 The level of Category B costs experienced in Southend is such that it is likely to significantly impact on CP investment decisions. It is possible that it would be lower in other towns and cities, but the fact that it could be as high as experienced in Southend (and potentially higher) makes the decision to use PIA even more complex as it introduces a significant level of uncertainty regarding the total construction costs for any one town or city.

5.2.8 CityFibre therefore proposes that Ofcom should change both the level and structure of the ancillary network adjustment costs that should be averaged into the rental costs, as follows:

(1) A national average per kilometre should be calculated for the purpose of determining the level of the rental charges;

(2) But, instead of a national average limit being applied in all towns and cities (regardless of the actual costs of using PIA in each of these), clearly specified categories of costs should be covered in full. This would necessitate setting specific rules for the distance of 'infill' that is covered and the size of subducts covered, but would ensure that all relevant costs would be covered by the rental charges.

5.2.9 The charging approach set out above would substantially reduce the uncertainty of overall costs of deploying full-fibre networks in individual towns and cities and thus encourage the use of PIA where available.

[27] Construction of new ducts where Openreach's ducts were unusable

[28] When applying Openreach's PIA charges as proposed by Ofcom.

## 6 Annex A lessons for CityFibre's PIA trial in Southend

6.1.1 During the PIA trial in Southend, CityFibre has constructed [✂]fibre network in the town of Southend, [✂]of which were constructed using Openreach's physical infrastructure through the current PIA product portfolio along with some SBC[29] infrastructure[30].

6.1.2 We have analysed the data collected from the trial and fit it into the cost categories A, B and C proposed by Ofcom in the DPA pricing consultation in order that we can compare Ofcom's estimated costs with the costs actually incurred in Southend. We are aware that costs will vary between different towns and cities, but nevertheless the data collected from the first large scale trial of PIA in the country is of significant value in this context.

### *6.2 Category A costs*

6.2.1 The table below shows the costs of items falling into Ofcom's category A. The quantities have been expressed as an amount per km used over the full PIA/SBC implementation. Three scenarios are analysed:

(1) [✂].

[✂]

6.2.2 [✂].

6.2.3 [✂].

6.2.4 As presented above, the actual costs incurred by CityFibre for Ofcom's category A costs of [✂]This presents two issues:

(1) Ofcom appears to have underestimated the number of network adjustment activities required per km once a CP actually uses Openreach's network at scale, and

(2) Openreach's price levels for the network adjustment services are inflated and are unsuitable for Ofcom to simply impute into its calculations of the PIA rental charges.

6.2.5 Whilst we acknowledge that there are regional and local cost variances, the level of discrepancies identified suggests that Ofcom's assumptions of the number of incidents of the various network adjustment activities are too low and need to be adjusted.

### *6.3 Category B costs*

6.3.1 For category B network adjustments, CityFibre has analysed job-pack data from the Southend trial. This data includes new network build in three categories:

6.3.2 [✂]

[29] Southend Borough Council

[30] [✂].

6.3.3 [✂].

6.3.4 The table below shows an analysis of these in-scope category B adjustments, showing actual costs incurred by CityFibre as well as an estimate of the amount that would be incurred at Openreach prices.[31]

[✂]

6.3.5 [✂] CityFibre therefore believes that the allowance made by Ofcom for category B in-scope costs is significantly lower than would appear reasonable if the objective is to create a predictable cost base of CPs deploying new all-fibre networks using PIA.

[31] Further breakdown of the costs in the table to show quantities and prices by component can be made available to Ofcom in due course. It has not been possible to complete that detailed analysis within the timeframe of submitting this response.