TalkTalk
For Everyone

Physical Infrastructure Market Review

TalkTalk submission

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NON-CONFIDENTIAL

1 Summary

1.1 TalkTalk welcomes Ofcom's Physical Infrastructure Market Review. Removing restrictions on using BT's duct and pole infrastructure offers the prospect of lower roll-out costs for infrastructure builders, improving returns to investment and enabling new full fibre networks to reach a greater proportion of British households and businesses. More altnet FTTP investment and strong regulation of FTTC will in turn stimulate Openreach to accelerate its FTTP deployment.

1.2 Ofcom's proposed remedies in this review are likely to give increased flexibility to investors who wish to construct predominantly leased line networks. Moreover, even for investors intending to build FTTP-GPON networks focussing on residential and small business customers, unrestricted DPA offers the prospect of savings through reduced bureaucracy, as there is no need to comply with, and more importantly prove compliance with, policies on the proportion of lines of each type.[1] Removing the restrictions therefore simplifies the use of the DPA product and reduces the ability of Openreach to frustrate its use and/or raise its rivals' costs. This provides a powerful rationale for removing these restrictions.

1.3 However, TalkTalk has significant concerns regarding deficiencies in the methodology adopted by Ofcom in order to introduce unrestricted DPA.

1.4 Most importantly, Ofcom's market definition is fundamentally flawed. It effectively presumes a specific product market and does not consider the prospect that there are narrower separate, or asymmetric, markets for passive infrastructure topologies that can be used only for leased lines and passive infrastructure topologies that can be used for access lines as well. This is unsupportable, and repeats the pattern of errors in product market definition which Ofcom has made in recent reviews, and which we have pointed to in our consultation responses.[2] Ofcom must fundamentally revise its market definition analysis in this case, and in general should make its market definitions on the basis of sound economics, rather than presuming a particular market definition to fit a pre-determined outcome. Without a robust economic basis for its market definition, Ofcom risks it being overturned on appeal, with the result that all remedies fall away.

1.5 As TalkTalk previously set out in its BCMR19 response last month, Ofcom has overestimated the extent of competitive networks by adopting an excessive estimate of the distances which competitor firms are likely to be willing to dig in order to serve leased line customers, and by adopting a threshold for the extent of overlap with altnet providers required to place a competitive constraint on BT. Correcting for this error further reinforces the need for an unrestricted DPA remedy.

1.6 Ofcom has made a further error (albeit on the basis of market definitions which should be changed) in its approach to the CLA, where it proposes to impose unrestricted DPA despite

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[1] Here, residential or small business customers are defined as those using contended broadband services, whereas large business customers are those using leased line services based on dedicated fibre circuits.

[2] Ofcom's BCMR16 was successfully appealed by BT Group on the basis of errors in market definition. TalkTalk set out at length in its recent BCMR19 submission the multiple significant errors made by Ofcom in market definition in that consultation; and we will set out the significant errors in market definition proposed in the Access Review in our consultation response later this month.

there being no finding that Openreach holds SMP for leased lines in that area. This appears legally dubious. Moreover, its justification for imposing regulation in the absence of SMP is nugatory. It has reached this position because of a clear error that Ofcom made in its BCMR19 proposals, where it found Openreach not to hold SMP despite a sustained market share in excess of 60%. Ofcom should find that Openreach has SMP in the CLA in both the passive access and business connectivity markets, which would provide a clear basis for its unrestricted DPA proposals.

1.7 Finally, Ofcom has not considered in this document to what extent broader dark fibre access remedies, which would be less intrusive than unrestricted DPA, might be an effective substitute for unrestricting duct and pole access. Ofcom should only choose to extend its DPA remedy if it is satisfied that it could not obtain substantially the same benefits from removing the restrictions on dark fibre which it has proposed to impose in the current BCMR.

1.8 In light of these substantive errors, Ofcom should reconsult on revised proposals in the PIMR which are more aligned with both sound economic analysis and the legal framework within which Ofcom must operate. These PIMR proposals should be consistent with the BCMR19 proposals, unlike Ofcom's current proposals which gloss over inconsistencies. We believe that, even with revised market definitions, it will still be appropriate for Ofcom to impose unrestricted DPA in all or most parts of the country.

1.9 The remainder of this submission sets out TalkTalk's views in detail.

2 Product market definition

2.1 Ofcom sets out its market definition at §§3.18-3.76 of its consultation, considering product market definition first, then geographic market definition based on that product market. This is the conventional and correct approach. However, beyond this TalkTalk has serious concerns about the approach adopted by Ofcom. Below we first describe some aspects of Ofcom's approach and explain why Ofcom is likely to have misdefined its product markets by starting the analysis on the basis of the wrong focal market.

2.1 Ofcom's comments on the focal product

2.2 To commence its market definition, Ofcom chooses a focal product (§3.24):

> *We begin with a focal product of wholesale access to telecoms physical infrastructure for deploying a telecoms network.*

2.3 It justifies its decision to use this focal product, rather than any narrower focal product, at §§3.28-3.29:

> *Our focal product is for the supply of access for any type of telecoms network... there is likely to be a range of potential access seekers, deploying different types of network. However, in general the underlying product is the same irrespective of end use. The same physical infrastructure can be used to support different types of network and there is nothing inherent in the nature of the duct, or pole that make it suited to a particular purpose. We think this is true of all telecoms physical infrastructure.*

We recognise that access seekers may have different preferences when deciding between physical infrastructure options, reflecting differences in their intended use. For example, a telecoms provider deploying a multi-service network to all premises is likely to place more weight on whether the infrastructure covers all premises than a telecoms provider employing a single leased line. We have sought to reflect the different types of access seeker in our market analysis – both at the market definition stage and in our market power assessment.

2.4 At §3.35(b), when considering the potential competition constraint from other utility infrastructure, Ofcom proceeds to note that *"the deployment of cables through ducts require access points at regular intervals*". It also notes, at §3.35(a) that some types of networks lack sufficient coverage to be usable for deploying telecoms networks, and at §3.35(d) that there may be construction incompatibilities which mean that specific networks cannot be used by access seekers.

2.5 Finally, albeit outside its section on market definition, and specifically considering duct owned by organisations such as local authorities, Ofcom notes at §3.120 that "*Alternative telecoms physical infrastructure is limited to small pockets within postcode sectors, and so is unlikely to be able to support deployment of telecoms networks at scale.* ***Given the costs of breaking in and out of duct****, such alternatives are only likely to be suitable for tactical use" [emphasis added]*.

2.1.1 *Network topologies differ between leased line networks and access networks*

2.6 A feature which Ofcom has alluded to, but not specifically addressed, in its analysis is that leased line networks and access networks have very different topologies:

- access networks will generally aim to cover substantively all premises in a wide area, whereas leased line networks will often specifically target individual premises or small zones of business premises.
- access networks will often have a break out point at every premises they pass. For example, [✂]. In contrast, leased line networks will have far fewer break out points, due to the lower density of large business premises and the bespoke nature of provisioning leased lines. They may not have a pre-installed break out point at every premises they pass, even in areas where they are intending to serve businesses. There are unlikely to be break out points installed in residential areas, even if the duct runs past them. Adding break-out points to an already installed network is likely to be very expensive, as it will require digging down to the duct and then physically amending it at every specific break-out point, as recognised by Ofcom in its analysis of the potential usability of non-telecoms third party infrastructure.
- leased line networks will be designed for uncontended access straight back to the exchange, and therefore may not break out to cabinets, although this will depend upon each network operator's design choices. In contrast, access networks will be brought to cabinets. [✂].

2.7 This reflects that leased line networks may have some features more like those of alternative (non-telecoms) network infrastructures, in their lack of access points (see §3.35(b)), increasing the costs of using them for access seekers wishing to offer comprehensive or near-comprehensive coverage.

2.1.2 *Directly buried networks cannot offer passive access*

2.8 When considering competition in any hypothetical market for passive access (whether for all types of lines, or some subset of lines), it is important to acknowledge that directly buried networks or network elements (whether in the street or across gardens) cannot offer passive access of any type once built.[3] In a directly buried network, cables are buried directly into the subsoil in a plastic sheath which tightly encompasses the cables laid, and new fibres cannot be blown.

2.9 This implies that a directly buried network could not impose a direct competitive constraint on a hypothetical monopolist in a passive access market, as they could not provide passive access to a third party. To the extent that they impose any competitive constraint in the passive market, the constraint would have to be indirect, via competition in downstream markets (e.g. wholesale local access, wholesale broadband access markets, retail broadband, BCM or retail leased lines).

2.10 TalkTalk notes that Table 3.2 demonstrates that 5% of BT's lead-ins are directly buried rather than ducted. We would expect that these elements of BT's network could not offer passive access.

2.2 Ofcom should start from a narrower focal market

2.11 The considerations set out in section 2.1 clearly point towards the conclusion that Ofcom should adopt a narrower focal market than Ofcom currently proposes.

2.12 It is a basic tenet of market definition when assessing SMP that the appropriate approach when defining markets is to start from the narrowest conceivable focal market, and then gradually expand that market in phases as the SSNIP analysis demonstrates that it is not profitable to price above the competitive level in such narrow markets. If this approach is not adopted, there is a risk that markets are defined more widely than is necessary, effectively by agglomerating two separate economic markets and treating them as being part of the same market.

2.13 In this instance, Ofcom has not started from the narrowest conceivable focal markets.

2.14 Ofcom should instead adopt two focal markets as its starting points:

- the market for ducted passive networks with limited break-out points (the market which sits upstream of BCMR markets) (referred to in what follows as type A networks); and,
- the market for ducted passive networks with frequent break-out points (the market which sits upstream of WLA markets) (referred to as type B networks).

2.15 The first of these focal markets (type A) will encompass networks operated by CPs such as COLT and Zayo who provide leased lines. The second (type B) will encompass networks operated by firms providing both leased line and WLA products, primarily Openreach and Virgin Media.

[3] A substantial proportion of TalkTalk's FTTP network in York is directly buried using narrow trenching.

2.16 Ofcom should then assess whether a SSNIP by a hypothetical monopolist in each of these markets would be constrained by competition from firms in the other market:

- starting with type B networks as the focal product, would operators of type A networks constrain operators of type B networks? TalkTalk envisages that there would be no such constraint. A hypothetical monopolist of type B networks, which would necessarily own the network assets of both Openreach and Virgin Media, would clearly be able to impose a sustained and profitable price increase of 5-10% as it would lose little demand to type A networks.
- starting with type B networks as the focal product, would operators of type B networks constrain operators of type A networks? Due to the frequency of break out points in type B networks, and indeed the dominant market shares in leased line markets seen in practice by Openreach and Virgin Media even in areas where there are multiple alternative leased line operators present, it seems clear that access network operators with frequent break-out points would be able to impose an effective competitive constraint on networks with few break out points.[4]

2.17 This means that the appropriate market definition would be asymmetric, with one economic market consisting of all ducted networks (type A and type B), and the other consisting solely of ducted networks with frequent break out points (type B only).

2.18 There is an open question about whether directly buried networks, via indirect competition, will be sufficient to impose a competitive constraint on either type of ducted network. It may be possible for Ofcom to leave this as an open issue, given the short period of the review and the small scale of directly buried roll-out at present. If so, this should be explicitly be left as an undetermined issue on the basis that Ofcom's SMP determination does not change irrespective of the precise conclusions reached.

2.3 Ofcom is correct that other forms of infrastructure do not constraint passive telecoms networks

2.19 In contrast to its lack of consideration of the potential for a constraint (or not) between type A networks and type B networks, Ofcom dedicates considerable effort (§§3.32-3.52) on ruling out competition from non-telecoms physical infrastructure and from wireless networks and satellite networks.

2.20 TalkTalk agrees with Ofcom that none of these potential substitutes is likely to impose an effective competitive constraint on a hypothetical monopolist of either ducted passive networks with frequent break-out points, or all ducted passive networks:

- there are likely to be significant extra costs in using non-telecoms physical infrastructure, amounting to more than 5-10% of the costs of using a telecoms specific network, as set out at §3.35. That alone is sufficient to rule them out of the relevant economic market, even leaving aside the multiple other factors correctly identified at §3.35 of the consultation. [✂];[5]

[4] Openreach's leased line market share is over 60% even in the central London area, with multiple competing operators present.

[5] [✂]

- microwave products will be a poor substitute for leased line products (and a non-existent substitute for access products) for the reasons identified in BCMR19 and set out at §§3.43-3.44 of the consultation, both at the level of active and passive products;
- we agree with Ofcom (§3.50) that it is too early to speculate on whether fixed wireless will become a viable competitive constraint on fixed access lines, that it is unlikely to be a viable substitute for leased line services, and that at present fixed wireless is not an effective competitive constraint on passive networks;
- satellite products (§§3.46-3.48) are not a substitute for active or passive access or leased line products, and are unlikely to be in the foreseeable future, given their high prices and limited bandwidth allowances.

2.4 Conclusions on product market definition

2.21 This section has set out that Ofcom's conclusions on product market definition are not robust. By starting from the wrong focal market, Ofcom has effectively assumed that the market is wider than is supportable on the basis of the economic evidence.

2.22 Ofcom should instead start from narrower focal markets. TalkTalk's analysis indicates that this is likely to lead to an asymmetric market definition, with type B networks, such as those of BT and Virgin Media, constraining type A networks, but not vice versa. There will therefore be two relevant product markets for further analysis:

- the market for type B telecoms networks; and,
- the market for all telecoms networks.

2.23 In each of these markets, it is unclear without further analysis whether directly buried networks and network elements will form part of the relevant market.

2.24 Having changed this, Ofcom will then need to amend other elements of its analysis, including geographic market definition, SMP assessment, and remedies, in light of this change.

3 Geographic market definition

3.1 Section 2 has demonstrated that Ofcom's current product market definition is incorrect, and will need to be revised by Ofcom before it finalises the PIMR. However, this section proceeds as if Ofcom did not revise its product market definition, in order to comment on the geographic market definition as currently set out by Ofcom. As one of the relevant product markets set out in section 2 is the market for all telecoms networks, the points in this section will directly apply in that product market; they may not apply in the narrower market for only type B telecoms networks.[6]

[6] Ofcom should conduct a separate geographic market definition exercise for each of the relevant product markets—the market for type B networks, and the market for all networks. However, as this section deals with Ofcom's analysis on its own terms, and as Ofcom has conducted geographic market definition on the basis of a single product market, TalkTalk here only discusses a single market in the main body of the response.

3.2 In brief, Ofcom's proposed approach on geographic market definition is in two steps:

- assess the geographic market on the basis of postcode sectors (§3.57-3.65);
- aggregate postcode sectors together on the basis of the number of competitors in each sector (§§3.66-3.72);

3.3 This leads to Ofcom provisionally defining four markets:

- BT only areas;
- BT and Virgin Media areas;
- High Network Reach ('HNR') areas excluding central London where there is BT plus two or more operators; and,
- the Central London Area ('CLA').

3.1 Ofcom's geographic market definition is not based on SSNIP analysis and lacks economic underpinnings

3.4 The purpose of geographic market definition is to determine how physically close operators need to be located to one another in order to impose effective competitive constraints on each other. In telecoms markets, there will generally be no demand side substitution between products—consumers will not usually move house in order to obtain 10% cheaper broadband services. Geographic market definition therefore involves some combination of supply-side substitution by providers and grouping otherwise different geographical areas into blocks with similar characteristics in order to make the analysis more tractable. However, throughout the process when determining geographic markets, Ofcom should keep in mind that market definitions should be based on a SSNIP analysis: if an operator in area A could not prevent a hypothetical monopolist in area B from profitably raising prices by 5-10%, then areas A and B should not be in the same geographic market.

3.5 In its BCMR19 response, TalkTalk commented that Ofcom had failed to provide economic underpinnings for its geographic market definition, and in particular for the proportionate overlap required to impose a competitive constraint on BT.[7] In that consultation, Ofcom had adopted a bright line test of 65% coverage being sufficient to impose a competitive constraint in the leased line market. This figure was lifted directly from past WBA reviews, which had themselves not justified this proportion on the basis of any economic or objective evidence; in any case, the appropriate figure for WBA is unlikely to be appropriate for BCM.

3.6 In the current review, Ofcom states at §3.70(a) that it considers that a postcode sector is covered by an alternative broadband operator if that operator can serve 30-80% of the premises, with the precise required proportion being redacted.[8] There is no obvious reason for this redaction, which is not about a specific operator's data, but rather reflects Ofcom's opinion of a threshold. It is unacceptable that such an important figure is redacted without any obvious rationale. In any case, even if it were acceptable to redact in this manner, the

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[7] §§2.73-2.79

[8] Note that this threshold does not provide Ofcom with a way of circumventing the need to properly define the product market. There will be some postcode sectors where more than 30% of premises are business premises, notably in CBDs; even in these areas Type A networks will not impose competitive constraints on Type B networks.

range is so wide as to make it impossible to meaningfully comment on, as it encompasses every plausible option Ofcom could have chosen.

3.7 Moreover, there is no rationale given for why a specific figure within this range is chosen. Ofcom should justify this assumption in terms of the ability to constrain a hypothetical monopolist's pricing to within 5-10% of the competitive level. No such rationale is provided. In the absence of this rationale, there is no reasonable basis for choosing one figure over another, which makes Ofcom's geographic market definition unsound.

3.8 Finally, the bottom end of this range is clearly much too low to provide a competitive constraint.[9] Under the Modified Greenfield Approach, there is no regulation and the hypothetical monopolist is therefore not subject to any type of uniform pricing obligation. It will therefore find it profitable to engage in price discrimination within postcode sectors, setting higher prices where there is less competition. Even if there were such a uniform pricing obligation, Ofcom has not ruled out that it would be more profitable to set prices on the basis of conditions of competition in monopoly areas, accepting a substantial loss of demand in duopoly areas. Reaching such a conclusion is a necessary condition to setting an appropriate threshold.

3.2 Ofcom's approach is based on flawed BCMR analysis

3.9 At §3.70(b) Ofcom states that it considers a 'leased lines' operator to be '*present*' if it has a breakout point within 50m of 65% of large businesses within a postcode sector. TalkTalk has set out at length in its recent BCMR19 submission why this approach is incorrect, in particular through setting a buffer distance far longer than can be sustained on the basis of the evidence presented by Ofcom. This will lead to a finding that an operator is 'present' even when it would be unable to constrain a hypothetical monopolist from setting a price no higher than 5-10% above the competitive level. TalkTalk does not repeat the submissions in full here, but refers Ofcom to section 2.2.3.1 of our earlier submission for our arguments on this at length.[10]

3.3 Ofcom's categorisation of areas into markets is broadly correct

3.10 TalkTalk agrees with Ofcom's approach of categorising markets based on their levels of competition, in order to make the SMP analysis tractable.

3.11 However, we consider that, in light of the split between networks with frequent break-out points and those with infrequent break-out points, and the different status of directly buried networks, Ofcom should not split markets based on the definitions proposed in BCMR19. Rather, it should count the number of effectively competing networks in each postcode sector able to offer the service in question. This means that in the market for networks with frequent break-out points, leased line networks would not be counted. It is likely that different levels of competition will be found between the two product markets, with greater competition in the economic market defined from a focal market of infrequent break-out points.

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[9] Ofcom's §3.76 is unclear, but might be read as implying that the bright line threshold used by Ofcom is actually 30%.

[10] See also §3.5 above.

3.12 It is also unclear why the CLA should be different from other HNR areas in this case. Ofcom has justified this on the basis of the analysis in the BCMR (at §§3.72-3.73). However, this analysis dealt only with downstream leased line markets—it did not cover local access markets at all, and there is no analysis from Ofcom to support the hypothesis that the competitive dynamics of passive markets work in an identical manner to those downstream of them.

3.13 Ofcom should therefore conduct more analysis on this topic, and potentially define different geographic markets for each of the product markets relevant to the PIMR. The same geographic market definition should not be assumed solely to reach simpler conclusions.

3.4 Conclusions on geographic market definition

3.14 Consequently, Ofcom should revise its geographic market definitions. In both the relevant product markets, it should only count a network as being present in a particular postcode sector if it would constrain a hypothetical monopolist to within 5-10% of competitive prices, on the basic of economic modelling. This modelling should assume, in line with the Modified Greenfield Approach, that the monopolist has the ability to engage in price discrimination within a postcode area as well as between areas, albeit that it will only price discriminate if it is able to identify customers where there is less competition, and if the gains of doing so exceed the costs in terms of additional complexity. If it does not price discriminate, then Ofcom should not assume that it will seek to retain market share in all areas, but will be willing to lose market share in some areas to increase profits (by more) in other areas.

3.15 TalkTalk envisages that this approach will lead to a different set of geographic markets from those currently proposed by Ofcom.

4 SMP assessment

4.1 Ofcom's SMP assessment will need to be amended based on the revised product and geographic market definitions after Ofcom has dealt with the issues identified in sections 2 and 3 of this submission. However, TalkTalk envisages that the approach of assessing competition in BT+0, BT+1, and BT+2 or more areas will be similar to that currently adopted by Ofcom. The points below should, unless market definitions are radically different from those currently proposed by Ofcom, directly apply to the wider of the two economic product markets, that for all telecoms networks.

4.2 TalkTalk strongly agrees with Ofcom's analysis that Openreach will hold SMP in BT+0 and BT+1 areas. In BT+0 areas there is by definition no effective competition at all, and the issue of SMP is unquestionable given the high barriers to entry due to large sunk costs of entry, and the extensive time it takes for any entering operator to plan and construct a network.

4.3 In BT+1 areas, not only is there limited competition—two firms will be insufficient to create an effectively competitive market—but BT has a market share of at least 60%, as set out at §3.95(a). As has been consistently found by the European courts, a market share of more than 50% creates a rebuttable presumption of SMP.[11] This is supported by BT's returns

[11] Or dominance, the equivalent in European law.

across both local access and leased line products being well above the relevant cost of capital despite Ofcom's regulation (§3.95(b)), and the proposal in BCMR to substantially weaken this regulation, enabling BT to further increase its returns at the expense of consumers.

4.4 BT+2 areas are likely to be less clear cut (to the extent that these exist at all in the product markets in question once the buffer distance and network coverage thresholds are corrected for their current errors). As Ofcom correctly points out at §§3.111, BT has by far the most ubiquitous network in the UK, passing effectively every premises. On the other hand, using small operators' passive networks is likely to be very expensive unless they offer particularly widespread coverage within a whole area. [✂]. It would be excessively costly, as Ofcom correctly notes at §3.122(b) to attempt to patch together different passive networks in a town in order to create a coherent FTTP roll-out.[12]

4.1 CLA

4.5 It is unclear why Ofcom treats the CLA differently from other areas in its SMP assessment. Ofcom notes that no single alternative operator passes more than 30% of all premises in the CLA (§3.125). 30% coverage is clearly at a level well below that which will be able to constrain BT in these areas; this can also be seen from the high market shares, in the range of 61-70%, which BT has been able to sustain in leased line markets in these areas (BCMR19 consultation §6.107).[13] In light of the very limited coverage by other operators, and the high costs of using multiple passive networks, as already identified by Ofcom, there will be no effective competition to BT.

4.6 As such, there is no need for Ofcom to treat the CLA as a separate economic market within the PIMR; rather, it can be included in one of the other groups. The factors found in the BCMR, of many smaller competing operators in business connectivity, will place no effective constraint on Openreach in this area. Instead, in light of the finding that no single operator other than BT can reach more than 30% of premises, it should be reclassified as a BT+0 area, in line with the methodology proposed for other parts of the country. At the moment, the approach proposed by Ofcom is both worryingly inconsistent with the approach proposed in other parts of the country, and is not underpinned by any economic logic.

4.7 Moreover, the networks in the CLA will have limited break-out points. When assessing competition in the market defined as a result of the focal market for ducted passive networks with frequent break-out points, these alternative operators will not even be in the same relevant market. Therefore, even if Ofcom (incorrectly) thought that a leased line operator with less than 30% coverage in a postcode sector could act as a competitive constraint on BT, it could not do so in the type B passive market.

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[12] In other words, a postcode sector based geographic market definition will not effectively represent the minimum geographic scale required for an alternative network operator to be an effective constraint on BT in this case.

[13] Leased lines are likely to be more competitive in central London than access lines.

5 Remedies

5.1 Overall, TalkTalk agrees with the remedies proposed by Ofcom in its consultation. They are appropriate to deal with the SMP which Ofcom has found, and will meaningfully improve consumer outcomes within telecoms markets. However, there are several areas in which they should be further strengthened to improve the effectiveness of DPA remedies.

5.2 TalkTalk agrees that there should be a requirement to provide network access on reasonable request. However, we note that in leased line markets substantially all of the benefits provided by a passive access requirement could also be obtained by a comprehensive dark fibre remedy, which would also have the significant advantage of reducing network duplication costs, being less complex to implement, and less intrusive as it would require fewer changes to Openreach's business model. We therefore consider that an obligation requiring BT to provide network access for offering leased lines (beyond the current mixed use allowable under the WLA remedy) may not be required (§5.29) if Ofcom were to change its regulatory approach in downstream leased line markets.

5.3 We agree that BT should be obliged to respond in a reasonable manner to requests for new forms of network access.

5.4 It is right for Ofcom to propose that BT should not discriminate unduly, in order to create a level playing field between BT's downstream divisions and those of access seekers. However, we are concerned about the weak form of non-discrimination proposed (§§4.34-4.39), which we consider will allow BT to discriminate against TalkTalk and other potential access seekers, rather than a more comprehensive equivalence of inputs (EOI) requirement. Given Ofcom's proposal to apply a no undue discrimination obligation rather than EOI on grounds of proportionality, we consider it would be appropriate to require Openreach to identify and justify all instances of non-equivalence, contrary to Ofcom's proposal not to impose this upfront obligation (§4.40). As a minimum, the most material instances of non-equivalence should be identified, accounted for and an assessment made to establish broad equivalence, if a full end-to-end process review is deemed disproportionate. We believe this is important in order to establish a baseline for monitoring and assessing BT's compliance with the no undue discrimination obligation. We note that Ofcom plans to "extend the ongoing monitoring programme" introduced following the WLA review, which includes working with the OTA and access seekers (§4.41). We welcome this but consider that Ofcom should take a more proactive approach to monitoring compliance with this obligation in order to ensure access seekers have confidence that they can compete on a level playing field. Ofcom should take the lead in working with access seekers to identify risks of non-equivalence, rather than waiting for specific complaints to arise. We also note that access seekers' ability to identify discrimination risks is dependent on sufficient transparency requirements, as discussed below.

5.5 We do not agree that there should be no specific transparency requirements placed on Openreach at present. It should report KPIs immediately from product launch, so as to provide a baseline for future KPI changes and lengthen the timeline which Ofcom has available for assessment. The current draft Reference Offer for WLA includes minimal KPIs, with only three comparative performance measures, which will be insufficient to fully assess product performance and no undue discrimination. We consider that Ofcom has an opportunity between the publication of the WLA Reference Offer and the publication of the PIMR statement to work with Openreach, access seekers and the OTA to establish a more complete set of KPIs for inclusion in an updated Reference Offer. Establishing comprehensive KPIs will help identify how to further improve the Reference Offer, particularly with refining SLAs;

5.6 We agree with the requirements on BT to provide network adjustments and PIA ancillary services.

5.7 We agree that BT should be compelled to publish a reference offer, to increase transparency of the market. We consider that there is an opportunity for Ofcom to introduce greater clarity regarding the minimum Reference Offer requirements detailed at §5.88, in particular Ofcom should more clearly specify that SLA/C/Gs are required for systems and ancillary services as well as for network adjustments; and for network adjustments, the SLA must include a maximum timeframe for completion, or some other mechanism to increase certainty for access seekers that network adjustments will be completed by Openreach within a reasonable period.

5.8 We agree that BT should be obliged to notify changes to charges, terms and conditions, and consider that the notice periods proposed by Ofcom are appropriate to allow operators to adjust their business models and purchasing patterns where they wish to do so.

5.9 We agree that BT should be required to notify technical information in order to allow customers to respond to changes in good time.

5.10 We agree that BT should be required to provide separate accounts for Physical Infrastructure markets, in order to allow Ofcom to assess the costs and profitability of these products, and ensure that BT is complying with its pricing obligations.

5.11 We agree that BT should be subject to quality of service requirements in Physical Infrastructure markets. In the absence of such requirements, and particularly given that there is no equivalence of inputs (EOI) regulation proposed for BT, BT would have the incentives and ability to reduce the quality of service on services provided to non-BT operators, reducing the competitiveness of firms using them.

5.12 TalkTalk agrees that BT should be able to implement the PIA remedies within a month of the PIMR statement, as the WLA18 remedy means that there is little development needed by Openreach to offer the unrestricted DPA product. However, we suggest that a slightly longer period may be required to update the Reference Offer to take account of the opportunities for improvement and greater clarity outlined above. Following the 1 April 2019 publication of the WLA Reference Offer, we would welcome further engagement with Ofcom on the matter of coordination between the WLA and PIMR Reference Offers to maximise the effectiveness of the product overall. In particular, we would expect to discuss how to ensure the introduction of a comprehensive set of KPIs and effective, proactive monitoring by Ofcom of no undue discrimination compliance.

5.13 TalkTalk agrees that there should be a specific access obligation to provide PIA (§5.14 *et seq.*). However, in light of the changes in market definition which Ofcom should make in order for its analysis to be economically sound, this obligation should be reconsidered in the context of the asymmetric product markets which Ofcom must find.

5.14 At §5.22 Ofcom sets out that it considers that there should be no usage restrictions of any type on PIA:

Limiting technology flexibility and limiting the scope of the PIA remedy is likely to materially increase the risk that a telecoms provider may take the view that it is not viable to invest in the first place... a fibre network is costly to build, but once employed has almost limitless capacity. The commercial business case for the initial investment therefore typically relies on using this capacity to generate as many different revenue streams as possible, through a wide range of different services.

5.15 TalkTalk agrees with this. However, it is likely to need to be revised in light of the asymmetric product markets in this area, as set out in section 2 of this submission. This statement appears very likely to be true for investment in networks with frequent break-out points, sufficient to be able to offer a residential access network. However, it is less obviously true for investment in type A networks, intended primarily to serve leased line customers. Ofcom will need to consider separately for these two markets whether usage restrictions, and if so which type of usage restrictions, will appreciably deter investment in network development via PIA. Ofcom has provided no evidence, even on an indicative basis, that would support the hypothesis that the current restrictions on use of DPA will materially reduce FTTP investment, and it should do so to provide a stronger rationale for its proposed remedies.

5.16 Ofcom's analysis at §5.27 is unclear. Ofcom has presented no evidence that access seekers are intending to roll out FTTP networks, or other networks using PIA, in the CLA. To date, most development of altnet FTTP networks has been outside London. London, and particularly central London, is likely to be a much more expensive area in which to deploy, given the high density of underground infrastructure (with a consequent need to avoiding cutting into cables or pipes), higher labour costs, and lane rental charges. When Ofcom refers to "*some access seekers*" incurring higher costs at §5.27(a) it is unclear who Ofcom is referring to; and at §5.27(b) the situation put forward appears to be entirely hypothetical, setting out a business model which no altnet network provider appears to be adopting. The rationale for Ofcom imposing unrestricted DPA in the CLA appears to be largely based on unsupported and unjustified assumptions.

5.17 Despite this, Ofcom is correct to not impose usage restrictions in the CLA, for the rather simpler and more intuitive reason that BT holds SMP in leased lines in the CLA (as set out at section 2.3.4 of TalkTalk's January 2019 BCMR submission). BT has a market share in excess of 60% in leased lines in the CLA, and Ofcom has not rebutted the presumption of SMP which this creates. Given that BT holds SMP in the leased lines market in the CLA, there is no need for Ofcom's convoluted justification. It can simply justify the remedy on the basis of downstream SMP, and the need to constrain it.

5.18 At §§5.32-5.35, Ofcom sets out the potential impact of the proposed PIA remedy on downstream markets. Ofcom's analysis in this area is superficial, and insufficient to justify the remedy proposed. As Ofcom states:

To the extent our remedy displaces some end-to-end competition, this is likely to be outweighed by the significant benefits of realising network competition based on PIA in potentially many more geographic areas.

5.19 Ofcom does not appear to have conducted the proper cost-benefit analysis which would be necessary to reach such a conclusion. It has not provided evidence of how much end-to-end competition will be displaced, whether similar benefits could be accrued by a less intrusive remedy (for example, unrestricted dark fibre), or the number of geographic areas in which

DPA is likely to be used for predominantly leased line networks.[14] Ofcom should conduct such a proper cost benefit analysis before concluding on remedies, to ensure that its proposals enhance consumer welfare overall.

5.20 This problem recurs at §5.38 of the consultation, where Ofcom states that it would not be proportionate to impose a dark fibre access remedy where PIA is impossible. In the absence of detailed evidence, it is unclear how Ofcom has reached this conclusion, and indeed whether it is based on evidence or a prejudice towards DPA over DFA. Ofcom should again conduct analysis of the costs and benefits of such a remedy beyond the cursory, qualitative arguments set out in the consultation.

6 Cost recovery and price regulation

6.1 TalkTalk broadly agrees with Ofcom's proposals regarding cost recovery. In particular:

- we agree that Openreach should recover network adjustment costs over all users of the infrastructure, in the same way as it does for adjustments related to BT deployment (§6.6);
- we agree that charging third party telecoms providers the costs of network adjustment would give BT an unmerited advantage over its competitors (§6.10);
- we agree that if there were cost recovery from telecoms providers requesting adjustment, it would run the risk of being charged for adjustments which Openreach would anyway have made (§6.11(a));
- we agree that the financial limit for the costs of adjustment should be the same as that proposed in the WLA (§6.19). However, we consider it to be important that the financial limit is that same for adjustments required or requested by other elements of BT group, in order to ensure a fully level playing field. Ofcom should ascertain how it might be able to introduce such parity, without which downstream divisions of BT will continue to have an unmerited advantage over its rivals.

6.2 TalkTalk also agrees with the proposals on price regulation set out by Ofcom at section 7 of its document:

- we agree that PIA should be subject to price regulation (§§7.3-7.7);
- we agree that the charges for PIA should be at the same level as those set under WLA18 (§§7.8-7.11);
- we agree that the loss of leased lines due to PIA will be insignificant over the review period (§7.14). Even if it were to be significant (which it will not be; indeed, it may be zero given the current problems with productising PIA remedies) then this should not prevent Ofcom imposing it, given the significant and unwarranted excess cost recovery which will be permitted under Ofcom's BCMR19 proposals. Similarly (§7.20) productisation costs will be insignificant compared to the proposed overrecovery in BCMR19.

[14] Ofcom has already enforced, in the WLA18, a remedy which would allow for DPA to be used for rolling out predominantly access networks. This remedy will continue to hold even if, for some reason, the PIMR does not proceed to a final statement.