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Office of Communications (Ofcom)
Riverside House
2a Southwark Bridge Road
London SE1 9HA
United Kingdom

For the attention of
Ms Sharon White
CEO

Fax: +44 20 7981 3504

Subject: Commission Decision concerning Cases UK/2019/2170-2171:

- **Market for physical infrastructure access in the United Kingdom;**
- **Market for wholesale high-quality access provided at a fixed location in the United Kingdom;**
- **Market for wholesale trunk segments of leased lines in the United Kingdom;**
- **Market for retail leased lines (Hull Area) in the United Kingdom.**

Comments pursuant to Article 7(3) of Directive 2002/21/EC

Dear Ms White,

1. PROCEDURE

On 24 May 2019, the Commission registered a notification from the United Kingdom's national regulatory authority, the Office of Communications (Ofcom)[1], concerning the

[1] Under Article 7 of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive), OJ L 108, 24.4.2002, p. 33, as amended by Directive 2009/140/EC, OJ L 337, 18.12.2009, p. 37, and Regulation (EC) No 544/2009, OJ L 167, 29.6.2009, p. 12.

markets for physical infrastructure access (PIA), wholesale high-quality access provided at a fixed location[2], wholesale trunk segments of leased lines[3], and retail leased lines[4] in the United Kingdom.

The national consultation[5] ran from 2 November 2018 to 1 February 2019

The Commission sent Ofcom a request for information on 4 June 2019 and received a response on 7 June 2019. It sent a second request for information on 11 June 2019 and received a response on 12 June 2019.

Pursuant to Article 7(3) of the Framework Directive, national regulatory authorities (NRAs), the Body of European Regulators for Electronic Communications (BEREC) and the Commission may make comments on notified draft measures to the NRA concerned.

2. DESCRIPTION OF THE DRAFT MEASURE

2.1. Background

The PIA market is a new and separate relevant market. Ofcom previously imposed remedies relating to it, in particular regarding duct and pole access, in the context of the market for wholesale local access (market 3a). The market for wholesale local access was previously notified to and assessed by the Commission under case UK/2018/2062-2063[6]. In said draft measure, Ofcom imposed the following remedies: (i) access to BT ducts, including the obligation to repair faulty infrastructure, expanded the possible use of duct and pole access, allowing for "mixed use"[7], (ii) non-discrimination based on strict equivalence and (iii) price control.

The Commission had no comments.

The markets for wholesale high-quality access provided at a fixed location, wholesale trunk segments of leased lines, and retail leased lines in the United

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2 Corresponding to market 4 in Commission Recommendation 2014/710/EU of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Recommendation on Relevant Markets), OJ L 295, 11.10.2014, p. 79.

3 Corresponding to market 14 in Commission Recommendation 2003/311/EC, replaced by the Recommendation on Relevant Markets.

4 Corresponding to market 7 in Commission Recommendation 2003/311/EC, replaced by the Recommendation on Relevant Markets.

5 In accordance with Article 6 of the Framework Directive.

6 C(2018)1931.

7 "Mixed usage" was permitted, enabling access seekers to offer both broadband- and non-broadband based (e.g. business) services with PIA input, provided the primary purpose of the network deployment remains the delivery of broadband services.

Kingdom were previously notified to and assessed by the Commission under case UK/2016/1849[8].

Ofcom identified distinct product markets for terminating segments of leased lines, both at retail and wholesale level, based on the type of interface and the bandwidth provided. It also found separate geographical markets[9].

The three criteria test was found to be met for all identified markets and British Telecommunications plc. ("BT") was designated as holding significant market power (SMP) in a number of retail and wholesale markets in the UK, while KCOM Group plc. ("KCOM") was designated as holding SMP in a number of retail and wholesale markets in Hull. Ofcom imposed a substantial set of active remedies at both wholesale and retail level (including charge controls).

The Commission issued a “comments” letter, asking Ofcom to consider imposing universal physical infrastructure access (to ducts and poles) in the non-competitive areas. It also asked Ofcom to consider imposing of a lighter set of remedies not only in the London Periphery (LP) area, but also in other parts of the UK territory, including five identified central business districts (CBD), based on a set of clear criteria reflecting all relevant parameters of the state of infrastructure-based competition therein.

The currently notified draft measure is part of an overall Ofcom strategy to move away from promoting competition through access-based regulation, instead moving to an approach that promotes competition and investment through network competition. A key feature of the new approach is to guarantee unconstrained duct and pole access as a remedy in a self-standing PIA market that is located upstream of the traditional wholesale access markets. Ofcom argues that duct access could no longer be imposed (although necessary) in areas where regulation is lifted and as ancillary remedy to market 3a, duct access could not serve for mobile or pure business connectivity.

The current draft decision is intended to be in force for 2 years only and to be fully reviewed as part of an overarching review of telecom access markets in 2021.

2.2. Market definition

2.2.1. Physical infrastructure

2.2.1.1. Product market

Ofcom defines a single product market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network. The scope is limited to networks that can be used to host fixed elements of telecoms networks, such as ducts, poles and chambers, regardless of whether they are used for access or backhaul. Non-telecoms infrastructure is excluded from the market. Physical infrastructure used to host radio transmission and reception equipment needed for

8 C(2016)2597.

9 (i) the Central London Area ("CLA"), (ii) the London Periphery ("LP"), (iii) the Rest of the UK and (iv) Hull, where KCOM (and not BT) is the incumbent operator.

wireless connections in a telecoms network, such as masts and antenna installations is also excluded from the market.

These findings are based on SSNIP[10]-test considerations. Ofcom finds no demand side substitution between telecoms physical infrastructure and non-telecoms physical infrastructure or wireless technologies.

Ofcom observes that non-telecoms infrastructure is currently used to host telecoms networks, but this use is very limited in scale and has led to only very limited network rollout. Ofcom concludes that non-telecoms physical infrastructure has material disadvantages, in terms of costs and operational complexity that would render switching from telecoms physical infrastructure to non-telecoms physical infrastructure unprofitable and therefore unlikely.[11]

Ofcom further concludes that this product market does not include microwave links, satellite and Fixed Wireless Access, due to their inability to constrain access to physical infrastructure.

No supply-side substitutes for access to telecoms physical infrastructure were identified.

2.2.1.2. Geographical market

Ofcom identifies multiple subnational markets[12]. For the purpose of the analysis, it uses postcode sectors as the appropriate geographical unit. The postcode sectors with similar competitive conditions are subsequently aggregated into geographical markets. The analysis focuses on the presence of alternative network infrastructure.[13] Ofcom finds four distinct geographical markets:

a) BT only areas;

b) areas with 1 alternative telecoms physical infrastructure that has been deployed to support multi-service networks (“BT+1”), but excluding High Network Reach areas (“HNR”) [14];

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[10] Small but significant non-transitory increase in price.

[11] The higher costs and operational complexity is mainly due to the following reasons: (i) lack of sufficient access points, (ii) restrictive rules for access (in particular for water, gas and electricity physical infrastructure), (iii) unsuitable network design, (iv) hostile environment for network co-existence (sewers), (v) lack of suitable sites for hosting technical facilities, (vi) high costs due to contractual complexities and costs related to the need to deploy cable ducts for telecoms physical infrastructure inside the non-telecoms infrastructures.

[12] Ofcom considers that markets in the Hull Area are distinct from those in the rest of the UK. Therefore, Ofcom does not extend the PIA market review to the Hull Area.

[13] Ofcom assumes that BT is present in each geographical unit and covers all premises (except for the Hull Area). Alternative operators are considered to be present, if a) in relation to broadband coverage the operators serves more than [redacted] % of premises in that postcode sector on the basis of its own infrastructure; and b) in relation to leased lines coverage, the operator can serve its services within 50 meters of more than 65 % of large business and mobile sites in that postcode sector.

[14] In practice the cable operator Virgin Media is expected to be the only significant operator of such infrastructure in this review period.

c) High Network Reach areas ("HNRs")[15] excluding the Central London Area ("CLA");

d) the Central London Area ("CLA") – an area in central London with a uniquely high presence of rival telecoms physical infrastructure deployed to support leased lines networks.

The BT only areas encompass 60% of postcode sectors, 53% of premises and 56% of large business sites in the UK (excluding Hull). The BT+1 areas encompass 34% of postcode sectors, 45 % of premises and 37% of large business sites (excluding Hull). The HNR areas and the CLA each cover 3% of postcode sectors, 1 % of premises and 3% of large business sites.

2.2.1.3. Three-criteria test

Ofcom considers that the identified PIA markets meet the three criteria test and are therefore susceptible to ex ante regulation. Barriers to market entry are high and non-transitory, as it would require very high levels of (sunk) investment and take considerable time to install new physical infrastructure. The markets are not found to tend towards effective competition. To the contrary, BT's market power appears to be significant and entrenched, remaining unchanged over time. Moreover, competition law is found insufficient to address the competition concerns in the markets.

2.2.2. *Wholesale high-quality access provided at a fixed location*

Within the market for wholesale high-quality access provided at a fixed location, Ofcom distinguishes the market for contemporary interface (CI) services, including connections over fibre typically using an Ethernet interface, from that for legacy traditional interface (TI) services.

2.2.2.1. Market for contemporary interface services

Ofcom further divides the product market for contemporary interface (CI) services into (i) CI Access services, which are connections to end-user business sites (such as office buildings or mobile base stations) and (ii) CI Inter-exchange connectivity services, which consist of the connections between BT exchanges in different geographical areas such as between towns and cities[16]. Both product markets cover all bandwidths.

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15 HNR areas are defined as aggregated postcode sectors that have at least two alternative (non-BT) telecoms infrastructures that can serve within 50 m more than 65 % of large business and mobile sites and [redacted].

16 CI access services are the routes between an end-user site and the first point of aggregation in a network. CI inter-exchange connectivity services are the routes between points of aggregation, i.e. network nodes, BT exchanges and most data centres, typically made up of backhaul and core connections. Ofcom notes that whereas access circuits are limited to individual business (and mobile) demand, CI inter-exchange circuits combine the demand of consumers (primarily residential broadband), businesses and mobile operators. In addition, the bandwidths of inter-exchange circuits are higher.

The **CI access services product market** includes all wholesale fibre-based Ethernet and wavelength division multiplex services, as well as dark fibre used to supply or self-supply CI Access services. Business-grade connectivity services provided over Ethernet in the first mile (EFM)[17], as well as symmetric and asymmetric broadband are excluded from the product market.

Regarding the CI access services market, Ofcom identified variations in competitive conditions between different geographical areas depending on the presence of rival infrastructure, which it considers as the main factor in this respect. Ofcom analyses network presence based on the number of rival networks within a specific distance[18] from customer sites. Then it calculates the distribution of rival infrastructure across the large business sites and mobile base stations in each postcode sector in the UK, and it groups together postcode sectors with similar levels of rival infrastructure.

Therefore, Ofcom identifies separate geographical markets, based on network competition: (i) BT Only areas[19]; (ii) BT+1 areas[20]; (iii) the Central London Area (CLA)[21]; (iv) High Network Reach areas of each of Birmingham, Bristol, Edinburgh, Glasgow, Leeds and Manchester (Metro Areas); (v) all other High Network Reach areas (taken together); and (vi) the Hull Area.

The **CI inter-exchange connectivity services product market** includes services at all bandwidths and dark fibre.

Ofcom conducts an analysis of competitive conditions at each BT exchange, as these are handover points for access remedies whether for residential products or for business products. Ofcom defines each BT exchange as a distinct geographical market.

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17 EFM is based on technology standards that allow telecoms providers to run Ethernet over a copper pair or multiple bonded pairs to connect to a customer.

18 Ofcom refers to such specific distance as "buffer distance" and decided to use 50m as an appropriate basis for measuring the competitive distance. The ‘buffer distance’ is not only measuring the distance that rivals would extend their network to serve a customer, but also how accurately Ofcom can measure when rivals are present. Ofcom considers that the actual distances for network extensions are likely to be shorter than 50m. However, Ofcom considers that 50m is an appropriate buffer distance that takes into account the potential measurement inaccuracies and is a reasonable proxy for network reach.

Furthermore, Ofcom took 65% as a network coverage threshold, that is the proportion of large business sites and mobile base stations that needed to be within the 50m buffer distance in order to be considered covered by rival networks.

19 Almost three-fifths of the postcode sectors in the UK (around 59%) can be categorised as BT Only areas, meaning that less than 65% of the large business sites and mobile base stations in those postcode sectors have a rival network within reach.

20 Over a third of postcode sectors (around 35%) have just one rival network within reach of large business sites and mobile base stations. HNR areas (including the CLA) represent only 6% of postcode sectors.

21 HNR areas (including the CLA) represent only 6% of postcode sectors. HNR areas have at least two rival networks present. The city cluster of London accounts for over half of all HNR postcode sectors. In the CLA, on average there are four rival networks within 50m of a large business site or mobile base station.

In the **Hull Area**, Ofcom defines a single product market for wholesale CI access services at all bandwidths. EFM and asymmetric broadband are excluded from the market[22]. Given the small size of the Hull Area, Ofcom considers that the likely limited demand for backhaul and core connectivity does not justify defining a separate market for CI inter-exchange connectivity services. The Hull Area presents different competitive conditions from the rest of the UK, with KCOM (and not BT) being the telecoms provider with the most extensive coverage and customer base. Therefore, Ofcom considers the Hull Area as a distinct geographical market.

Ofcom clarifies that this market review covers the period to 31 March 2021.

2.2.2.2. Market for traditional interface services

Ofcom defines a separate market for traditional interface services up to and including 8 Mbit/s (low bandwidth TI services). This market has a national scope.

Ofcom maintains that there is a separate product market for low bandwidth TI services in the Hull Area for the period of this review at wholesale and retail level. However, Ofcom finds that this is a market in decline[23] and that beyond the period of this review there are clear dynamics that suggest that effective competition will be reached in the foreseeable future.

2.3. Finding of significant market power

2.3.1. Physical infrastructure

BT[24] is found to hold SMP in all identified PIA markets. Ofcom considers that, even if a non-ubiquitous infrastructure would allow access seekers to connect a commercially attractive number of premises, the ubiquity[25] of BT's infrastructure in all identified geographical markets provides material advantages to access seekers over the usage of non-ubiquitous infrastructures when access seekers consider

22 Ofcom finds that there is a single retail market – currently regulated – for CI services at all bandwidths in the Hull Area.

23 The number of KCOM's wholesale leased lines has declined by around 5% per annum while the number of its retail leased lines has declined by about 30% to 50% per annum. Also, [redacted]% of KCOM's wholesale TI leased lines are for circuits where one end terminates outside the Hull Area.

24 The Openreach Division is a functionally separate division within BT plc which manages and operates certain assets and provides certain products. Openreach Limited is a wholly owned subsidiary of BT plc which it has engaged to operate and manage the Openreach line of business on behalf of BT plc. Consequently, BT retains the ownership of capital assets operated and managed by Openreach Limited including the ducts and poles covered by this review. An Agency and Services Agreement and Governance Protocol establishes the framework between BT plc and Openreach Limited in respect of the Openreach Division. Ofcom proposes to impose the PIA obligation on BT, while accepting that Openreach will provide the access services on BT's behalf.

25 Ubiquity means that the infrastructure provides the ability to connect to any premises or site within a given geographical area. Ofcom further clarified in its response to the Commissions RFI that BT passes [redacted]% of premises in the UK (excluding Hull), has connections to >86% of households (86 % of current active connections + inactive connections to those house that were previously served by BT). Ofcom does not have data on the number of businesses that are connected. However, [redacted]% of Openreach's new connections in 2017 were already duct connected. It is Ofcom's assessment that this number significantly understates Openreach's overall business coverage as it most likely includes a disproportionate number of connections to new buildings.

deploying a network. In particular, it considers that a ubiquitous infrastructure would be best placed to enable (prospective) network rollout beyond the limited footprint of BT's rivals.

Even in the geographical area with the highest presence of alternative infrastructures, BT enjoys a significantly higher percentage of on-duct connected new provisions, which gives it a significant cost advantage. Alternative operators (AOs) on the other hand currently only build 11% of network connections, that were not duct connected. Instead, they prefer to purchase off-net services rather than incurring the necessary digging costs.

More specifically, Ofcom concludes that BT has SMP in the BT-only area, based on:

(1) BT’s dominant downstream position;

(2) BT is the only significant operator in the market – so there are no direct or indirect constraints;

(3) the high entry barriers to constructing new physical infrastructure; and

(4) the absence of significant countervailing buyer power.

The SMP finding of BT in the BT+1 area is based on:

(1) BT’s dominant downstream position;

(2) the ubiquity of BT’s telecoms physical infrastructure and the more attractive mix of lead in infrastructure. In that respect, Ofcom finds that the direct constraints from existing upstream competitors, even if they were to supply access to their infrastructure, would be unlikely to be a sufficient constraint upon BT;

(3) the high entry barriers to constructing new physical infrastructure; and

(4) the absence of significant countervailing buyer power.

In the HNR area, Ofcom finds BT to hold SMP based on the following:

(1) BT’s dominant downstream position;

(2) alternative infrastructures cover only a subset of these areas and are oriented towards leased lines, so cannot provide the ability to connect to any premise that BT’s ubiquitous infrastructure provides, which suggests that the direct constraints from existing upstream competitors, even were they to supply access to their infrastructure, would be unlikely to be a sufficient constraint upon BT;

(3) the high entry barriers to constructing new physical infrastructure; and

(4) the absence of significant countervailing buyer power.

Finally, Ofcom concludes that BT has SMP in the CL area, based on the following:

(1) identified cost and time advantages of BT in the downstream market as a result of its control of a ubiquitous telecoms physical infrastructure;

(2) alternative infrastructure has very low coverage of residential premises, and so cannot provide the ability to connect to any premise that BT’s ubiquitous infrastructure provides, which suggests that the direct constraints from existing upstream competitors, even were they to supply access to their infrastructure, would be unlikely to be a sufficient constraint upon BT;

(3) the high entry barriers to constructing new physical infrastructure for the deployment of a multi-service network; and

(4) the absence of significant countervailing buyer power.

2.3.2. Wholesale high-quality access provided at a fixed location

2.3.2.1. CI access services market

As regards the CI access services market, Ofcom intends to designate BT with SMP in the whole of the UK, except for the Central London Area (CLA)[26] and the Hull Area.

Ofcom based the SMP assessment on the following criteria: (i) market shares, (ii) control of infrastructure not easily duplicated, (iii) economies of scale and scope, (iv) barriers to entry and expansion, (v) absence of potential competition, and (vi) absence of or low countervailing buyer power.

In particular, in BT-only areas – where less than 65% of large business sites have a rival network to BT within 50m, and BT+1 areas – where more than 65% of large business sites have only one rival network to BT within 50m, BT has a very high share of 2017 new customer ends ([redacted]% and [redacted]% respectively)[27]. In these areas, there is very limited rival infrastructure.

In metro areas and in all other HNR areas (taken together) BT's share is over [redacted]%. In these areas there is some rival infrastructure in proximity to customer sites, but BT still benefits from significant competitive advantage over rivals as it is significantly closer to customer sites[28].

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26 Ofcom considers that the CLA is different from other geographic markets because of the strength of competitive constraints based on the high density of rival infrastructure, and the likely strengthening of those constraints based on the impact of the unrestricted PIA remedy.

27 The market shares of its largest rival, Virgin Media, are materially lower, at [redacted]% and [redacted]% in BT-only and BT+1 areas, respectively. Virgin Media does not have a nationwide presence as BT does. This places Virgin Media at a disadvantage when bidding for multi-site contracts.

28 For a large proportion of users, BT will be duct-connected while rivals will need to extend their networks to connect the customer.

Ofcom finds that BT does not have SMP in the CLA. Even though BT has a high share ([redacted]%) of 2017 new customer ends, Ofcom concludes that BT's market power will be sufficiently constraint by the very extensive presence of rival infrastructures in the CLA Customers in the CLA have on average 4.3 rival networks within 50m, and 90% of customers in the CLA have at least two rivals to BT within 50m, including 64% who have four or more rivals[29]. In addition, given the high number of networks already present and the high business density, Ofcom expects at least some rivals to deploy infill network extensions[30] using the unrestricted PIA remedy in the CLA.

2.3.2.2. CI inter-exchange connectivity services market

Ofcom focused its SMP assessment on the presence of rival networks at BT exchanges.[31] It also considers criteria such as barriers to entry, economies of scale and countervailing buyer power.

Ofcom groups BT exchanges (each is a relevant market) into (i) BT Only exchanges, (ii) BT+1 exchanges, and (iii) BT+2 or more exchanges. Ofcom intends to designate BT with SMP at its exchanges[32] where only BT, or BT plus one Principal Core Operator (PCO)[33] are present.

As the trunk segment of leased lines is not on the list of recommended markets, Ofcom applies the three-criteria test to routes from BT exchanges that are deemed non-competitive in order to ascertain whether they are susceptible to ex ante regulation. It considers that BT Only and BT+1 exchanges (i) exhibit high and non-transitory barriers to entry, (ii) in the absence of regulation they will not tend towards effective competition in the foreseeable future, and (iii) competition law alone is insufficient to address market failures.

Ofcom considers that BT is likely to face greater competitive pressure in BT exchanges where BT and at least two PCOs are present, therefore Ofcom does not find SMP in these areas[34]. Such routes are thus deemed to be competitive and will not be regulated.

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29 BT's rivals had duct connections already in place for 76% of CI Access customers they connected in the CLA in 2017. Ofcom considers that where rivals are already duct-connected, BT is unlikely to have a material competitive advantage.

30 Under infill deployment, telecoms providers would use unrestricted PIA to fill gaps between areas where they already have network coverage.

31 Ofcom explains that there were a series of problems associated with calculating market shares in this case, e.g. data is incomplete and inaccurate. Ofcom also considers that market shares are less informative as once a network operator is present at an exchange it provides a competitive constraint even if its share of current sales is low. Therefore, Ofcom did not undertake a comprehensive review of market shares at BT exchanges.

32 Of a total of 5,573 BT exchanges, 4,269 are BT Only exchanges and 733 are BT+1 exchanges.

33 PCOs are telecoms providers that own substantial core infrastructure (at BT exchanges) and have the capacity to offer other telecoms providers a wholesale inter-exchange connectivity service. Ofcom considers that there are eight telecoms providers that fulfil these requirements: CenturyLink, CityFibre, Colt, eir, SSE, Virgin Media, Vodafone and Zayo.

34 571 BT exchanges are not characterised by SMP.

2.3.2.3. Hull Area

Ofcom finds that KCOM has SMP in the supply of CI Access services at all bandwidths at wholesale level in the Hull Area. It takes into account the following criteria: (i) KCOM's persistently high market shares, (ii) limited presence of rival infrastructure[35], (iii) barriers to entry and expansion, (iv) economies of scale and scope, (v) countervailing buyer power, and (vi) potential competition.

Regarding the retail market for CI services, as well as the wholesale and retail market for TI access services, Ofcom conducted the three-criteria test and found that regulation is no longer justified. It will therefore be removed.

2.4. Regulatory remedies

2.4.1. Physical infrastructure

Ofcom considers that the UK legislation transposing the Broadband Cost Reduction Directive (BCRD)[36] is not sufficient to address effectively the competition concerns arising from BT's market power in physical infrastructure markets. Effective competition would require SMP type regulation.[37]

Ofcom therefore proposes to impose a full set of remedies on BT, including (i) unrestricted physical infrastructure access, (ii) non-discrimination, (iii) transparency, including the obligation to publish a reference offer and to notify changes to prices, terms and conditions, (iv) cost accounting, (v) accounting separation and (vi) price control.

The remedies proposed in the draft measure are the same across all identified markets[38].

Regarding access, Ofcom proposes to impose unrestricted PIA access[39]. The proposed access obligation includes the obligation on BT, to make adjustments to its

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[35] KCOM has a [redacted]% share in the market for wholesale CI Access services. Its duct network is ubiquitous in the Hull Area. The small number of potential customers in this market makes it unviable for competitors to develop their own network infrastructure.

[36] Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks ("BCRD"), OJ L 155, 23.5.2014, p.1.

[37] Ofcom's main arguments as to the insufficiency of the BCRD are that the directive provides only insufficient possibilities to specify operational processes and detailed timescales through access terms. There is uncertainty as to the prices that will be charged for access and there is a range of factors which must be considered in resolving a dispute and the precise approach will depend on the specific circumstances of each dispute. Moreover, the BCRD does not include any explicit obligations to prevent vertically integrated infrastructure operators from discriminating between their own downstream businesses and rival access seekers when providing access.

[38] Ofcom explains that while its analysis suggests that there are potential variations in the competitive conditions between each PIA market sufficient to define separate geographical markets, the remedy imposed are the same in each market as everywhere BT has the ability to possibly abuse its SMP position.

[39] There are no restrictions regarding usage or geographical scope.

physical infrastructure where this is necessary, feasible and efficient in order to make the physical infrastructure available to access seekers[40].

The draft measure sets a non-discrimination obligation that is intended to be as close as possible to an equivalence of input (EOI)[41] approach. Ofcom imposes strict equivalence in respect of all processes and sub-products that contribute to the supply and consumption of network access, unless BT is able to demonstrate that a difference would be justified. However, even then processes shall be broadly equivalent, meaning that difference must not put network users at a disadvantage. New processes have to be developed in a way to guarantee full equivalence.

As regards access price control, Ofcom proposes a differentiated approach regarding specific services related to unrestricted PIA. Network adjustment costs are to be recovered over all users of the physical infrastructure (including BT's own use), with a maximum price cap of £4,750 per kilometre.[42] Productisation costs[43] are to be recovered over all users of the physical infrastructure. Rental charges are capped at the current level[44], subject to annual inflation adjustment. With respect to all other charges, including any new PIA products introduced in this review period, Ofcom decided to impose a LRIC+ basis, requiring that charges be set at a level that is reasonably derived from the costs of the service.

2.4.2. Wholesale high-quality access provided at a fixed location

For the wholesale high-quality access market, Ofcom proposes to impose differentiated remedies in the identified geographical markets where SMP was found. The proposed remedies assume the presence of the above-described remedies in the upstream PIA market under the modified greenfield approach.

Ofcom proposes to impose the following general remedies in all markets where BT is found to hold SMP: (i) access upon reasonable request, (ii) non-discrimination, (iii) transparency, including the need to publish a reference offer, (iv) cost accounting and (v) accounting separation.

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40 The determination of whether a particular network adjustment falls within the scope of the unrestricted PIA obligation is based on the three criteria: necessity, feasibility and efficiency.

41 The imposition of strict EOI is considered disproportional, given the costs, disruption and required time necessary for re-engineering existing legacy processes and systems.

42 The network adjustment cap applies to the aggregate network adjustment costs that Openreach is required to recover across all users of the physical infrastructure. It is not a cap on the price Openreach can charge for individual network adjustments. For example, if an AO encounters a collapsed duct, it can request a network adjustment. Subject to certain conditions, Openreach must repair the duct. The charge applied to this repair must be cost-oriented (i.e. it is subject to a "basis of charges" condition). Openreach is required to recover it across all users of the infrastructure, rather than charge the AO requesting the repair. However, if the aggregate cost of all the network adjustments that an AO requires exceeds the cap for that order (£4750 per kilometre of spine duct), Openreach will charge the AO directly for the excess amount. Ofcom expects network adjustment costs to reach the price cap only very rarely, as most will be minor adjustments.

43 i.e. the costs that Openreach incurs in setting up and managing the PIA product, and processing individual PIA orders.

44 They are currently imposed as ancillary remedies to the WLA market.

In the HNR and metro areas, which displays some degree of competition, the prices should be set "fair and reasonable"[45]. Ofcom does not impose specific quality of service standards for BT's wholesale services in these areas.

Where BT does not face competition from two or more rivals, Ofcom considers that the short-term prospects for competition are low. It therefore proposes to keep wholesale prices at the current level for all bandwidths and sets quality of service standards[46].

Access to dark fibre is limited to inter-exchange routes from BT-only exchanges where the nearest rival network is more than 100m away.[47] Prices for dark fibre shall be set at cost[48].

A high level summary of differentiated remedies is provided in the table below[49]:

Table 1.2: High level summary of our proposed remedies

	CI Inter-exchange connectivity markets			CI Access services market			
Level of competition	**BT Only**	**BT+1 other**	**BT+2 or more**	**BT Only**	**BT+1 other**	**BT+2 or more (HNR areas)**	
						Outside CLA	CLA
Active services at all bandwidths	Cap at current prices QoS standards		None	Cap at current prices QoS standards		Fair pricing	None
Dark fibre(1)	Price at cost QoS standards(2)	None	None	None	None	None	None

(1) From BT Only exchanges, where no rival network is within 100m. (2) From April 2020.

45 Ofcom considers that "fair and reasonable" means that wholesale prices should be margin squeeze free. Ofcom will monitor if costs and margins are consistent with the margin squeeze test.

46 The price for a basket of services (or individual services subject to a sub-cap) will have to be maintained at the current level in nominal terms, without a CPI adjustment. The price cap applies to two separate baskets of services: (i) services at 1Gbit/s and below, and (ii) services above 1 Gbit/s (VHB). Within each basket, BT will have flexibility to change prices of individual services, provided the overall basket revenue does not increase in nominal terms year-on-year.

47 Ofcom considers the advantages and risks of access to dark fibre for access seekers. Finally Ofcom argues that requiring dark fibre from BT+1 exchanges would potentially undermine existing rival investment and risks deterring rival network operators from connecting to BT+1 exchanges and developing their backhaul networks, especially following the introduction of unrestricted PIA.

48 Prices for dark fibre connections between BT-only exchanges will be determined on a current cost accounting for fully allocated costs (FAC-CCA) basis.

49 See page 8 of Volume 3 of the notification.

As regards the Hull Area, Ofcom proposes to impose a full set of remedies on wholesale services provided by KCOM, including access, non-discrimination, transparency including the obligation to publish a reference offer, accounting separation, cost accounting and price control. It decided that prices should be "fair and reasonable" coupled with an obligation on KCOM to provide a pricing transparency report to enable Ofcom to check if prices are in fact fair and reasonable against suitable benchmarks.

3. COMMENTS

The Commission has examined the notification and the additional information provided by the Ofcom and has the following comment:[50]

Geographical segmentation of PIA market

The Commission takes note of Ofcom's granular approach regarding potential and actual competitive differences in different geographical areas. Ofcom identifies the presence of network infrastructures as the key determinant of competitive conditions in those areas. However, Ofcom concludes that BT holds SMP in all geographical markets and that the exact same set of SMP obligations are appropriate and proportionate to remedy the identified market failures.

Ofcom further concludes that differentiated remedies for different geographical markets are justified in downstream markets such as the high-quality access market and expects this to be the case in future market reviews of downstream markets. The competitive conditions as regards the high-quality access market appear indeed substantially different across geographical markets.

As regards the geographical market differentiation of the PIA markets however, the Commission notes that competitive conditions do not appear to be very different, hence s a national PIA market (excluding Hull) would be more adequate. Moreover, a finding of different geographical markets, in view of principally the same market failures identified throughout the entire territory, may raise uncertainty as to continued uniform regulation of PIA market(s), and therefore might deter potential access seekers to rely on it.

However, the Commission considers that the finding of differentiated geographical markets, as opposed to larger geographical units or even a single national market, would not change the SMP finding or the selected remedies and hence the regulatory outcome would be the same. The Commission however invites Ofcom, before adopting its final measure, to revisit its conclusions as regards the existence of differentiated geographical markets for PIA.

Pursuant to Article 7(7) of the Framework Directive, Ofcom shall take the utmost account of the comments of other NRAs, BEREC and the Commission and may adopt the resulting draft measure; where it does so, shall communicate it to the Commission.

The Commission's position on this particular notification is without prejudice to any position it may take *vis-à-vis* other notified draft measures.

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[50] In accordance with Article 7(3) of the Framework Directive.

Pursuant to Point 15 of Recommendation 2008/850/EC[51] the Commission will publish this document on its website. The Commission does not consider the information contained herein to be confidential. You are invited to inform the Commission[52] within three working days following receipt whether you consider that, in accordance with EU and national rules on business confidentiality, this document contains confidential information which you wish to have deleted prior to such publication.[53] You should give reasons for any such request.

Yours sincerely,

CERTIFIED COPY
For the Secretary-General,

Jordi AYET PUIGARNAU
Director of the Registry
EUROPEAN COMMISSION

For the Commission
Roberto Viola
Director General

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[51] Commission Recommendation 2008/850/EC of 15 October 2008 on notifications, time limits and consultations provided for in Article 7 of Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services, OJ L 301, 12.11.2008, p. 23.

[52] Your request should be sent either by email: CNECT-ARTICLE7@ec.europa.eu or by fax: +32 2 298 87 82.

[53] The Commission may inform the public of the result of its assessment before the end of this three-day period.