



Promoting investment and competition in fibre networks Approach to geographic markets

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1 Executive summary

- 1.1 Government places stable and long-term regulation at the heart of its Statement of Strategic Priorities (which is regarded as key to delivering its connectivity ambitions). Amongst the desired outcomes identified by Government are: regulation only where, and to the extent necessary to address competition concerns; and flexibility for firms to reduce costs and manage risks through commercial risk-sharing and co-investment.¹
- 1.2 We support these strategic priorities and their focus on the stable and long-term regulation needed to incentivise commercial investment in world-class digital infrastructure. We also support Ofcom's strategy to support long-term fibre investment, including the proposed consolidated review of residential and business telecoms markets and physical infrastructure.
- 1.3 Starting in 2021, Ofcom proposes to apply different regulation in different parts of the country (depending on the level of competition), and this regulation will apply for longer (at least five years). This consultation explains the basis upon which Ofcom will categorise areas as effectively-, potentially-, or non-competitive, and hints at the regulation that will apply in each area; with further detail to be provided in spring 2019.²
- 1.4 Ofcom's consolidated review enables, in principle, a more 'holistic' and forward-looking view of network investment and competition. It provides an important opportunity for Ofcom to better tailor its regulation, and to facilitate innovative commercial access arrangements which support investment (as envisaged by Government). But this depends on Ofcom measuring competition robustly: by capturing the impact of regulated access to physical infrastructure on the viability of fibre deployment by network rivals; and by fully reflecting the network supply options that customers already have, as well as those emerging, and how these may vary in their service capability, as well as the customers and areas they will target.

Our proposals

1. Ofcom must clearly specify the competition concerns (in appropriately defined service and geographic markets) that its regulation is designed to address.
2. Ofcom should assess whether any competition concerns can be addressed solely by regulated access to physical infrastructure, without the need for further wholesale access remedies.
3. Ofcom's assessment of competition should fully capture the network supply options customers already have, as well as those emerging (and how they vary in their service capability, as well as the customers and areas they will target).
4. Where regulation (downstream of physical infrastructure) is considered necessary, it should incentivise investment, allow fair competition and facilitate innovative models for managing and sharing risk.
5. Regulation of effectively competitive business markets is not appropriate. The central London area 'CLA', and the very high bandwidth 'VHB' segment more widely should not be regulated (beyond duct and pole access).
6. Clarity is needed on how investment by Openreach will be encouraged in areas which are higher cost as this may affect how geographic areas are defined.

¹ DCMS, Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services, Consultation, 15 February 2019, para 22.

² We reserve our position to comment fully on Ofcom's assessment of geographic markets when we are able to see this in conjunction with Ofcom's remedy proposals later in the year.

A market analysis 'at the network level' must clearly identify competition issues that regulation is intended to address, and the appropriate level for intervention

- 1.5 For the 2021 review, Ofcom will not conduct separate assessments of residential (local access) services and business (leased lines) services as it has to date. Instead, it will assess competition from a network viewpoint, with more emphasis on the competitive impact of future network build.
- 1.6 We agree that services provided over networks should not be assessed 'in isolation', but they must still be assessed (albeit holistically). This is needed in order to clearly specify the competition issue which regulation is intended to address, and to assess the proportionality of remedies at different levels of the supply chain (as required under the EU regulatory framework).
- 1.7 Ofcom proposes (in its physical infrastructure market review 'PIMR') to impose duct and pole access nationwide. This consultation hints that Ofcom may find Openreach to have significant market power 'SMP' in wholesale markets downstream of physical infrastructure nationwide, allowing additional wholesale remedies to be imposed broadly.
- 1.8 On its face, it is not clear how this aligns with the Government's view that '*regulatory forbearance, where appropriate, should be considered by Ofcom in developing its regulatory approach to incentivise the roll out of full fibre networks.*'
- 1.9 It is unarguable that duct and pole access will make the provision of downstream telecoms services more contestable. The package of regulation proposed by Ofcom as part of the 'PIMR' is designed to support new network investment. It is expected to remove advantages that Openreach is perceived to have in the construction of, and innovation in, telecoms infrastructure, and the provision of downstream services.
- 1.10 Ofcom should fully reflect the impact of upstream (physical infrastructure) regulation and consider whether any competition concerns (identified through a service assessment) can be addressed solely at this upstream level, without the need for further wholesale access remedies.

Ofcom's market analysis should capture competition from a range of supply options (which will vary in business model and service capability)

- 1.11 Ofcom proposes to assess competition in different parts of the country by reference to the availability of networks supporting both residential and business services (i.e. 'multi-service networks').
- 1.12 Ofcom does not mention the capability of these network (i.e. their speed or reliability) as a relevant consideration. Openreach is therefore 'counted' as a multi-service network irrespective of whether it is a superfast or ultrafast operator. Ofcom also intends to exclude from its assessment networks that serve only business customers (as they are not deemed to be multi-service networks).
- 1.13 The roll-out of new ultrafast networks will fundamentally change the structure of the market. In addition to the established scale ultrafast operator (Virgin Media), there will

be new fibre deployment by alternative operators and Openreach. There will also be competition from fixed wireless operators using 5G technology to offer high capacity access at fixed locations.

- 1.14 Operators currently focused on business customers will continue to expand, facilitated by duct and pole access which Ofcom would like to see available for any fixed network purpose without restrictions. Some will use this as a 'bridge' to offering multiple services; others will remain focused on business services.
- 1.15 There will, therefore, be differences in business model, service capability and geographic focus which a robust competition assessment would need to capture. Ofcom's proposed assessment – by failing to distinguish Openreach's superfast capabilities from its ultrafast capabilities, and by excluding business-only network providers – will not measure competitive conditions accurately (and will not, therefore, allow regulation to be tailored appropriately).
- 1.16 Openreach is primarily a superfast operator in a market moving towards ultrafast. It would need to invest to keep pace, in competition with a large existing ultrafast operator and emerging fibre and fixed wireless operators. A finding that Openreach has SMP nationwide across all its network access services - without capturing these important distinctions between its superfast and ultrafast market positions - would be an error.
- 1.17 This is because regulation imposed on the basis of such a finding (reflecting Openreach's large existing superfast position), may unduly (and unnecessarily) restrict Openreach's ability to compete fairly as a nascent ultrafast operator with its ultrafast rivals.
- 1.18 Openreach should be allowed to compete fairly, and work with its customers to develop innovative commercial offerings to ensure that the value of ultrafast networks can be extracted as demand for ultrafast develops, and that risks can be appropriately shared. Put simply, Openreach should have the same commercial flexibility as its rivals to find innovative ways of supporting its ultrafast investment which are supported by its customers (noting that these customers are large and have buyer power, as they may consider alternative access options).
- 1.19 Some business markets (including but not limited to the central London area 'CLA') are already effectively competitive due to the presence of rival leased line infrastructure that delivers competitive outcomes for customers. And this competition – from the presence of rival infrastructure – will only increase with mandated access to Openreach's duct and poles, without restrictions.
- 1.20 If Ofcom does not capture these specific business dynamics, it may regulate in business segments where regulation is unnecessary, or (again) may impose forms of regulation which limit Openreach's commercial flexibility unduly in light of the competitive constraints which exist (but are not properly captured by Ofcom).
- 1.21 In both cases, this would run counter to Ofcom's (Government's) intention to create a regulatory framework which better supports investment by only regulating where and to the extent necessary to address competition concerns.

Ofcom should spell out how its regulatory model will facilitate innovative models for managing and sharing risk

- 1.22 Ofcom's market analysis should also reflect the dynamics of competition which arise from greater contestability coupled with strong wholesale buyers.
- 1.23 Duct and pole access, and other facilitators, make full fibre deployment significantly contestable, and rival network providers credible contenders. Large wholesale customers can wield significant buyer power by choosing which of these contenders they support, and then locking in the benefits of competition over time through their contractual terms. Providers, for their part, have strong incentives to agree appropriate commercial deals that share the risks and gains from network deployment to support investment.
- 1.24 The benefits of such arrangements in supporting investment (over traditional regulated access arrangements) have been recognised by Government, and as part of the new European legislative framework. Provision is made, under the latter, for regulatory authorities to grant regulatory relief where such arrangements support investment and meet certain non-discrimination conditions. Ofcom should explain, in due course, how it sees these arrangements as part of its new regulatory model and should not, in any event, propose regulation which would inhibit such arrangements.

The model for encouraging build by Openreach in higher cost areas should be specified as this may affect how areas which are potentially competitive and non-competitive are defined

- 1.25 Ofcom indicates that its objective in non-competitive areas is to encourage investment by Openreach in new ultrafast networks and allow access to its networks to promote retail competition and protect consumers from high prices.
- 1.26 Openreach is likely to face higher build costs in non-competitive areas (potentially very high in the more remote areas). To encourage it to build, it would need a high degree of security over the volumes it could expect and its opportunity to recover these costs (over these volumes) and earn a regulated return.
- 1.27 If areas are initially defined to be non-competitive but later turn out to be viable for deployment by alternative networks (resulting in overbuild of Openreach), volumes would be lower than expected putting at risk a fair return on Openreach's investment. To avoid this, Ofcom might err towards defining marginal areas as prospectively competitive rather than non-competitive (i.e. the non-competitive area would be smaller).
- 1.28 On the other hand, if Openreach is to deploy broadly within this area – potentially including some areas where build is unlikely to be economic – there may be merit in allowing it to meet the costs of serving customers in higher cost areas through margins earned in lower cost areas (i.e. an internal cross-subsidy). This would point to a larger non-competitive area, with measures to prevent or discourage overbuild, for example, lifting the requirement on Openreach to offer duct and pole access in this area or

putting in place a licensing regime.

- 1.29 If areas which are not economic were to receive public subsidy to support deployment (or where funds are created through an industry levy), there would be less need to define a large non-competitive area in order to facilitate commercial funding by Openreach through cross-subsidy.
- 1.30 We urge Ofcom to specify the model it envisages for encouraging build by Openreach in the parts of the country which are higher cost and therefore less attractive to alternative networks. A mechanism will be needed to provide Openreach with some security over volumes; the breadth of the area over which such security is needed will depend on whether Openreach is expected to deploy in the very high cost (non-economic) areas or whether deployment in these areas will be supported with public (or other external) funds.

A more granular method for measuring network presence is preferable where fibre deployment could be targeted

- 1.31 Network presence would be more accurately measured using 500 square metre grids than using postcode sectors or exchange areas. This more granular approach would be preferable if fibre deployment is more targeted than the deployment Ofcom expects (i.e. deployment in areas larger than postcode sectors, where build is viable). Such a targeted approach is possible given mapping techniques, and the options created by duct and pole access.
- 1.32 More generally, a coverage threshold is less relevant where Ofcom is seeking, in the first instance, to identify areas where fibre build is viable rather than the level of competition within an area, which will require broader metrics. Any use of such a threshold to help identify effectively competitive areas should be transparent about measurement errors and used alongside other forward-looking measures of competition.

2 A market analysis ‘at the network level’ must still be capable of identifying relevant differences in competition so that the need for, and type of, regulation can be appropriately assessed

2.1 Ofcom proposes to assess competition from a network viewpoint with competition measured by reference to the availability of fixed networks supporting residential and business services.³ Ofcom does not mention the capability of the network in serving these segments (i.e. speed or reliability) as a relevant consideration.⁴ Nor will Ofcom include networks or business models that serve only business customers⁵ as part of its proposed assessment of network availability, as they are not considered to be multi-service networks. Ofcom’s proposals are not supported by reference to an analysis of a relevant service market.⁶

2.2 Ofcom’s assessment will, therefore, measure competition in only one dimension: namely, the physical presence (and coverage) of multi-service fixed networks (of any capability). This is expected to vary by geography depending on whether an area can support one or more of these networks.⁷

2.3 But this misses the fact that:

- the degree and nature of competition can also vary depending on the capabilities of the network (e.g. whether or not it is capable of supplying ultrafast services);⁸
- competition can occur before several multi-service networks are widely available where strong wholesale customers are able to leverage greater contestability to secure good commercial access deals, and where there are strong incentives for providers to negotiate arrangements which share risk; and
- competitive constraints can be exerted by networks with a business model which does not involve supply of multiple services (e.g. networks operated by rivals targeting business customers).

2.4 Put simply, Ofcom’s approach will not allow it to regulate only where, and to the extent necessary, to address competition concerns.⁹ Specifically, it will only pick up

³ Approach to Geographic Markets Consultation, paras 1.6-1.7. Ofcom states (at para 3.29) ‘Given our strategy, as set out above, and the types of fibre networks we expect to be built, our intention is to consider a single product market for downstream wholesale network services, against which we will carry out a competition assessment on a geographic basis, based on the availability of networks over the forward look period of the review.’ (emphasis added)

⁴ Ofcom now defines ‘fibre rich networks’ which can be used to provide different services (such as high capacity and secure private networks for businesses), and where the final connection to the customer can use a variety of technologies (including fibre, cable and G.Fast). Approach to Geographic Markets Consultation, para 2.6.

⁵ Defined widely as business access, fixed backhaul, data centres and mobile backhaul.

⁶ Approach to Geographic Markets Consultation, para 3.30.

⁷ In short, Ofcom must follow the principles of EU and UK competition law, which requires the careful assessment of the relevant product/service market(s) prior to any assessment of market power. See paragraph 24 of the Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (SMP Guidelines) (OJ 2018 C159/1) which explains that ‘in assessing whether an undertaking has significant market power [...] defining the relevant market is of fundamental importance as effective competition can only be assessed against this definition.’

⁸ As well as, potentially, considerations relating to the symmetry or asymmetry of services.

⁹ See recital 29 of Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast) the (European Electronic Communications Code).

competition issues indicated by the availability of networks.

- 2.5 It is unclear how Ofcom will determine whether competition issues in service markets are addressed adequately by physical infrastructure access without the need to impose additional wholesale remedies.
- 2.6 Nor will Ofcom be able to tailor regulation to appropriately reflect the implications of competition between networks with different capabilities, greater contestability and strong buyers, and competition from networks with a business focus.
- 2.7 Ofcom should not, therefore limit itself to measuring competition only by reference to network availability. It should examine (across all service markets that will be supplied by new networks), the important demand and supply factors which drive actual and potential network deployment and, ultimately, competitive outcomes, as explained further below.

Ofcom's competition assessment must allow it to consider the necessity (and proportionality) of wholesale remedies in light of its intervention to mandate access to physical infrastructure

- 2.8 As pointed out in Ofcom's recent physical infrastructure market review ('PIMR') consultation, '[t]he market in which access to physical infrastructure is provided is the most upstream market of the retail markets in which competition problems have been found.'¹⁰
- 2.9 Ofcom also provides a reminder (in the PIMR consultation) that the SMP Guidelines (which form part of the EU regulatory framework)¹¹ require that national regulators undertake an analysis of whether, absent regulation upstream, there would be a risk of harm to consumers due to a lack of competition in identified retail markets.
- 2.10 Regulators must start by identifying and analysing the wholesale market that is most upstream of the retail market in which any competition problems have been found and consider whether they can be addressed by remedies in that market. To the extent they can, then any further analysis of wholesale markets downstream of physical infrastructure must take into account the upstream remedy, and its role in making these markets more contestable.¹²
- 2.11 As noted above, Ofcom will think about markets (for the 2021 review) from a network point of view rather than focusing on individual downstream wholesale services in isolation.¹³ We agree that services provided over networks should not be assessed 'in isolation' but they must still be assessed (albeit holistically). Without this, the

¹⁰ PIMR Consultation 2018, para 3.5.

¹¹ Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (2018/C 159/01) [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0507\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0507(01)&from=EN).

¹² We set out in the BT Group response to the 2018 BCMR and PIMR consultations how access to physical infrastructure will materially increase CPs' ability and incentive to deploy fibre to businesses (including within the shorter review period in the run up to 2021), and how this will increase the competition facing Openreach, and reduce the need for regulation in the wholesale markets downstream of physical infrastructure.

¹³ Approach to Geographic Markets Consultation, para. 2.10.

competition issue which Ofcom's interventions are intended to address will be unspecified, and it will not be clear how Ofcom has ensured proportionality in its interventions at different levels of the supply chain as required under the EU regulatory framework.

- 2.12 Ofcom proposes (in its physical infrastructure market review 'PIMR') to impose duct and pole access nationwide. This consultation hints that Ofcom may find Openreach to have significant market power 'SMP' in wholesale markets downstream of physical infrastructure nationwide, allowing additional wholesale remedies to be imposed broadly. On its face, it is not clear how this aligns with the Government's view that *'regulatory forbearance, where appropriate, should be considered by Ofcom in developing its regulatory approach to incentivise the roll out of full fibre networks.'*¹⁴
- 2.13 A service level analysis is needed, therefore, to establish whether access to physical infrastructure may be enough (without the need for further wholesale intervention).
- 2.14 We consider that access to physical infrastructure is likely to be enough where markets downstream of physical infrastructure are contestable – i.e. where networks rivals can contest the provision of services over new fibre rich networks without material disadvantage, and where strong buyers can use this opportunity to negotiate favourable access terms. Regulators in countries with a lot of full fibre (for example, Spain and Portugal) have successfully adopted this approach.¹⁵
- 2.15 We explain in more detail below how a contestability analysis may differ from Ofcom's proposed focus on network availability, by:
- explicitly recognising the role of physical infrastructure access in levelling the playing field between network rivals. In the PIMR, Ofcom explains that access to Openreach's infrastructure removes advantages that Openreach has in the construction of, and innovation in, telecoms infrastructure and the provision of downstream telecoms services;¹⁶ and
 - giving appropriate weight to factors which influence competitive outcomes in downstream wholesale markets beyond multi-service fixed network availability, namely the capabilities of networks; strong buyers and the dynamics of commercial access arrangements; and competition from business network specialists.

¹⁴ DCMS, Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services, Consultation, 15 February 2019, para 22.

¹⁵ See the report by WIK at Annex 1. These countries have chosen not to impose ex ante access conditions for FTTP (despite a national SMP finding encompassing all broadband speeds) for the initial period of FTTP deployment (e.g. 7 years in Spain). This has allowed the market to play out, and commercial agreements to be struck, which has in turn driven competitive investment. In Spain, regulation was only applied after the initial phase of deployment in areas where further competitive entry was deemed unlikely; Portugal has used complete forbearance (beyond duct and pole access) to encourage investment.

¹⁶ PIMR consultation 2018, para 1.13. The advantages which are removed relate to cost, coverage, and speed of provision and innovation. Ofcom also makes clear how access to physical infrastructure can address market power in the provision of downstream telecoms services as it sees the SMP findings in the business connectivity markets as flowing *'directly from BT's control of the only ubiquitous telecoms network, and the advantage that provides in terms of being closer to customer sites'* PIMR consultation 2018, para 3.96.

2.16 We consider that this approach is more likely to ensure that regulation is tailored to where it is needed (and to the extent needed) in line with the Government's strategic priorities.¹⁷

Ofcom's market analysis should reflect the differing capabilities of multi-service fixed networks and the implications for competition

2.17 The Openreach response sets out in detail why the (differing) capabilities of networks matter as part of a robust analysis of wholesale competitive conditions.

2.18 Openreach indicates that it does not currently operate a scale ultrafast network, and that its current access network provides services of more limited capability to UK residential customers than services supplied by other fixed network providers in certain areas. Ofcom proposes, however, to 'count' Openreach's network presence irrespective of the capability of its network relative to others.

2.19 Equally, a market share analysis to assess whether Openreach is, in fact, constrained by rival networks¹⁸ (and which, we assume, will aggregate across superfast and ultrafast connections), will tend to over-state Openreach's market power. Openreach, as a superfast operator facing the superior capabilities of (initially small) ultrafast rivals, would have a high, but vulnerable, market share, and its market power in these circumstances would be minimal.

2.20 Openreach points out a key anomaly of this approach. A blanket SMP finding is likely to attach to Openreach even though: (i) as a new ultrafast operator it will have far fewer ultrafast connections and will face head-to-head competition from an established and sizeable ultrafast operator (Virgin Media), new FTTP operators and fixed wireless operators such as Three that will deploy 5G technology in coming years;¹⁹ and (ii) as a superfast operator seeking to compete against such operators it will face significant capability disadvantages.

2.21 Openreach proposes the following in light of these anomalies (which BT agrees with):

- **Ofcom should make appropriate distinctions between superfast and ultrafast**

¹⁷ In light of the objectives of progressively reducing ex ante sector-specific rules as competition in markets develops and, ultimately, to ensure that electronic communications are governed only by competition law as set out in the European Electronic Communications Code, it is important that any ex ante regulation which Ofcom proposes to introduce is underpinned by a robust competition analysis, which includes a detailed product market definition analysis. See also paragraphs 393 et seq of the Competition Appeal Tribunal's (CAT) decision in *British Telecommunications plc v Office of Communications* [2017] CAT 25, 10 November 2017 in which the CAT explains that *'the relevant legislative framework and guidance makes clear that market definition should precede the analysis of SMP'*. For completeness, BT observes that if the analysis is not consistent with competition law principles, the analysis would not be sufficiently robust to support a finding of dominance in the context of competition law.

¹⁸ Approach to Geographic Markets Consultation, para 2.19. *'In areas where we have seen a second rival ultrafast network actually deployed, we will have evidence (market share data etc.) that will allow us to assess whether rival networks are a competitive constraint on Openreach's network.'*

¹⁹ We also note that, as migration between legacy and new platforms proceeds, switching by customers at the retail level tends to be asymmetric: it is more likely for a customer to migrate up the speed tiers in response to a marginal increase in price than down. This limits the degree of pricing power the legacy network can wield. On the supply side, the Openreach legacy network is unlikely to compete effectively with new ultrafast networks.

capabilities as part of its competition assessment.²⁰ Ofcom should acknowledge that the market is moving to ultrafast; a market segment where Virgin Media is the market leader; where Openreach's legacy capability is less likely to underpin market power; and where Openreach, as an ultrafast operator will be relatively small and subject to constraints associated with a more contestable market (as discussed further below). Any market share analysis should treat high legacy shares (at a point in time) cautiously and focus instead on wider and forward-looking competitive pressures, in particular in light of Ofcom's longer five-year review periods and the requirement on Ofcom to carry out a forward-looking analysis.^{21 22}

- **Ofcom should ensure that regulation does not inhibit Openreach's ability to compete fairly**, reflecting the distinct competitive conditions associated with ultrafast as compared to superfast. Openreach indicates (and BT agrees) that even SMP remedies that may be considered 'light touch' – for example safeguard caps on certain products and requirements for product and process equivalence – can inappropriately frame pricing structures in the market and/or limit commercial options. Openreach should be allowed to compete fairly and work with its customers to develop innovative commercial offerings to ensure that the value of ultrafast networks can be extracted as demand for ultrafast develops, and that risks can be appropriately shared.

2.22 It would be reasonable for Ofcom not to find SMP in the provision of ultrafast services where Virgin Media currently leads (by some margin) in large parts of the country, and where FTTP provision (including by Openreach) is still nascent and will be for a number of years. No operator has market power as things stand and a more market driven model is appropriate and is most likely to lead to business models and risk sharing agreements which will support investment.

Ofcom's market analysis should reflect the dynamics of competition which arise from contestability coupled with strong wholesale buyers

2.23 Ofcom's competition assessment should engage with the dynamics of large-scale network deployment coupled with strong wholesale buyers. In these circumstances, competition may well occur in advance of deployment.

2.24 As noted above, duct and pole access (which Ofcom says will remove Openreach's cost, coverage and speed of provision deployment advantages) and other facilitators (such as charge controls on Openreach set to accommodate competitor fibre build costs),²³

²⁰ We discuss the need for Ofcom's model to recognise the distinct capabilities and characteristics of network competition in business segments below.

²¹ See SMP Guidelines, para 25 and Joined Cases C-68/94 and C-30/95, *France and Others v Commission* EU:C:1998:148. See also Ofcom's stated approach to future regulation 'Regulatory certainty to support investment in full fibre broadband', para 2.21.

²² It is also entirely possible that a different geographic lens is relevant when assessing Openreach's superfast and ultrafast capability (with the latter likely to be less ubiquitous). In any event, any market power considered to be connected to ubiquity would be largely removed by making duct and pole access available everywhere.

²³ Ofcom, Regulatory certainty to support investment in full-fibre broadband, July 2018, para 4.18. '*When determining the price of Openreach's regulated services, we may also consider competitor fibre build costs, rather than focusing solely on Openreach's own costs. We recognise the significant economies of scale and scope enjoyed by Openreach may not be available to new market entrants.*'

makes full fibre deployment significantly contestable, and rival network providers credible contenders. There are several potential scale providers, with strong financial backing, and Virgin Media is already a scale operator.

2.25 Large wholesale customers can wield significant buyer power by choosing which of these contenders they support, and then locking in the benefits of competition over a period through their contractual terms.²⁴ Just as a procurement authority will lock in benefits from a competitive tender over the period of a concession let to only one successful bidder. Providers, for their part, have strong incentives to agree appropriate commercial deals that share the risks and gains from network deployment to support investment.

2.26 The Government recognises the potential for these arrangements to emerge and includes the following within its Statement of Strategic Priorities consultation:

*'It is important that firms are able to agree appropriate commercial deals that share the risks and gains from network deployment to support investment. There should be flexibility for firms to develop new approaches to reduce deployment costs and manage risks through commercial risk-sharing and co-investment arrangements. Although these will be commercial decisions for operators, the Government expects Ofcom to play a role in facilitating such arrangements where appropriate.'*²⁵

2.27 There is explicit provision within the European Electronic Communications Code 'EECC' for such risk sharing arrangements designed to support investment to be notified to regulatory authorities for review, and for regulatory relief to be granted if the co-investment offer meets certain conditions.²⁶

2.28 These commercially negotiated arrangements could deliver pro-investment and pro-competitive outcomes (measured by reference to prices and levels of investment) without delivering a high number of (multi-service) networks competing head-to-head in an area. Ofcom's reliance on network availability (a purely structural indicator of competition) may not, however, capture these important dynamics.

2.29 Ofcom must also, therefore, assess effective competition by reference to the network supply options available (and potentially available) to large wholesale customers, and their ability to extract wholesale supply terms which are disciplined by these options (including through risk sharing deals). This must allow for the possibility that this discipline can happen where there is a credible prospect of deployment, short of actual network presence.

2.30 More specifically, where actual arrangements are negotiated between Openreach and

²⁴ A (confidential) example of this buyer power being exerted is provided in the BT Group response to the 2018 BCMR and PIMR consultations at paras 2.15 to 2.20.

²⁵ DCMS, Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services, Consultation, 15 February 2019, para 22.

²⁶ See Article 73.2(f) and recital 199 of the European Electronic Communications Code. Certain arrangements are seen as offering significant benefits through the pooling of costs and risks associated with network construction. These include co-ownership or long-term risk sharing through co-financing or purchase agreements giving rise to specific rights of a structural character by other providers of electronic communications networks or services. The new EU Code, therefore, allows for regulatory (i.e. SMP) obligations to be lightened where incumbents enter into commercial risk sharing arrangements with downstream CPs if they meet certain criteria. A key criterion is that network access remains open to access seekers after the initial investment albeit at a price that recognises differences in risk taken.

risk sharing partners, Ofcom should set out, in due course, how it views the provisions in the EECC to review these arrangement (and potentially grant regulatory relief) and how they might apply as part of its proposed framework for regulating in different parts of the country.

Competition from business market specialists must be properly reflected to avoid inappropriate re-regulation of effectively competitive markets

- 2.31 Ofcom intends to consider a *'single product market for downstream wholesale network services'* which is broadly defined as networks supplying ultrafast broadband and leased line services (so-called *'multi-service networks'*).²⁷ Ofcom acknowledges that some existing networks are service specific but will not treat these as multi-service networks (or as substitutes) *'unless there is clear evidence to the contrary.'*²⁸
- 2.32 Ofcom will, however, take account of competition these networks are currently providing as part of its SMP and remedies assessment instead of at the market definition stage. Ofcom states *'This would mean that even though our approach might indicate there are insufficient networks providing a range of services in the CLA, we would expect to recognise the competition in leased lines and not impose remedies. This would continue to allow Openreach to provide relevant wholesale leased lines services in the CLA without any regulation.'*²⁹
- 2.33 Certain business markets (including but not limited to the CLA)³⁰ are already effectively competitive reflecting the presence of rival leased line infrastructure that delivers competitive outcomes for customers.
- 2.34 Ofcom is already proposing to re-regulate in these areas by imposing duct and pole access nationwide. Re-regulation downstream of physical infrastructure on top of this is not justified in competitive business markets even if Ofcom proposes to find SMP but not to impose remedies.³¹
- 2.35 An SMP finding (even without remedies) may make Openreach more cautious in fairly responding to competition than it should be. It would also prevent BT from delivering the competitive activities through another part of BT as provided for in the Commitments.³²

2.36 Regulation that *is* imposed might limit Openreach's commercial flexibility unduly

²⁷ Approach to Geographic Markets Consultation, para 3.29.

²⁸ Approach to Geographic Markets Consultation, para 3.30.

²⁹ Approach to Geographic Markets Consultation, para 3.53. We note that the term "leased line" appears no longer appropriate in an environment where most network capabilities (including bandwidth dedicated to a particular service or end user) are determined by the electronics attached to the ends of the fibre and often controlled elsewhere in the network through software not hardware.

³⁰ The areas would be more extensive if Ofcom had undertaken a market analysis which properly captured the competitive constraints in Metro areas and in the VHB segment (in metro areas and beyond), as we set out in our response to Ofcom's BCMR consultation (BT Group's Response to the consultations published on 2 November 2018, 18 January 2019).

³¹ BT notes that Article 8(2), Access Directive would not require further regulation to be layered on top of DPA.

³² The Commitments states that *'In the event that Ofcom concludes, pursuant to a market review, that BT no longer has SMP in a particular market, then except in the event that BT determines at its sole discretion that it is impractical to do so, such*

considering the competitive constraints which exist (but are not properly captured due to Ofcom's focus on multi-service networks).³³

- 2.37 For example, the requirement on Openreach to offer products which are equivalent in all respects to all downstream customers is not only likely to be unnecessary but would not further customers' interests.³⁴ It is commonplace in business markets for customers to seek long-term agreements because they benefit from lower wholesale access prices in return for longer term contracts and/or volume commitments (a form of risk sharing).³⁵
- 2.38 To avoid these errors, Ofcom's competition assessment must capture the specific dynamics in business segments. This analysis would identify the presence of business only networks by geography using data on actual sites served rather than the business database used by Ofcom.³⁶ It would also explicitly take account of the likely impact of unrestricted duct and pole access (in accordance with the Modified Greenfield Approach).³⁷ The removal of usage restrictions on duct and pole access will allow solely business customers to be targeted encouraging a much broader range of CPs (who focus on business services) to take up duct and pole access.
- 2.39 This analysis would be likely to identify an effectively competitive VHB market nationwide. Competition in this segment tends to be organised through tendering processes, where network rivals compete to provide bespoke circuits (mostly for many sites simultaneously as part of long-term contracts).³⁸
- 2.40 For the bandwidths at 1G and below, network rivals are gaining anchor tenants (e.g. local authorities, MNOs and businesses, also under longer term contracts) which they use to 'bridge' to full fibre build to premises and SMEs.³⁹ This competition creates competitive pressure in this business segment, long before FTTP networks will be built. As 5G and fixed wireless services are deployed, this competition is also likely to

products within that market (which were formerly SMP Products but which have become non-SMP products) shall be provided by, and the related assets shall be managed by a division of BT other than the Openreach Division', para 3.6.

³³ As noted above, any such analysis would not be sufficiently robust to support a finding of dominance in the context of competition law.

³⁴ Openreach legal separation should already address competition concerns relating to its incentives to discriminate in favour of BTs downstream business units.

³⁵ This is particularly the case infrastructure operators sell to retail CPs who then use the fibre to aggregate traffic or to resell it to business access customers.

³⁶ As set out in the Openreach response to the BCMR Consultation 2018, the database used by Ofcom misclassifies sites likely to be consuming low bandwidth copper or superfast business products as sites with demand for point-to-point Ethernet circuits.

³⁷ See BT Group's Response to the consultations published on 2 November 2018, 18 January 2019 as well as the expert report submitted alongside it (AlixPartners, The competitive impact of duct and pole access on the BCMR 2019).

³⁸ BT Group's Response to the consultations published on 2 November 2018, 18 January 2019, paragraphs 3.3-3.18.

³⁹ CityFibre describe this strategy as follows '*Our approach is to deploy initial fibre spine networks, the upfront capital costs of which are recovered substantially through initial, anchor tenancy contracts for the supply of point-to-point fibre (i.e. products within the BCMR) to one or more large customers. From that initial competitive bridgehead in a town or city, CityFibre then seeks to densify the use of the network by adding further business customers and/or contracts to supply backhaul to MNO macro sites, and in a tertiary phase to then build out a city-wide full fibre network to serve residential consumers and SMEs and (eventually) MNOs' connectivity needs for 5G small cells.*' CityFibre response to BCMR Consultation 2018, para 3.2.2.

intensify.⁴⁰

2.41 This analysis would allow Ofcom to determine whether wholesale access regulation (beyond duct and pole access) is necessary. There is a strong case that no further regulation is needed in the VHB segment, and that lower bandwidth services will face increasing competitive pressure including from multi-service networks who will target potential anchor tenants in business segments first.

⁴⁰ Ofcom must consider the role of 5G and fixed wireless in its analysis of markets downstream of DPA. In particular, we expect alternative operators to deploy fibre networks to support fixed wireless and mobile connections; in turn these connections could increasingly replace connections that are relying entirely on fixed networks.

3 Ofcom's analysis of network presence should support its objective of fibre investment where it is economic

- 3.1 Ofcom's objective is to support fibre investment where it is economic. A more granular approach to the measurement of network presence would be preferable if fibre deployment is more targeted than the deployment Ofcom expects.
- 3.2 A coverage threshold is less relevant where Ofcom is seeking, in the first instance, to identify areas where fibre build is viable rather than the level of competition within an area, which will require broader metrics. Any use of such a threshold to help identify effectively competitive areas should be transparent about measurement errors and used alongside other forward-looking measures of competition.

There would be advantages to using a more granular approach to the measurement of network presence

- 3.3 We agree that the objective of geographic market analysis is to differentiate between geographic areas based on the competitive conditions in those areas.⁴¹ A more granular approach has the advantage of better distinguishing areas with different competitive conditions. But we agree with Ofcom that this must be balanced with practicality and manageability,⁴² and for this reason, we agree that an analysis at the level of individual premise is not currently tractable.
- 3.4 Analysis set out in the Openreach response suggests, however, that network presence may be more accurately measured using 500 square metre grids, rather than postcode sectors or exchange areas. The latter units of measurement (when combined with a 65% coverage threshold) do not perform as well as more granular methods in accurately measuring presence in partially covered postcode sectors or exchange areas. As Ofcom already collects coverage data at the premise level (the Connected Nations data) it is relatively simple to allocate these to a grid (of any size) based on the eastings and northing of the premise, which is known from Ordnance Survey data.⁴³
- 3.5 This more granular approach would be preferable if fibre deployment is more targeted than the deployment Ofcom expects (i.e. deployment in areas larger than postcode

⁴¹ Approach to Geographic Markets Consultation, para 3.7.

⁴² Approach to Geographic Markets Consultation, para 3.11.

⁴³ Mathematically, if the eastings and northings (for example 532,052 and 181,144 respectively for St. Paul's Cathedral in London) are divided by the grid size (in this case 500: 532,052/500 and 181,144/500), and then converted to an integer, this then becomes the grid reference (1064, 362).

sectors, where build is viable). Such a targeted approach is possible given mapping techniques, and the options created by duct and pole access.⁴⁴

A coverage threshold is less relevant to the identification of areas where fibre build is viable and must be supplemented as a measure of competitive constraint

- 3.6 For Category 1 (effectively competitive) areas, Ofcom is seeking to identify the level of competitive constraint between (at least) three multi-service fixed networks. Whereas, for Category 2 and 3 (potentially competitive and non-competitive areas, respectively), Ofcom is seeking to distinguish whether there is potential for competition between such networks, or not; in simple terms, whether build by an alternative multi-service ultrafast network is viable.
- 3.7 Applying a coverage threshold⁴⁵ is less relevant in assessing the potential for competition. We consider that, even if a multi-service fixed network has covered a minority of premises, it should be counted as indicative of potential competition.
- 3.8 In Category 1, coverage of premises (within a geographic unit) may be considered a proxy for the degree of competitive constraint exerted by the multi-service fixed networks on each other, and therefore whether there is effective competition.⁴⁶ But in this case, Ofcom will, in any event, undertake a supplementary analysis using other metrics to be able to ascertain whether an area is effectively competitive.⁴⁷ So, again, the coverage threshold is less relevant.
- 3.9 In light of this, we conclude that Ofcom should consider using a lower coverage threshold than the level used for its wholesale broadband access ‘WBA’ market analysis (namely 65%). Using a lower threshold may define some areas that are ultimately non-competitive as being potentially competitive. But this is consistent with erring ‘on the

⁴⁴ Ofcom proposes to use data from its Connected Nations report on which telecoms providers can provide phone and broadband services down to each individual premises in the UK (Approach to Geographic Markets Consultation, para 3.32). Ofcom states ‘*In general, we assume these networks would also be capable of supporting other services, such as leased lines.*’ We consider that this assumption requires further consideration; moreover, leased line-only networks will need to be captured accurately and their competitive significance assessed (even where they are not a stepping stone to new multi-service fibre networks). More generally, we agree with Ofcom’s proposal to use the latest Connected Nations update, which are issued twice a year, in addition to the main report, which is issued once a year to accurately capture full fibre roll-out which will change within the year.

⁴⁵ The proportion of premises within a postcode sector or exchange area which would need to be covered for Ofcom to count a network as present in that area.

⁴⁶ Care would be needed in using a coverage threshold as an indicator of competitive constraint. An alternative network may only need to put a modest proportion of customers at risk for this to create a competitive constraint (provided there is little scope for price discrimination between customers at risk and those not at risk – i.e. where uniform prices transmit the benefits of competition broadly across areas).

⁴⁷ Approach to Geographic Markets Consultation, para 3.23. Ofcom states ‘*For the effectively competitive test, the choice of threshold needs to be considered alongside other elements of the SMP assessment. In particular, if we set a low threshold we could include more networks as present in an area, but networks which would be excluded under a higher presence threshold will tend to cover fewer premises and so may be expected to have a lower market share across the geographic unit as a whole. So, the choice of a lower threshold does not necessarily lead to more areas being identified as effectively competitive.*’ We reiterate in this context that Ofcom should focus on metrics other than market share, and if market shares are used then consideration should be given to the appropriate weight to attach to a high legacy share which may not reflect forward-looking competitive pressures as the market moves to ultrafast.

*side of assuming that there are reasonable prospects of network rollout' which is Ofcom's intent.*⁴⁸

- 3.10 As discussed further below, this may help underpin investment by Openreach in non-competitive areas by giving it more security over the volumes (and returns) it could expect because there would be less risk of overbuild (where areas which are initially defined to be non-competitive later turn out to be viable for deployment by alternative networks).⁴⁹
- 3.11 Equally, use of a lower covers threshold than 65% poses a low risk of de-regulating in Category 1 before the areas are effectively competitive, because Ofcom intends to undertake a fuller SMP analysis in any event to establish the degree of competition in these areas anyway.
- 3.12 If the coverage threshold is seen by Ofcom as important in identifying effectively competitive areas, Ofcom should be transparent about the direction and scale of errors its choice of geographic unit entails (which in turn will depend on the type and scale of alternative network build— see Annex 1 to the Openreach response).⁵⁰ Care will be also be needed that effectively competitive are not mis-classified due to the choice of threshold where other metrics of competitive pressure (competitive dynamics; evolution of prices; viability of build using DPA etc.) would suggest a different classification.

Planned network build should also be defined appropriately broadly to avoid mis-classification of potentially competitive and non-competitive areas

- 3.13 We agree with Ofcom that all network plans should be included in defining the potentially competitive areas, (regardless of the type of service they relate to) because they may lead to new fibre networks capable of providing multiple services.⁵¹ This is consistent with the position taken by Ofcom in the PIMR consultation, where the impact of unrestricted duct and pole access was described as follows: *'operators may initially offer leased lines to businesses, and later broadband to homes'*.⁵²
- 3.14 In addition, these plans are relevant to Ofcom's assessment of competition even if they do not broaden into networks capable of providing multiple service (i.e. both residential and business services). As noted above, competition from business specialists must be

⁴⁸ "In line with our strategic aim of promoting investment in network rollout, we want to set a threshold (or thresholds) that err on the side of assuming that there are reasonable prospects of network rollout so that marginal cases are more likely to be considered in Category 2 above." Approach to Geographic Markets Consultation, para 2.26.

⁴⁹ An alternative scenario is described below, however, where a larger non-competitive area would better support Openreach deployment if it is required to commercially fund (through cross-subsidy) deployment in areas which not economic.

⁵⁰ For example, using the illustrative example of the Virgin Media footprint (which Ofcom can verify based on actual Virgin Media data), Openreach estimates that a coverage threshold set at 65% results in the following errors; 3 million premises that Virgin Media covers that are outside the postcode sectors are classed as 'covered' by them, and 1.7 million homes that are not covered by Virgin Media are in postcode sectors where they are classed as 'covered'.

⁵¹ Approach to Geographic Markets Consultation, para 3.35.

⁵² PIMR consultation 2018, para 5.7.

acknowledged not only as a bridge to multi-service network competition, but as a source of competition in its own right in relevant business markets.

- 3.15 We agree that Ofcom should include any plan that is sufficiently detailed to identify the towns/cities in which deployment is planned.⁵³ Although more general plans (i.e. with an intention to build but no location specified) are more uncertain, we think that Ofcom should include these plans where it is able, by gathering a wide set of documents,⁵⁴ to gain a reasonable idea of geographies that will be targeted.
- 3.16 However we do not agree that applying the 65% coverage threshold is appropriate or relevant in assessing the potential for future rollout in postcode sectors.⁵⁵ There is a risk that this approach will classify clusters of premises as non-competitive when in fact they are potentially competitive.⁵⁶
- 3.17 In addition, there will be areas where providers will have firm plans, yet for less than 65% of premises in the postcode sector even though build may well be viable more broadly in the areas. Use of a coverage threshold may, therefore, underestimate the viability of competitive ultrafast network build. More generally, Ofcom should consider whether a coverage threshold in the context of an assessment of viability.
- 3.18 Application of a 65% coverage threshold to planned and potential build also appears to contradict Ofcom's statement elsewhere (which we agree with), that it *'would consider [a higher level] plan [as covering] all premises in that town/city and include all geographic units that have a sufficient proportion of its premises within the boundary of the town/city'*.

⁵³ Approach to Geographic Markets Consultation, para 3.40.

⁵⁴ These might include but are not limited to: investment case documents, including those that quantify expected returns from rollout; network rollout plans; strategy documents, which may signal which type of area the operator may seek to target for deployment; and post implementation reviews from existing rollout projects, which may provide signals as to future rollout strategy.

⁵⁵ Approach to Geographic Markets Consultation, para 3.42 and para 4.19.

⁵⁶ Annex 1 of Openreach response sets out why a 65% threshold (in conjunction with the geographical unit of a postcode sector) leads to biased results when considering network presence due to the presumption of the type of coverage build Ofcom expects (full postcode coverage by multi-service networks).

4 The model for encouraging build by Openreach in higher cost areas should be specified as this may affect how areas which are potentially competitive and non-competitive should be defined

- 4.1 Non-competitive areas (i.e. Category 3) are described by Ofcom as areas that do not meet Ofcom's assessment of being considered viable for rollout by anyone other than Openreach.⁵⁷ Ofcom's objective in this area is to encourage investment by Openreach in new ultrafast networks and allow access to its networks.⁵⁸
- 4.2 Openreach is likely to face higher build costs in non-competitive areas. To encourage it to build, it would need a high degree of security over the volumes it could expect and its opportunity to recover these costs (over these volumes) and earn a regulated return.
- 4.3 Ofcom proposes to err on the side of caution so that marginal cases are more likely to be classified as potentially competitive rather than non-competitive.⁵⁹ Such an approach would help mitigate the risk of unforeseen overbuild which would otherwise lower the volumes available for Openreach to spread the higher build costs in these areas and put at risk a fair return on Openreach's investment.
- 4.4 However, if there is an expectation that Openreach should commercially fund a broad deployment in the non-competitive area – potentially including some areas where build is unlikely to be economic – there may be merit in allowing it to meet the costs of serving customers in higher cost areas through margins earned in lower cost areas (i.e. an internal cross-subsidy).
- 4.5 This would require a larger non-competitive area where marginal areas are designated as non-competitive rather than potentially competitive, but with measures to prevent or discourage overbuild, for example, lifting the requirement on Openreach to offer duct and pole access in this area or putting in place a licensing regime.
- 4.6 If areas which are not economic were to receive public subsidy (or other external funds such as an industry levy) to support deployment, there would be less need to define a large non-competitive area to facilitate commercial funding by Openreach through cross-subsidy.
- 4.7 Ofcom must also consider the prospect of differences in regulated wholesale prices between the non-competitive area (however defined) and more competitive areas

⁵⁷ 'Category 3 will comprise geographic areas that do not meet our assessment of being considered viable for rollout. This will typically be rural areas, villages and smaller towns and will be areas where there is currently no existing alternative network and there are limited prospects of significant network rollout (other than by Openreach).' Approach to Geographic Markets consultation, para 2.25

⁵⁸ '...our objectives are to encourage investment by Openreach in new ultrafast networks and to allow access to its networks to promote retail competition and protect consumers from high prices.' Approach to Geographic Markets consultation, para 1.11

⁵⁹ This is particularly important should Ofcom retain a methodology of defining market boundaries that has a significant amount errors (as we have set about above) causing premises to be included in the non-competitive area when in fact they should be classified as potentially competitive.

(which will depend on build cost and take-up relative to the potentially competitive areas).

