



Defining relevant markets in Hull for the Telecoms Access review

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1 Executive Summary

- 1 As Ofcom commences its work to review the telecoms markets in Hull in the Telecoms Access Review, MS3 is pleased to set out in this document critical insights into the functioning of markets at both retail and wholesale levels, identifying existing and potential market failures that Ofcom should seek to overcome and prevent in the remedies applied for the 2026 – 2031 period.
- 2 For many years, the Hull area has been regulated in a very similar manner to how Ofcom had regulated the rest of the UK (RoUK), with some allowances for the much smaller scale of the Hull area.¹ It has, however, become apparent over time, that telecoms markets in Hull have not developed in the same way as the RoUK (and most other European telecoms markets, regardless of size).
- 3 Despite Ofcom having found that KCOM enjoyed a position of significant market power (SMP) in the Hull area and consequently mandated wholesale access remedies in both broadband and leased lines markets, little or no retail competition has emerged in Hull. This contrasts sharply to the RoUK, where similar remedies imposed on BT/Openreach has engendered a large number of retail service providers. In Hull, KCOM still holds a retail broadband market share of >80% and a retail leased lines market share >40% with the wholesale market at even higher levels.² Retail competition in Hull has only started to emerge once MS3 and others started building separate competing full-fibre networks.
- 4 In recent market reviews for Hull, Ofcom has gradually removed regulation at the retail level. Although consistent with international good practice, this has not been supported by evidence that wholesale level regulation would be sufficient to protect consumer interests. On the contrary, Ofcom has consistently found that consumers (residential and business) in Hull are paying considerably more for telecommunications services than those in the RoUK.³

¹ In the 2021 Hull WFTMR Statement, Ofcom estimated that the Hull area covered approximately 7% of the total UK premises, equal to around 200,000 premises.

² Due to lack of detailed market information, the market shares included in this document are the best estimates MS3 can produce.

³ See for example KCOM's list prices in Figure 10 of Ofcom's Pricing trends report published December 2024: <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/multi-sector/pricing/2024/pricing-trends-for-communications-services-in-the-uk-2024.pdf?v=387092> and the Hull WFTMR V2 paragraph 2.14..

- 5 The advent of infrastructure competition in Hull has put a spotlight on local market failures. The threat of losing market share not just at the retail level but also at the wholesale level (as MS3 is a wholesale-only provider) has caused KCOM to react in the retail market in a manner to foreclose the retail broadband market to competition and in a manner that only a provider with dominance in the relevant market would be able to.

MS3 argues in this submission that Ofcom needs to depart from its practice of regulating the Hull areas in the same manner as the RoUK. There is clear evidence that the market conditions are materially different and KCOM's behaviour in recent years has evidenced that regulatory intervention is required at the retail level.

Based on the data available and MS3's first-hand experience in the Hull telecoms markets, MS3 argues that the following markets should be defined as being susceptible to ex-ante regulation and that KCOM has SMP in each of those markets:

1.1.1 Retail broadband services.

- This market includes fixed wireline broadband connections of all speeds, but excludes leased lines, Ethernet First Mile (EFM) and broadband services provided over fixed wireless connections.
- This market satisfies the three criteria to justify ex-ante regulation, and
- KCOM has SMP in this market, demonstrated through KCOM's very high market share and its ability to price in a manner that is independent of its customers and ultimately consumers.

1.1.2 Wholesale broadband services

- MS3 has identified two separate markets in this category:
 - The regulated wholesale local access (WLA) market and
 - The KCOM white label wholesale broadband service.

MS3 notes that as of March 2024, KCOM reported zero external revenues in the regulated WLA market. This suggests that all of KCOM's wholesale broadband services are provided in the white label broadband market, and it is essential that this market is clearly and separately identified so that appropriate transparency and controls can be applied.

- Like the retail markets these two markets supply, these markets include fixed wireline broadband connections of all speeds, but excludes leased lines, Ethernet First Mile (EFM) and broadband services provided over fixed wireless connections.
- Despite the gradual emergence of infrastructure competition, these markets still satisfy the three criteria and are therefore susceptible to ex-ante regulation.
- KCOM holds SMP in both of these markets as shown by its continued very high market shares and its ability to use retail market behaviour to erect barriers to competition in both retail and wholesale markets. MS3 also notes that, despite Ofcom specifically mandating that KCOM should make the WLA remedy easier to consume and independent of access to local exchanges, KCOM's latest regulatory accounts show the external sales in that market is still zero. This suggests that a combination of wholesale market entry barriers and retail market foreclosure is preventing end consumers in Hull from accessing the benefits of competition.

1.1.3 Retail leased lines services

- This market includes all retail leased lines of all bandwidths but exclude broadband connections and EFM connections. It also excludes wireless connections.
- Despite Ofcom having mandated wholesale leased lines access remedies in Hull, the retail leased lines market satisfies the three criteria for ex-ante regulation. This is due to market entry and expansion barriers created by KCOM.
- KCOM retains >40% market share in this market, potentially even >50%, and KCOM's market share has not changed materially over the past five years. KCOM has recently introduced and incentivised its staff to sell 5-year leased lines contracts resulting in the market being effectively foreclosed to competition for the foreseeable future. MS3 argues that these facts support a finding that KCOM has SMP in the retail leased lines market in Hull.

1.1.4 Wholesale leased lines services

- There are two relevant markets in this category:
 - Wholesale leased lines used for end-customer connectivity, and

- Wholesale leased lines used for mobile backhaul. These markets satisfy the three criteria for ex-ante regulation due to significant barriers to market entry and a sustained high market share held by KCOM that shows that the market does not tend towards competition.
- KCOM has SMP in these markets as demonstrated by its very high and stable market share and the absence of counter-vailing buyer power.

1.1.5 Physical Infrastructure services

- 6 MS3 has not identified a separate market for Physical Infrastructure (PI) services. MS3 considers that access to KCOM's PI should instead be mandated as a remedy in both wholesale broadband and wholesale leased lines markets.

2 Introduction

- 7 In the standard market review framework, the first, and critical, step is to identify relevant markets susceptible to ex-ante regulation. This paper takes a systematic approach to reviewing the definition of all relevant fixed telecoms markets in Hull, which we hope will be of assistance to Ofcom.
- 8 Although the TAR is primarily a wholesale market review, we have included the definition of relevant retail markets. This is due to the significant concerns already reported to Ofcom about KCOM's behaviour in several retail markets.⁴

2.1 Background to the Hull telecoms markets

- 9 KCOM is the incumbent provider of fixed telecom services in Hull.⁵ KCOM has a ubiquitous full fibre network service in all of Hull, as well as areas outside Hull.
- 10 Consistent with Ofcom's preference for applying upstream wholesale regulation to remove or reduce barriers to market entry in downstream retail markets⁶, the Hull retail broadband market is currently not defined as a relevant market susceptible to ex-ante regulation and is thus not currently regulated.

⁴ MS3 notes that Ofcom has concluded that the MS3 complaint about KCOM's behaviour in the retail broadband market in Hull does not constitute a breach of competition law. MS3 also notes that, in its letter to MS3 with its conclusion, Ofcom refers to the analysis it will be performing in the Hull TAR process. With that in mind, it is critical that Ofcom defines relevant retail markets susceptible to ex-ante regulation.

⁵ In this paper, the term 'Hull' refers to the KCOM Original Licence Area (OLA).

⁶ This is also consistent with international good practice and set out explicitly in relevant European Commission regulations and directives.

- 11 In 'conventional' telecoms markets, that approach has worked reasonably well to initially introduce retail-level service competition through resale of the incumbent's network and services and a gradual increase in the control and autonomy for the Internet Service Providers (ISPs) alongside the possibility for the ISPs to invest in and control more elements of the service determining electronics and also parts of the physical network. During the early years post market liberalisation, the regulator would typically apply retail market regulation to protect consumers against the dominant provider extracting monopoly rent, as well as to prevent the dominant provider from undertaking competitive behaviour in the retail markets to prevent competing ISPs from gaining a proper foothold. Once retail competition was reasonably established, regulation was gradually removed from retail markets and the regulator increasingly relied on wholesale regulation to protect consumer interests and safeguard competition.
- 12 In Hull, however, the small market size.⁷ (relative to the rest of the UK – RoUK market) and the lighter touch regulation typically applied by Ofcom (and Oftel before it) to KCOM in Hull has resulted in a near-monopoly in telecoms at both retail and wholesale levels and very little service-level competition resulted from the imposition on KCOM of wholesale access regulations. Despite this, Ofcom has more or less mirrored the de-regulatory approach adopted for the RoUK in its regulation in Hull – gradually removing retail market regulation and increasing reliance on wholesale market interventions.
- 13 The Hull market is presently at a watershed point where, after many years of a stagnant near-monopoly market, MS3 (and others) have entered the market and are building new full-fibre networks in direct competition with KCOM. This means that KCOM is now (for the first time) facing real competition at both retail and wholesale market levels (MS3 is wholesale-only and has 22 retail ISPs selling services on its network across residential and business broadband and leased lines markets). MS3 has written separately to Ofcom about specific anticompetitive practices by KCOM in the retail markets and is concerned that there are presently no ex-ante remedies in place to in any way curtail such behaviour in the future..⁸
- 14 MS3 believes that due to the unusual history of how competition has (and has not) developed in Hull, the Hull TAR must take a step back from the conventional 'up-stream only' regulatory

⁷ MS3 does not have access to a source stating the number of premises in Hull but understands that it is likely to be between 190,000 and 210,000.

⁸ We will outline those concerns again in the relevant sections of this paper as the submission made to Ofcom relates to current and past behaviour, whereas the Hull TAR is intended to address behaviour in the future. In light of Ofcom's recent conclusion that the behaviours documented by MS3 did not constitute breach of competition law, MS3 is particularly concerned that Ofcom take action in the TAR to prevent such behaviour in the future.

approach and consider what interventions are necessary to prevent abuse of market power by KCOM at any and all levels in the market. MS3 considers that the Hull TAR should be a 'greenfield' review with no carry-over or presumption of continuity from past market reviews.

- 15 In this document, MS3 comments on the extent to which it considers the relevant markets defined in the Hull WFTMR remain appropriate for the current and likely future market conditions (during the 2026 – 31 period for which the Hull TAR remedies will apply) and makes suggestions where we consider they are no longer appropriate or are insufficient.

3 The Hull broadband markets

3.1 Retail broadband markets

3.1.1 Retail broadband product definition

- 16 The Hull WFTMR did not define a relevant retail broadband market. MS3 understands that this was due to Ofcom applying a similar approach in Hull to that of the RoUK market, with an emphasis on upstream wholesale intervention. Based on the market conditions we set out below, MS3 argues that it is essential for the successful introduction of sustainable broadband competition (in retail and wholesale) in Hull that a retail broadband market is defined, and that appropriate and proportionate remedies are introduced.
- 17 In respect of the definition of the Hull retail broadband market, MS3 believes that the market should include all of KCOM's retail broadband speeds but should exclude fixed wireless broadband and leased lines.
- 18 Fixed wireless broadband services often have usage restrictions, so are unlikely to be ready substitutes to broadband services delivered over the KCOM full-fibre network. Additionally, the quality-of-service performance of fixed wireless broadband services are also not comparable to those delivered across a full-fibre network.
- 19 Leased lines, while capable of delivering broadband access comparable to a full-fibre broadband network are substantially more expensive and are unlikely to be a substitute for full-fibre broadband connections.

3.1.2 Retail broadband geographic market definition

- 20 The full geographic market in Hull is quite small and MS3 believes that there would have to be very strong arguments to justify the creation of smaller geographic markets within the Hull area. Although there are parts of Hull where neither MS3 nor other builders of new networks have yet deployed, that is a temporary status which is likely to change considerably over time.
- 21 MS3, therefore, believes that there should be a single relevant geographic market for retail broadband services in Hull.

3.1.3 Conclusion on product and geographic market definition

- 22 As set out in the preceding sections, MS3 considers that there is a single retail broadband product market including all of KCOM's retail broadband speeds but excluding fixed wireless broadband and leased lines, and a single retail broadband geographic market covering the entire area of Hull for which KCOM is the incumbent fixed line operator.

3.1.4 Three criteria test

- 23 In order for the market defined above to qualify for further analysis the three criteria test is applied to ascertain whether that market is a relevant market susceptible to ex-ante regulation. That is, are we sure that ex-ante regulation is necessary and that standard ex-post competition law provisions are not sufficient to address any market failures that may arise.⁹
- 24 The three criteria that need to be satisfied for the market to be a relevant market susceptible to ex-ante regulation are:
- 1) There are high and non-transitory barriers to market entry;
 - 2) The market structure does not tend towards effective competition within the relevant time horizon; and
 - 3) Competition law alone is insufficient to adequately address the market failure(s) concerned.
- 25 MS3 considers that all of the three criteria are satisfied. Although conventional thinking would argue that regulatory intervention at the wholesale level should reduce barriers to retail market

⁹ MS3 notes that Ofcom's recent decision that the behaviours described by MS3 in its competition complaint do not constitute breaches of competition law, highlights the need for Ofcom to be able to intervene at the retail level as part of the ex-ante regulatory framework in Hull.

entry and ensure that the retail market would tend towards effective competition, this has proven ineffective in Hull for a significant period of time. We outline our reasoning below:

Barriers to market entry

- 26 Although there are no structural barriers to market entry in the Hull retail broadband market, the inability for a retail ISP to build sufficient market share to build a sustainable business in the Hull broadband market alone (not considering larger brands which have presence in adjacent markets including the RoUK retail broadband market) represents a high and non-transitory barrier to market entry.
- 27 The barriers to building a sustainable market share in the Hull broadband market are primarily in the Hull retail market, and less so in upstream wholesale markets. Those behaviours include the introduction and an 'out of contract surcharge' which effectively forces consumers back into KCOM contracts to which punitive early termination charges (ETCs) are applicable.¹⁰ Those pricing practices are intended to prevent successful market entry by retail competitors and cannot be effectively remedied by upstream wholesale regulatory intervention.
- 28 This situation is further evidenced by the challenges faced by retail ISPs using MS3's network to compete in Hull. Those ISPs are not dependent on regulated access to the KCOM network and facilities but are still experiencing significant barriers to viable market entry and expansion. It is, therefore, evident that increased regulatory intervention in the upstream wholesale market would not address the problems currently experienced in the retail broadband market.

Market tending towards competition

- 29 KCOM has been subject to wholesale regulatory remedies designed to introduce competition at the retail level for more than 25 years, and yet very little retail competition is apparent. MS3 believes that absent retail regulatory intervention, it is unlikely that the retail broadband market in Hull will ever tend towards competition.

Sufficiency of competition law

- 30 The nature of competition barriers in the Hull retail broadband market are such that, without ex-ante preventative regulatory intervention, it would not be viable for a retail competitor to enter

¹⁰ MS3 acknowledges that KCOM uses the industry standard approach to the calculation of ETCs. The reason that the KCOM ETC are so much higher than those in the RoUK is that KCOM's standard retail broadband prices are much higher than elsewhere in the UK.

the market and gather sufficient evidence to mount an ex-post competition case against KCOM. Retail ISPs simply would not be able to exist for long enough under the current market conditions to gather the evidence required to support a competition case, nor would such a business be able to fund a competition case through court. Further, as ex-ante regulatory intervention has the specific purpose to remove or reduce barriers to market entry and to promote competition in the interests of end consumers, practices that may not be considered breach of competition law would likely be considered barriers to market entry and competition within an ex-ante regulatory framework.

- 31 Given the lack of success of upstream ex-ante regulation in delivering retail broadband competition in Hull, it is evident that material competition barriers exist at the retail level.¹¹ in addition to any barriers at the wholesale level. Only ex-ante intervention at the retail level would be able to address the market issues identified.
- 32 In the SMP section below, we present examples of abuse of dominance by KCOM in the retail broadband market, perpetrated while upstream wholesale regulation was in place.

3.1.5 SMP

- 33 Ofcom highlighted in the Hull WFTMR that both retail and wholesale prices in Hull were materially higher than for the RoUK market. That, in itself, is evidence that KCOM is able to act independently of its customers and ultimately consumers in setting high prices without the fear of competitive retaliation or of customers ceasing contracts with KCOM to the extent that such price increases would be non-profitable for KCOM.
- 34 In addition to the general high price levels, KCOM introduced in March 2023¹² an 'out of contract surcharge' of initially £3/month but subsequently increased to £5/month, for customers for whom their fixed contract period had expired. This charge is in addition to the removal of any discounts the customers may have benefited from during the fixed contract period.
- 35 KCOM offers heavily discounted prices for new customers. As KCOM is the incumbent, the only new customers would therefore be customers of their competitors (at the retail or wholesale

¹¹ Note that other small markets have successfully introduced retail (and in some instances wholesale) competition. These include the Channel Islands, Gibraltar and the Isle of Man. MS3, therefore, does not believe that it can be credibly argued that the reason for lack of retail competition is the size of the Hull broadband market.

¹² Which was the time when MS3's market presence was starting to become noticeable and KCOM likely realised that MS3 would become a serious infrastructure competitor.

level). Whilst this type of pricing may be standard and acceptable for new market entrants without market power, it is of significant concern when practiced by the SMP provider – especially when the discounted retail prices are below the SMP provider’s published wholesale prices.

- 36 Further, MS3 understand that KCOM also uses the discounted rates selectively for some existing customers, if those customers seek to terminate their KCOM retail broadband contract. Again, whilst this may be standard commercial behaviour in a competitive market, it is a clear abuse of dominance if practiced by an SMP provider.
- 37 In addition to the pricing behaviour outlined above (and which is set out in more detail in the competition complaint submitted to Ofcom in August 2024, a copy of which is available on request “the competition complaint”), and at around the same time as the introduction of the out of contract surcharge, KCOM commenced a process of gradually making it harder for customers to terminate their contracts with KCOM. The ability to terminate through a form on the KCOM website was removed, as was the ability to use the on-line chat function to terminate. This left only the option of calling the KCOM customer services centre if a customer wants to terminate its KCOM broadband contract. MS3 has submitted, as part of its competition complaint evidence of customers trying for weeks and months to terminate their KCOM contracts via the customer services centre, showing clearly that KCOM was acting obstructively in this context.
- 38 MS3 contends that only a provider with significant market power would be able to treat its customers in the manner described above and still retain a very high market share.¹³
- 39 MS3 consider the evidence outlined above and as set out more fully in its competition complaint to prove beyond any doubt that KCOM enjoys a position of SMP in the Hull retail broadband market.

3.2 Wholesale broadband markets

- 39 The Hull WFTMR imposed a wholesale access remedy for Wholesale Local Access (WLA) and, in addition, KCOM offers a white label wholesale broadband product. According to KCOM’s 2024 Regulated Financial Statement (RFS), it collected zero revenues in the WLA market over that

¹³ MS3 does not have access to the precise number of premises in the KCOM Original Access Area (OLA). Nor the number of premises served by other providers, but we assess that KCOM’s market share is likely in the region of 85% of premises taking fixed broadband services in Hull.

year, no data is available on the revenues or connections provided by KCOM using its white label wholesale broadband product. Although Ofcom required KCOM in the Hull WFTMR to remove the requirement for presence in local exchanges to consume the WLA product, this does not appear to have overcome the challenges ISPs have in consuming the KCOM WLA product.

- 40 Since the 2021 Hull WFTMR, MS3 has entered the wholesale broadband market in Hull, offering the equivalent of the regulated WLA product. In addition to KCOM and MS3, other providers self-supply broadband access, the largest of those is Connexin.¹⁴ MS3 currently covers approximately 54% of Hull premises.¹⁵ with its wholesale-only full-fibre network but provides only approximately 7% of connections.^{16,17} This is despite MS3 offering a superior wholesale product (the equivalent of the regulated WLA product) and wholesale prices materially below those of KCOM.
- 41 MS3 believes that the biggest barriers to its success in the Hull wholesale broadband market are KCOM's behaviour in the retail broadband market and the absence of a regulated physical infrastructure remedy in Hull. ISPs using the MS3 wholesale product are facing the anticompetitive behaviours described above in the retail broadband market section and therefore are achieving much lower take-up that should reasonably be expected given the high quality and significantly lower prices they offer.
- 42 Whilst the Hull wholesale broadband markets are experiencing issues, MS3 believes that the majority of those issues originate at the retail market level. As MS3 offers an attractively priced and technically superior product to the KCOM white label wholesale broadband product (given that the regulated WLA product appears to be available in name only), MS3 believes that Ofcom does not need to intervene unduly at the active wholesale market level (But, please note that separate papers will be submitted that address remedies for broadband, leased lines markets, including the introduction of a PIA remedy).

¹⁴ Connexin's infrastructure was recently acquired by CityFibre.

¹⁵ MS3's network is primarily in Hull town and its suburbs.

¹⁶ Based on Ofcom's map of the Hull Area contained in the Hull WFTMR Annex 26 page 170, MS3 has estimated that there are presently approximately 206,000 premises in the Hull area (combination of business and residential premises).

¹⁷ MS3's take-up level of its Ready For Service (RFS) premises is approximately 9%

3.2.1 Wholesale broadband market definitions

Wholesale broadband product markets

43 KCOM provides two wholesale broadband access services:

- Wholesale FibreLine Access in the WBA market (described by KCOM as its 'white label' broadband product) which is presently completely unregulated, and
- Wholesale FibreLine Local Access in the WLA market, which is regulated.

44 In the Hull WFTMR, Ofcom found that no access seekers consumed the regulated WLA product. This was due to a number of potential challenges with the product and working with KCOM, one significant of which was that the access seeker had to collocate at KCOM local exchanges to consume the product. As KCOM asserted that its relevant local exchanges were at capacity, significant work would need to be undertaken to accommodate access seekers, which would be costly and time-consuming.

45 The Hull WFTMR therefore mandated the provision of a WLA product that did not require the access seeker to collocate at KCOM local exchanges. However, the recently published KCOM RFS still shows zero consumption of the regulated WLA product up to the end of the last KCOM financial year.¹⁸

46 In contrast, MS3 understands that some access seekers do consume the unregulated wholesale broadband product, but it is not possible to ascertain the volumes of lines used by access seekers this product. This is due to that product being unregulated and KCOM therefore having no duty to report volumes, revenues or financial performance of that product.

47 MS3 believes that the persistent difficulties in consuming the regulated WLA product and the lack of transparency of the level of consumption and financial performance of the unregulated white label product has created a fundamental lack of transparency in the market and that the Hull TAR needs to address that.

48 MS3, therefore, asks that Ofcom define two relevant markets for wholesale broadband access. Defining a relevant market for the white label product does not necessarily mean that the charges and conditions for that product need to be subjected to detailed regulatory intervention, but it would enable Ofcom to mandate transparency provisions to be applied in

¹⁸ End of March 2024.

that market, including the provision of RFS for both markets. Other safeguarding provision may be appropriate, MS3 will address those in the separate remedies papers to follow this submission.

49 In the Hull WFTMR, Ofcom found that the WLA market should be defined to include all speeds of broadband access offered by KCOM and that it should exclude wireless broadband access as well as wholesale leased lines. MS3 agrees that those parameters remain valid and that they can be equally applied in both the WLA and WBA markets. MS3 is not aware of any material changes to products or market conditions that would justify changing that market definition.

Wholesale broadband geographic markets

50 Although MS3 and others are building competing networks in Hull, the boundaries of those networks change over time as the networks expand. MS3 is, therefore, not aware of any factors that would justify the creation of separate geographic markets for wholesale broadband access in the Hull area.

3.2.2 Conclusion on product and geographic market definition

51 MS3 contends that there are two wholesale broadband access markets (the WLA and the WBA markets) and that they both cover the whole Hull area.

3.2.3 The three criteria test

52 In order for the market defined above to qualify for further analysis the three criteria test is applied to ascertain whether that market is a relevant market susceptible to ex-ante regulation. That is, are we sure that ex-ante regulation is necessary and that standard ex-post competition law provisions are not sufficient to address any market failures that may arise.

53 The three criteria that need to be satisfied for the market to be a relevant market susceptible to ex-ante regulation are:

- 4) There are high and non-transitory barriers to market entry;
- 5) The market structure does not tend towards effective competition within the relevant time horizon; and
- 6) Competition law alone is insufficient to adequately address the market failure(s) concerned.

High and non-transitory barriers to market entry

- 54 The two wholesale broadband markets in Hull remain subject to high and non-transitory barriers to market entry while KCOM remains the only provider to provide ubiquitous network coverage in the area. Additionally, the absence of a physical infrastructure access remedy in these markets and the ability for KCOM to engage in anticompetitive practices at the retail level add to the entry barriers in the wholesale markets by increasing costs of entry and erecting barriers to take up of competitive wholesale services, as presented by MS3 in its competition complaint.
- 55 Although MS3 has entered the WLA market in Hull, the cost of building all new physical infrastructure and the growing opposition to the erection of new telegraph poles means that additional build in the Hull area would be very limited unless a workable PI access remedy was to be imposed in the WLA market.
- 56 Additionally, the material barriers in the retail market for MS3's customers significantly impact on the viability of market entry at the wholesale level due to the resulting low levels of network utilisation.
- 57 MS3 considers that the barriers outlined above for the WLA apply equally or even more so for the WBA market, as there is, to the best of MS3's knowledge, no competitive market entry at all in the WBA market.

Market tending towards competition

- 58 For the same reasons as articulated above, neither of the two wholesale broadband markets tend towards competition. The WBA market remains a monopoly,¹⁹ and the barriers cited above for the WLA market apply to both market entry and expansion. With such strong barriers to expansion, the market cannot tend towards competition.

Sufficiency of competition law

- 59 The market failures experienced in the Hull wholesale broadband markets are of a nature that could not be remedied through ex-post competition intervention. Ofcom's objective is to enable efficient and effective competition to the benefits of consumers and citizens in Hull, the structural and behavioural barriers to competition presented in this document can only be effectively overcome through ex-ante intervention.

¹⁹ To the best of MS3's knowledge, no other provider offers a white label broadband access service in Hull.

60 MS3, thus, contends that the application of competition law would be insufficient to overcome the market failures identified.

3.2.4 SMP

60 Although there is emerging competition in the parts of the Hull wholesale broadband markets, this is heavily constrained by the barriers already described. The combination of the barriers to

wholesale broadband competition and the anticompetitive practices in the retail broadband market means that KCOM can act independently of its customers and ultimately consumers and there is evidence of KCOM doing so in the past and the present.

61 Additionally, there are parts of the Hull area where no alternative infrastructure exists and KCOM's dominant position stands unchallenged.

4 The Hull leased lines markets

4.1 Retail leased lines markets

4.1.1 Retail leased lines product market

62 At present, in accordance with the Hull WFTMR, the provision of retail leased lines in Hull is not regulated. This is consistent with the Ofcom's general approach to focus regulatory intervention upstream from retail markets, where competition issues have been identified.

63 The KCOM 2024 RFS shows that KCOM consumes 56% of its wholesale leased lines products by value. Although some limited alternative leased lines infrastructure exists in Hull, the very high level of self-supply in this market suggests that KCOM retains market power.²⁰ Further, according to KCOM's RFS submissions, the proportion of external sales of wholesale leased lines in Hull has increased from app. 35% in 20-219/20 to app. 44% in 2023/24. That is a very modest increase, suggesting that there is no effective competition in the Hull retail leased lines market. This despite Ofcom having imposed remedies at the wholesale level for more than a decade.

²⁰ The EC guidelines state that >40% market share is indicative of SMP and >50% is in itself evidence of SMP.

- 64 In addition to the leased lines provided on the KCOM network, however, some are provided on the MS3, Openreach and CityFibre networks within the Hull area. It is therefore not possible for MS3 to assess whether KCOM has a market share of >50%, but it is very likely that its market share is at least 40%. MS3 considers this sufficient to justify Ofcom defining a relevant market for retail leased lines in Hull.
- 65 MS3 also draws Ofcom's attention to the fact that KCOM sold off its national leased lines business to Nasstar in 2021.²¹ This will likely have increased the external sales proportion as some of the national leased lines will likely have A-ends in Hull, but is unlikely to represent increased competition to KCOM in the Hull retail leased lines market
- 66 With regards to the scope of the retail leased lines product market, MS3 considers that it should include Ethernet leased lines of all speeds connecting either end-user premises or a KCOM network location. MS3 considers that broadband connection and EFM connections should be excluded from this market, as should leased lines provided of fixed wireless access (FWA) technology.

4.1.2 Retail leased lines geographic market

- 67 MS3 is not aware of any evidence that there are meaningful and enduring differences in the competitive conditions in different parts of Hull and therefore considers that the retail leased lines market should cover all of Hull.

4.1.3 The three criteria test

- 68 In order for the market defined above to be qualify for further analysis the three criteria test is applied to ascertain whether that market is a relevant market susceptible to ex-ante regulation. That is, are we sure that ex-ante regulation is necessary and that standard ex-post competition law provisions are not sufficient to address any market failures that may arise.
- 69 The three criteria that need to be satisfied for the market to be a relevant market susceptible to ex-ante regulation are:

- 1) There are high and non-transitory barriers to market entry;

²¹ <https://www.nasstar.com/hub/news/nasstar-completes-acquisition-of-kcom-national>.

- 2) The market structure does not tend towards effective competition within the relevant time horizon; and
- 3) Competition law alone is insufficient to adequately address the market failure(s) concerned.

High and non-transitory barriers to market entry

70 Consistently with MS3's findings in the retail broadband market, there are significant barriers to market entry and expansion in the Hull retail leased lines market. Despite mandated wholesale leased lines access, it is clear that competitors are finding it extremely hard to compete with KCOM in this market.

71 Similarly to KCOM's behaviour in the retail broadband market, MS3 has observed that, as MS3's network has expanded and presents an increased threat to KCOM's market share and price levels, KCOM has started marketing their longer-duration leased lines contracts more heavily and has introduced new 5-year and 7-year duration contract options..²² These changes have taken place in the last two years as MS3's network has grown and appear to have the explicit objective of erecting barriers to market entry for MS3 and others.

Market tending towards competition

72 As set out above, KCOM's RFS show that KCOM retains a very high market share, likely significantly above the 40% threshold for which SMP can be presumed. MS3 does not have access to any data that suggests that the market tends towards competition.

Sufficiency of competition law

73 The barriers to competition in the retail leased lines market are of an exclusionary nature, which requires ex-ante intervention and MS3 does not consider that competition law would be sufficient in addressing the competition issues identified.

4.1.4 Conclusion on retail leased lines market definition

74 MS3 considers that the Hull retail leased lines market satisfies the criteria as a relevant market susceptible to ex-ante regulation.

²² <https://www.kcom.com/wholesale/media/g1xjj03j/changes-to-1gb-contract-length-options.pdf>.

4.1.5 SMP

- 75 MS3 considers that the very high market share that KCOM has been able to sustain, despite wholesale access regulation having been imposed for a very long time, and the retail practices commenced by KCOM when infrastructure competition started to look like a realistic threat are sufficient to justify a conclusion that KCOM holds a position of SMP in the Hull retail leased lines market.
- 76 Other factors, such as the absence of countervailing buyer power due to the absence of ubiquitous competitive network competitors and the fact that many customers are now tied into very long contracts, support that conclusion.

4.2 Wholesale leased lines markets

- 77 In the Wholesale Leased Lines access (WLL) market, Ofcom imposed in the Hull WFTMR both a general access remedy and two specific access remedies; namely to provide 1) Ethernet access and 2) dark fibre access connectivity, both products should be provided between KCOM ODF sites (or third-party premises) and end-user sites, and between two end-user sites.
- 78 KCOM offers Ethernet wholesale leased lines products in two versions:
- Ethernet Connect Access (point to point), and
 - Ethernet Direct Access (multi-site connectivity)

Between 10Mb and 100Gb speeds and dark fibre access is offered as two products: Single Fibre and Fibre Pair.

Although MS3's network serves parts of the business connectivity market in Hull, KCOM still holds by far the largest market share at both wholesale and retail levels. Ofcom estimated KCOM's market share in the leased lines access market (LL Access market) in 2021 to be between 60% and 70%.

- 79 MS3 has written to Ofcom about KCOM's anticompetitive practices in the Hull broadband market. As MS3 expands its network and its retail leased lines providers increasingly seek to win retail leased lines market share from KCOM, using the MS3 network, MS3 has already observed

that KCOM has started to implement exclusionary business practices at the retail level (such as incentivising its sales force to sell 5-year retail leased lines contracts). This and other potential practices with the same objective of foreclosing the retail leased lines market to competition has a direct impact on the viability of infrastructure competition in Hull. If MS3's retailers cannot access retail leased lines customers, then MS3 cannot achieve the necessary levels of utilisation and returns on its network investment.

- 80 The LL Access market is characterised by significant barriers to expansion for competitors such as MS3, but the issues faced here are different to those faced in the broadband market.
- 81 Ofcom will be aware that businesses are typically very risk averse with regards to the changing of communications and connectivity providers. This is understandable and is true almost regardless of other market conditions. In Hull, businesses have become accustomed to using primarily KCOM (or ISPs using KCOM's network), and ISPs using the MS3 network are finding that it is a very difficult market to break into. For that reason, MS3 is primarily targeting the residential markets in the short term and leaving the business connectivity market for a later stage when the MS3 brand has become better known and synonymous with high quality and excellent service. MS3 does, however, supply LL Access circuits to retail ISPs targeting that market and approximately 8% of MS3's revenues are from the business market²³.
- 82 Due to high construction costs and the lack of access to existing physical infrastructure in Hull, MS3 has not been able to build its network to some of the areas with the highest concentration of business premises, including Clarence Street (HU9 1DH), Clough Road (HU6 7PL), Monks Way West (HU14 3RS) and National Avenue (HU5 4JB), so it cannot be said that, at this time, MS3 offers a full alternative to the KCOM LL Access product portfolio.

4.3 MS3 and ISP consumption of KCOM wholesale leased lines

- 83 MS3 uses Wholesale Leased Lines from KCOM to reach locations where it does not itself have network presence and for where physical resilience is a customer requirement. This is likely to remain a permanent requirement for MS3 for resiliency purposes and there may also remain a

²³ This percentage is reducing over time. Before entering the residential broadband market in [time], MS3's business model was to offer wholesale leased lines only. Over time, the legacy wholesale leased lines business is reducing as a proportion of the overall business.

small number of locations where MS3's network cannot be deployed, even if a fully-functional physical infrastructure Access (PIA) product were to be made available in Hull.

- 84 Likewise, it is likely that retail providers to the business community in Hull will continue to need predictable and stable access to wholesale leased lines from KCOM in the Hull area. This would be for a combination of resiliency requirements (even if they use MS3 as the primary connection) and because there will be retail customers that would be uncomfortable with the idea of moving their connectivity to another network and therefore have a preference for staying on the KCOM network.

4.4 Regulatory concerns relating to the Hull wholesale leased lines market

85 KCOM's 2024 RFS shows that KCOM's wholesale leased lines revenues grew by 21% from previous year and KCOM consumed 56% of its wholesale leased lines, by value, down from 57% in the previous year. The total supply of wholesale leased lines by KCOM (by volume) dropped by 9% from 2023 to 2024. Revenues grew by 21% compared to an increase in costs of 14% year on year.²⁴ ²⁵

- 86 BT owns and operates a limited amount of leased lines network in Hull as do CityFibre and MS3, but MS3 considers that Ofcom's conclusion in the 2021 WFTMR, that KCOM had a consistently high market share, is likely to remain true for the 2026 TAR analysis. This is because only MS3 has undertaken material network build in Hull since the 2021 WFTMR was concluded and MS3 has focused primarily on residential broadband provision.

- 87 MS3 expects that the availability of a functioning PIA product in Hull will enable it to gradually replicate the KCOM network coverage of the central business districts (CBDs), but it is likely to take some considerable time before MS3 can (in any meaningful way) challenge the dominance of KCOM in the wholesale leased lines market. This is primarily due to the reluctance of many businesses to incur any business risks associated with the changing of telecoms provider.

- 88 MS3 has three primary regulatory concerns in the wholesale leased lines market.

²⁴ It should be noted that the increase in costs is largely attributable the effect of changes in holding gains and therefore not a reflection of investment by KCOM in the wholesale leased lines market.

²⁵ The KCOM RFS does not provide any form of granularity of the types of leased lines sold. It even does not indicate the number of dark fibre connections sold. With that level of aggregation, it is difficult to see the effect of Ofcom's interventions (for example the imposition of the obligation to provide dark fibre connections) and what has given rise to increase in revenues despite the reduction in numbers of leased lines sold.

- That KCOM could refuse to make wholesale leased lines available to MS3 and other providers on fair and reasonable terms. As described above, there is likely to be a long-term necessity for KCOM to provide both primary and resiliency connections and it is important that KCOM cannot abuse its dominant position to either refuse supply or only offer supply on terms that are not fair and reasonable.
- That KCOM significantly reduces its wholesale leased lines pricing to squeeze out emerging infrastructure competition.
- That KCOM could start mirroring its anticompetitive retail broadband behaviour in the retail leased lines market, in the form of adopting anticompetitive retail pricing and erecting barriers to retail market entry and expansion for ISPs using a competing network.

89 MS3 asks that Ofcom consider carefully the possible behaviours that KCOM could adopt during the 5-year period of the TAR to foreclose competition in the retail leased lines market (with consequent impact in infrastructure competition) and/or refusal to supply wholesale leased lines on fair and reasonable terms.

90 Having expressed concerns of potential future behaviour by KCOM in the wholesale and retail leased lines markets motivated by a desire to prevent effective infrastructure competition, it is also important that Ofcom ensures that any intervention in either of those markets should be designed to not undermine any existing incentives to continue roll-out of competitive full-fibre networks in Hull. The interests of retail leased lines users in Hull will be best served by the introduction of robust and sustainable infrastructure competition and Ofcom remedies should be tested against that objective.

4.4.1 Relevant product markets

91 In the 2021 WFTMR, Ofcom found that there was a single product market for the provision of wholesale leased lines access (WLL) services, defined as set out below:

- includes services at all bandwidths;
- includes dark fibre used to supply or self-supply leased line services;
- includes mobile backhaul in the same market as enterprise customers; and

- excludes business-grade connectivity services provided over EFM and broadband.²⁶

92 MS3 believes that the relevant market for wholesale leased lines market remains largely unchanged since the 2021 WFTMR decision. MS3 considers that:

- Leased lines of different bandwidths remain part of the same market as market conditions are very similar and the principle of the chain of substitution is applicable in this market.
- Fibre broadband connections do not form part of the leased lines market, nor do EFM.²⁷ connections

93 However, MS3 considers that Ofcom should reconsider the following points:

- Whether mobile backhaul connections remain part of the overall wholesale leased lines market, and
- Whether dark fibre should be considered a substitute to active wholesale leased lines.

94 The reasons for questioning these two aspects of the wholesale leased lines market definition are set out below.

4.4.2 Mobile backhaul

95 To the best of MS3's knowledge, the mobile backhaul market in Hull is served by three providers, namely KCOM, CityFibre and MS3. But MS3 and CityFibre are only able to serve parts of the area where they have network and KCOM is the fall-back provider for all MNOs with infrastructure in Hull.

96 Mobile backhaul connections are consumed by mobile network operators (MNOs) for integration into their own networks, they are not purchased at the wholesale level for resale at the retail level either as stand-alone connections or part of managed connection solutions to enterprise or public sector customers. The dynamics for those circuits are, clearly, different from wholesale leased lines for use in retail connectivity products, as there is no single end customer being served by the individual wholesale leased line purchased and, as such, it is not subject to the same competitive constraints and dynamics.

²⁶ Hull WFTMR paragraph 4.11.

²⁷ Ethernet Final Mile.

- 97 MS3 considers that it is harder for a market entrant to win individual mobile backhaul lines, as the MNOs typically like to purchase in bulk and use framework agreements. The fact that CityFibre and MS3 have managed to win parts of the Hull mobile backhaul lines is likely testament to the desire by the MNOs to move away from KCOM and the fact that significant numbers of mobile backhaul lines remain with KCOM is testament that KCOM remains the only option for MNOs in significant parts of the Hull area.
- 98 MS3's considers that the mobile backhaul market should be defined separately from the main wholesale leased lines market for two main reasons:
- 4) MNOs attempt to bulk-buy their backhaul capacity and it is an extremely difficult market for new entrants to penetrate, and
 - 5) Many MNOs have a strong preference to consume dark fibre connections, whereas the majority of wholesale leased lines users serving commercial connectivity needs lack the internal resources and skills to readily consume dark fibre
- 99 Finally, although Ofcom has included mobile backhaul in the general wholesale leased lines market in the Hull WFTMR, MS3 notes that the specific remedies mandating Ethernet and dark fibre access only apply to the connection between end-user sites and the KCOM network or between two end-user sites. It is not clear, therefore, how Ofcom envisages that mobile backhaul circuits (whether Ethernet or dark fibre) are mandated within the remedies applied in the WFTMR.

Dark fibre

- 100 MS3 agrees that dark fibre access (DFA) is a material input to active wholesale leased lines products. Whether it is a direct substitute for active wholesale leased lines, however, is a very different question. There can be no dispute that DFA cannot be a full and direct substitute for active leased lines, the need for the wholesale customer to provide its own electronics makes that clear.
- 101 Given the mixed levels of sophistication of ISPs purchasing wholesale leased lines (and therefore the strong likelihood that a significant number would not have the technical capacity and/or competency to use DFA in lieu of active leased lines), it is not clear that the availability of DFA would materially impact on the price pressure of active wholesale leased lines. If that is not the case, then DFA should not be included in the relevant market as a substitute.

102 Because DFA is presently included in the overall WLL market, it is not possible to ascertain from the KCOM RFS the volume and value of DFA circuits provided by KCOM and thus its impact on the overall market. MS3 considers that, if Ofcom decides to continue to mandate DFA in Hull then it should be in a separate mobile backhaul market and not in the broader WLL market.

103 Ofcom should reconsider the mandating of DFA in light of the emergence of infrastructure competition in Hull. In the Hull WFTMR, Ofcom explicitly stated that it was not concerned about any adverse impact of the DFA remedy on the development of infrastructure competition:

“We do not expect dark fibre to materially weaken incentives to invest, because we consider there is not, and is unlikely to be potential for, material and sustainable competition to KCOM at the network level.

*We acknowledge that there are existing, competing networks in the Hull Area, and that our proposals may impact upon them but these are small and not expected to expand their services in the Hull Area”.*²⁸

104 The current market conditions and the reality of the considerable investment by MS3 (and others) in competing full-fibre networks in Hull shows clearly that that Ofcom’s presumption of no infrastructure competition in Hull was erroneous. As the competitive networks expand and MS3 starts focusing more on the leased lines market, MS3 urges Ofcom to reconsider the appropriateness of the DFA remedy.

105 As presented above, MS3 considers that dark fibre is not a sufficient substitute to wholesale leased lines for wholesale leased lines customers serving the enterprise market make a small but significant non-transitory increase in price of active wholesale leased lines unprofitable for KCOM and therefore should not be included in the relevant market. If a separate market is defined to serve mobile backhaul, then it is possible that a DFA remedy could be justified in that market. Due to lack of disaggregation of the RFS, MS3 is not aware of the volumes of DFA circuits already purchased from KCOM, but the drop in circuit volumes and increase in revenues suggests that the DFA remedy has not caused a reduction in active wholesale leased lines circuits.

²⁸ Hull WFTMR V3 paragraphs 3.17 and 3.18

4.4.3 Relevant geographic markets

106 In the Hull WFTMR, Ofcom found there to be a single geographic market for the provision of WLL services.

107 MS3 considers that Hull remains a single geographic market. Although there is, by necessity, locations where MS3 or other competitive network builders are present now and some where they are not, MS3 plans to significantly increase its coverage, if a functioning PIA product is made available. There are therefore no enduring geographic market boundaries within the Hull area in which competitive conditions differ to the extent to justify the introduction of geographic sub-markets.

4.5 Three criteria test

108 In the 2021 Hull WFTMR, Ofcom stated:

“We consider that the three criteria test set out in section 79(2B) of the Act is met in relation to the LL Access market in the Hull Area because:

a) **High and non-transitory barriers to entry** – Barriers to entry and expansion can exist in the LL Access markets where operators do not have networks in a given area or are not close to demand sites. There are significant economies of scale because once the high fixed cost of investment in network build has been sunk, the marginal cost of connecting an individual site is relatively low. Accordingly, given KCOM’s ubiquitous full fibre network in the Hull Area, high and non-transitory barriers to entry are likely to persist in the LL Access market over the course of the review period.

b) **A market which does not tend towards effective competition** – As outlined below, KCOM retains a high share of supply in the Hull Area. The evidence we have suggests that there will be minimal investment in rival networks in the review period. Accordingly, we do not consider the market will therefore tend towards effective competition in the Hull Area.

c) **Insufficiency of competition law** – Competition law, in particular the rules prohibiting the abuse of a dominant position, is an important part of the legal framework that KCOM needs to comply with. Given its position of SMP KCOM has a special responsibility not to allow its actions on the market to distort or impair competition. However, we consider that competition law remedies would be insufficient to address the identified competition concerns on their own in this context.

- First, competition law would focus on tackling the abuse of a dominant position and would not be as effective as ex ante regulation in promoting and protecting competition from rival networks in the LL Access market and in downstream retail markets.*
- Second, regulation must remain effective for the review period, and ex ante regulation better enables us to do this as it can be tailored to the particular circumstances in the markets and services provided.*
- Third, competition law does not provide enough regulatory certainty, which itself can undermine downstream competition where there is upstream SMP – and regulatory certainty is important in encouraging long-term investment in competing networks. In contrast, a benefit of ex ante regulation is that all industry stakeholders are clear in advance on the regulation that will apply.*
- Finally, ex ante regulation can facilitate more timely enforcement due to the greater certainty and specificity provided. Although significant fines can be levied for breaches of competition law, which do have some reputational and commercial implications, cases often take considerable time, by which point the damage to competition may be irreversible.”²⁹*

109 MS3 considers that this analysis remains valid today. And is applicable to both product markets defined above.

110 Despite the emergence of competitive infrastructure build in Hull since 2021, MS3 still considers the three criteria to be met. This is because KCOM remains the only provider with ubiquitous network coverage, and it is unlikely that that situation will be completely reversed within the period of the TAR.

111 Additionally, as explained above, the reluctance by enterprise customers to change connectivity suppliers means that a competitor network (and ISPs using the competitor network) will be facing considerable barriers to market entry and expansion. The types of competition issues arising in these types of market conditions cannot be addressed through an ex-post competition

²⁹ Hull WFTMR Volume 2, Paragraph 4.18.

law intervention, they are the very types of barriers that justify the existence of ex-ante preventative regulatory interventions.

4.6 SMP

112 KCOM retains a very large market share in both the wholesale leased lines markets and is the only network operator offering a ubiquitous network in Hull. MS3 is aware of no factors that would suggest that KCOM does not retain SMP in this market. Indeed, the presentation of an increase in revenues against a reduction in circuit numbers suggests that KCOM is unlikely to be under any competitive price pressures.³⁰

113 To the best of MS3's knowledge, the network footprints of BT and CityFibre have not changed for several years and MS3 is the only provider currently building at scale in the area. MS3 does not at this time present a viable threat to KCOM's SMP position in the wholesale leased lines markets.

5 Physical infrastructure market

114 In the RoUK WFTMR, (and in the preceding Physical Infrastructure Market Review (PIMR) in 2019), Ofcom defined a separate relevant market for physical infrastructure (PI). In the Hull WFTMR, Ofcom did not define a PI market, however.

115 Since the WFTMR, MS3 has deployed its full-fibre network across much of Hull, but Ofcom will be aware of the challenges to that deployment resulting from having to erect new telegraph poles. For that reason and due to the economics of deploying new PI in some parts of Hull (some central urban areas and some rural/suburban), MS3 is now working with KCOM on a trial of a KCOM Physical Infrastructure Access product (known as KPIA), which can be used for deployment of fibre networks to serve both the downstream broadband and leased lines market.

³⁰ MS3 acknowledges that this may be partly due to customers using higher bandwidth circuits, but even in that event, it would appear that KCOM is not pricing its wholesale leased lines products in order to retail market share against incoming competitors.

116 MS3 is grateful for Ofcom's and government's support in motivating KCOM to develop the KPIA product and MS3 is committing considerable resources on getting the product ready for use outside very small trial parameters.

117 Given the size of the Hull market, and also given the likely demand for KPIA, MS3 considers that it would be most appropriate for the KPIA to be included as a remedy in the wholesale broadband and leased lines market, and to not create a separate PI market and mandate the KPIA product as a remedy in that market.

118 The reason for this preference is that MS3 considers that the KPIA remedy needs to be designed to meet the needs in the relevant downstream markets, rather than become a goal in its own right. It is important that the KPIA product is developed to be proportionate both to the likely speed and volume of use and to the size of the market and compliance burden on KCOM in a relatively small market.

119 MS3 will submit separate papers on its analysis and proposals for remedies for the relevant markets set out in this paper.



Annex A KCOM price and margin analysis

Full Fibre 100

Wholesale FibreLine Local Access End User Rental Charges - Data Only - Service Level 2							Margin	
		Retail exc VAT		Wholesale				
Date Range	Operative Date	Offer	Standard	Wholesale	Speed	Standard (ex VAT) - Wholesale	Offer (ex VAT) - Wholesale	
01-Mar-25 to 29-May-25	28-Feb-25	£ 27.49	£ 37.49	£ 25.94	175/50	£ 11.55	£ 1.55	
06-January-2025 to	06-Jan-25	£ -	£ 37.49	£ 17.96	106/106	£ 19.53		
17-July-24 to	17-Jul-24	£ -	£ 37.49	£ 17.96	106/32	£ 19.53		
13-June-2024 To 03-September-2024	13-Jun-24	£ -	£ 37.49	£ 19.44	106/32	£ 18.05		
04-June-2024 To 01-July-2024	04-Jun-24	£ -	£ 37.49	£ 19.44	106/32	£ 18.05		
04-June 2024 To 03-September-2024	04-Jun-24	£ 16.66	£ 37.49	£ 19.44	106/32	£ 18.05	-£ 2.78	
04-April-2024 To 03-June-2024	04-Apr-24	£ -	£ 37.49	£ 19.44	106/32	£ 18.05		
04-April-2024 To 03-June-2024	04-Apr-24	£ -	£ 37.49	£ 19.44	106/32	£ 18.05		
01-March-2024 To 03-April-2024	01-Mar-24	£ 22.49	£ 37.49	£ 19.44	106/32	£ 18.05	£ 3.05	
01-March-2024 To 03-April-2024	01-Mar-24	£ 16.66	£ 37.49	£ 19.44	106/32	£ 18.05	-£ 2.78	
12-December-2023 To 29-February-2024	12-Dec-23	£ 24.99	£ 34.99	£ 19.44	106/32	£ 15.55	£ 5.55	
12-December-2023 To 29-February-2024	12-Dec-23	£ 24.99	£ 34.99	£ 19.44	106/32	£ 15.55	£ 5.55	
14-November-2023 To 11-December-2023	14-Nov-23	£ -	£ 34.99	£ 19.44	106/32	£ 15.55		
14-November-2023 To 11-December-2023	14-Nov-23	£ 16.66	£ 34.99	£ 19.44	106/32	£ 15.55	-£ 2.78	
23-October-2023 To 28-July-2024	23-Oct-23	£ -	£ 34.99	£ 19.44	106/32	£ 15.55		
03-October-2023 To 13-November-2023	03-Oct-23	£ -	£ 34.99	£ 19.44	106/32	£ 15.55		
03-October-2023 To 13-November-2023	03-Oct-23	£ 16.66	£ 34.99	£ 19.44	106/32	£ 15.55	-£ 2.78	
01-September-2023 to	01-Sep-23	£ -	£ 34.99	£ 19.44	106/32	£ 15.55		
09-August-2023 To 02-October-2023	09-Aug-23	£ 24.99	£ 34.99	£ 17.65	106/32	£ 17.34	£ 7.34	

04-August-2023 to	04-Aug-23		£ 35.00		75/20	£ 35.00	
05-June-2023 To 08-August-2023	05-Jun-23	£ -	£ 34.99	£ 17.65	106/32	£ 17.34	
02-May-2023 To 08-August -2023	02-May-23	£ 24.99	£ 34.99	£ 17.65	106/32	£ 17.34	£ 7.34
03-April-2023 To 04-June-2023	03-Apr-23	£ -	£ 34.99	£ 17.65	106/32	£ 17.34	
03-April-2023 To 30-April-2023	03-Apr-23	£ 30.83	£ 34.99	£ 17.65	106/32	£ 17.34	£ 13.18
01-March-2023 To 02-April-2023	01-Mar-23	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
01-March-2023 To 02-April-2023	01-Mar-23	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
20-January-2023 to	20-Jan-23			£ 17.65	106/32		
12-December-2022 To 28-February-2023	12-Dec-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
12-December-2022 To 31-January-2023	12-Dec-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
14-November-2022 To 11-December-2022	14-Nov-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
14-November-2022 To 11-December-2022	14-Nov-22	£ 20.83	£ 33.33	£ 17.65	106/32	£ 15.68	£ 3.18
10-October-2022 To 13-November-2022	10-Oct-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
19-September-2022 to	19-Sep-22	£ -	£ -	£ 17.65	106/32		
01-September-2022 To 02-October-2022	01-Sep-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
01-September-2022 To 13-November-2022	01-Sep-22	£ 20.83	£ 33.33	£ 17.65	106/32	£ 15.68	£ 3.18
01-June-2022 To 26-June-2022	31-Aug-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
01-July-2022 To 31-August-2022	01-Jul-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
04-May-2022-To 30-June-2022	04-May-22	£ 20.83	£ 33.33	£ 17.65	106/32	£ 15.68	£ 3.18
01-May-2022 to	01-May-22	£ -	£ 33.33	£ 17.65	530/106	£ 15.68	
01-April-2022 To 03-May-2022	01-Apr-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
01-March-2022 to 31-August-2023	01-Mar-22	£ -	£ 33.33	£ 17.65	106/32	£ 15.68	
01-March-2022 To 18-April-2022	01-Mar-22	£ 29.16	£ 33.33	£ 17.65	106/32	£ 15.68	£ 11.51
01 Dec 2021 to	01-Dec-21	£ -	£ 35.00	£ 17.65	106/32	£ 17.35	
01 May 2021 to	01-May-21	£ -	£ 35.00	£ 17.49	106/32	£ 17.51	

01 Apr 2021 to	01-Apr-21	£ -	£ 35.00		75/20	£ 35.00	
01 May 2019 to	01-May-19			£ 18.14	75/20		

Full Fibre 300

Wholesale FibreLine Local Access End User Rental Charges - Data Only - Service Level 2								
							Margin	
		Retail exc VAT		Wholesale				
Date Range	Operative Date	Offer	Standard	Wholesale	Speed	Standard (ex VAT) - Wholesale	Offer (ex VAT) - Wholesale	
06-January-2025 to	06-Jan-25	£ -	£ 46.66	£ 21.97	318/318	£ 24.69		
17-July-24 to	17-Jul-24	£ -	£ 46.66	£ 21.97	318/80	£ 24.69		
13-June-2024 To 03-September-2024	13-Jun-24	£ -	£ 46.66	£ 24.91	318/80	£ 21.75		
04-June-2024 To 01-July-2024	04-Jun-24	£ 29.17	£ 46.66	£ 24.91	318/80	£ 21.75	£ 4.26	
04-June 2024 To 03-September-2024	04-Jun-24	£ -	£ 46.66	£ 24.91	318/80	£ 21.75		
04-April-2024 To 03-June-2024	04-Apr-24	£ 29.16	£ 46.66	£ 24.91	318/80	£ 21.75	£ 4.25	
04-April-2024 To 03-June-2024	04-Apr-24	£ 24.99	£ 46.66	£ 24.91	318/80	£ 21.75	£ 0.08	
01-March-2024 To 03-April-2024	01-Mar-24	£ 24.99	£ 44.16	£ 24.91	318/80	£ 19.25	£ 0.08	
01-March-2024 To 03-April-2024	01-Mar-24	£ 20.83	£ 44.16	£ 24.91	318/80	£ 19.25	-£ 4.09	
12-December-2023 To 29-February-2024	12-Dec-23	£ 29.16	£ 41.66	£ 24.91	318/80	£ 16.75	£ 4.25	
12-December-2023 To 29-February-2024	12-Dec-23	£ 20.83	£ 41.66	£ 24.91	318/80	£ 16.75	-£ 4.09	
14-November-2023 To 11-December-2023	14-Nov-23	£ -	£ 41.66	£ 24.91	318/80	£ 16.75		
14-November-2023 To 11-December-2023	14-Nov-23	£ -	£ 41.66	£ 24.91	318/80	£ 16.75		
23-October-2023 To 28-July-2024	23-Oct-23	£ -	£ 41.66	£ 24.91	318/80	£ 16.75		
03-October-2023 To 13-November-2023	03-Oct-23	£ -	£ 41.66	£ 24.91	318/80	£ 16.75		
03-October-2023 To 13-November-2023	03-Oct-23	£ 29.16	£ 41.66	£ 24.91	318/80	£ 16.75	£ 4.25	
01-September-2023 to	01-Sep-23	£ -	£ -	£ 24.91	318/80			

09-August-2023 To 02-October-2023	09-Aug-23	£ -	£ -	£ 24.73	318/80		
04-August-2023 to	04-Aug-23		£ 38.33		200/35	£ 38.33	
05-June-2023 To 08-August-2023	05-Jun-23	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
02-May-2023 To 08-August -2023	02-May-23	£ 33.33	£ -	£ 24.73	318/80		£ 8.60
03-April-2023 To 04-June-2023	03-Apr-23	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
03-April-2023 To 30-April-2023	03-Apr-23	£ 37.49	£ -	£ 24.73	318/80		£ 12.76
01-March-2023 To 02-April-2023	01-Mar-23	£ 37.49	£ -	£ 24.73	318/80		£ 12.76
01-March-2023 To 02-April-2023	01-Mar-23	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
20-January-2023 to	20-Jan-23			£ 24.73	318/80		
12-December-2022 To 28-February-2023	12-Dec-22	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
12-December-2022 To 31-January-2023	12-Dec-22	£ -	£ -	£ 24.73	318/80		
14-November-2022 To 11-December-2022	14-Nov-22	£ -	£ -	£ 24.73	318/80		
14-November-2022 To 11-December-2022	14-Nov-22	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
10-October-2022 To 13-November-2022	10-Oct-22	£ -	£ -	£ 24.73	318/80		
19-September-2022 to	19-Sep-22	£ -	£ -	£ 24.73	318/80		
01-September-2022 To 02-October-2022	01-Sep-22	£ 37.49	£ -	£ 24.73	318/80		£ 12.76
01-September-2022 To 13-November-2022	01-Sep-22	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
01-June-2022 To 26-June-2022	31-Aug-22	£ 33.33	£ -	£ 24.73	318/80		£ 8.60
01-July-2022 To 31-August-2022	01-Jul-22	£ -	£ -	£ 24.73	318/80		
04-May-2022-To 30-June-2022	04-May-22	£ 29.16	£ -	£ 24.73	318/80		£ 4.43
01-May-2022 to	01-May-22	£ -	£ 33.33	£ 24.73	318/80	£ 8.60	
01-April-2022 To 03-May-2022	01-Apr-22	£ 24.99	£ -	£ 24.73	318/80		£ 0.26
01-March-2022 to 31-August-2023	01-Mar-22	£ -	£ -	£ 24.73	318/80		
01-March-2022 To 18-April-2022	01-Mar-22	£ -	£ -	£ 24.73	318/80		

01 Dec 2021 to	01-Dec-21	£ -	£ -	£ 24.73	318/80		
01 May 2021 to	01-May-21	£ -	£ -	£ 24.50	318/80		
01 Apr 2021 to	01-Apr-21	£ -	£ 38.33		200/35	£ 38.33	
01 May 2019 to	01-May-19	£ -	£ -	£ 32.19	200/35		

Full Fibre 500

Wholesale FibreLine Local Access End User Rental Charges - Data Only - Service Level 2		Retail exc VAT		Wholesale	Margin	
Date Range	Operative Date	Offer	Standard	Wholesale	Standard (ex VAT) - Wholesale	Offer (ex VAT) - Wholesale
01-Mar-25 to 29-May-25	28-Feb-25	£ 29.16	£ 52.49	£ 25.94	£ 26.55	£ 3.22
06-January-2025 to	06-Jan-25	£ -	£ 52.49		£ 52.49	
06-January-2025 to	06-Jan-25			£ 23.59		
17-July-24 to	17-Jul-24	£ -	£ 49.99	£ 23.59	£ 26.40	
13-June-2024 To 03-September-2024	13-Jun-24	£ 24.99	£ 49.99	£ 27.62	£ 22.37	-£ 2.63
04-June-2024 To 01-July-2024	04-Jun-24	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
04-June 2024 To 03-September-2024	04-Jun-24	£ 24.99	£ 49.99	£ 27.62	£ 22.37	-£ 2.63
04-April-2024 To 03-June-2024	04-Apr-24	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
04-April-2024 To 03-June-2024	04-Apr-24	£ 29.16	£ 49.99	£ 27.62	£ 22.37	£ 1.54
01-March-2024 To 03-April-2024	01-Mar-24	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
01-March-2024 To 03-April-2024	01-Mar-24	£ 24.99	£ 49.99	£ 27.62	£ 22.37	-£ 2.63
12-December-2023 To 29-February-2024	12-Dec-23	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
12-December-2023 To 29-February-2024	12-Dec-23	£ 24.99	£ 49.99	£ 27.62	£ 22.37	-£ 2.63
14-November-2023 To 11-December-2023	14-Nov-23	£ 24.99	£ 49.99	£ 27.62	£ 22.37	-£ 2.63
14-November-2023 To 11-December-2023	14-Nov-23	£ 24.99	£ 49.99	£ 27.62	£ 22.37	-£ 2.63

23-October-2023 To 28-July-2024	23-Oct-23	£ 24.99	£ 49.99	£ 27.62	£ 22.37	
03-October-2023 To 13-November-2023	03-Oct-23	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
03-October-2023 To 13-November-2023	03-Oct-23	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
01-September-2023 to	01-Sep-23	£ -	£ 49.99	£ 27.62	£ 22.37	
09-August-2023 To 02-October-2023	09-Aug-23	£ 37.49	£ 49.99	£ 27.62	£ 22.37	£ 9.87
04-August-2023 to	04-Aug-23		£ 41.67	£ 27.62	£ 14.05	
05-June-2023 To 08-August-2023	05-Jun-23	£ 37.49	£ 49.99	£ 27.62	£ 22.37	£ 9.87
02-May-2023 To 08-August -2023	02-May-23	£ 41.66	£ 49.99	£ 27.62	£ 22.37	£ 14.04
03-April-2023 To 04-June-2023	03-Apr-23	£ 37.49	£ 49.99	£ 27.62	£ 22.37	£ 9.87
03-April-2023 To 30-April-2023	03-Apr-23	£ 41.66	£ 49.99	£ 27.62	£ 22.37	£ 14.04
01-March-2023 To 02-April-2023	01-Mar-23	£ -	£ -	£ 27.62		
01-March-2023 To 02-April-2023	01-Mar-23	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
20-January-2023 to	20-Jan-23			£ 27.62		
12-December-2022 To 28-February-2023	12-Dec-22	£ -	£ -	£ 27.62		
12-December-2022 To 31-January-2023	12-Dec-22	£ 41.66	£ 49.99	£ 27.62	£ 22.37	£ 14.04
14-November-2022 To 11-December-2022	14-Nov-22	£ -	£ 49.99	£ 27.62	£ 22.37	
14-November-2022 To 11-December-2022	14-Nov-22	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
10-October-2022 To 13-November-2022	10-Oct-22	£ -	£ -	£ 27.62		
19-September-2022 to	19-Sep-22	£ -	£ -	£ 27.62		
01-September-2022 To 02-October-2022	01-Sep-22	£ 41.66	£ 49.99	£ 27.62	£ 22.37	£ 14.04
01-September-2022 To 13-November-2022	01-Sep-22	£ 41.66	£ 49.99	£ 27.62	£ 22.37	£ 14.04
01-June-2022 To 26-June-2022	31-Aug-22	£ -	£ -	£ 27.62		
01-July-2022 To 31-August-2022	01-Jul-22	£ 32.08	£ 49.99	£ 27.62	£ 22.37	£ 4.46
04-May-2022-To 30-June-2022	04-May-22	£ 33.33	£ 49.99	£ 27.62	£ 22.37	£ 5.71
01-May-2022 to	01-May-22			£ 27.62		

01-April-2022 To 03-May-2022	01-Apr-22	£ 33.33	£ 45.83	£ 27.62	£ 18.21	£ 5.71
01-March-2022 to 31-August-2023	01-Mar-22	£ -	£ -	£ 27.62		
01-March-2022 To 18-April-2022	01-Mar-22	£ -	£ -	£ 27.62		
01 Dec 2021 to	01-Dec-21	£ -	£ -	£ 27.62		
01 May 2021 to	01-May-21	£ -	£ -	£ 27.37		
01 Apr 2021 to	01-Apr-21	£ -	£ 41.67	£ 38.19	£ 3.48	
01 May 2019 to	01-May-19			£ 38.19		