General

Telecoms Access Review

BT Group submission to Ofcom – Non-confidential version

July 2024

BT Group

Executive summary

Since Ofcom's last market review in 2021, fixed infrastructure investment has delivered outstanding benefits for UK citizens, consumers, and businesses. Ofcom should ensure this trend continues. BT's investment in Openreach has led to over 15m premises getting access to full fibre, with this number expected to reach 25m by the end of 2026. Our ambition is to go further, building to 30m by 2030 under the right conditions. Ofcom's current projections suggest that 27 million premises (91%) could have access to full fibre by May 2026 (with gigabit capable at 94%). The full fibre footprint of Altnets (defined in this document as competitors to Openreach not including VMO2/nexfibre) is reported to be equivalent to that of Openreach, while VMO2/nexfibre plan to reach 23 million premises by 2028 (nearly 80% of the UK). This is a fantastic achievement for a national infrastructure project, supporting the UK Government's ambition of nationwide gigabit capable broadband by 2030.

Increased network choice for consumers has driven competitive offers, in turn encouraging take-up. The industry average for take-up of full fibre is 28%. Both average download speed and average data usage more than doubled between 2019 and 2023, and real terms prices of ultrafast services have fallen by 30% over the last three years.

Ofcom should retain the same long-term competition and investment framework set out in 2021 that has so successfully delivered for consumers and businesses

BT's financial commitment to deliver full fibre is significant, at a time when BT is also extending 5G networks, investing in customer experience, removing Huawei equipment from our network, supporting our pension fund, and returning value to our investors. We made this commitment because fibre investment is strategically the right thing to do, and because Ofcom's WFTMR '21 gave us confidence in a pro-investment regulatory framework. The framework was clear, offering pricing stability, longer-term certainty about regulation over at least 10 years, national pricing rules, and a commitment to allow investors the opportunity to make a fair return (the 'fair bet') over the full investment lifecycle.

With those clear rules set and commitment from Ofcom, BT Group and others have stepped in and invested for the good of the UK. The opportunity for the wider UK economy is significant; nationwide full fibre deployment could unlock over £70bn of productivity gains, bringing back over 500,000 workers into the economy by 2030 – including 150,000 older workers – through enabling flexible working.

Further investment is required: there are more premises to pass and more premises to connect. Investors still want and need confidence in a consistent and predictable regulatory framework. The current framework for investment is working, and Ofcom must recommit to it across the key elements:

- In its 2021 Statement, Ofcom gave clarity on future fibre regulation, recognising the investments being made by all network operators in full fibre networks have payback periods counted in decades not years.
- Ofcom signalled it expected the same UK-wide approach to pricing to endure for ten years or more if investment continued and consumer outcomes remained good, as well as continued support for the retirement of legacy networks.
- If there was a need to move to cost-based regulation in the future in places where market power remained because competition did not emerge and consumer outcomes were poor, Ofcom committed to honour the fair bet principle. As such, Ofcom said "BT would have the opportunity to earn a return above its cost of capital over the whole fibre investment cycle."
- Ofcom also committed to supporting BT's retirement of legacy infrastructure and to deregulate where possible, regulating only where necessary. Now is the time for Ofcom to shift its focus to these issues.

Following the huge success of fibre investment, and plans to continue to 2030 and beyond, Ofcom's 2021 support of copper to fibre migration and exchange closure needs to come centre stage…

BT Group's investment in fibre, together with the planned closure of the legacy voice network in 2027, unlocks further benefits for consumers and citizens through the rationalisation of legacy services and network architectures. Closing down old networks leads to lower costs for industry, more resilient networks and wider societal benefits including greater energy efficiency. Retiring legacy networks will also improve the customer experience across BT Group including its Openreach subsidiary and the sub-brands EE, Plusnet, and BT through simpler products and portfolios, and more streamlined operations.

Legacy voice closure, hybrid fibre availability, continued full fibre build and Openreach engagement with its CPs will enable much of this migration and closure to be achieved through commercial relationships. But regulation has a strong bearing on achieving the UK's digital future. Ofcom's original copper retirement framework unnecessarily delays consumer benefits from closing copper and exchange buildings, with timescales far longer than those in other European countries.

We propose Ofcom steps back, revisits the core principles guiding its thinking, and refreshes its view on copper retirement. Such principles will include protecting customers and competition but must not set prescriptively high thresholds for closure. We ask Ofcom embrace Openreach's specific proposals to give greater regulatory certainty for the exit of the first 108 exchanges by 2030, [REDACTED]. Regulatory certainty is crucial now as Openreach, BT Group and wider communications providers all need to act during the TAR's 2026-31 timeframe to realise these efficiencies.

…and Ofcom needs to deregulate areas that are effectively competitive on a forward-looking basis

While not identifying any competitive areas for residential services in 2021, Ofcom was clear it expected to identify areas as competitive where there are at least three networks present and competition was established. We believe there is now sufficient evidence on a forward-looking basis to support such findings, and for Ofcom to demonstrate it is serious about deregulating where possible. Competitive network build, including overbuild, has been delivered ahead of expectations in large parts of the UK in residential and in leased lines markets, with an estimated [REDACTED] of premises currently with access to at least two ultrafast networks and [REDACTED] with access to at least three. By the beginning of the next review period, and on a conservative basis, we expect this to reach at least [REDACTED]and [REDACTED] respectively.

This time around Ofcom must conduct a truly forward-looking assessment of competition. There is a far greater number of network builders and a larger variety of business models than Ofcom anticipated in 2021, including in those places it originally considered to be 'rural Area 3'. Openreach faces genuine scale competition: VMO2/nexfibre, will cover 80% of the UK by 2028 and have active plans for wholesaling, and the coverage of Altnets is reported to be equivalent to Openreach's full fibre footprint. This is not the context for tighter regulatory rules. As we have seen in Europe, following commercial and competitive investment in fibre, the drive should be towards deregulation, or at the least lighter touch remedies, that really reflect the competitive dynamics.

In an increasingly competitive fixed market, restricting Openreach's ability to respond to competition on the merits, and limiting the commercial agility of BT's retail arms (and Openreach's external CPs) will harm customers and the UK.

Contents

1 Introduction

1.1 BT Group welcomes Ofcom's launch of the 2026 Telecommunications Access Review (TAR). As part of the Commitments, Openreach has greater strategic and operational independence, including leading on fixed access network regulation on behalf of BT Group.[1] Openreach has made its own submission on specific points of regulation within the TAR framework. This submission covers those areas where BT Group has three distinct perspectives to add:

- as the sole Openreach shareholder and investor in Openreach's fixed access networks, BT Group sets out how regulation must continue to support investment, the opportunity to compete fairly and make reasonable returns. This is covered in Section 2;
- as the party responsible for BT Group's wider networks and assets, including exchange buildings and networks other than fixed access, BT Group considers it important that in the next phase of our full fibre investment, regulation more proactively supports copper retirement and exchange closure. This is covered in Section 3; and
- as a player in the wider fixed telecoms market, including as an investor in Openreach's fibre investment as well as a provider of downstream services, BT Group has a perspective on competition and the steps Ofcom takes to deregulate. This is covered in Section 4.

1.2 We set out our views on these issues in the context of an increasingly competitive and effective market for consumers, in large part because of the current regulatory framework.

The market context: consumer outcomes have far exceeded expectations

1.3 From around 2.6m homes in 2020,[2] BT's investment in Openreach now passes over 15m premises, with 1m premises added in Q1 2024/25.[3] The FTTH Council's most recent figures show the UK now has the fastest fibre build rate in Europe in absolute terms (and the third fastest in percentage terms).[4]

1.4 This is consistent with positive build outcomes across all providers: Ofcom shows full fibre, and gigabit-capable coverage were 57% and 78% respectively by September 2023[5] – significantly more than where they were in 2020 (18% and 27%).[6]

1.5 This increased network choice for consumers has ensured competitive offers and prices, encouraging take-up (see figure 1 below). The industry average for take-up of full fibre is 28%.[7] Both average actual download speed[8] and average data usage[9] more than doubled between 2019 and 2023. Real terms prices of ultrafast services have fallen by 30% over the last three years.

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[1] BT Group plc. Our commitments - Our governance & policy - Policy & regulation | BT Plc.
[2] Openreach, 2020. Our Annual review and reports | Openreach. Page 10.
[3] BT Group plc. Trading update for the three months to 30 June 2024 (bt.com)
[4] ISPreview, 28 March 2024. FTTH Council - Full Fibre Broadband to Cover 29.6 Million UK Homes by 2029 - ISPreview UK .
[5] Ofcom, 2023. Connected Nations 2023 - UK report (ofcom.org.uk). Page 3.
[6] Ofcom, 2023. Connected Nations 2023 - UK report (ofcom.org.uk). Page 2.
[7] Ibid.
[8] Ofcom, 2023. UK home broadband performance, measurement period March 2023: Interactive data - Ofcom. Page 3.
[9] Ofcom, 2023. Communications Market Report 2023 (ofcom.org.uk). Page 1.

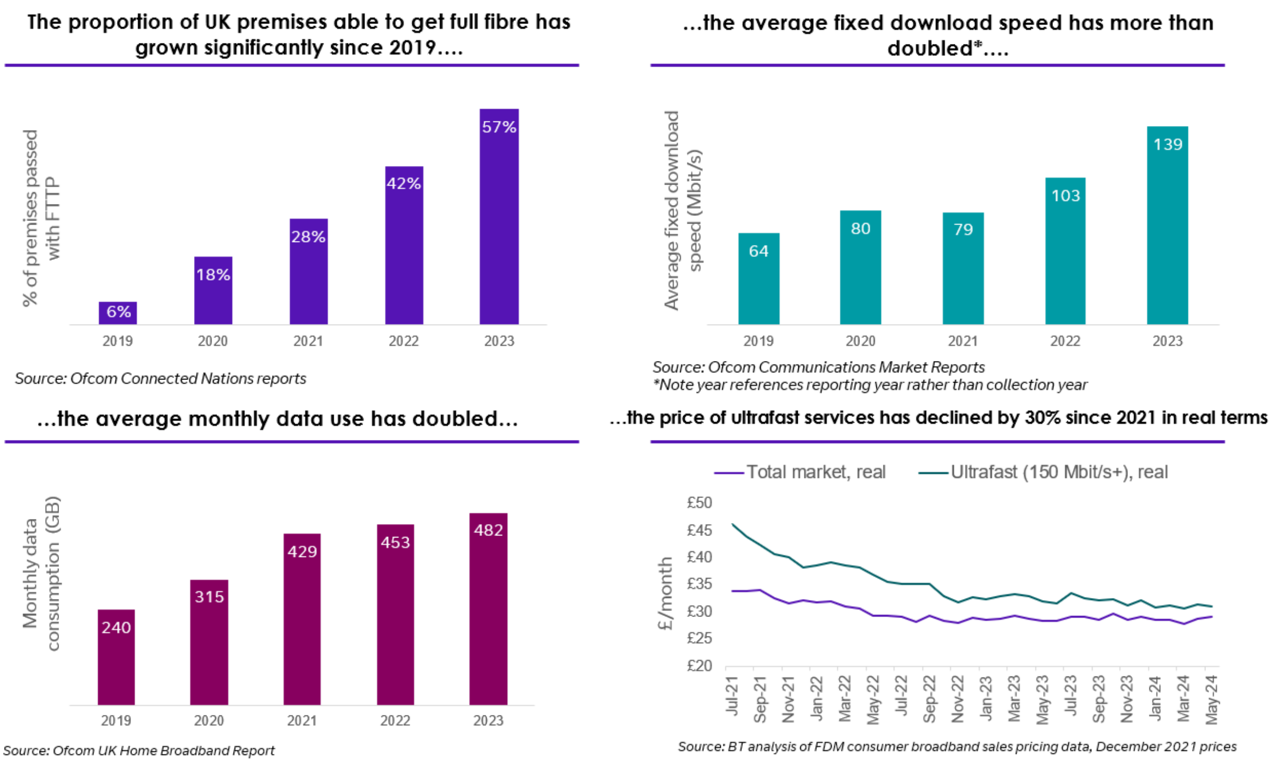

Figure 1: Fixed market trends

1.6 This step change in connectivity is good news for the wider UK economy. Analysis from the Centre for Economic and Business Research (CEBR)[10] suggests nationwide full fibre could unlock over £70bn in productivity gains, and that Openreach's full fibre deployment could bring over 500,000 people back into the workforce by 2030 – including over 150,000 older workers – through enabling flexible working. Previous work by the CEBR also found that 500,000 people could move into more rural areas with improved connectivity – helping to support growth and revitalise rural communities across the UK.

Investment will continue so long as regulation supports it

1.7 Ofcom's current projections suggest that, by May 2026, 27 million properties (91%) could have access to full fibre (with gigabit-capable at 94%).[11] FTTH Council Europe estimated back in March this year that the UK will hit 29.6 million homes passed by 2029.[12] This will be a fantastic achievement for a national infrastructure project, and only just short of the UK Government's ambition of national gigabit capable by 2030.[13]

1.8 Openreach has set out an ambition to reach 30m premises by 2030 if the regulatory and investment conditions are right[14] – while other providers are also building at scale. The full fibre footprint of Altnets (not including VMO2/nexfibre) is reported to be equivalent to that of Openreach,[15] while

[10] CEBR for Openreach, 2023. Full fibre impact | Openreach.
[11] Ofcom, October 2023. Connected Nations Planned Network Deployments (ofcom.org.uk). Page 4.
[12] ISPreview, 20 March 2024. FTTH Council - Full Fibre Broadband to Cover 29.6 Million UK Homes by 2029 - ISPreview UK.
[13] UK Government, 2 February 2022. Levelling Up the United Kingdom White Paper (publishing.service.gov.uk).
[14] Openreach, 7 December 2023. Openreach business briefing. Page 13.
[15] INCA, 2024. The State of the Altnets in 2024 | INCA.

VMO2/nexfibre plan to reach 23 million premises by 2028 (nearly 80% of the UK)[16] – meaning a second national-scale wholesale infrastructure provider will become available for the first time during the next market review period.

1.9 While most premises will be funded entirely by private investors, governments continue to contribute funding to new build for customers in the hardest to reach premises. Openreach has been identified as a preferred bidder for Government's Type C Lot contracts, alongside contracts with other fibre builders.

1.10 However, challenges remain even after the fibre-to-the-premises (FTTP) network has been built.[17] The cost of provisioning for example can be nearly as high as build costs and is incurred each time a new customer connects. These costs are borne in large part today, but recovered much later. Significant complexities and uncertainties also remain in terms of migrating customers off old and onto new networks, in particular when only a small proportion of customers remain.

1.11 Regulation plays a key role in these outcomes, by giving certainty and clarity to investors, by promoting investment by a range of actors, and by allowing all companies a fair opportunity, but not a guarantee, to make returns on investment commensurate with the risk these investments face. It remains vital that Ofcom's 2026-2031 TAR continues to meet these objectives.

[16] nexfibre, 29 June 2023. nexfibre's new full fibre network goes live with launch of Virgin Media O2's services - nexfibre.

[17] The terms full fibre and FTTP are used interchangeably in this document.

2 A stable regulatory framework remains crucial for investors to 2031 and beyond

2.1 Ofcom's Wholesale Fixed Telecoms Market Review 2021 (WFTMR '21) gave important clarity and certainty on future regulation, with implications for the opportunity to make future returns. Ofcom's current pro-investment framework remains correct and must remain consistent to support continued investment up to and beyond 2031.

Regulation cannot remove investment risks faced by BT or others, but it must not contribute to them

2.2 BT has made a £15bn commitment to fibre investment. This is in the context of constrained capital needing to support investing for growth in value (FTTP, 5G, core networks), supporting its pension funds, maintaining a strong balance sheet (target BBB+, currently BBB), and paying progressive dividends. Total investment demands have exceeded the free cashflow generated from trading which has led to net debt rising by almost £1bn a year for the past couple of years.

2.3 While digital infrastructure is clearly critical for the UK (see paragraph 1.6 above), there are still those who have concerns or doubts about this investment including the reliability of the regulatory framework underpinning it. This is only natural as investors are yet to see a return. The 2021 WFTMR provided a clear pro-investment framework – pricing stability and longer-term certainty about the regulatory approach were a key part of that. This included a move to 5-year review periods from 3, a signal of at least 10-year consistency in national pricing rules, and a commitment to the fair bet over the full investment lifecycle for all fibre investors. BT Group and others have been incentivised by that framework to make risky investments in the expectation that we have the opportunity (but no guarantee) to generate a fair return for our investors.

2.4 However, a clear regulatory framework does not remove investment risks. Ofcom does not, and cannot, guarantee a return to any investors. What it can do and has done is guarantee regulation will not take away the fair opportunity to make a return on investment for investors (BT or investors in Openreach competitors alike). [REDACTED]

[Redacted]

Figure 2: [Redacted]

2.5 The orange boxes in the figure above call out [REDACTED]

2.6 [REDACTED]

2.7 Regulation plays a huge part of investor trust. [REDACTED] In February 2021, New Street Research wrote about BT in their update on its Q42020 results "… [t]he real direction of travel will be set by the WFTMR – the Wholesale Fixed Telecoms Market Review – which should set the direction of regulation for the next 5 years, and likely the next 10-15 years."[18] Redburn expressed concerns about BT's ability to cover its dividend but qualified its concern by reference to the 40-year duration of its investment in FTTP.[19] The long-term nature of regulation remains of utmost importance to BT shareholders and investors in the sector more generally.

Ofcom's WFTMR '21 gave important clarity and certainty on future regulation, with implications for the opportunity to make future returns

2.8 The timeframe for returns is why our investors placed so much weight on the certainty provided by the WFTMR '21. As a fibre investor, there were some key elements to the WFTMR '21 that gave BT Group (and our shareholders) the certainty required to commit to build fibre given associated long payback periods.[20] Below, we set out the most important elements that underpinned BT Group's confidence to invest.

2.9 Ofcom's 2021 approach to supporting investment in gigabit-capable networks was focused on encouraging competition between different networks where viable, to provide high quality services, choice, and affordable broadband for consumers throughout the UK. To enable the significant investment required to achieve this, Ofcom gave regulatory certainty and allowed companies to make a fair return whilst ensuring consumers continue to have access to affordable broadband as new networks are rolled out.

2.10 Ofcom's regulation was expected to complement public funding programmes to extend into the hardest-to-reach areas of the UK, reaching beyond the 80% of the UK that was expected to be achieved through commercial deployments at the time.

2.11 There are four key elements to the WFTMR '21 Ofcom must preserve and recommit to:

- a long-term regulatory framework;
- clear principles for when further regulation might be required;
- a nationally consistent approach; and
- any further price regulation in future honours the fair bet.

2.12 **A long-term regulatory framework:** Ofcom put in place a holistic framework, applying the same set of regulatory measures, nationally and which were expected to endure for at least 10 years:

- strict charge controls on Openreach's duct and poles,

[18] New Street Research - BT (Buy): *Openreach - "the hidden jewel"*, February 4, 2021, by James Ratzer.
[19] Redburn - BT Group, *How the Walk Back Up to FY23 Works*, 9 February 2021, by Nick Delfas.
[20] WFTMR 2021, Volume 1, Chapter 1. Statement: Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26 - Ofcom.

a move away from cost-based 'charge control' regulation in legacy services (copper, fibre-to-the-cabinet (FTTC), and business connectivity markets), and

a supportive approach to copper to fibre migration (see section 3 below).

2.13 This was intended to enable full fibre investment by (i) unleashing a competitive race to investment by Altnets, VMO2/nexfibre, and Openreach and by (ii) incentivising migration from the old to the new full fibre networks. Instead of a cost-based charge control, superfast broadband (the so-called anchor service) was capped and indexed each year by CPI to support incentives for migration to full fibre, and so were active services in business markets (Openreach Ethernet products).

2.14 **Clear principles for when further regulation might be required**: Ofcom was very clear on the circumstances it would need to see to consider price regulation in future:

a. No expectation to introduce cost-based price controls on active services until at least 2031. Ofcom's "starting point" in its 2026-2031 review would be that the "same wholesale access prices would apply in each of Area 2 and Area 3"[21] given expected ongoing investment, commercial and state funded, in both Area 2 and Area 3 throughout the period to 2031.

b. Beyond 2031, if competition and investment were still in the process of emerging, Ofcom said it expected to continue to regulate in a way that supports the continued development of competition and investment.[22]

c. Even if investment and competition had not emerged and was not expected to emerge later, intervention would only be considered where there was a clear need "based on consumer outcomes" (noting consumers in non-competitive areas might still benefit if Openreach chose to adopt the same prices as in competitive areas).[23]

d. Finally, if there was a need to move to cost-based regulation in the future, Ofcom committed to honour the fair bet principle.[24]

2.15 **A nationally consistent approach:** Ofcom noted that effective competition was unlikely to emerge in all parts of the UK, and that regulation may only be needed in specific "parts of the UK" i.e. only where Openreach would, at some point in the future, be found to have significant market power (SMP).[25] While in 2021 Ofcom believed that in what it termed Area 3 at the time "the likelihood of competitive network entry at scale was low,"[26] it recognised that in some areas there may be some commercial build by Altnets. As a result, it hedged its position by setting nationally consistent remedies, ensuring Openreach committed to build to 3.2m premises but also extended its prohibition on geographic discounts and notification requirement for 'loyalty inducing discounts' to Area 3 to foster investment by Openreach competitors.[27] In fact, and as BT, Openreach and others pointed out to Ofcom at the time, competition went much further than the area Ofcom identified as potentially competitive in 2021, not least as a result of Ofcom applying a nationally consistent set of remedies.

2.16 **Ofcom confirmed that where it may need to regulate in future it would do so in a way that honours the fair bet** to take account of investment risk. This, Ofcom indicated, would mean "allow[ing] BT to keep the upside (i.e. returns in excess of its cost of capital it has earned up to that point), as well as

[21] WFTMR 2021, Volume 1, page 3.
[22] WFTMR 2021, Volume 1, page 3.
[23] WFTMR 2021, Volume 4, paragraph 1.113.
[24] WFTMR 2021, Volume 1, page 3.
[25] WFTMR 2021, Volume 4, paragraph 1.114.
[26] WFTMR 2021, Volume 1, paragraph 2.34.
[27] WFTMR 2021, Volume 3, paragraph 1.29.

ensuring it can earn its cost of capital going forwards. [...] BT would have the opportunity to earn a return above its cost of capital over the whole fibre investment cycle". [28] Specifically, Ofcom guided that:

a. it will check if BT would have undertaken the investment based on regulation being proposed, i.e. so investors can earn an upside commensurate to the downside risk they took at the time of investment;[29]

b. in doing so, Ofcom will consider the risks investors took at project outset;[30]

c. they allowed 3-4% uplift for the FTTC fair bet and they would honour the fair bet based on similar principles;[31]

d. FTTP WACC is 'north of' 7.8%,[32] has higher operating leverage than FTTC as well as a higher income elasticity of demand;[33] and

e. prices would be set based on economic depreciation, assuming a constant revenue per line that would allow Openreach to recover costs incurred over the investment lifetime.[34]

Ofcom's current pro-investment framework remains correct, and must remain to support continued investment up to and beyond 2031

2.17 Market developments support the continuation of this framework. BT internal analysis, based on publicly available data suggests competition from alternative networks is now much more widespread than in 2021, and far greater than Ofcom expected at the time. Ofcom's strategy is working well:

- Altnets' footprint is reported to be nearly equivalent to that of Openreach.
- VMO2/nexfibre's plan to reach 23 million premises (around 80% of the UK) by 2028 – meaning a second national-scale wholesale infrastructure provider will become available for the first time during the next market review period.
- Ofcom's rural Area 3 has seen much more investment than it had anticipated in 2021, which was supported by Ofcom adopting national remedies despite this. At the time, Ofcom thought that a third of the UK would see scale investment only by Openreach. [REDACTED] This is consistent with BT's balanced build decision in 2021, whereby our investment in Openreach full fibre in 2021 amounted to nearly double the 3.2m build commitment Openreach made to Ofcom in June 2020 for Area 3. [REDACTED]
- A wider range of Altnet business models than Ofcom foresaw in 2021 have emerged, which means competitive pressure is no longer exercised only by scale players but also by vertically integrated niche players specialising in e.g. multi-dwelling units or rural locations (see also section 4 below).
- Expected consolidation is likely to strengthen, not weaken competitive pressure as assets in the ground will remain available to customers irrespective of who owns them.

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[28] Ofcom letter to BT, 20 October 2021. Dame Melanie Dawes to Philip Jansen response (ofcom.org.uk).
[29] WFTMR 2021, Volume 4, paragraph 1.117.
[30] Ibid.
[31] WFTMR 2021, WFTMR statement analyst briefing (transcript) (ofcom.org.uk).
[32] Ibid.
[33] WFTMR 2021, Annex 21, paragraph 41 and 42.
[34] WFTMR 2021, Volume 4, paragraph 1.119 and 1.120.

2.18 Now is not the time to change the framework given investment will continue:

- BT has the ambition to invest in Openreach build to 30m homes by 2030 under the right conditions. BT's ambition rests on the assumption that Ofcom will not change its overall regulatory approach, including how it treats BT's sunk investments. BT's ambition to continue to build to up to 30m homes was first made public at BT's Q1 2021 Results presentation.[35] Clive Selley confirmed this ambition in December 2023 in Openreach's Investor Briefing.[36]
- Gigabit programme investment will require continued commercial funding, as well as continued public funding support. As of April 2024, over £1.3bn has been awarded to a range of providers to deliver Type A and Type B procurements, and Openreach has been selected as a preferred bidder for Government's Type C procurements. These contracts currently cover almost all of England and parts of Wales, and the number of benefitting premises should rise significantly over the rest of the decade as a greater number of contracts move into delivery. The previous Government had set an ambition to reach nationwide gigabit coverage (over 99%) by 2030, which was echoed in the new Government's manifesto.
- Continued growth in adoption requires investment in new connections including into less engaged cohorts of consumers and businesses across the country.
- To enable this further future investment, we urge Ofcom to continue its holistic regulatory approach as set in its 2021 WFTMR. Now is not the time to make major changes. Instead, we need Ofcom to publicly recommit to what it set out in 2021.

2.19 [REDACTED]

[35] Telco Titans, 3 September 2023. BTwatch Report #327 – August 2021 | Digital Reports | TelcoTitans.com.
[36] Openreach Investor Briefing, 7 December 2023. For Investors | Openreach. Slide 13.

3 Ofcom needs to update the specifics of its legacy retirement framework

3.1 Public switched telephone network (PSTN) closure, FTTC availability, continued FTTP build and evolutions in the Openreach Ethernet portfolio (e.g. EAD2) means the commercial enablers to support widespread exchange-based copper withdrawal and building closures will be in place during the TAR 2026-31 period. These closures will bring real benefits for UK consumers and businesses, but they will require specific actions to be taken by BT Group, Openreach and Openreach's customers in this review period to realise them.

3.2 Openreach has already consulted on withdrawing from the first 108 exchanges, allowing Openreach and BT Group to act for their closure and Openreach is already working with its customers to support this change.

3.3 A clear and effective regulatory framework to support copper retirement, legacy product evolutions and buildings closures is vital. Ofcom needs to update its previous thinking to take account of most recent developments, looking to international examples of more rapid yet effective action.

3.4 Ofcom's principles for copper retirement should include, for example:

- rules and migrations policy focussed on protecting existing competition and protecting customers, not confusing other public policy interventions on universal availability
- Retirement policies need to be well articulated, communicated, and managed, but also timely.
- End customers should receive an equivalent or better service after migration – not the current implicit requirement that only a better service will do
- Vulnerable customers and critical national infrastructure should receive specific protections, but this should not bleed across into wider rules on legacy transition and closures.
- Use of commercial incentives and approaches, where consistent with competition policy, to drive migrations.

3.5 We ask Ofcom to embrace Openreach's more specific proposals. Regulatory certainty is crucial now as Openreach, BT Group and other communications providers all need to act during the TAR's 2026-31 timeframe to realise these efficiencies.

Fibre coverage allows for copper retirement, building closures and new network architectures supporting productivity and sustainability

3.6 Network build has been far more significant, and from far more players, than considered possible at the time of the WFTMR '21. Today, 97% of customers can access superfast broadband. By 2026, c.90% of UK premises will have access to full fibre. Openreach's ambition is to continue building to reach 30m premises by 2030. Government's Gigabit Programme aims to deliver 99% full fibre coverage by 2031. Legacy exchange-based copper services are diminishing, with only 10% of broadband connections using exchange-based copper (ADSL).[37] Voice lines using the PSTN will fall to zero by January 2027.

[37] Ofcom, 2023. Communications Market Report 2023: Interactive data - Ofcom.

3.7 Fewer and fewer exchange-based copper services means it will become increasingly uneconomic to maintain BT's current network of exchange buildings: the costs of these buildings will need to be covered by correspondingly fewer customer connections. Today we have c.5,500 exchanges in the UK. As our network is simplified through the rollout of fibre and withdrawal of legacy services, we plan to reduce our footprint to around 1000 exchanges.

3.8 No exchange-based copper and fewer exchange buildings will provide significant benefits for the telecoms industry, "UK plc" and end customers:

- simpler and more reliable access networks [REDACTED],[38] requiring less maintenance effort;
- simpler Openreach product portfolio, supporting an improved communications provider (CP) and end customer experience and streamlined processes;
- a more sustainable network, significantly [REDACTED];
- improved security and resilience with fewer network access and connection points and more efficient infrastructure for CPs;
- lower long term supply costs resulting from savings in exchange building costs; and
- freeing up brownfield land for development, including in many prime locations.

3.9 By way of example, a simplified product portfolio needs less resource for service delivery, field force, system support roles and so on. [REDACTED].[39] This could eventually lead to lower costs for industry and lower prices for consumers compared to a situation where parallel infrastructure would need to be maintained for longer for a dwindling customer base.

3.10 Achieving these savings is not easy. Leaving exchanges is a complex process with multiple stakeholders requiring tight coordination. For example, exchange tenants can include various CPs, mobile operators, tower companies and others. Openreach manages the relationship with CPs, but BT Group as the overall leaseholder manages relationships with other tenants, and Telereal owns many of the buildings.

3.11 BT's exchange building withdrawal requires:

- a joined-up approach across both BT Group and Openreach, with appropriate governance in accordance with our Commitments;
- engagement and action by other building tenants to realise end customer benefits; and
- a regulatory strategy and framework that gives everyone certainty and clarity in which to make decisions.

Ofcom's current framework for copper retirement needs to be updated to reflect market developments and keep pace with international peers

3.12 Ofcom was very supportive of the exchange closure ambition in WFTMR '21.[40] Ofcom's main priorities from the WFTMR which relate to copper retirement including exchange exit were to (i) support fibre

[38] [REDACTED]
[39] [REDACTED]
[40] WFTMR vol 1 para 2.49 states *"We want our regulation to support a smooth transition from BT's legacy copper network to its new full fibre network while protecting consumers and ensuring that, where possible, there are not households left behind without an ultrafast service."*

build, (ii) promote network competition, (iii) protect vulnerable customers and (iv) provide reasonable terms/timeframes for migrations/withdrawal.

3.13 As set out above, Ofcom's wider competition framework, investment by a range of industry actors and Government's gigabit programme is on track to deliver on the objectives of supporting build and promoting competition. The rationale for Ofcom's current copper retirement and exchange closure thresholds has moved. For example, Ofcom's reasoning for exchange-based coverage thresholds was based on the belief that Openreach could otherwise pursue a targeted build strategy to chill Altnet and VMO2/nexfibre investment.[41] That has been proved to be incorrect. Openreach pursued a balanced build across all geographies, and Altnets have built in locations where Openreach has and has not yet built.

3.14 Ofcom's original framework unnecessarily delays consumer benefits from exchange closure. In combination, Ofcom's proposed triggers suggested a total period of at least 5 years from notification of stop-sell to complete withdrawal of regulation from copper-based services.[42] This is far longer than we have seen in other European countries who have set out staged and well-communicated retirement frameworks with greater speed.[43] For example:

- Estonia's incumbent, Telia, switched off the PSTN completely in July 2017 after a swift migration process of 2.5 years, starting 2015. The notice period in exchanges with LLU was 6 months where the incumbent offered access to regulated wholesale services at the same price as copper (i.e. fibre, bitstream and duct access).
- In Spain, in exchanges where there are no co-located wholesale parties, the guarantee period (for continued provision of copper-based services) is only 1 year, or 2 years where there are co-located wholesale parties.
- Norway has a notification period of three years at a maximum and six months if there is an equivalent replacement product, where retailers can provide services comparable to their current copper ones with similar profit margins. The regulation allows Telenor to shut down copper earlier in special cases, including when changes to the network are necessary due to circumstances beyond Telenor's control.
- Ireland has an aim of copper withdrawal by 2028, with transition starting as soon as a legacy exchange area has 'modern infrastructure' i.e. fibre available. There is a 6-month stop sell notice period which increases to 18-months for switch-off. Access seekers must be informed and given adequate notice to inform their customers. Wholesale access products of equal functionality and quality (to copper) must be available.[44]

[41] WFTMR 2021, Volume 3, paragraph 2.67.

[42] Combining Ofcom's first and second threshold notice periods from its WFTMR statement and its proposed third threshold notice period from its 2020 consultations.

[43] In addition, it is also far longer than in EC Recommendation 2024/539 on the regulatory promotion of gigabit connectivity, which recommends a duration of 2-3 years (rather than 5 years) and states that, in some situations, based on national circumstance, it could be an even shorter period (see paragraph 70).

[44] Comreg, 2023. "Framework for the Migration from Legacy Infrastructure to Modern Infrastructure: Response to Consultation and Decision".

Country	Announced	Completion	Threshold	Exchange notice
Estonia	2015	2017	No threshold - led by incumbent. Incumbent to provide access to regulated wholesale service at copper pricing.	6-months
Ireland	2021	2028	When exchange has "modern infrastructure" available. Access to regulated wholesale service of equal functionality and quality.	6-months stop-sell. Up to 18 months stop-service.
Norway	2019	2025	None (access seekers required to be involved in replacement decisions).	3 years, or 6-months if an equivalent replacement product available.
Spain	2016	2024	Only where exchange is no longer in use.	1-2 years.

Figure 3: International examples of copper-withdrawal and exchange closure

3.15 Ofcom's approach also focussed on achieving 100% fibre availability (less exceptions) before withdrawal. This is an unnecessarily high hurdle – many other EU countries are facilitating exchange closure when there is availability of a sufficiently good quality alternative product that supports existing competition, including existing FTTC. Norway's regulator for example has said Telenor should have:

> *"…freedom of choice with regard to which technology access is to be continued on. Wholesale customers can, for example, be offered fibre or fixed wireless broadband instead of copper access. We believe it is more forward-looking, than demanding that the copper access be continued, and better facilitates the technology shift."*[45]

Key principles and policies that should underpin a revised framework for legacy withdrawal and buildings closure

3.16 Without a clear and workable framework, BT Group and Openreach will not be able to deliver the full consumer benefits from the UK's digital infrastructure. BT and Openreach will need to make material capital and resource investments in realising buildings closures. Without a better framework, investing in these changes is significantly harder to justify despite the clear consumer benefit that they allow.

3.17 Before defining specific rules for retiring legacy services, including exchange-based copper, we suggest Ofcom revisits and rearticulates the key principles to underpin any framework to make sure its proposed rules are fit for purpose and achieve their aims. We would suggest:

- Legacy retirement rules and migrations policy should focus on protecting existing competition and protecting customers, but not be used as a lever to drive investment incentives or universal availability which is well covered by other policies such as Ofcom's competition rules, the broadband USO, the Government's Gigabit programme.
- Retirement policies need to be well articulated, communicated, and managed, but also timely. It is not appropriate to introduce unnecessary delays to changes other countries are well advanced in.

[45] Nkom, 2021. "Nkom announces changes in the regulation of Telenor - will ensure predictability for wholesale customers in the copper network", translated into English.

- End customers should receive an equivalent or better service after migration – not the current implicit requirement that they receive a better service.[46]
- Vulnerable customers and critical national infrastructure should receive specific protections and approaches where required and where proportionate, but this should not bleed across into wider rules on legacy transition and closures.
- Industry should be able to use commercial incentives and approaches, where consistent with competition policy, to drive migrations. From our experience, this includes the importance of having incentive pricing options to give CPs the right incentives to move to cheaper, better quality and longer-term products where these are available.

3.18 Openreach has made several proposals for copper retirement and exchange closure in its submissions to Ofcom. We would urge Ofcom to embrace the merits of Openreach's proposals, including:

- how Ofcom can provide greater regulatory certainty to enable Openreach to exit c.108 exchanges by 2030 and further exchanges thereafter based on, among other things, phased withdrawals of MPF and SOTAP;[47] and
- how the current copper retirement framework relating to the withdrawal of all forms of copper-based network access should be completed and updated in 2026, including a switch from exchange area thresholds to premises thresholds.

[46] For example, EC Recommendation 2024/539 on the regulatory promotion of gigabit connectivity states **only** that customers "*should have effective access to products on VHCNs that constitute **appropriate alternatives** to products delivered over the legacy network*" (paragraph 70, emphasis added). Moreover, customers who get FTTC are not dependent on the exchange, so it is arbitrary that they must get something better to allow a building that is not used in the provision of their service to be closed.

[47] [REDACTED]

4 Ofcom's successful strategy means more focus can be placed on deregulation

4.1 In setting priorities for the telecoms sector in 2019, the UK government identified "stable and long-term regulation that encourages network investment" as a strategic priority. As part of this, Government set the expectation of "regulation only where and to the extent necessary to address competition concerns",[48] taking "account of differences in competitive conditions in geographic areas when designing network regulation" and concluding that in areas with effective competition "Government would not anticipate the need for regulation".[49] Ofcom too identified the potential for progressive deregulation in WFTMR '21.

4.2 In leased line markets, Ofcom retained deregulation in the Central London Area (CLA) and concluded whilst BT had SMP in High Network Reach Areas (HNRs) "this is finely balanced" and "the strength of competition in these areas is likely to increase over this review period, with the potential for them to emerge as fully competitive in future review periods".[50]

4.3 Competitive network build has already exceeded 2021 expectations, including material multi-network build across large parts of the UK, both in residential and leased lines markets. In the following we set out our views on the scope for deregulation in:

- residential markets, where [REDACTED] of the UK will have 3 networks available by 2026 alongside strong – and increasing – Altnet take-up;
- leased lines markets, where High Network Reach areas now have the same characteristics as the already deregulated Central London Areas, especially when PIA use is taken into account; and
- inter-exchange markets (noting the importance of preserving existing exemptions, e.g. for the BT core).

4.4 Retaining unnecessary regulation harms consumers, reducing the scope for innovation (including innovation to increase efficiency and reduce costs), choice, stronger incentives to price keenly to attract customers, and higher quality of service.[51]

The potential for deregulation in residential markets (Wholesale Local Access)

4.5 In the 2021 WFTMR Ofcom stated, "where there is established competition, we will not regulate Openreach's broadband products." In the 2021 statement, for residential markets Ofcom did not identify any such areas but said it expected to do so in the future "given that customers in these areas would benefit from the choice of multiple networks, so we could remove regulatory restrictions."[52]

4.6 Ofcom described a two-stage framework[53] of assessment for deregulation (i) defining a competitive Area 1 based on a postcode sector level analysis of "where there is already material commercial deployment by two rival [networks] to BT each with established market positions" and (ii) assessing market power in Area 1 based on evidence of competitive constraints on Openreach.

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[48] UK Government, 2019. Statement of Strategic Priorities. Paragraph 20.
[49] Ibid.
[50] WFTMR 2021, Volume 2, paragraph 8.255.
[51] WFTMR 2021, Volume 1, paragraph 2.10.
[52] WFTMR 2021, Volume 1, paragraph 2.
[53] WFTMR 2021, Volume 2, section 7.

4.7 In assessing competition, Ofcom says it will consider Openreach's forward-looking market share, competitive pricing responses, and countervailing buyer power.[54] We agree with these factors, but stress the importance of dynamic measures, including observed behaviours of players in the market.

4.8 We consider that competition from an established gigabit-capable network in VMO2/nexfibre with a current footprint of nearly 17m premises, with plans to reach 80% of premises and plans to wholesale already constitutes an effective competitive constraint on Openreach pricing. That is even before considering the presence of additional networks built by Altnets which are reported to have a full fibre footprint equivalent to that of Openreach.[55]

4.9 According to our (conservative) estimates, [REDACTED] of the UK will have 3 networks available by 2026, with increasing evidence of good consumer outcomes driven by network competition.[56] Since 2021 there have been material and positive competitive developments and consumer outcomes, enabled by network overlaps, and a variety of competitors.

Good industry-wide outcomes for consumers. The market has moved on dramatically since the last review. Widespread fibre investment has resulted in a significant increase in coverage and take up – with public plans from BT, VMO2 and Altnets of more to come. By September 2023, Ofcom's Connected Nations reported full fibre coverage had more than trebled since 2020 (from 18% to 57%), with average industry take up of 28%. This trend is expected to continue with Ofcom's current projections suggesting 91% of properties could have full fibre access by May 2026.

Significant overlap between fixed access networks means there is much more choice of broadband suppliers at both the retail and wholesale level since the last review. Figure 4 shows our internal analysis of ultrafast coverage suggests [REDACTED] premises [REDACTED] are covered by at least three providers today.[57] By 2026-27, [REDACTED] of premises will have 2 or more competitors in addition to Openreach available, and so should be defined as Area 1, while Openreach-only areas would have shrunk to only [REDACTED]of premises from 29.8% in the 2021 WFTMR.[58]

A wide range and variety of competitors – far greater than Ofcom considered in 2021. Figure 5 shows the range of different players operating at the retail or wholesale level, or both; some providing services across multiples areas, with others specialising in different market or geographic segments. The common denominator is the potential to constrain one another in terms of price and quality (e.g. including higher bandwidths and high SLAs), as once a network is in the ground the owner of that asset has the incentive to average the capacity available. In this review, Ofcom should recognise the competitive constraints on Openreach's pricing from all players business models, not just VMO2/nexfibre and CityFibre.

[54] WFTMR 2021, Volume 2, paragraph 8.75.
[55] INCA, 2024. The State of the Altnets in 2024 | INCA.
[56] See Figure 4.
[57] BT Group uses the publicly available data this is based to inform its commercial strategy; it was not produced for the purposes of a regulatory assessment. [REDACTED]
[58] WFTMR 2021, Volume 2, Table 7.3. 29.8% is based on premises in the postcode sectors where neither VM (now VMO2/nexfibre) nor CityFibre is deemed to be present.

UK gigabit-capable availability	June 2024		End of FY 2026-27	
	Premises (m)	Share	Premises (m)	Share
Openreach only	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Openreach + 1 competitor (**either** VMO2/nexfibre **or** at least one Altnet)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Openreach + 2 or more competitors (VMO2/nexfibre **and** at least one Altnet)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Competitor(s) only	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Not available	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Figure 4: Network overlap – gigabit-capable premises passed, June 2024 and at end of FY 2026-27[59]

	Description	Examples of Openreach network competitors
Consumer and SME market (FTTP)[60]	**Generalists** Target the most attractive commercial areas where there is high demand. Some leverage B2B bids as a first step before building FTTP into surrounding areas	Integrated retailers: G. Network, Fibrus, Wightfibre, Zzoomm Wholesalers: CityFibre, Kcom, VXFiber
	Multi-Dwelling Unit (MDU) Specialists Operate regionally targeting MDUs – often focusing on large cities	Integrated retailers: Glide, Hyperoptic Wholesalers: Community Fibre
	Rural Focused Focus on deploying FTTP in hard-to-reach rural areas – potentially limited room for overbuilding and/or government funding can be secured	Integrated retailers: Gigaclear, Truespeed, airband, trooli
Corporate market (high bandwidth products)	**Business to Business (B2B)**	Integrated retailers: VMO2, eu networks, Zayo, Commsworld, Neos Networks Wholesalers: VMO2/nexfibre, CityFibre, Colt, Neos Networks

Figure 5: The range and variety of fixed access network competitors

4.10 On a forward-looking basis, and with the intensity of competition in the market, there remains significant scope for new wholesale supply arrangements to be announced, which has already conditioned market behaviours by all network operators.

4.11 Pressure on price and quality is only going to increase, enhancing outcomes for consumers, such as the competitive consumer prices and high SLAs[61] we are seeing in the market, as well as high take-up of gigabit-capable services. CityFibre nearly doubled its connections in 2023 and is reaching 40% take-up

[59] Based on BT's internal estimates. End 2026-27 forecasts are conservative as we do not account for new build premises and include conservative estimations on Altnet build.
[60] Examples in this table highlight the market and geographic segments that competitors specialise in, and do not indicate that competitors are not present in other markets. For example, Hyperoptic specialises in MDUs but also offers fibre broadband to residents and businesses, as well as leased lines to businesses.
[61] Examples of high SLAs include Hyperoptic offering 50%-100% of a weekly charge when there is unplanned loss of service for fibre broadband packages above 150 Mbps.

in some of its older build programmes such as Milton Keynes,[62] and some Altnets have take-up rates reaching nearly as much as Openreach and VMO2 [REDACTED]. Together, we would expect these factors to result in an Area 1 of material size in the next review period.

[Redacted]

Figure 6: [REDACTED]

Given these trends Ofcom must stay true to its intention to deregulate where possible and regulate only insofar as necessary

4.12 Ofcom must not only adopt a sufficiently forward-looking approach to competition, but ensure its remedies, where SMP remains, are designed with sufficient flexibility. Outcomes that could harm competition on the merits, in turn harming consumers, must be avoided. Openreach is right in its submissions to Ofcom that anticipated demands by Altnets for tighter regulation of its commercial flexibility are not justified and buck the trend in terms of the observed competitive outcomes set out above.

4.13 Other National Regulatory Authorities (NRAs) have adopted approaches to geographic deregulation more aligned with ensuring regulation remains proportionate to market power.

	Deregulation criteria for locality			Review of competitive areas
Italy	**Competing networks** 2 competing networks (fixed) w/60% coverage each, combined coverage >75%	**Wholesale market share** SMP provider market share<80%	**Retail market share** SMP provider FTTP/C market share ≤ 40%	**Annual**
Spain	**Competing networks** 3 competing networks w/20% coverage each	**Retail market share** Incumbent retail market share<50%		**Within three years** Consultation live
Austria Undertakings sufficient – No SMP remedies	Competing networks 3 superfast networks (incl. SMP provider) available to 75% of population	Competing networks (fixed) Two fixed networks (incl. SMP provider) to 75% of households	Retail market share of SMP provider Less than 50%	**N/A** Commercial undertakings deemed sufficient

Figure 7: Examples of deregulation in countries subject to SMP framework

4.14 As more areas become effectively competitive over the review period, restrictions that prevent Openreach competing on the merits should be removed. In areas where ex-ante regulation remains, Ofcom should lighten obligations, including by considering market developments that impact the key parameters of Ofcom's finding of market power.

4.15 Were, for instance, VMO2/nexfibre to announce a wholesaling deal with any major CP, then all major UK CPs will have wholesale agreements with alternatives to Openreach (TalkTalk, Vodafone and Zen currently already have supply agreements with CityFibre). Given VMO2/nexfibre is a well-established and competitive network with a potential full fibre footprint of 23 million premises by 2028 (nearly 80% of the UK),[63] ex-ante restrictions on Openreach commercial flexibility would be both disproportionate and ineffective. This is because the key determinant of an Altnet's success may no longer be the loss of a CP customer by Openreach.

4.16 Regulatory approaches in 2026-31 must allow for the prospect of rapid changes in competition and rapid removal or reduction in of ex ante rules in response. Other regulators are already reacting to this

[62] CityFibre, 26 Jan 2024. UK's largest independent fibre network reaches £100m... | CityFibre.
[63] nexfibre, 29 June 2023. nexfibre's new full fibre network goes live with launch of Virgin Media O2's services - nexfibre.

Analysis of postcode sectors with at least two altnets who provide at least 50% coverage challenge. For example, the Italian regulator, AGCOM, has imposed review mechanisms in the Italian WLA market to reflect developments in competition and the scope for deregulation over time. As well as deregulating 'Market 1A' (comprising of 14 municipalities), AGCOM committed "to update the list of "more competitive municipalities" on an annual basis.[64] In the way Ofcom defines markets and set remedies in this review, Ofcom should seek to ensure it (and Openreach) can take account of rapidly changing market conditions.

Leased lines markets have also become much more competitive, especially in High Network Reach areas

4.17 Ofcom has already identified the increasing competitiveness of leased lines markets through its 2016 deregulation of the Central London Area. By 2019, Ofcom identified that 90% of business customers have at least 2 competing networks nearby and 64% have 4 or more in the CLA.[65] BT's internal indicative data suggests that competition has increased even further. We strongly believe Ofcom will find the same trend in other leased lines markets, including a significant number of the High Network Reach (HNR) areas Ofcom identified in 2019, driven by the increased availability of multi-purpose networks providing business connectivity services.

VMO2/nexfibre	**Covers most HNRs with plans to upgrade entire network from cable to FTTP (XGS-PON capable of up to symmetric speeds up to 10Gbps by 2028).[66] Many recent customers are in HNRs like Belfast City Airport[67] and Greater Manchester Combined Authority.**
CityFibre	Ethernet network covering 28 towns and cities, including the HNRs Glasgow, Edinburgh, Bristol, and Leeds. Its expansion plans are based on i) long-term purchasing commitments by broadband providers such as TalkTalk, Vodafone, and Zen; ii) acquisition of other networks such as Lit Fibre in March 2024; and iii) winning 5 Project gigabit contracts for 650k premises in hard-to-reach areas in Buckinghamshire and Kent.[68]
Colt	Partnered with CityFibre to expand its network reach to cities covered by CityFibre, using an access model to connect commercial buildings as on-net locations which support fully managed Colt services.[69]
Zayo	On-net with points of presence in London, Glasgow, Leeds, and Manchester HNRs.[70]

[64] European Commission, 15 April 2024. IT-2024-2497 Adopted_EN_Redacted %2b corrigendum.pdf (europa.eu). Page 10.
[65] See Figure 10 in the leased lines Annex.
[66] Our UK Fibre Network | Virgin Media Business.
[67] Belfast City Airport | Virgin Media Business; Greater Manchester Combined Authority | Virgin Media Business.
[68] Our Ethernet Network | CityFibre; CityFibre wins five new Project Gigabit contracts… | CityFibre.
[69] Colt, 3 April 2024. How we've added 7,000 more on-net sites across the UK with CityFibre - Colt Technology Services.
[70] Zayo's global network mapbook, April 2024, available here.

Commsworld	On-net in 30 towns and cities including HNR areas of London, Birmingham, Bristol, Edinburgh, Glasgow, Leeds, and Manchester.[71]

Figure 8: Competitive network build since 2021

4.18 There are now also numerous ‘network aggregators’ (with TalkTalk’s PlatformX Communications ‘PXC’ being the most well-known). Retail providers of business connectivity can, and do, multi-source network connections to meet their customer needs. This reduces the importance of any single network provider with ubiquitous or wide-spread coverage. This has fundamentally changed the competitive landscape within which Openreach, and BT Business operate, with greater competitive pressure in nearly all geographies.

4.19 We see increasing levels of competition in the HNRs. Even adopting Ofcom’s existing conservative methodology of determining rival network presence, BT’s analysis finds that most HNR metropolitan areas currently display similar characteristics to the CLA during BCMR 2019 when it was already maintained as deregulated by Ofcom – and can be expected to follow a similar trajectory to CLA.[72]

4.20 We also expect the same trends to have affected leased lines competition in a number of contiguous parts of Area 2 which display similar characteristics to today’s HNR areas. BT analysis suggests this includes all London-based Area 2 postcode areas, as well as Area 2 postcode areas of Harrogate, Sutton, Swindon, and Wakefield.[73] At a buffer distance of [REDACTED] which we believe is more appropriate than the 50m distance Ofcom used in the last review (see below), over [REDACTED] of business premises in each of these areas appear to have at least 3 competing networks present [REDACTED]. Once buffer distances factor in unrestricted PIA, we strongly expect Ofcom will find significant competition from multiple network providers to Openreach in these areas.

4.21 The competitive pressure is further exhibited by Openreach’s discounting behaviour, with discounts on connection charges for EAD 1 Gbps products in HNRs throughout the review period, increasing from 40% during October 2021 to 45% in April 2023 and 59% since April 2024 (relative to Area 2 and Area 3 prices).[74]

4.22 These trends in rival network coverage are also confirmed by case studies of BT Business’ tenders for public sector customers and large corporates. In the past year, BT Business has lost tenders to rival Retailers, Aggregators [REDACTED] and Resellers [REDACTED] that are known to partner with rival fibre network infrastructure providers such as VMO2/nexfibre, and CityFibre, in HNRs [REDACTED].[75]

Ofcom should reassess leased lines competition taking direct account of PIA remedies

4.23 The scope for leased lines competition has increased following Ofcom’s successful introduction of regulated PIA services. Unrestricted PIA has been available since April 2019, although there was uncertainty over its use for leased lines ahead of the 2021 WFTMR. Even in 2021, Ofcom agreed that “PIA has the potential to substantially increase competition in Leased Lines Access markets, by extending the range over which existing networks will be able to compete” and noted that “most operators expect to use a lot of PIA over the review period”.[76] Despite this Ofcom took a conservative

[71] commsworld.com/our-network.
[72] [REDACTED].
[73] [REDACTED]
[74] See Annex A.
[75] See Annex A for case studies of recent tenders BT Business has lost to its rivals.
[76] WFTMR 2021 Annex, paragraph A3.67-68.

view and discounted PIA in its forward looking competition assessment by setting a 50m 'buffer distance' which assumed that networks would need to dig to connect new premises rather than use PIA.

4.24 Repeating Ofcom's previous network reach analysis in this review would systematically understate the presence of rival infrastructure and their impact on competition. In this review, Ofcom should update its network reach analysis based on the evidence of PIA usage since the WFTMR and adjust the buffer distance accordingly:

Ofcom's own analysis of physical infrastructure costs in BCMR 2019 found that PIA significantly reduces the costs of network extensions where Openreach's ducts already exists – approximately by a factor of 10.[77]

Analysis submitted by BT Group also found that PIA enables CPs to provide their own fibre connections to end users at a cost that is below the cheapest Openreach wholesale Ethernet service (100Mbps EAD Local Access) for distances up [REDACTED] even based on just a three-year payback period.[78]

4.25 We therefore think it appropriate to consider rival networks' presence in each leased line access geographic market based on a [REDACTED] buffer distance as a conservative indicative assessment of the impact of PIA. We expect Ofcom to conduct a similar analysis using more accurate data it can request from all network operators of business connectivity services.

4.26 BT analysis suggests that with a buffer distance of [REDACTED], at least [REDACTED] of business premises in the ten largest HNR metropolitan areas identified in the WFTMR have 2 or more rival networks (i.e. besides Openreach) available.[79]

The BT Core must remain deregulated in any updated assessment of interexchange connectivity (IEC)

4.27 In 2021, Ofcom chose to regulate certain IEC markets based on an assessment using competitor presence as a key metric in market analysis.[80] While we recognise that Ofcom is still considering how it will assess this market in the period after 2026, it is important that any market analysis/imposition of remedies does not result in inappropriate/disproportionate re-regulation. We have three specific concerns in this area:

Ofcom should maintain all exemptions from Equivalence of Inputs (EoI) obligations on proportionality grounds - we are particularly concerned about BT core nodes. The BT core is a distinct, contiguous network, which is not required for the provision of backhaul (see figure 9). In 2021, Ofcom introduced an exemption for the BT Core – amongst other types of connections – from EoI obligations[81] on grounds of proportionality.[82] This followed the submission of information by BT on the impact that regulation of any individual nodes/connections would have [REDACTED].[83] These submissions remain highly relevant to the TAR. Given the above, core

[77] BCMR 2019, BCMR Statement, paragraph A6.21 and Figure A6.1.
[78] Alix Partners on behalf of BT Group, 25 January 2019. The competitive impact of duct and pole access on the BCMR 2019. Annex 1.
[79] [REDACTED]
[80] IEC markets are a subset of 'trunk' markets. WFTMR 2021, Volume 2, paragraph 6.122.
[81] WFTMR 2021, Volume 7, paragraph 5.4.
[82] WFTMR 2021, Volume 2, paragraph 3.109-3.115.
[83] WFTMR 2021, Volume 7, paragraphs 3.112-3.114.

nodes should remain outside EoI obligations wherever they are located.[84] We set out detail on the impact of regulation, costs, and the siting of core nodes in Annex B.

Why

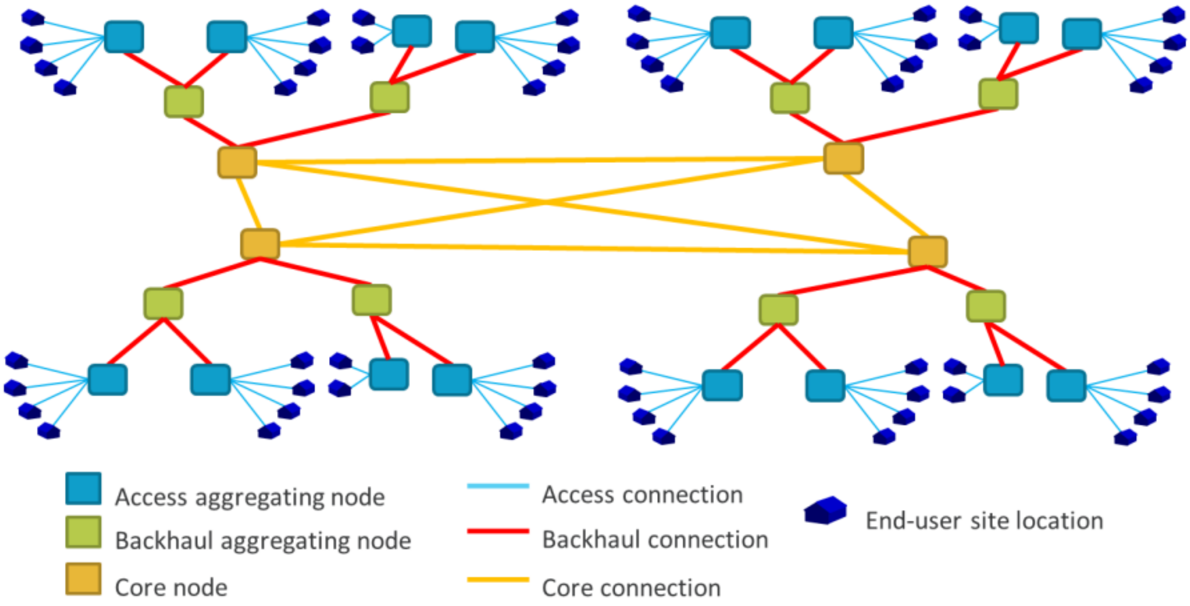

Figure 9: Logical illustration of access/backhaul/core networks[85]

Interexchange (and wider "trunk") markets previously deemed competitive by Ofcom should not be (re-)regulated unless there is overwhelming evidence that this is required. Ofcom has chosen to progressively de-regulate certain connections and product markets over a prolonged period, a process which included detailed market assessment at the time. The starting point for any review should therefore be markets should remain deregulated, whatever model Ofcom chooses to use to assess this market.

Ofcom's model for analysis of the IEC market in 2021 did not take account of all competition in the market. This is largely because not all third-party operators were included in the market assessment – rather it only included a subset of eight operators, despite many others operating in this market. Moreover, we expect infrastructure competition in access markets to have had an effect on IEC connectivity as third parties are no longer necessarily required to interconnect at BT exchanges to interconnect between access/backhaul networks.

4.28 We provide further information on these points in Annex B.

[84] [REDACTED]

[85] BCMR 2019, Volume 2, Figure 3.1.

5 Appendix A Leased lines

BT's analysis of rivals' network presence

Methodology and data

In 2020, we noted that Ofcom's geographic market assessment was based on data from December 2017 and already excluded a significant portion of competitive build;[86] and that, had Ofcom included more up to date data, it would have found a materially greater number of competitive postcodes. It was clear then that competition in leased line access (LLA) markets was developing rapidly. As set out in section 4 in the main document, there is compelling evidence that effective competition in the HNRs is now widespread, and it's likely that the same is true of many areas in Area 2 as well as some in Area 3.

This section summarises our methodology and provides the data tables underpinning the analysis in section 4 in our main submission.

BT has conducted its own analysis of rivals' network presence as of June 2024 to assess how competition has evolved since the WFTMR. Whilst we do not have the data to fully replicate Ofcom's network reach analysis, [REDACTED].

Results – CLA

		BCMR (2017)	WFTMR (Dec 2019)	BT analysis (June 2024)
Proportion of business premises with at least X competing networks within 50m of postcode (cumulative)	X=1 or more	94%	99%	
	X=2 or more	90%	94%	[REDACTED]
	X=3 or more	81%	84%	[REDACTED]
	X=4 or more	64%	71%	[REDACTED]
Proportion of business premises with at least X competing networks within 250m of postcode (cumulative)	X=1 or more			
	X=2 or more			[REDACTED]
	X=3 or more			[REDACTED]
	X=4 or more			[REDACTED]

Figure 10: Rival network presence in the CLA over time[87]

As demonstrated by Figure 10:

- BT analysis finds that the share of premises in the CLA with 3 or more competing networks within 50m [REDACTED] has increased compared to what Ofcom found in the CLA during the WFTMR

[86] BT Group, 2020, Response to WFTMR consultation, paragraph 2.81.
[87] BCMR 2019 figures from Volume 2, Table 6.9. WFTMR figures from Volume 2, Table 8.3. BT analysis figures calculated based on the proportion of demand sites with at least X non-Openreach networks present, and assumes Openreach is present at all demand sites. For example, BT's *X=3 or more* figure refers to the proportion of demand sites with two or more non-Openreach networks present.

(84%), and likewise when looking at the share of premises with 4 or more competing networks within [REDACTED]

Results – HNR

Area (Top 10 HNR metropolitan areas in WFTMR, and CLA)	% of business premises with 3+ competing networks within 50m			% of business premises with 3+ competing networks within 250m
	BCMR 2019 (2017)	WFTMR (Dec 2019)	BT analysis (June 2024)	BT analysis (June 2024)
Manchester	51%	57%	[REDACTED]	[REDACTED]
Glasgow	45%	47%	[REDACTED]	[REDACTED]
Edinburgh	33%	47%	[REDACTED]	[REDACTED]
Liverpool		20%	[REDACTED]	[REDACTED]
Leeds	58%	65%	[REDACTED]	[REDACTED]
West London		49%	[REDACTED]	[REDACTED]
Birmingham	57%	62%	[REDACTED]	[REDACTED]
Bristol	66%	69%	[REDACTED]	[REDACTED]
Belfast		31%	[REDACTED]	[REDACTED]
South East London		46%	[REDACTED]	[REDACTED]
CLA	**81%**	**84%**	[REDACTED]	[REDACTED]

Figure 11: Rival network presence in HNR over time[88]

As demonstrated by Figure 11:

BT analysis finds that some HNR metropolitan areas currently display similar characteristics to the CLA during BCMR 2019 when it was already maintained as deregulated by Ofcom – and can be expected to follow a similar trajectory to CLA. In particular, the share of premises with 3 or more networks within [REDACTED]

[88] BCMR 2019 figures from Volume 2, Table 6.6, WFTMR figures from Volume 2, Table 7.6. The ten largest metropolitan areas are based on the number of HNR postcode sectors, as set out in WFTMR Volume 2, para. 7.141. Figures for each HNR postcode area (e.g. Manchester) in the table are based on business premises located in postcode sectors within the postcode area that were classified as HNR in the WFTMR.

Results – Selected locations in Area 2

Area (Selected Area 2 locations)	% of premises with 3+ competing networks within 50m	% of premises with 3+ competing networks within 250m
	BT analysis (June 2024)	BT analysis (June 2024)
East London	[REDACTED]	[REDACTED]
North London	[REDACTED]	[REDACTED]
North West London	[REDACTED]	[REDACTED]
South East London	[REDACTED]	[REDACTED]
South West London	[REDACTED]	[REDACTED]
West London	[REDACTED]	[REDACTED]
Harrogate	[REDACTED]	[REDACTED]
Sutton	[REDACTED]	[REDACTED]
Swindon	[REDACTED]	[REDACTED]
Wakefield	[REDACTED]	[REDACTED]

Figure 12: Rival network presence in selected Area 2 postcode areas over time[89]

Openreach discounts in CLA and HNR

EAD 1 Gbps LA and Standard Connection charge	Oct 21 - Mar 22	Apr 22 - Jun 22	Jul 22 - Mar 23	Apr 23 - Mar 24	Apr 24 - Present
CLA - connection charge	£1,123	£1,123	£750	£750	£462
Area 2 and 3 - connection charge	£1,857	£1,909	£1,909	£2,058	£2,058
Discount in CLA vs Area 2/3 (£)	£734	£786	£1,159	£1,308	£1,596
Discount in CLA vs Area 2/3 (%)	40%	41%	61%	64%	78%

Figure 13: EAD 1 Gbps Local Access (LA) and Standard Connection charge in the CLA[90]

[89] Figures for each postcode area (e.g. Harrogate) in the table are based on business premises located in postcode sectors within the postcode area that were classified as Area 2 in the WFTMR.
[90] Based on publicly available Openreach pricing and special offers.

EAD 1 Gbps LA and Standard Connection charge	Oct 21 - Mar 22	Apr 22 - Mar 23	Apr 23 - Mar 24	Apr 24 - Present
HNR - connection charge	£1,123	£1,123	£1,123	£835
Area 2 and 3 - connection charge	£1,857	£1,909	£2,058	£2,058
Discount in HNR vs Area 2/3 (£)	£734	£786	£935	£1,223
Discount in HNR vs Area 2/3 (%)	40%	41%	45%	59%

Figure 14: EAD 1 Gbps LA and Standard Connection charge in the HNR

[REDACTED]

6 Appendix B BT Core

Overview

As noted in our main submission, BT Group has three concerns relating to the interexchange connectivity (IEC) market:

1. Ofcom should maintain all exemptions from Equivalence of Inputs (EoI) obligations for connections between BT core nodes ('the BT core'),[91] as EoI obligations for these connections would be disproportionate (as Ofcom determined in 2021).[92]
2. Interexchange (and wider "trunk")[93] markets previously deemed competitive by Ofcom should not be (re-)regulated unless there is overwhelming evidence that this is required.
3. Ofcom's model for analysis of the IEC market in 2021, while a pragmatic way of capturing competition for connections between BT exchanges, was unlikely to capture the full extent of competition in a competitive network build. It therefore was likely overly conservative in identifying competitive constraints in the supply of telecoms networks on a geographic basis.

Here, we provide further detail on these elements.

[91] Ofcom defined core connections in the WFTMR 2011, Annex 2, paragraph 2.4: *Core connections (and nodes) transport multiple telecoms services aggregated from all the services provided to customers and generally have higher capacity than backhaul connections (and nodes). Core nodes are used to route (or switch) traffic from backhaul connections onto the core network, or between backhaul nodes or other core nodes.* A list of BT core nodes is included in Schedule 4 of the WFTMR wftmr-statement-schedule-4-iec-exchanges-by-market.xlsx.
[92] WFTMR 2021, Volume 3, paragraphs 3.109-3.115.
[93] Trunk services is a broad term used to describe backhaul connectivity between BT exchanges, data centres, and telecoms provider network nodes. See BCMR 2019, Volume 2, paragraph 3.2.

Ofcom should maintain all exemptions from Equivalence of Inputs (EoI) obligations for the BT core

It is essential that Ofcom retains the exemptions from EoI obligations established in WFTMR,[94] in particular for BT core nodes. This ensures the ongoing integrity and resilience of the BT core, as well as ensuring BT is still able to provide fibre services for national security purposes.

As Ofcom noted in 2021, BT has chosen to deploy both IEC nodes for backhaul and core nodes at certain exchanges. While IEC nodes for backhaul were the intended object of Ofcom's SMP obligations, core nodes form a distinct network which is outside the intended scope of the IEC market and where imposition of remedies would be disproportionate (see figure 9 in the main document).

The BT core network is [REDACTED].

Given the above changes do not lead to any improvement in customer experience or have any impact on the competition concerns Ofcom was seeking to address in its regulation of the IEC market, Ofcom concluded in 2021 that the imposition of EoI obligations for BT Core nodes would be disproportionate and was not appropriate for the competition concerns Ofcom had in the IEC market:

> *"applying EOI to existing arrangements can be disruptive and costly. In this case, BT has informed us that, if EOI is imposed on the 21 BT core exchanges, this will create uncertainty in the way BT plans its investments in the core network and will impose disproportionate costs on BT in terms of network resilience and the cost of providing core network services. We consider that this represents an unacceptable level of cost and disruption, and is not needed to address our competition concerns in the IEC market in addition to the specific access remedies we have imposed."*[95]

We agree with this assessment and urge Ofcom to ensure that this exemption remains in place irrespective of the approach Ofcom takes to interexchange connectivity.

[REDACTED]

Interexchange (and wider "trunk") markets previously deemed competitive by Ofcom should not be (re-)regulated

In 2021, Ofcom noted that it had previously deemed all trunk that do not connect between BT exchanges should be considered competitive, with a subset of the latter connections also deregulated based on competitor presence. In 2026, we believe that Ofcom should go further and make clear that previously deregulated connections in the IEC should not, as a matter of course, be re-regulated in the event of a change in competitor presence.

This is largely a matter of proportionate policymaking – that deregulated markets need not be reassessed at each and every review, unless there is compelling evidence of the need to do so. It is reasonable to assume that a competitive constraint exists at an exchange once competing infrastructure is present. This is particularly relevant where competing network providers have consolidated, leading to a BT+2 exchange becoming a BT+1, which might suggest a lessening of competition. In reality, however, consolidation is likely to have strengthened competition when considered across the market.

[94] WFTMR 2021, Volume 3, paragraphs 3.109-3.115 and Annex 7, paragraph 5.4.
[95] WFTMR, 2021, Volume 3, paragraph 3.112.

Ofcom's approach to Interexchange connectivity is conservative

Finally, we note that Ofcom only considered a subset of providers in backhaul markets in the WFTMR – those defined as Principal Core Operators (PCOs) which:

- own their own infrastructure;
- have a substantial footprint; and
- have the capacity to offer wholesale IEC services to other telecoms providers" (see Figure 17).

Figure 17: Principal Core Operators defined in 2021. Note Century Link is now rebranded to 'Lumen'

Ofcom's list of PCOs, however, is likely to be too conversative in any forward look from 2026 for three reasons:

i. Although "substantial footprint" is not clearly defined, it is evident that presence at each and every BT exchange is not required to offer trunk connectivity on a national or quasi-national basis;
ii. Linked to the above, the relevance of exchange-based metrics for assessing market power in the IEC market are likely to decline over time, as Openreach decommissions exchanges and the theoretical maximum volume of interexchange connections reduces over the course of future market review periods; and
iii. Finally, as Ofcom noted in 2021, widespread take-up of Openreach's Physical Infrastructure Products – with some 169 providers ordering 160,000km of duct – might have enhanced competitive conditions at BT+0 and BT+1 exchanges because building between access networks and competing backhaul networks is relatively cheaper than in previous market reviews.

Ofcom should therefore seek to expand the list of deregulated interexchange connections in its upcoming market review to reflect competitive conditions in the market.

July 2024

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