Appropriate approach to pricing remedies on Openreach's Wholesale Local Access (WLA) services

Considerations for the TAR - Non-Confidential Version

Executive summary

Ofcom's Telecoms Access Review will need to review appropriate regulation across a range of fixed telecoms markets for the period 2026-31, including WLA markets.

In its Wholesale Fixed Telecoms Market Review (WFTMR) in 2021, Ofcom applied what it termed a 'pricing continuity' approach for Openreach WLA services, consisting of CPI-0% cap on the MPF and GEA-FTTC rental prices for its 40/10 FTTC product across the UK, as well on its FTTP 40/10 rental price where a copper-based service is not available (set at a premium of £1.70 to the FTTC 40/10 price). Pricing flexibility was then allowed on higher-speed FTTC and FTTP products, subject to a requirement that rental prices and other charges where set on "fair and reasonable" terms.

Ofcom considered that this approach would appropriately balance its key objectives to promote investment in gigabit-capable networks while protecting consumers, particularly given FTTP roll-out by Openreach and altnets was nascent at the time of the review.

Allowing pricing flexibility on higher speed products would incentivise additional FTTP investment by altnets and Openreach, by providing greater certainty on prices and allowing for the possibility of higher wholesale prices, which would improve profitability.

The CPI-0% cap on the 40/10 products was designed to protect consumers from significant price increases, both on the 40/10 and higher-speed products. This reflected a view that the 40/10 prices would act as an "anchor", constraining prices for higher speed services because significant increases in wholesale (and in turn retail) prices on these products would result in consumers downgrading to the 40/10 product.

In this paper we outline key considerations for setting WLA pricing remedies in the TAR, taking account of the current market situation and future market developments.

Market developments since 2021

There have been a number of developments since 2021 that are relevant when considering the appropriate WLA pricing remedies from 2026:

- Significant FTTP network roll-out by Openreach and rivals since WFTMR 2021, with Openreach planning to cover the majority of the UK by 2026;
- Migration away from ADSL services will be largely complete by 2026, and a significant share of consumers will have migrated to higher-speed FTTC products, and from FTTC to FTTP;
- Openreach's higher-speed FTTC and FTTP prices over the WFTMR period have been constrained by contractual agreements with ISPs (the GEA discount offer and Equinox contracts respectively). The GEA discount offer provides significant discounts on higher-speed FTTC products and "pegs" their prices to the 40/10 product, meaning all OR FTTC prices have increased in-line with inflation, while the Equinox contract offering real terms reductions in rental prices, in both cases subject to meeting performance targets.

Key considerations for WLA pricing remedies over the TAR period

40/10 prices will be a weaker constraint on higher speed FTTC prices after 2026

The current GEA discount offer is due to run until 2026, meaning Openreach would have the scope to significantly increase higher-speed FTTC prices after 2026 if the price cap is maintained on the 40/10 product.

The evolution in the market since 2021 means Openreach will also have an increased incentive to raise higher-speed FTTC prices after 2026:

- Openreach previously had the incentive to keep these prices low in order to incentivise upgrades from ADSL to FTTC and from lower to higher-speed FTTC services, but these incentives will have largely fallen away by 2026, given migration from ADSL will be largely complete, and the majority of FTTC customers will already be on higher-speed products.
- 40/10 FTTC prices are unlikely to effectively constrain higher-speed FTTC prices going forward, because a number of behavioural effects (such as status quo bias, loss aversion, and regret aversion) mean that consumers may choose not to downgrade to the 40/10 product, even in the event of very significant price increases. This results in a strong asymmetry between profit maximising differentials when upgrading customers and when they have already upgraded. This is supported by the results of a survey recently commissioned by Frontier, and is also consistent with Ofcom's view in WFTMR 21, where it recognised that the constraint on higher bandwidths imposed by the 40/10 control would gradually reduce over time.
- Keeping FTTC prices low may have also increased retention on Openreach's network where it had yet to roll-out FTTP, but faced competition from other networks capable of offering higher speeds than its FTTC network. This will be less of a factor post-2026, given Openreach's FTTP network is expected to cover the majority of the UK by that time, with a significant proportion of customers remaining on FTTC because they are 'disengaged'.

A continuation of the current regulatory approach would risk Openreach significant increases the prices of higher-speed FTTC products after 2026. This would directly harm end consumers by increasing the cost of their broadband access (where these prices are passed on to retail prices), and also harm downstream competition by reducing the relative competitiveness of ISPs competing with BT's retail business.

Evidence also suggests that this would particularly harm vulnerable customers: research by Ofcom shows that these customers are less engaged in the market, and are more likely to exhibit behavioural biases such as loss aversion and status quo bias, meaning they are even less likely to downgrade their packages in response to price increases than other users.

Larger increases in higher-speed FTTC prices would be unlikely to stimulate material incremental FTTP investment

It is unlikely that significant increases in overall FTTC prices would deliver material benefits by stimulating incremental FTTP investment by Openreach or altnets, compared to an outcome where prices continued at their current inflation-based trajectory:

- The significant FTTP investment by Openreach and altnets over the WFTMR period has occurred while higher-speed FTTC prices have increased with CPI, indicating that above-CPI FTTC price increases have not been required to incentivise significant FTTP build.
- FTTC prices are likely to have a significantly lower impact on Openreach and altnet FTTP investment decisions over the TAR period vs WFTMR, given FTTC-FTTP migration up to 2026 will mean the number of customers on FTTC products will be much smaller.
- In the case of Openreach, higher FTTC prices could actually provide an incentive to delay rather than increase investment in FTTP roll-out, as all else equal, higher FTTC prices would reduce the incremental returns on FTTP investments.

Key considerations when setting WLA pricing remedies in the TAR

Given the shift in costs and benefits, the continuation of the current regulatory regime, in which a charge control is maintained on 40/10 products and pricing flexibility allowed on higher-speed products, is unlikely to adequately balance Ofcom's key regulatory objectives: it risks significant increases in higher-speed FTTC prices which would directly harm consumers, but would be unlikely to generate material benefits through incentivising material additional FTTP investment by Openreach or altnets.

Ofcom should therefore consider alternative packages of remedies which could provide greater protection for end customers while providing certainty for all stakeholders: Openreach, ISPs, altnets and end users. Potential remedies could include:

- charge-controlling the 80/20 FTTC product (either as the ‘anchor’ or as part of a broader basket of FTTC services)[1], or
- retaining the 40/10 anchor, but implementing additional remedies to prevent Openreach from rapidly increasing the effective differential between 40/10 and higher-speed FTTC services on the expiry of the current discount offers.

[1] If the regulated anchor product were to change from 40/10 as a result of a regulatory change, under the Equinox 2 contract Openreach would have the right to amend its FTTP prices from those set out in that contract. As such, if Ofcom were to change the anchor product in the TAR, it is possible that the level of FTTP prices could be affected.

1 Introduction and background

Ofcom has begun its Telecoms Access Review (TAR 26), which will include a review of competitive conditions and appropriate regulation across a range of fixed telecoms markets for the period 2026-31, including WLA markets.

There is an expectation that BT will be found to have significant market power (SMP) in WLA markets in some, if not all, areas of the UK. Absent regulation, there is a risk that Openreach would set WLA prices at an excessively high level, with adverse consequences for end consumers, either because price increases would be passed on to end consumers (exploitative conduct) or through weaker retail competition (exclusionary conduct). To address these risks, Ofcom can introduce pricing remedies, which could include applying charge controls on prices for certain products.

Ofcom's current WLA regulations

In its Wholesale Fixed Telecoms Market Review in 2021 (WFTMR 21), Ofcom chose to set price regulation on Openreach WLA services using an approach it termed "*pricing continuity*" across the UK.[2] [3] In practice, this was based on the approach in the previous 2018 WLA market review, where Metallic Path Facility (MPF) services and General Ethernet Access (GEA) FTTC 40/10 services[4] were charge-controlled, though the caps were set much higher:

- a CPI-0% cap was applied to MPF and GEA-FTTC rental prices for Openreach's 40/10 FTTC product, with the starting charges based on the 2020/21 prices under the cost-based charge control set in WLA 18 – i.e. prices for these products were fixed in real terms at the 2020/21 levels determined in WLA 18; and
- Openreach was allowed "pricing flexibility" on higher-speed FTTC products, as in WLA 18, subject to a requirement that prices were set on "fair and reasonable" terms (both for rental and other charges).

Ofcom also applied a similar approach to FTTP services.[5] It imposed a charge control on FTTP 40/10 rental prices where a copper-based 40/10 service is not available, set at a premium of £1.70 to the FTTC 40/10 price, with pricing flexibility on other FTTP prices (again, subject to rental and other one-off charges being set on "*fair and reasonable*" terms).

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2 Ofcom determined separate geographic markets for WLA, distinguishing between areas where Ofcom expected material and sustainable network competition ("Area 2"), and those where it didn't ("Area 3"), but applied the same pricing remedies across both.

3 WFTMR 21, Volume 4, paragraph 1.2, and tables 1.1 and 2.1.

4 40/10 stands for 40 Mbit/s download and 10 Mbit/s upload speed. FTTC 40/10 rental charges means all virtual unbundled local access (VULA) 40/10 rental charges.

5 FTTP stands for Fibre-to-the-premises.

We have been asked by Vodafone, Sky, and Talk Talk ("the clients") to identify key considerations for setting WLA pricing remedies in the TAR, given market developments since 2021 and likely developments over the TAR 26 review period. As part of this we consider whether the continuation of the current regulatory pricing approach would appropriately balance FTTP investment incentives with consumer protection over this period.

In the rest of this note, we set out:

- Ofcom's rationale for the current WLA price regulation;
- An assessment of the appropriateness of the imposing the same remedies for the TAR 26 period; and
- Resulting considerations for Ofcom when setting WLA pricing remedies in the TAR

2 Ofcom's rationale for existing WLA price regulation

Relevant framework

The Communications Act 2003 sets out Ofcom's key statutory duties and objectives. Section 88 of the Act[6] requires that Ofcom only implement network access price regulation where it is appropriate for:

- promoting efficiency;
- promoting sustainable competition;
- conferring the greatest possible benefits to end users, having regard to the long-term interests of end-users in the use of next-generation networks; and
- promoting the availability and use of new and enhanced networks.

It also states that Ofcom must consider, when setting network access price regulations, the benefits of predictable and stable wholesale prices in ensuring efficient market entry, and sufficient incentives to bring into operation new and enhanced networks.

In relation to setting WLA access price regulation, the key objectives to consider will be promoting investment in gigabit-capable networks, which will benefit end-users in the longer term, and protecting consumers. There are trade-offs between these objectives - allowing higher access prices and more flexibility on price-setting may incentivise investment, but at the expense of lower protection for consumers from higher prices (and weakened retail competition).

6 https://www.legislation.gov.uk/ukpga/2003/21/section/88

Ofcom's price remedies aimed to increase investment in FTTP networks

Ofcom had regard to its duties when designing WLA price regulation across the UK, and has historically exercised discretion in setting these regulations in favour of an approach that promotes competition and investment in gigabit-capable networks, by Openreach and altnets.[7]

Ofcom saw the WFTMR 21 market review period as a window of opportunity for competing network build, as Openreach had not yet upgraded the majority of its network to FTTP. Since Openreach had not yet deployed a FTTP network at scale, altnets had the opportunity to invest in their own FTTP networks to compete with Openreach for ISPs and their end customers. Ofcom envisaged that this increased investment by altnets would in turn put pressure on Openreach to build out gigabit-capable networks.[8]

However there was a perceived risk that altnets might not want to invest if wholesale prices were too low, or if there was uncertainty on the future level of prices, as this would decrease expected returns on investment. For example, if Openreach's wholesale FTTC prices were set too low, an ISP using Openreach's network would have a weaker incentive to switch to a competing network, which would decrease expected volumes on that competing network. Lower prices also imply lower margins on each connection. Conversely, Ofcom considered that higher, more predictable wholesale prices would encourage altnet build, by increasing their ability to compete profitably and promote more switching by ISPs from Openreach to altnets.[9]

As a result, Ofcom considered that the WFTMR21 approach, which retained pricing flexibility for higher-speed products, would provide greater certainty and allow for the possibility of higher wholesale prices for higher speeds, therefore promoting investment by altnets. It also considered that pricing continuity would promote Openreach's FTTP investment by providing greater returns on FTTP build, and increasing the risk of losing volumes to competitors if it did not invest in areas where competition existed or was expected to arise.

The price remedies aimed to protect consumers by charge-controlling an "anchor" product

While pricing continuity would allow pricing flexibility for higher-speed products, a charge control was maintained on 40/10 FTTC prices at 2021 levels in real terms.[10] Ofcom considered that this would protect not only consumers on 40/10 FTTC products, but also consumers on higher-speed products:

7 WFTMR 21, Volume 4, paragraphs 1.7 and 2.7

8 WFTMR 21, Volume 4, paragraphs 1.10-1.11

9 WFTMR 21, Volume 4, paragraph 1.22

10 WFTMR 21, Volume 4, paragraphs 1.17 and 1.19

- Consumers using 40/10 FTTC products would be directly protected by the control, because the price of 40/10 FTTC would only be allowed to rise in-line with inflation.
- While there would be no direct price controls on speeds above 40/10, Ofcom expected that a price cap on the 40/10 product would act as an "anchor", constraining prices Openreach could charge for higher-speed FTTC and FTTP products.[11] In particular, it considered that beyond a certain price level, price increases for higher-speed products (passed on to retail prices by ISPs) would lead consumers to downgrade to the 40/10 product. As a result, Openreach would be unable to charge significantly higher prices for these higher-speed services, despite those not being subject to a price control.[12]

Ofcom's view was that this would provide sufficient protection to consumers, particularly as any additional returns Openreach made (from prices being somewhat above cost) would contribute to Openreach's investment in FTTP networks, which would benefit consumers in the long run.[13]

However, Ofcom acknowledged that once consumers have become accustomed to higher speeds, they may be willing to pay a higher premium to remain on the higher-speed product than they would have been willing to pay for an upgrade, i.e. there may be an asymmetry in willingness to pay for higher speeds depending on whether consumers are already using a higher-speed product.[14] This would reduce the extent to which 40/10 products could effectively serve as an "anchor" to constrain higher speed services over time.

The price remedies were applied across Area 2 and 3

Ofcom applied the same pricing remedies in areas where it judged there was potential for material altnet build (Area 2), and where there wasn't (Area 3). Ofcom's rationale for its pricing remedies was broadly the same for both these areas. It reasoned in particular that, since the charge control in Area 2 had been set at a level to incentivise investment by competing networks, aligning the charge control in Area 3 would also be supportive of investment by competing networks in that area, even if these may not be material.[15] It also considered that this would promote FTTP investment by Openreach, and referred to a commitment made by Openreach to roll out FTTP to 3.2m premises in Area 3 cumulatively by the end of 2025/26 under this regulatory approach.[16]

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11 WFMTR 21, Volume 4, paragraph 1.55

12 Put another way, Ofcom considered that 40/10 product would be a reasonable substitute for higher-speed products over the WFTMR 21 market review period.

13 WFTMR 21, Volume 4, paragraphs 1.50-1.51

14 WFTMR 21, Volume 4, paragraph 1.58

15 WFMTR 21, Volume 4, paragraphs 2.57-2.58

16 Ofcom Consultation: Promoting competition and investment in fibre networks – Pricing wholesale local access services in Geographic Area 3 with a BT Commitment to deploy a fibre network, paragraphs 2.13-2.14

3 Assessment of the appropriateness of the current remedies for the TAR 26 period

In this section we assess whether Ofcom's current package of remedies would be appropriate in the next regulatory period, taking account of the need to balance investment incentives with consumer protection.

We set out that, based on available evidence, continuing to use 40/10 as an anchor with flexibility on higher speeds risks significant increases in FTTC prices in real terms, but that higher FTTC prices are unlikely to stimulate material incremental FTTP investment by Openreach or altnets.

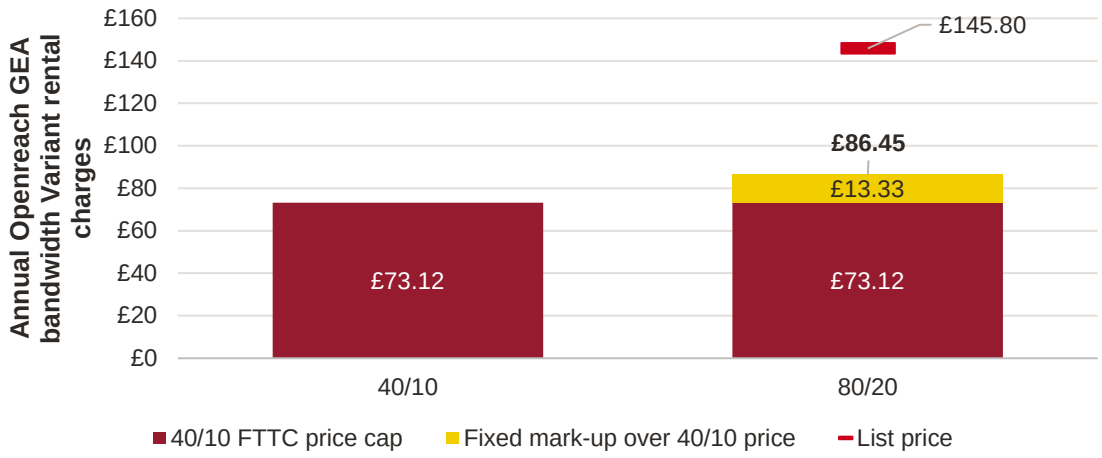
3.1 Relying on 40/10 prices as an anchor would risk significant increases in higher-speed FTTC prices

The expiry of the GEA discount offer means Openreach has the ability to significantly increase higher-speed FTTC prices after 2026

Current prevailing prices for Openreach's higher-speed FTTC WLA products are set based on contractual arrangements (i.e. the GEA discount offer contract). Under these arrangements, the 40/10 FTTC price reflects Ofcom's price cap, whereas higher-speed FTTC product prices reflect a defined mark-up over the regulated 40/10 FTTC price, and represent a significant discount on Openreach list prices – see Figure 1 below. Prices of the higher-speed FTTC products have then been set to increase with CPI, in-line with increases in the 40/10 product price. In practice, this means that higher-speed FTTC prices are currently "pegged" to the 40/10 FTTC prices.

The GEA discount offer has therefore limited Openreach's ability to increase higher-speed FTTC prices relative to 40/10 FTTC prices.

Figure 1 Applicable GEA-FTTC discount offer annual prices in 2023/24, and comparison with notional list price



Source: Frontier Economics analysis of Openreach rate cards

This offer has provided a number of commercial advantages to Openreach:

- keeping FTTC prices low incentivises migration from ADSL services (e.g. MPF) to FTTC services (e.g. MPF+GEA), which is margin-enhancing as the GEA price has a positive contribution margin;[17]
- keeping the price premium on higher-speed FTTC products relatively low incentivises upgrades from lower to higher-speed FTTC services, thus increasing overall ARPUs, again being margin-enhancing as the costs of provision do not differ between 40/10 and higher-speed services; and
- providing access to 80/20 FTTC services at a relatively low premium also increases retention where Openreach faces competition from other networks offering higher speeds than the FTTC network can offer, such as VMO2 and altnets.

However, Openreach has only notified the market that they will maintain prices as per the offer up to 2026.[18] As a result, if the anchor was to remain on the 40/10 product and pricing flexibility allowed on higher-speed products, Openreach would be able to increase the price of other higher-speed products to any level after this date.

In addition, the evolution in the market since 2021 means Openreach will also have an increased incentive to raise higher-speed FTTC prices going forward, as we set out below.

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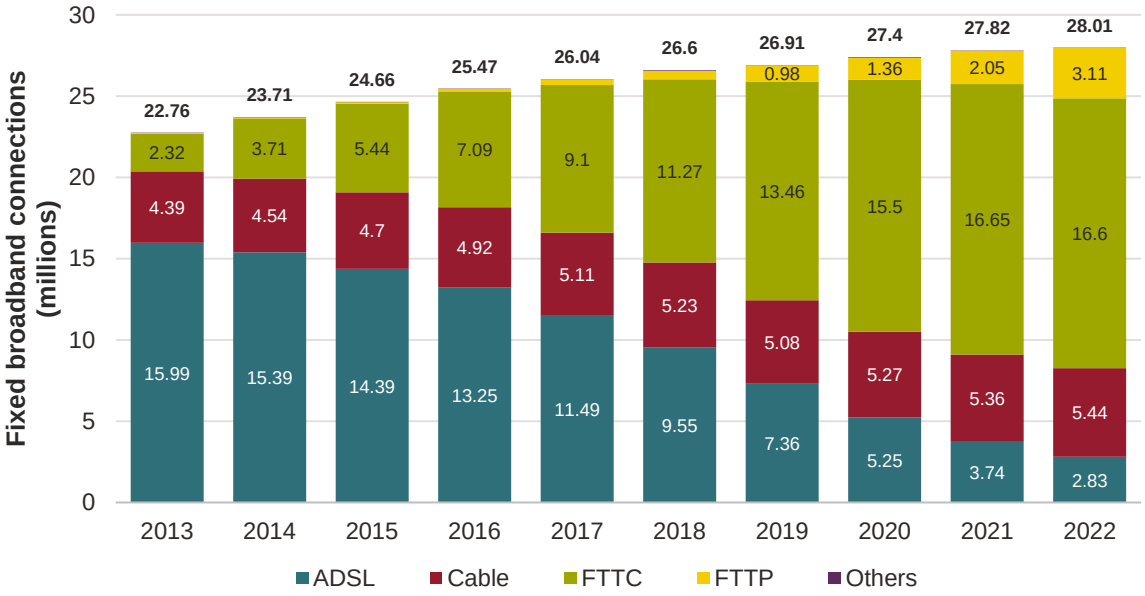
17 ADSL stands for Asymmetric Digital Subscriber Line, which is a copper-based fixed telecoms technology.

18 The existing offer effectively expired in August 2023, however, Openreach provides notifications of extensions beyond this date. See for example: https://d2haref.openreach.co.uk/cpportal/updates/briefings/general-briefings/gen01223 and https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=g1Bb8vnI3D6t%2BA6BA7O8WHV9tKFYwuns3hMTrq0X916rmMllOOG7b%2F12AmPFLBERe6YShZ82RgLOGLsH2e9%2Bmw%3D%3D

Migration away from ADSL will be largely complete, and a significant share of consumers migrated to higher-speed products

The number of consumers still taking ADSL services has continued to fall, with, under current trends, a negligible number remaining by 2026. This means that the initial rationale of keeping FTTC prices low to migrate end customers from ADSL to FTTC will have largely fallen away by 2026.

Figure 2 Change in mix of broadband connection technologies over time



Source: Frontier Economics analysis of Ofcom Communications Market Report 2023 data

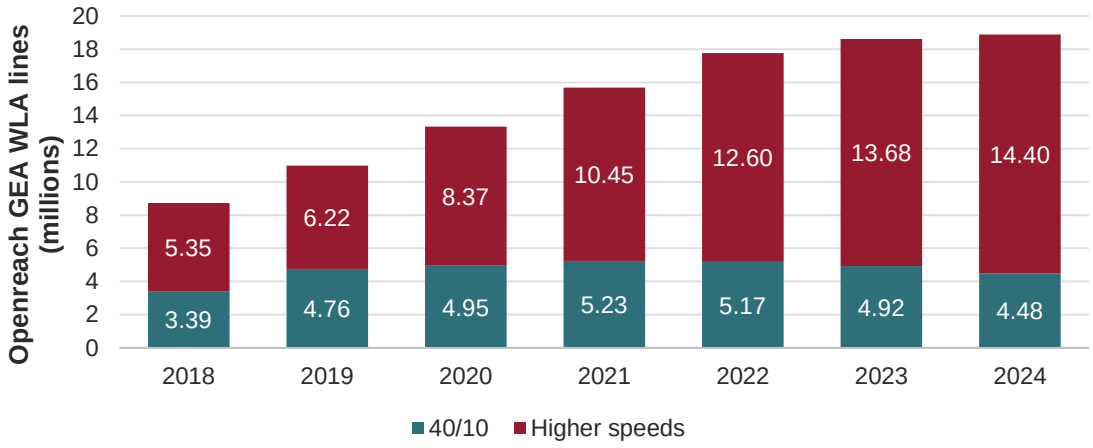
In addition, since WFTMR 21 there has been material FTTP network build by both Openreach and altnets. This has been coupled with migration of end customers to higher-speed products, both via migration from FTTC to FTTP, and from lower to higher-speed FTTC products: as of 2024, 30% of Openreach's FTTC WLA customers were served via the 40/10 product, with the rest on higher-speed FTTC products.[19] The share is expected to fall further by the time of the TAR review period[20], and of those remaining on the 40/10 product, we understand that some are unlikely to switch to higher-speed FTTC products for technical reasons – this is because speeds above 40/10 may not be technically achievable for these customers (e.g. due to their

19 BT Regulatory Financial Statement, 2024

20 WFTMR 21, Volume 4, paragraph 1.49

location relative to the nearest local exchange), meaning they would achieve little or no gain in quality from upgrading their package.[21]

Figure 3 Change in mix of Openreach GEA lines by speed over time



Source: *Frontier Economics analysis of BT Regulatory Financial Statements*
Note: *Includes GEA FTTC, FTTP and SOGEA lines in Area 2 and Area 3*

Taken together, this means that the initial rationale to keep higher-speed FTTC prices relatively low to migrate end customers to higher-margin 80/20 products will also have largely fallen away by 2026.

The expansion of Openreach's FTTP network means it has less incentive to keep FTTC prices low to retain ISPs on its network

As noted above, during the WFTMR 21 period Openreach had an incentive to limit the price of higher-speed FTTC prices in areas where it faced competition from altnets. This is because Openreach's FTTP roll-out was in its early stages, and significant FTTP build by altnets was expected, meaning it was possible that FTTP services would be available from altnets in a number of areas before these were available from Openreach. In addition, upgrades to VMO2's HFC[22] network have allowed significantly higher speeds than available on Openreach's FTTC network. As a result, lower prices on higher-speed FTTC products would act to incentivise ISPs to keep their end customers on Openreach's FTTC network in areas where Openreach had yet to roll out FTTP, rather than switch to altnets' FTTP products or VMO2. While Openreach had an incentive to raise FTTC prices over this period in areas where

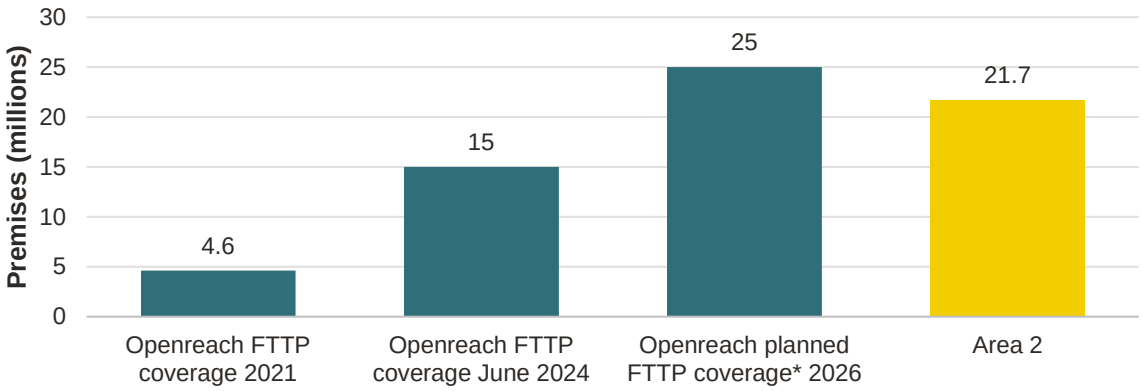
21 We understand from Sky that approximately 25% of FTTC lines are technically incapable of supporting speeds above 40 because of the copper line length from the cabinet.. Removing the 40 Mbit/s cap would only result in a noticeable improvement in speeds for about 66% of these end customers.

22 HFC stands for hybrid fibre-coaxial (i.e. cable)

there was little prospect of material WLA competition from VMO2 or altnets, Ofcom prohibited its ability to geographically target price reductions on FTTC rental charges.[23]

However, Openreach has now undertaken significant FTTP roll-out, and evidence suggests that by 2026, its network is likely to cover the majority of premises where material altnet build could be viable, as illustrated in Figure 4 below. BT's latest trading update revealed that Openreach's FTTP network now covers 15m premises, more than triple the premises it covered in 2021,[24] and Openreach has announced plans to deliver FTTP to 25m premises and businesses by 2026.[25] While Openreach does not report exactly where this network will be located, it has stated that that it would focus its FTTP roll-out first on urban and suburban areas where altnet build is likely most viable.[26] It is also reasonable to expect that Openreach's FTTP network will cover virtually all premises in Ofcom's defined Area 2 by 2026, given it has committed to cover 3.2m premises in Area 3 by 2025/26 - the remainder of its 25m planned coverage by 2026 is 21.8m, which matches the number of premises that Ofcom estimated were in Area 2 as part of WFTMR 2021 (21.7m).[27]

Figure 4 Openreach FTTP coverage and coverage plans since WFTMR21



Source: *Frontier Economics analysis of data in BT Annual Reports, Openreach press releases, and WFTMR 21 Volume 2*

Note: *Openreach planned FTTP coverage by 2026 includes both domestic and business premises. Openreach FTTP coverage figures refer to overall coverage across Ofcom-defined Area 2 and 3.*

23 WFTMR 21, Volume 4, paragraph 2.59

24 https://www.bt.com/bt-plc/assets/documents/investors/financial-reporting-and-news/quarterly-results/fy25/q1/q1-fy25-trading-update.pdf

25 https://www.openreach.com/fibre-broadband/where-when-building-ultrafast-full-fibre-broadband#accordion-9a5353362d-item-4ab4131165

26 For example, Birmingham, Bristol, Cardiff, Edinburgh, Leeds, Liverpool, London and Manchester made up the first phase of Openreach's FTTP roll-out starting in 2018, which aimed to connect up to 40 UK towns, cities and boroughs with FTTP. See: https://www.openreach.com/news/openreach-launches-fibre-first-programme-to-make-fibre-to-the-premises-broadband-available-to-three-million-uk-homes-and-businesses-by-the-end-of-2020/

The expansion of Openreach's network means that from 2026, Openreach will have a lower incentive to keep higher-speed FTTC prices lower, as raising such prices is less likely to result in ISPs and end customers switching to altnets or VM02. In particular, if higher FTTC prices resulted in ISPs and end customers being more likely switch to FTTP products, Openreach will now be able to retain these customers on its own FTTP network rather than losing them to altnets/VM02. The commercial FTTP price agreement that ISPs have with Openreach, Equinox, helps to ensure this, as ISPs are able to attain a significant discount on Openreach FTTP list prices if they migrate more end customers to Openreach's network. As such, Openreach is likely to have more of an incentive to raise the price of its higher-speed FTTC products post-2026 than it did over the WFTMR 21 period.

To the extent that ISPs pass on WLA price increases to end customers, raising FTTC prices could also lead to price discrimination that would increase Openreach profits: engaged consumers would switch away from FTTC to alternatives, including to Openreach FTTP, leaving less engaged, "more sticky" consumers who would not switch to face higher prices.

Consumer behaviour means 40/10 FTTC prices are unlikely to effectively constrain higher-speed FTTC prices

As noted above, Ofcom's rationale for placing a charge control on the 40/10 FTTC product was that this would act as an "anchor" on higher-speed FTTC products i.e. that consumers would be likely to downgrade to the 40/10 product if the price of the higher-speed products were raised significantly.

However, evidence suggests this is unlikely to be the case in reality.

The specifics of consumer behaviour means that consumers may choose not to downgrade speeds even in the event of very significant price increases

Whether a consumer would downgrade to the 40/10 product if Openreach were to significantly increase the price of higher-speed products is dependent on that consumer's willingness to pay to avoid downgrading speeds. The expectation that 40/10 prices would constrain the prices of higher-speed products is therefore predicated on peoples' willingness to pay to avoid downgrading speeds being somewhat similar to their willingness to pay to upgrade speeds.

However, empirical research and studies of consumer behaviour have demonstrated that this is unlikely to be the case in practice. Indeed, Ofcom has previously recognised that consumer behaviour may deviate from what standard models of consumer behaviour predict.[28]

[28] The existence of behavioural biases – and the implications for switching behaviour – has regularly been acknowledged by Ofcom. Ofcom's own qualitative research found that *"people tend to over-value what they have currently and under-value the benefits of an alternative"* – see: Ofcom (2020) Helping consumers get better deals, paragraph 2.18. Similarly, Ofcom recognised at WFTMR 21 that consumers' willingness to pay for higher-speeds may depend on whether they are already on a higher-speed product – see WFTMR 21, Volume 4, paragraph 1.58.

In particular, prominent experiments have shown that the minimum price that will lead to consumers being willing to give up, or sell, a good (also known as willingness to accept) is much higher than the price consumers are willing to pay to buy the same good.[29] This is sometimes referred to as the **"endowment effect"** or **"status quo bias"**, and stems from two consumer behaviours identified in the field of behavioural economics:

- **"reference dependence",** which is the tendency of consumers to assess the value of a product with reference to changes from a reference point (which in this context would be a consumer's current broadband package); and
- **"loss aversion"**, which refers to how consumers disproportionately focus on potential losses, rather than potential gains, when choosing between alternatives – i.e. consumers often seek to minimise losses rather than maximise gains when making decisions.[30] In this case, consumers may disproportionately focus on the reduction in speeds, and the potential implications of this on its user experience, when deciding between its current and lower speed broadband packages.

Other behavioural biases may also prevent consumers from downgrading to 40/10 broadband when faced with a price increase. In particular:

- **"present bias"**, where consumers place greater value on the present than the future (e.g. consumers may not switch broadband due to up-front switching costs, even if these will be more-than offset by longer-term benefits); and
- **"regret aversion"**, where consumers are averse to making decisions they consider they might ultimately regret.[31] Similar to loss aversion, in this context a consumer may be averse to downgrading speed given this risks of worsening its broadband user experience (such as causing more buffering on streamed videos, pauses in video calls), which it may then regret.

It follows that consumers may choose not to downgrade to the 40/10 product even in the event of very significant increases in prices for higher-speed products, thus meaning 40/10 prices are unlikely to effectively constrain higher-speed prices.

There is also evidence **that these behavioural biases disproportionately affect vulnerable customers, meaning these customers in particular may not downgrade their speeds**

29 See: Thaler, R. "Toward a Positive Theory of Consumer Choice." Journal of Economic Behavior and Organization 1 (March 1980): 39-60; Knetsch, J. L., and Sinden, J. A. "Willingness to Pay and Compensation Demanded: Experimental Evidence of an Unexpected Disparity in Measures of Value." Quarterly Journal of Economics 99 (August 1984): 507-21; and Levin, I. P., Schreiber, J., Lauriola, M., and Gaeth, G. J. "A Tale of Two Pizzas: Building up from a Basic Product versus Scaling down from a Fully-Loaded Product." Marketing Letters 13 (November 2002): 335-344.

30 Tversky, A., and Kahneman, D. "Loss Aversion and Riskless Choice: A Reference Dependent Model." Quarterly Journal of Economics 106 (November 1991): 1039-1061

31 See: Laibson, D. "Golden Eggs and Hyperbolic Discounting." Quarterly Journal of Economics 112 (May 1997): 443-477; and Loomes, G., and Sugden, R. "Regret Theory: An Alternative Theory of Rational Choice Under Uncertainty" Economic Journal 92 (December 1982): 805-824.

when faced with large price increases. For example, qualitative research by Ofcom has suggested that vulnerable customers are more likely to exhibit loss aversion and status quo bias than non-vulnerable customers.[32] Ofcom has also demonstrated that engagement is lower among vulnerable customers than non-vulnerable customers. For example, it found that 44% of vulnerable out-of-contract broadband customers have been out of contract for more than two years, compared to 37% of all out-of-contract customers.[33]

This is also supported by real-world evidence on UK broadband users

To test how real-world broadband consumers behave, we commissioned a survey of fixed broadband users on their preferences for broadband services, including their willingness to trade off the speed of their broadband package with prices.

- Each survey respondent was asked 8 questions, with each question providing a choice between their current broadband package (and current broadband retail price), and 3 other packages which differed in the speed and price. The prices of the alternative packages were randomised, but set within reasonable ranges based on the current prevailing prices for these packages in the UK market.
- Consistent with the theory above, responses showed that consumers are averse to downgrading the speed of their broadband service, even in response to large differences in prices: For example, of those currently on a 80Mbps product and chose to downgrade to 40Mbps in the survey, the average amount they were willing to accept to downgrade was approximately £11.40/month. This is significantly more than the average amount that respondents currently on the 40Mbps were willing to pay to upgrade to 80Mbps (approximately £5.30/month), and significantly larger than the current differential between Openreach's 80Mbps and 40Mbps FTTC WLA prices (approximately £1.10/month).

  This indicates that customers would be willing to pay a significant amount not to downgrade their speeds.

Given all of the above, we consider that Openreach's 40/10 FTTC prices are no longer likely to be an effective anchor for higher-speed FTTC prices. This is because the evidence suggests that even if Openreach were to significantly increase its higher-speed FTTC prices (which it will have the ability and greater incentive to do post-2026), this would not result in a material share of end customers downgrading to the 40/10 FTTC product, if these price increases were passed through to retail prices. Indeed, this is consistent with Ofcom's expectation at WFTMR 21 that "*the constraint imposed by the 40/10 charge control on higher bandwidths, where Openreach would have pricing flexibility, would gradually reduce over time*".[34]

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32 https://www.ofcom.org.uk/__data/assets/pdf_file/0018/168003/broadband-price-differentials.pdf

33 https://www.ofcom.org.uk/__data/assets/pdf_file/0031/199075/bb-pricing-update-july-20.pdf

34 WFTMR 21, Volume 4, paragraph 1.19

This means that under the continuation of the current regulatory approach, there is a risk that Openreach significantly increases the prices of higher-speed FTTC products after 2026. This would likely allow Openreach to increase overall ARPUs for FTTC services faster than CPI.

3.2 Larger increases in higher-speed FTTC prices are unlikely to stimulate material incremental FTTP investment by Openreach or by altnets

As noted in Section 2, Ofcom's rationale for allowing pricing flexibility for Openreach's higher-speed FTTC products (i.e. allowing greater-than-CPI price increases on these products vs inflation-based increases on the 40/10 product) was that this would encourage investment in FTTP roll-out by both Openreach and altnets. Ofcom considered that pricing flexibility could allow Openreach to set the overall level of prices higher, thereby increasing Openreach's incentive to build out its FTTP network. It could also encourage Openreach investment by allowing it to use raising FTTC prices as a means to prompt end-customer migration to FTTP. It would also encourage altnet investment by increasing the returns on this investment, either by allowing them to increase their prices, or by increasing their attractiveness to ISPs.

However, we consider that price increases greater than CPI on higher-speed FTTC products would be unlikely to stimulate material incremental FTTP investment by Openreach or altnets.

Greater-than-CPI price increases for higher-speed FTTC products would not materially increase the incentive for Openreach to invest in FTTP

There has been significant investment in FTTP roll-out over the WFTMR 21 review period so far. However, this has occurred under prices for higher-speed FTTC products which have increased in-line with CPI under the current GEA discount offer, and Openreach is planning additional FTTP roll-out to the majority of the UK before the end of the GEA discount offer period. This indicates that above-CPI price increases on FTTC products were not required to incentivise further investment in FTTP in the WFTMR 21 review period.

Furthermore, if Openreach increases its prices for higher-speed FTTC products once the existing GEA discount offer comes to an end, this can actually provide an incentive for Openreach to delay rather than increase investment in FTTP roll-out, especially in areas where it does not face actual or prospective altnet competition. This is because higher prices for higher-speed FTTC products would increase Openreach's returns on these legacy services, given as discussed earlier, remaining FTTC end customers are unlikely to downgrade to the 40/10 product, and are more likely to be "sticky" (and thus less likely to switch to FTTP if FTTC prices increase). The increase in higher-speed FTTC prices would also be unlikely to be matched by an increase in FTTP prices, particularly given FTTP prices are set by the Equinox contract. As such, increasing the price of higher-speed FTTC products would reduce the incremental returns from Openreach investing in FTTP.

Finally, raising FTTC prices to prompt end customer migration to FTTP is unlikely to provide an additional incentive for Openreach to invest in FTTP roll-out. Openreach has managed to migrate a significant share of end customers onto its FTTP network without raising (GEA discounted) higher-speed FTTC prices by more than inflation, and can already prompt ISPs to migrate end customers to its FTTP products via its copper retirement regime or by lowering FTTP prices for 'entry' FTTP products. The FTTP pricing structure under the Equinox 2 contract also encourages migration, by providing significant discounts for ISPs if they agree to use mainly Openreach's FTTP products for new orders instead of its legacy copper products.[35]

Altnets would not necessarily have additional incentives to invest in FTTP if higher-speed FTTC product prices increased by more than inflation

Larger increases in Openreach's higher-speed FTTC prices may also be less likely to incentivise material additional FTTP investment by altnets, going forward.

This is because a significantly larger share of FTTC customers will already have migrated to FTTP by 2026, and as such a much smaller number of customers will be on FTTC products than was the case at the time of WFTMR in 2021. This means that changes in FTTC prices will have a much lower impact on altnet investment business case (and thus investment decisions) than was the case over the WFTMR period. For example, to the extent that higher FTTC prices would incentivise customers to migrate to FTTP quicker (and thus give altnet an opportunity to grow the base on their networks quicker), this would have a smaller relative impact than in 2021, as the base of FTTC customers that this would effect will be smaller.

In the areas not covered by FTTP at that stage, altnets may also have a strong incentive to invest in FTTP roll-out regardless of the level of such prices, because they have an incentive to roll out their networks before Openreach does in these areas (and thus capture the pent-up demand for FTTP).[36]

Given the above, greater-than-CPI price increases for higher-speed FTTC products would be unlikely to materially increase FTTP investment, by either altnets or Openreach.

35 https://www.ofcom.org.uk/phones-and-broadband/telecoms-infrastructure/decision-on-openreach-equinox-2-pricing-offer/

36 Altnets may also be better able to retain these customers, given there may be barriers to ISPs switching a customer to another FTTP network. For example, switching network would require an additional connection to be installed an the end customers' premises, which would cause disruption for the end customer.

3.3 Under a continuation of existing pricing remedies, Openreach's FTTP pricing would be set by current contractual agreements

Regarding Openreach's FTTP WLA prices, we note that the current pricing remedies do not impose a cap on higher-speed FTTP prices, meaning absent other constraints, Openreach would have the ability to significantly increase these prices.

We however note that such prices are set by the Equinox 2 pricing contract, which defines the level and trajectory of each FTTP product price across all of Openreach's GEA-FTTP footprint, including any expansion in its FTTP network. The Equinox contract runs until 2031, and Openreach would not have the contractual right to vary the contract prices if Ofcom retains the current regulation on the anchor service i.e. does not move this from 40/10 to another service, or change the charge control on that service from a CPI control.[37]

Given this, if the current regulatory approach was to be continued, the Equinox offer would constrain Openreach from increasing higher-speed FTTP prices above the level prescribed by the offer over the TAR period.

3.4 Applying the current set of remedies from 2026 is unlikely to appropriately balance consumer protection and investment incentives

As outlined in Section 3.1, a continuation of the current pricing remedies will create a risk of Openreach increasing its prices for higher-speed FTTC products by significantly more than inflation after 2026.

Where such above-inflation increases are passed on to retail prices, this would directly harm consumers by increasing the cost of their broadband access. This would include vulnerable customers, which evidence suggests are less engaged in the market and are even less likely to downgrade their packages in response to price increases than other users. There would also be a harm to downstream competition, by reducing the relative competitiveness of ISPs competing with BT's retail business: an increase in WLA prices would increase costs and reduce profitability for competing ISPs, but would have little impact on BT Groups "end-to-end" profitability (as a vertically integrated operator, the wholesale price increase would simply re-assign profits from BT's retail arm to its wholesale arm).

However, the "cost" of the above-inflation FTTC price increases is unlikely to be offset by any material associated benefits, given as set out in Section 3.2, such increases are unlikely to stimulate material additional FTTP investment by altnets and Openreach compared to an outcome where overall FTTC ARPUs increased with CPI.

[37] Equinox contract, Clause 15.2. https://d2haref.openreach.co.uk/cpportal/updates/briefings/ultrafast/nga201721

As such, we consider the continuation of the current pricing remedies is unlikely to appropriately balance Ofcom's key relevant regulatory objectives.

4 Considerations for Ofcom when setting WLA pricing remedies in the TAR

Given the above, Ofcom should consider alternative packages of remedies which provide greater protection for consumers while providing certainty for all stakeholders: Openreach, ISPs, altnets and end users. Potential remedies could include:

- charge-controlling the 80/20 FTTC product, either as the 'anchor' or as part of a broader basket of FTTC services;[38]
- retaining the 40/10 anchor but implementing additional remedies to prevent Openreach from rapidly increasing the effective differential between 40/10 and higher-speed FTTC services on the expiry of the current discount offers.

These remedies should constrain Openreach's ability to significantly increase high-speed FTTC prices, for example through ensuring Openreach's prices across FTTC products post-2026 are constrained to increasing with inflation, consistent with the trajectory of these prices over the WFTMR 21 period.

This would protect end customers, by constraining increases in retail prices to the extent that ISPs would pass on wholesale FTTC price increases to consumers, and would be unlikely to dampen FTTP investment, given above-inflation increases in prices for FTTC products are unlikely to drive material additional FTTP investment by Openreach or altnets beyond 2026. This could in fact improve investment incentives, given it would provide greater certainty on the future overall FTTC price level. This, in turn, would provide both Openreach and altnets with greater certainty about the returns they could expect from FTTP investment going forwards.

We understand that, under current contractual arrangements, Openreach reserves the right to amend its FTTP prices as set out in Equinox 2 (i.e. re-open the contract) if the anchor changes from 40/10 to another product as a result of a regulatory change, or if the control on that product is changed from a CPI-0% control.[39] As such, if Ofcom were to move the charge control from the 40/10 product, it is possible that prevailing FTTP prices could be affected.

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38 A weighted-average approach could provide Openreach with some discretion in how exactly it structures its FTTC WLA prices, subject to the overall price cap. This would allow Openreach additional flexibility for sending price signals to ISPs and end-customers (e.g. incentivising ISPs to migrate customers onto higher-speed FTTC products).

39 See Equinox 2 FTTP Offer Contract terms and conditions, Schedule 1, paragraph 15.2. See: https://d2haref.openreach.co.uk/cpportal/updates/briefings/ultrafast/nga201721