

Promoting competition and investment in fibre networks: Telecoms Access Review 2026–31

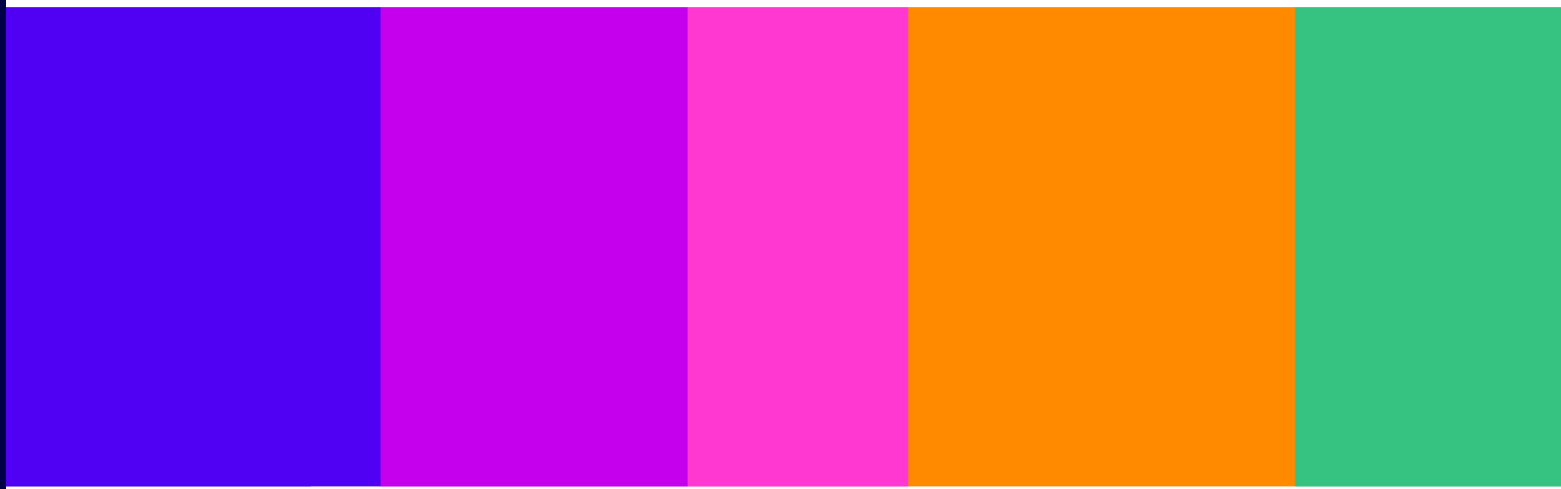
Volume 2: Market definition and SMP
assessment

Non-confidential version for publication [X]

Statement

Published 17 March 2026

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1. Introduction and our approach to market analysis

- 1.1 In this volume (Volume 2) we set out our reasoning and decisions on identifying product and geographic markets. We also set out our significant market power (SMP) analysis for the markets we are reviewing in the UK (excluding the Hull Area).¹ These markets are:
- physical infrastructure
 - wholesale local access (WLA)
 - leased line access (LLA)
 - inter-exchange connectivity (IEC)
- 1.2 The remedies we have decided to impose, in light of our SMP findings, are set out in Volumes 3, 4, 5 and 6.²
- 1.3 This section provides an introduction to Volume 2 and sets out some of the more detailed themes of our approach to market definition.

Scope of the telecoms access market review

Residential and business services included in this review

- 1.4 In this review, we are considering telecoms services providing broadband connectivity at a fixed location. These locations include residential and business premises. Retail services delivered over broadband connections include landline, broadband and TV for residential consumers; and for smaller businesses, services include landline and broadband (often in packages offering different speeds and packages tailored to the needs of businesses).³
- 1.5 Broadband services are typically provided over a local access network and there are many different local access network technologies, each with different capabilities. The main access network technologies are copper wires, fibre-to-the-cabinet (FTTC) which uses a combination of copper wires and fibre cables, hybrid fibre-coaxial (HFC) cable and full fibre (fibre-to-the-premises (FTTP)). This review covers all of these access network technologies.
- 1.6 Over the past two decades, access networks have been developing to support increasingly higher broadband speeds, and the latest developments are able to support speeds of 1,000

¹ When we refer to the UK, throughout this document, we mean the UK excluding the Hull Area (i.e. the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc (KCOM)). We separately found that KCOM had SMP in various markets in the Hull Area in October 2021. See Ofcom, 2021. [Statement: Promoting competition in fibre networks – Hull Area Wholesale Fixed Telecoms Market Review 2021-26](#). We are considering the Hull Area markets for the period 2026-31 in a separate review and consulted on our proposals in December 2025. [Consultation: Promoting competition and investment in fibre networks – Hull Area Review 2026-31](#).

² As we did not make any market power determination in the WFTMR21 for the markets for wholesale fixed analogue exchange lines (WFAEL), wholesale integrated services digital network (ISDN2 and ISDN30), and wholesale broadband access (WBA), they are not included within this review.

³ Landline phone calls are increasingly delivered over digital technology, called Voice over Internet Protocol (VoIP), using broadband services. Ofcom. 30 May 2025. [Moving landline phones to digital technology: what you need to know](#). Accessed 13 January 2026.

Mbit/s (1 Gbit/s) or more. Accordingly, these latest networks are referred to as gigabit capable. The two main access network technologies that are gigabit-capable are HFC and FTTP.

- 1.7 In addition, larger businesses sometimes use an uncontended connection, usually fibre, known as a 'leased line', for high-capacity data services. We also consider these leased line services in this review.
- 1.8 Telecoms services provided to consumers on the move are not part of this review. However, wireless connections (using mobile, satellite or fixed wireless access technology) may be used to deliver some retail services at a fixed location (for example, to deliver landline services and to provide broadband connections for some residential consumers and businesses) and we therefore take these into account where relevant in this review.
- 1.9 We give an overview of the broadband and leased line markets in Section 2 of this Volume.

Markets to be reviewed

- 1.10 In this review we are considering the wholesale markets that support retail telecoms services provided at fixed locations, not the whole value chain for fixed telecoms retail services.
- 1.11 In particular, we are reviewing the following markets:
 - The physical infrastructure market: wholesale access to telecoms physical infrastructure, such as underground ducts or telegraph poles, that can be used for deploying a telecoms network.
 - The wholesale local access (WLA) market: wholesale services used by telecoms providers to sell broadband to residential consumers and smaller businesses.
 - The leased line access (LLA) market: wholesale services used by telecoms providers to sell high quality, uncontended capacity and high-speed lines, typically more suited to larger businesses.
 - The inter-exchange connectivity (IEC) market: wholesale services used by telecoms providers to carry broadband traffic between BT exchanges located in different geographic areas.
- 1.12 The most upstream wholesale market is the physical infrastructure market while the three downstream wholesale markets are the WLA, LLA and IEC markets. The retail markets encompass services for residential consumers and businesses customers (e.g. standalone broadband or a bundle of broadband and landline services) and are further downstream from the three wholesale downstream markets. They are not part of this review.

Approach to market definition

- 1.13 In this section we set out our approach to defining and analysing markets. We start our review by considering the market context, this includes an analysis of both the relevant retail and wholesale markets.
- 1.14 We start our wholesale market analysis with the market for physical infrastructure, as this is the most upstream market. This reflects our preferred approach to regulation, which is to intervene at the most upstream level of the value chain to minimise regulation in

downstream markets and to promote competition as far back into the network as possible.⁴ We then consider each of the WLA, LLA and IEC markets in turn.

- 1.15 For each wholesale market we review, we define a product and a geographic market. We start by defining a product market. We do so using the hypothetical monopolist test. We refer to the starting point for the application of the hypothetical monopolist test as the ‘focal product’, which is typically the narrowest potential market definition.⁵
- 1.16 Next, we define different geographic markets, reflecting the different competitive conditions arising in each product market. We do so by identifying areas within which competitive conditions are sufficiently homogenous, such that they can be distinguished from neighbouring areas in which competition conditions are appreciably different.⁶
- 1.17 In response to the March 2025 Consultation, a limited number of stakeholders submitted responses relating to our approach to market definition.⁷ Where these comments relate generally to our approach, we address these comments in the following sections. Where these comments relate to specific markets, we address the comments in the relevant section.

Retail markets

- 1.18 In its response to the March 2025 Consultation, Openreach noted that that we had not assessed whether downstream retail markets are competitive or already regulated, which it argued is essential under the modified Greenfield approach, and essential for proper upstream market definition and assessing SMP.⁸
- 1.19 When identifying wholesale markets, we start with an analysis of whether the corresponding retail markets are prospectively competitive in the absence of wholesale regulation based on a finding of SMP.⁹ Consistent with our approach in previous market reviews, we do not consider it necessary to formally define retail markets to do so.
- 1.20 In this review, the relevant retail services are those supported by fixed line connections, including fixed broadband services and leased lines services.
- 1.21 Our assessment is that, without any upstream wholesale SMP regulation, the retail market would not be competitive over the review period. It is a feature of these markets that there are high costs of building telecoms infrastructure, especially the physical infrastructure necessary to deploy telecoms networks, as illustrated by the fact that many new network

⁴ This approach to defining markets is broadly consistent with the WFTMR21 and has been set out in more detail in the 2019 PIMR Statement (for more details, see: Ofcom. 2019. [Promoting competition and investment in fibre networks: review of the physical infrastructure and business connectivity markets](#). Volume 1, Paragraphs 3.9-3.21).

⁵ See Annex 1 for more detail.

⁶ See Annex 1 for more detail.

⁷ Whereas in general stakeholders supported our approach to market analysis, Openreach was the only stakeholder to comment broadly on our approach to market analysis. See [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 2. Paragraph 8; [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 6-8. Question 2.6; [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 4; [Consumer Scotland](#) response to TAR26 March 2025 Consultation. Page 6; [Scottish Government](#) response to TAR26 March 2025 Consultation. Page 2; [FCS](#) response to TAR26 March 2025 Consultation. Page 2; [TechUK](#) response to TAR26 March 2025 Consultation. Page 5. Question 2.10.

⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 2 and 10.

⁹ This is explained in Annex 1.

deployments since the WFTMR21 have relied on regulated access to BT's physical infrastructure at least to some degree.

- 1.22 Absent regulation, the providers of retail services would likely be those providers that operate both their own networks and physical infrastructure, and therefore retail competition would not be effectively competitive.
- 1.23 Considering in turn each of broadband services and leased line services:
- a) For broadband services, retail competition would predominantly be driven by BT Group and VMO2, as vertically integrated providers which have built networks using their own physical infrastructure. As set out in Volume 2, Section 4, while there has been significant deployment of new networks since the WFTMR21, many new network deployments rely on regulated access to BT Group's physical infrastructure to some degree. The high cost of replicating such infrastructure means that, in the absence of regulation, we would not expect to see the necessary rival investment or rollout of new physical infrastructure by vertically-integrated providers to mean that the retail market is prospectively competitive over this review period.
 - b) For leased lines, retail competition would again likely be largely driven by vertically integrated providers which have built networks using their own physical infrastructure. This is also likely to be predominantly driven by BT Group and VMO2, although there are some areas where vertically integrated networks other than BT Group and VMO2 are present which have built their own physical infrastructure. Nonetheless, we consider that the high cost and time required to replicate such infrastructure means that in many areas – absent regulation – there is unlikely to be sufficient build of new physical infrastructure by vertically integrated providers to mean that the retail market is prospectively competitive in this review period.

Modified Greenfield approach

- 1.24 Openreach submitted that we had misapplied the modified Greenfield approach in our market analysis.¹⁰
- 1.25 We do not agree with this. As set out in Annex 1, when defining a market and assessing SMP, we apply principles that are commonly referred to as the modified Greenfield approach.¹¹ In practice, this means that we identify and analyse a market on the assumption that no SMP regulation exists in that particular market. This avoids a risk of circularity in our assessment. Precisely how this applies in each case depends on the particular circumstances of the market being assessed, and we set out how we have applied this approach in the relevant sections below.¹²

¹⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 85-87.

¹¹ We note that the term "modified Greenfield" is not a statutory term or term of art. See [British Telecommunications PLC v Office of Communications \(VULA\) \[2016\] CAT 3](#), at paragraph 146.

¹² We note that our approach is consistent with English case law (see [Hutchison 3G UK Ltd v The Office of Communications](#) [2009] EWCA Civ 683 and [British Telecommunications PLC v Office of Communications \(VULA\) \[2016\] CAT 3](#)). It is also consistent with the European Commission's SMP Guidelines. We disagree with aspects of Openreach's submission in relation to how it says the modified Greenfield approach applies.

Market reviews are forward-looking

- 1.26 When defining a market, we are required to conduct a forward-looking assessment, taking into account expected or foreseeable developments that may affect competition in the market over the review period.¹³
- 1.27 As discussed in more detail in the relevant sections, there is inherent uncertainty in defining forward-looking geographic markets, particularly during a dynamic period in which network competition is still developing. In particular, the evidence indicates that the development of competitive conditions in both the WLA and LLA markets over the review period is uncertain due to several factors. For example:
- a) Whether, when and where further planned deployment will materialise, and how this will affect the geographic variation in competitive conditions.
 - b) The extent to which existing or new competitors will be able to compete in relevant markets. In particular, having deployed their networks, whether new competitors will be able to overcome market-specific barriers to attract, connect and retain customers.
 - c) Timing and form of altnet consolidation and how any consolidation will affect the strength and footprint of different competitors.
 - d) Potential entry or exit of competing networks.
- 1.28 We disagree with Openreach's view that our market definition is overly reliant on current market shares and not sufficiently forward-looking.^{14 15 16 17}
- 1.29 When defining each of the relevant markets, we consider whether there is a sufficient likelihood that expected changes in competitive conditions will materialise during the review period. In doing so, we exercise our regulatory judgment, taking into account indications from any reliable and (as far as possible) recent evidence that is available to us in relation to future market developments.¹⁸
- 1.30 We are also mindful that market boundaries should be clearly identifiable and consistent over time. A key part of our assessment, informing our decision of whether to define sub-national markets, is whether we expect appreciable differences in competitive conditions between different geographic areas that are sufficiently clear and stable over time such that it would be appropriate to reflect them in a five-year forward-looking market definition.¹⁹ Basing market definition on temporary fluctuations in prices, take-up, or performance metrics would risk mis-characterising competition over the review period.

¹³ See Annex 1.

¹⁴ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 23. Paragraph 67.

¹⁵ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 8-9. Paragraphs 11-17.

¹⁶ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026](#). Pages 3 and 8.

¹⁷ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 11-15. Paragraphs 24-36.

¹⁸ We note that this is also broadly consistent with the approach set out in the [Commission Notice on the definition of the relevant market for the purposes of Union competition law](#) (C/2024/1645), paragraph 77.

¹⁹ We note that this is also broadly consistent with [Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services](#) (2018/C 159/01), paragraph 50 and Commission Staff Working Document, [Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services](#) (C(2018) 2374 final), page 21.

- 1.31 We have gathered updated evidence to ensure our assessment is based on the latest and most reliable information. We set out what this evidence is in greater detail in the following sections on market definition.

Factors affecting competitive conditions in wholesale access markets

- 1.32 On a forward-looking basis, network presence alone is not necessarily enough for competitive conditions to be different in a particular geographic area.²⁰ Instead, competitive conditions in different geographic areas in the WLA and LLA markets are determined by the materiality and sustainability of the competitive constraint that the networks present in those areas have the ability or the potential to exert.
- 1.33 The materiality of the competitive constraint hinges on whether a network has the ability, or the potential, to sufficiently overcome the market-specific barriers to entry and expansion and gain a material share of demand over the review period. While some of these barriers are market-specific, in both WLA and LLA they go beyond the high costs of building a network, and include barriers to attract, connect and retain customers. Therefore, we disagree with Openreach that, in principle, any network that has deployed fibre or plans to do so in the foreseeable future is likely to act as a material competitor, given that the network may be ineffective in competing for customers.
- 1.34 We also assess sustainability of the constraint. Since our approach to market definition is forward looking we need to assess not only whether providers can compete on price and quality to gain market share today, but also whether they can continue to do so over the review period, in the absence of regulation.²¹ Alongside materiality, sustainability is therefore central to our assessment of competitive conditions on a forward-looking basis over the review period: until a network has the ability to operate viably and to continue offering competitive prices and quality in the future, uncertainty remains as to whether any constraint it poses will persist.²²
- 1.35 We therefore also disagree with Openreach that, in principle, every network is a sustainable constraint.²³ In Openreach's view, once a network is built, even if it is not successful under any given ownership, it would be acquired by another network, and therefore is always a lasting constraint.
- 1.36 However, firstly, as we explain above, the mere presence of a network is not enough for there to be material and sustainable competition, as this depends on whether the network is able to exert such a constraint.

²⁰ Several stakeholders commented on this in the LLA context and expressed agreement. [INCA](#) response to TAR26 March 2025 Consultation. Page 69. Paragraph 268. [PXC](#) response to TAR26 March 2025 Consultation. Paragraphs 3.2-3.5. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 104. Openreach disagrees with this. [Openreach](#) response to TAR26 November 2025 Consultation. Paragraph 34.

²¹ See the discussion of the modified Greenfield approach above.

²² We agree with Openreach that a network may gain this ability through consolidation, should consolidation make the network sustainable. [Openreach](#) response to TAR26 November 2025 Consultation. Paragraph 34.

²³ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 21-22. Paragraph 60-64. [Openreach](#) response to TAR26 November 2025 Consultation. Paragraph 34.

1.37 Secondly, it is not necessarily the case that every network would in fact be acquired. It is also possible that a consolidation could lead to the loss of a competitive constraint, as may be the case if a network is consolidated with another network with which it overlaps.

Structure of the rest of this volume

1.38 The rest of this volume is structured as follows:

- Section 2 gives an overview of the market context.
- Section 3 considers the physical infrastructure market.
- Section 4 considers the wholesale local access market.
- Section 5 considers the leased line access market.
- Section 6 considers the inter-exchange connectivity market.
- Section 7 sets out the competition concerns arising from our proposed findings that BT has SMP in each of the relevant markets.

1.39 In Sections 3, 4, 5, and 6, we begin with completing our product and geographic market definition. We then turn to assessing SMP in the geographic market. Throughout this volume, we have taken stakeholders' feedback into account when making our decisions.

2. Market context

2.1 In this section, we set out background information on the retail and wholesale markets for the provision of broadband and leased line services. This covers:

- For broadband services:
 - > Structure of the broadband market
 - > Retail and wholesale broadband availability
 - > Retail and wholesale broadband take-up
 - > Retail broadband pricing
 - > Broadband consumers attitudes and usage
 - > Alternative technologies delivering fixed telecoms services
- For leased line services:
 - > Structure of the leased line market
 - > Service take-up and usage

Broadband

2.2 As set out in Section 1, our review considers telecoms services provided at a fixed location. These are delivered over a variety of technologies, and can deliver a range of services, including broadband.

2.3 In this section we give some additional context on the broadband market.

Structure of the broadband market

The broadband supply chain

2.4 There are many providers involved in delivering broadband services, as outlined in Figure 2.1. These providers range from those that build and operate the network infrastructure itself, to those that provide the services to consumers.²⁴ Some providers operate at all levels of the value chain (i.e. vertically integrated network operators), while others operate only in parts of the value chain (e.g. wholesale providers).²⁵ In recent years, many new network operators have entered the market, deploying alternative network infrastructure for wholesale and/or retail provision of broadband services. These newer providers are known as altnets.²⁶

2.5 We explain the different types of providers operating in the broadband value chain in more detail below. We describe the functions of physical infrastructure operators, network

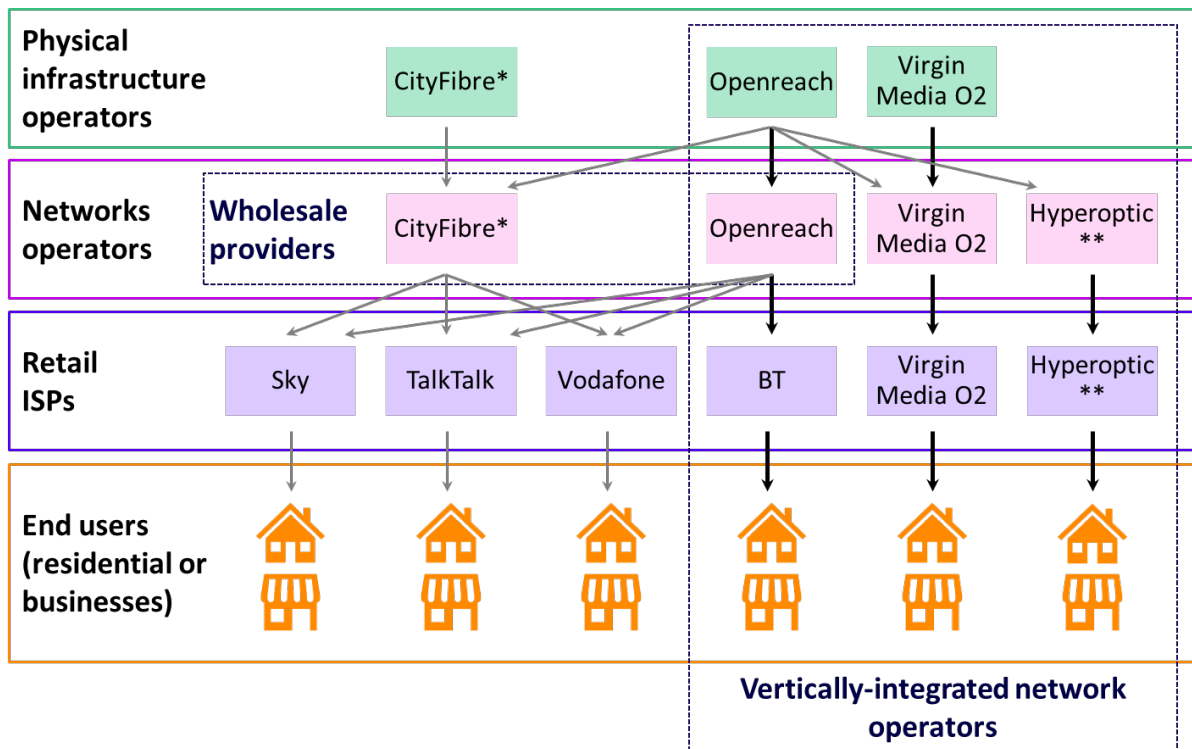
²⁴ When referring to consumers throughout this broadband section, we mean residential consumers and businesses that use broadband services similar to residential consumers, unless otherwise specified.

²⁵ The upstream part of the market is for wholesale services, which are those services that telecoms providers provide for themselves and sell to each other. The most downstream part of the market is retail services – those sold directly to residential consumers and businesses.

²⁶ Altnet is short for an alternative network provider which is not Openreach or Virgin Media O2. An altnet is an organisation operating within the UK that builds its own network infrastructure for wholesale and/or retail provision of broadband services. Some altnets also offer leased line services, and we refer to these as multi-service networks.

operators, and the retail internet service providers (ISPs), as well as the difference between vertically integrated network operators and other types of providers.

Figure 2.1: Broadband supply chain – examples only



Source: Ofcom. 2026.

Notes: Companies included in the diagram are provided **as examples only** and are not intended to provide an exhaustive picture of the broadband telecoms market. *CityFibre uses a mix of self-build and PIA. **Hyperoptic uses PIA and Openreach leased lines. ²⁷

Physical infrastructure operators

- 2.6 Physical infrastructure operators build and operate the infrastructure in which telecoms networks equipment is deployed, such as ducts and poles.
- 2.7 Network operators (discussed below) may build their own physical infrastructure for their own use or use by other network operators. Network operators may also use third parties' physical infrastructure, or a combination of this and their own physical infrastructure.
- 2.8 As discussed in Volume 3, Section 5, Openreach is currently mandated to provide specific network access in the form of physical infrastructure access (PIA). As mentioned in Volume 1, as of December 2025, more than 150 providers had already deployed network using access to Openreach's physical infrastructure (or had placed orders to do so). These providers had ordered 211,000 km of duct, and over 145,000 km had already been used. They had ordered approximately 1.4m attachments to poles, of which more than a million attachments had already been used. ²⁸

²⁷ Hyperoptic. May 2023. [Hyperoptic Response: Ofcom Consultation – Improving broadband information for consumers](#). CityFibre. June 2022. CityFibre Blog. [Repurposing yesterday's network for our Full Fibre future](#). Accessed 6 March 2026.

²⁸ Openreach PIA Usage Report for Q3 2025/26 received 16 January 2026.

2.9 Different providers use PIA to different extents. Some providers may use a combination of self-build and PIA (such as CityFibre), and others may use mostly PIA.²⁹

Wholesale-only providers

2.10 Network operators build and operate their own fixed telecommunications networks.

2.11 Some network operators are **wholesale providers**; wholesale providers do not sell broadband services directly to end-users, but instead sell network access to retail ISPs who then sell broadband services to residential consumers and small businesses.³⁰

2.12 **Openreach** operates BT Group's network. It is the largest wholesale provider in the UK with near-universal coverage and provides wholesale services to over c.650 retail ISPs.³¹ We discuss Openreach and BT Group in more detail below.

2.13 Other examples of wholesale providers include CityFibre and nexfibre:

- **CityFibre** currently covers 4.7m premises and plans to cover 8m premises.³² CityFibre provides wholesale services to a large number of retail providers, including TalkTalk, VodafoneThree, Sky and Zen.³³
- **nexfibre**³⁴ currently covers 2m premises and is targeting 5m premises by 2026.^{35 36} Virgin Media O2 (VMO2) acts as the anchor tenant for nexfibre's build, and in April 2025, giffgaff was announced as nexfibre's second wholesale customer.³⁷ nexfibre intends to make its network available to other ISPs in the future.³⁸

Vertically integrated network operators

2.14 Some network operators are vertically integrated, meaning they control all stages of broadband service delivery, from owning or using physical infrastructure, to selling directly to consumers and businesses. Examples of vertically integrated network operators include

²⁹ CityFibre. 14 June 2022. [Repurposing yesterday's network for our full fibre future](#). Accessed 23 February 2026.

³⁰ Among businesses, broadband services are primarily used by micro and small businesses, and larger businesses more likely to use leased lines, which are discussed later in this volume.

³¹ Openreach. [Openreach website](#). Accessed 8 December 2025.

³² We note that CityFibre distinguish between 4.7m premises passed by their network, 4.5m premises that are ready for service (RFS), and CityFibre's RFS consumer footprint of 4.15m premises. CityFibre. [CityFibre delivers record performance in 2025](#) Accessed 10 February 2026.

³³ VodafoneThree refers to the combined business created as a result of the 2025 merger between Vodafone and Three in the UK. Vodafone Group Plc and CK Hutchison Group Telecom. 2 June 2025. [Completion of Vodafone and Three merger in the UK](#).

³⁴ nexfibre is a joint venture between InfraVia Capital Partners, Liberty Global and Telefónica. nexfibre. [About nexfibre](#). Accessed 27 February 2025. VMO2 is a 50:50 joint venture between Liberty Global and Telefónica SA. VMO2. [Hello, we're Virgin Media O2](#). Accessed 27 February 2025.

³⁵ nexfibre. 9 January 2025. [Nexfibre network passes 2 million premises](#). Accessed 14 January 2025. According to our own data gathered for TAR26, discussed further in Volume 2, Section 4 and Annex 18, nexfibre covered [X] of premises and planned to cover [X] by 2031.

³⁶ FTTP refers to fibre-to-the-premises, however this can also be referred to as fibre-to-the-home (FTTH), fibre-to-the-building (FTTB) or full fibre. See Annex 18, Glossary, for the full definition.

³⁷ nexfibre. [nexfibre welcomes giffgaff to its next generation wholesale platform](#). Accessed 9 January 2026.

³⁸ In February 2026, the owners of the VMO2 network (Liberty Global and Telefonica), and InfraVia, agreed to acquire Substantial Group (including the Netomnia network footprint and retail brands YouFibre and Brsk) through their existing joint venture, nexfibre. The deal is not yet complete and subject to regulatory approval. VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

BT Group, VMO2 and some of the altnets deploying FTTP, such as Netomnia/Brsk,³⁹ Hyperoptic or Community Fibre.

- 2.15 BT Group is the largest vertically integrated network operator. The group includes the upstream wholesale entity, Openreach, which manages BT's network. Since 2018, it has been a separate subsidiary within BT Group.⁴⁰ Openreach's network previously used primarily copper-based technologies,⁴¹ including FTTC (explained below), but in the last few years, Openreach has been deploying a new network using fibre cables running directly to premises (FTTP). Openreach has already deployed FTTP to 21m premises and plans to build to 25m by the end of 2026.⁴² In addition, BT Group recently announced plans to extend full fibre to 30 million premises, beyond the existing 25m target.⁴³ The Openreach network is used by downstream retail divisions of BT Group (e.g. BT, EE, Plusnet) who sell services directly to consumers, as well as other retail ISPs and network providers.
- 2.16 VMO2 is currently the second largest vertically integrated network operator. As outlined above, VMO2 has entered an agreement with nexfibre whereby nexfibre will carry out VMO2's new FTTP build (in areas where VMO2 is not already present) with VMO2 operating as a build partner.
- 2.17 VMO2 and nexfibre are separate companies, and nexfibre can sell its services to other ISPs and [redacted].⁴⁴ In areas where nexfibre is or plans to be present, VMO2 will act as wholesale customer of nexfibre (as the anchor tenant) and use nexfibre network to provide broadband services. Due to the arrangements between them, we use the combined VMO2 and nexfibre data on coverage and active lines, unless specified (e.g. Figure 2.5).⁴⁵ They also have common shareholders.⁴⁶
- 2.18 In February 2026, the owners of the VMO2 network (Liberty Global and Telefonica), and InfraVia, agreed to acquire Substantial Group (including the Netomnia network footprint and retail brands YouFibre and Brsk) through their existing joint venture, nexfibre. As the

³⁹ We refer to the Substantial Group companies as Netomnia/Brsk. Substantial Group companies include BRSK Limited and Netomnia Limited which provide upstream network services, and BRSK ISP Limited and Youfibre, which provide downstream ISP retail services. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. p.1. In February 2026, the owners of the VMO2 network and InfraVia agreed to acquire Substantial Group through their existing joint venture, nexfibre. As the deal is not yet complete and subject to regulatory approval, we continue to consider the Netomnia network footprint as separate from VMO2/nexfibre. VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

⁴⁰ Openreach became a separate subsidiary in BT Group as a result of commitments that BT made to give Openreach greater strategic and operational independence from BT Group to address competition concerns identified by Ofcom in 2016. For more details, see annual reports by Ofcom's [Openreach Monitoring Unit](#).

⁴¹ Copper-based broadband: A broadband service where the physical connection between the local access aggregation node and the network termination equipment (NTE) comprises copper wires either in whole or in part. Openreach products used to deliver copper-based broadband include, but are not limited to LLU, SLU, MPF/SMPF, FTTC, G.fast, SOTAP, SOGEA, and SOG.fast.

⁴² BT. 5 February 2026. [Results for the nine months to 31 December 2025](#). Accessed 25 February 2026.

⁴³ BT. 12 February 2026. [Chancellor welcomes BT's investment into the UK's best networks](#). Accessed 13 February 2026.

⁴⁴ ([redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted])

⁴⁵ In Section 4, we explain that we use the combined VMO2 and nexfibre data on coverage and active lines for the purpose of defining geographic markets and assessing SMP (i.e. we treat the nexfibre footprint as no different to if VMO2 were expanding its footprint directly).

⁴⁶ nexfibre is a joint venture between InfraVia Capital Partners, Liberty Global and Telefónica. Liberty Global and Telefónica own VMO2.

deal is not yet complete and subject to regulatory approval, we continue to consider the Netomnia network footprint as separate from VMO2/nexfibre.⁴⁷

- 2.19 Together, VMO2 and nexfibre cover over 18.8m premises nationwide.⁴⁸ VMO2 operates a mainly Hybrid Fibre Coaxial network (HFC, explained below) covering most urban areas of the UK. It announced in 2021 that it would be upgrading its HFC network to FTTP by 2028.⁴⁹ As discussed above, VMO2 is also expanding its retail coverage as the anchor tenant for the FTTP network being deployed by wholesale altnet nexfibre. As of February 2026, VMO2 and nexfibre's combined FTTP coverage was 6.4m premises.⁵⁰
- 2.20 Many altnets are also vertically integrated, owning or using physical infrastructure as well as selling directly to consumers and/or businesses. Examples of vertically integrated altnets include Netomnia/Brsk, Community Fibre and Hyperoptic.
- 2.21 Some vertically integrated operators also offer wholesale access, in addition to selling services directly to consumers. In September 2025, VMO2 launched a specialist business unit dedicated to wholesale services.⁵¹ Some vertically integrated altnets also offer wholesale access, or have plans to do so. For example, Community Fibre has a wholesale agreement with VodafoneThree.⁵² Netomnia/Brsk has created a B2B wholesale platform, opening up access to its network to ISPs and other business providers.⁵³

Retail internet service providers (ISPs)

- 2.22 Retail ISPs provide residential consumers and small businesses with broadband services. Retail ISPs include both providers that use their own networks (which are the vertically integrated network providers discussed above), and those that use others' networks to provide retail services. Retail ISPs may also provide other services that use a broadband connection such as digital landlines or streaming services.
- 2.23 The majority of residential consumers and small businesses purchase broadband services from a small number of large retail ISPs. Table 2.1 below shows the market shares of ISP below.

⁴⁷ Virgin Media O2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2025.

⁴⁸ Virgin Media O2. 18 February 2026. [Virgin Media O2 Q4 2025 Financial Results](#). Accessed 6 March 2026.

⁴⁹ Virgin Media O2. [Virgin Media O2 bolsters future network with fibre upgrade plan](#). Accessed 15 January 2025.

⁵⁰ <https://news.virginmediao2.co.uk/wp-content/uploads/2025/02/Virgin-Media-O2-Q4-FY-2024-Earnings-Release.pdf> Virgin Media O2. 18 February 2026. [Virgin Media O2 Q4 2025 Financial Results](#). Accessed 6 March 2026. According to our own data gathered for TAR26, discussed further in Volume 2, Section 4 and Annex 18, VMO2 covered [redacted] of premises and planned to cover [redacted] by 2031. VMO2 response dated [redacted] to s135 notice dated [redacted], question [redacted] and Nexfibre Networks Limited response dated [redacted] to s135 notice dated [redacted], question [redacted]

⁵¹ Virgin Media O2. 17 September 2025. [Virgin Media O2 brings together new team to challenge the fixed wholesale market](#). Accessed 17 November 2025.

⁵² Community Fibre. 28 August 2025. [Community Fibre launches strategic wholesale agreement with VodafoneThree](#). Accessed 17 February 2026.

⁵³ Netomnia. 12 August 2025. [Netomnia Launches B2B Wholesale Platform](#). Accessed 17 November 2025.

Table 2.1: Broadband connections by ISP (%)

ISP	Share
BT	30%
Sky	20%
VMO2	20%
TalkTalk	8%
Other	21%

Ofcom. 17 July 2025. [Communications Market Report 2025](#) – Interactive data, Telecoms and Networks, Fixed telecoms connections by ISP (%). Operator Data collected in 2024.

2.24 BT (including EE and Plusnet) remained the largest UK broadband provider in 2024, with a 30% share of active retail broadband connections, and in combination with Sky (20%), VMO2 (20%) and TalkTalk (8%) accounted for most (78% share) retail broadband connections.⁵⁴ Other retail ISPs, which include the remainder of retail ISPs, together accounted for a 21% market share, a six percentage point increase since 2021. Within this category, Vodafone held [X] % share of retail broadband connections and Zen accounted for [X] %.

Residential and business broadband products offered

2.25 All retail ISPs offer a range of products which may be differentiated by, for example, the services included as a bundle with the broadband service, or the choice of headline broadband speeds. For instance, some providers offer FTTP packages with speeds ranging between 35 Mbit/s to 900 Mbit/s, and increasingly there are ISPs offering products with speeds up to 5 Gbit/s.⁵⁵ ⁵⁶ Contract lengths vary between 12 to 24 months, although some providers offer monthly rolling contracts.⁵⁷ The different packages and speeds are offered at a range of different price points.

2.26 Some of the ISPs providing residential broadband services also offer a range of broadband packages targeted at business users, particularly ‘small office/home office’ and ‘micro-businesses’. There are also smaller ISPs who are specialist providers of these business broadband services. Business broadband products typically offer a range of additional

⁵⁴ TalkTalk’s share of broadband connections refers to TalkTalk Consumer (i.e. retail), rather than PlatformX’s wholesale connections.

⁵⁵ For example, BT offer download speeds ranging from 36 Mbit/s to 900 Mbit/s. BT. [BT broadband](#). Accessed 10 December 2025. TalkTalk offers speed at a similar range. TalkTalk. [Our best broadband deals](#). Accessed 10 December 2025.

⁵⁶ For example, Community Fibre offer packages with speeds from 100 Mbit/s to 5 Gbit/s. Community Fibre. [Community Fibre. Broadband Packages](#). Accessed 10 December 2025. Similarly, Sky offers speeds of up to 5 Gbit/s. Sky. [Sky Broadband Speeds](#). Accessed 10 December 2025. VMO2 also offer speeds of up to 2 Gbit/s using the next fibre network. VMO2. [VMO2 switches on residential 2Gbps broadband service and launches symmetrical speed options](#). Accessed 4 March 2025. Vodafone offer speeds of up to 2.2 Gbit/s. [Vodafone Broadband](#). Accessed 10 February 2026.

⁵⁷ For example, Sky and TalkTalk have minimum 24-month terms, while Gigaclear have a minimum 18-month term. Hyperoptic and VMO2 offer 1 month rolling contracts. BT. [BT Broadband deals](#). Accessed 10 December 2025. TalkTalk. [TalkTalk Full Fibre](#). Accessed 10 December 2025. Sky. [Sky Broadband Speeds](#). Accessed 10 December 2025. VMO2. [No contract broadband](#). Accessed 10 December 2025. Hyperoptic. [Hyperoptic broadband only price plans](#). Accessed 10 December 2025.

features compared to residential broadband products, e.g. increased customer support.⁵⁸ Products may also be tailored to the needs of different types and size of organisation.⁵⁹ However, not all businesses may need the extra features provided by business broadband products, and some may purchase residential broadband: Ofcom research, conducted in 2025, found that 51% of SMEs said they had a fixed-line business broadband contract and 47% said they had a residential broadband contract.⁶⁰

2.27 While smaller businesses may purchase business broadband packages for their organisations, larger businesses may purchase leased lines, which we discuss later in this section.

Retail and wholesale broadband availability

Fixed broadband services can be delivered using a variety of technologies

2.28 There are four primary types of fixed line technologies for fixed broadband access. More information about these types of technologies can be found in Annex 2.

- **Asymmetric Digital Subscriber Line (ADSL)** – Copper (telephone) cables are used to connect the exchange to each premises. The theoretical maximum download speed for ADSL is around 24 Mbit/s, however, actual speeds delivered diminish with the length of cable from exchange to the premises and average at around half of this.
- **Fibre to the cabinet (FTTC)** – FTTC involves optical fibre to the street cabinet, with copper cables connecting the cabinet to the premises. FTTC uses ‘very high-speed digital subscriber line’ (VDSL) technology. As with ADSL, speeds diminish with the length of the copper cable, with the maximum download speed for premises close to the cabinet normally up to 80 Mbit/s.⁶¹
- **Hybrid fibre coaxial (HFC) cable** – HFC is provided via optical fibre to a street cabinet and via coaxial cable from the cabinet to the premises. Because coaxial cable has less signal loss compared to telephone copper wires, HFC can deliver higher speeds over longer distances. In the UK, HFC is provided by VMO2, and its cable network can deliver gigabit speeds.⁶²
- **Full fibre or ‘fibre to the premises’ (FTTP)** – The connection from the exchange to the premises is provided entirely over optical fibre. Generally, distance to the premises does not affect the speed delivered. FTTP can deliver gigabit speeds.⁶³

2.29 Fixed broadband connections can also be categorised based on the download speed they provide, described below.

⁵⁸ Other examples of additional features include cloud apps (e.g. Office 365 or Dropbox), static IP addresses or faster upload speeds.

⁵⁹ For example, Virgin Media O2 offers broadband products for small businesses (1-10 employees).

See [Fibre Business Broadband & Phone Deals for 2025 | Virgin Media Business](#). Accessed 28 January 2025.

⁶⁰ Ofcom. 18 July 2025. [Consultation: Reviews of Call Termination Markets and End-to-End Connectivity Condition](#). Business call user research data tables.

⁶¹ Another technology known as G.fast is also sometimes deployed at, or near, a limited number of cabinets offering higher speeds than VDSL.

⁶² HFC access networks are shared between a large number (usually hundreds) of premises.

⁶³ Most FTTP access networks use Passive Optical Network (PON) approaches where capacity in the downstream and upstream direction is shared between around 30 to 60 users.

- We use the term **standard broadband** to describe broadband services with download speeds below 30 Mbit/s. This can be delivered by ADSL, FTTC, HFC and FTTP.⁶⁴
- **Superfast broadband** is used to describe broadband with download speeds of at least 30 Mbit/s. This can be delivered over FTTC, HFC, and FTTP technologies. Superfast broadband provides faster speeds for typical home activities, such as for one-person streaming 4K/UHD video, and allows a one-hour HD TV episode to be downloaded in under four and half minutes. Several devices can also work simultaneously over superfast broadband. Superfast broadband is available to almost all of UK premises.^{65 66}
- **Gigabit-capable broadband** can offer download speeds of 1 Gbit/s and above and can only be delivered by HFC and FTTP. In comparison to superfast broadband, gigabit-capable broadband enables sufficient speeds to download a one-hour HD TV episode in eight seconds.⁶⁷ We discuss gigabit-capable broadband coverage in the next section.

Gigabit-capable and FTTP broadband coverage have increased since 2021

There has been substantial progress in the roll-out of FTTP and gigabit-capable networks

- 2.30 Since the publication of the WFTMR Statement in March 2021, there has been substantial progress in the roll-out of gigabit-capable networks. This has been driven by the deployment of FTTP networks by both Openreach and altnets, as well as VMO2's upgrade of its HFC network to be able to deliver gigabit speeds, which was completed in December 2021.^{68 69}
- 2.31 Figure 2.2 illustrates the progress made in FTTP broadband and gigabit-capable broadband availability from January 2021 for all premises,⁷⁰ as well as planned coverage until January 2031.⁷¹ Both FTTP and gigabit-capable broadband availability have increased since 2021. For example, access to FTTP broadband has increased from 20% of premises in January 2021 to 78% in July 2025.

⁶⁴ This includes decent broadband, which refers to broadband connections with a download speed of at least 10 Mbit/s and an upload speed of at least 1 Mbit/s.

⁶⁵ As of July 2025, 98% of residential premises across the UK have access to superfast broadband. Ofcom. 19 November 2025. [Connected Nations 2025](#). Page 13.

⁶⁶ We also sometimes refer to **ultrafast broadband**, which is used to describe broadband services capable of delivering a minimum download speed of 300 Mbit/s. This can be delivered over G.fast, HFC or FTTP.

⁶⁷ Ofcom. 19 November 2025. [Connected Nations 2025](#). Page 13.

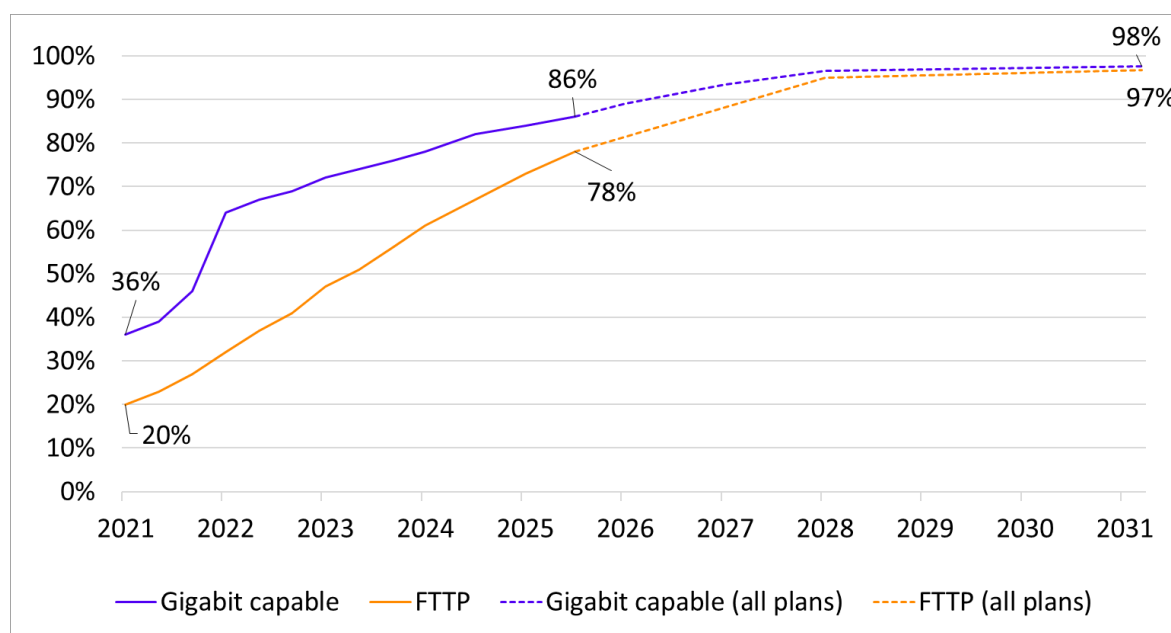
⁶⁸ Gigabit-capable broadband can be delivered over both FTTP and HFC technologies, so as operators roll out FTTP, gigabit-capable coverage for residential consumers and businesses will increase.

⁶⁹ Virgin Media O2. 7 December 2021. [Virgin Media O2 completes gigabit upgrade in boost for Britain's broadband target](#). Accessed 11 February 2025.

⁷⁰ The Connected Nations narrative reports focus on residential premises only, while figures reported here are for all premises, i.e. residential and commercial, which can be found in the interactive reports provided with each Connected Nations publication.

⁷¹ The planned coverage data reported for January 2031 exclude the Hull Area. Coverage values shown between January 2028 and January 2031 are extrapolated estimates. All data points at or before January 2028, as well as the January 2031 point, are based on providers' data.

Figure 2.2: FTTP and gigabit-capable broadband existing and planned coverage, 2021 to 2031



Source: Ofcom analysis of Connected Nations coverage data (collected 2021-2025) and planned network deployment data (collected May 2025) and additional planned network deployment data provided for TAR (collected July-September 2025, for additional detail see Annex 3).

Notes: we use all network deployment plans provided by operators, as opposed to, for example, only plans that are fully funded or are in the process of being built. Figures provided are for all relevant premises covered by the Connected Nations and TAR data, residential and commercial, rather than residential premises. Gigabit-capable coverage of residential premises was 86% in July 2025, and FTTP coverage was 78%. Connected Nations data reported between 2021 to 2028 includes the Hull Area and the planned coverage data reported for January 2031 exclude the Hull Area. Therefore, data discrepancies may be present with figures differing to those reported in later volumes. Coverage values shown between January 2028 and January 2031 are extrapolated estimates. All data points at or before January 2028, as well as the January 2031 point, are based on providers' data.

2.32 We expect the increase in the coverage of gigabit-capable broadband to continue well into the 2026-31 review period. Plans submitted in 2025 indicate that 97% of premises could have access to gigabit-capable broadband by March 2031, with the increase driven mostly by FTTP build. A number of providers have announced FTTP build plans, for instance, Openreach plans to build to 25 million premises passed by the end of 2026 with ambitions to pass 30 million premises by 2030.⁷² Overall, FTTP coverage could increase from 78% as of July 2025 to 97% across the UK by March 2031.⁷³

2.33 The rate of FTTP deployment is expected to slow down compared to recent years, given the significant build progress to date, which has resulted in coverage of about two thirds of the UK (as mentioned above, FTTP coverage stands at 78%, as of July 2025). Different altnets have built at varying rates, with Netomnia/Brsk accelerating their build, while other altnets have scaled back their build plans.⁷⁴ As coverage reaches very high levels, the remaining

⁷² BT Group. [BT Group plc - Annual Report 2024](#). Page 60. Accessed 27 February 2025.

⁷³ FTTP planned coverage figures are dependent on networks completing planned deployments.

⁷⁴ Netomnia aim to build to five million premises by 2027. 16 December 2025. [Netomnia FTTP overtakes FTTC](#). Accessed 10 February 2026. In contrast, reports show the challenging position that some altnets are in. ISP Review. 24 November 2025. [Enders analysis warns largest UK broadband altnets lost £1.5bn in 2024](#). Accessed 13 February 2026.

premises without gigabit-capable broadband coverage are likely to be the most difficult to connect.⁷⁵

Coverage varies across the UK

2.34 While the availability of gigabit-capable broadband has increased across the UK, there are variations. For instance, urban areas see a higher availability than rural areas. As of July 2025, 90% of all premises in urban areas have access to gigabit-capable broadband compared with 60% in rural areas. In addition, across the UK nations, Northern Ireland has the highest availability of gigabit-capable broadband as of July 2025, at 94% of all premises compared with 87% for England, 80% for Scotland and 79% for Wales.⁷⁶

2.35 In the WFTMR21, we found that the level of material and sustainable competition, both actual and/or potential, varied in different parts of the UK. We therefore defined two geographic markets for the provision of the wholesale services that support the delivery of broadband (the wholesale local access market or WLA, as mentioned in Section 1 of this Volume):

- WFTMR21 WLA Area 2, where we considered that there was, or there was likely to be the potential for, material and sustainable competition to BT in the commercial deployment of competing networks; and,
- WFTMR21 WLA Area 3, where we considered there was not, and there was unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.⁷⁷

2.36 As shown in Table 2.2, the availability of gigabit-capable broadband in WFTMR21 WLA Areas 2 and 3 stood at 92% and 72% respectively as of July 2025 (based on additional analysis of Connected Nations data conducted for the March 2026 Statement. See Annex 3).

Table 2.2: Gigabit-capable broadband and FTTP current coverage across the UK, July 2025⁷⁸

	WFTMR21 WLA Area 2	WFTMR21 WLA Area 3	UK
Gigabit-capable coverage	92%	72%	86%
FTTP coverage	80%	71%	77%

Source: Ofcom analysis of Connected Nations coverage data (correct as of July 2025, collected in August 2025) and planned network deployment data (correct as of January 2025, collected in May 2025), and additional planned network deployment data provided for TAR2026 (collected in July-September 2025). Base: 32.2m premises.

Note: The number of premises in the CN premise base has increased since 2021. Therefore, when we look at WFTMR21 WLA Area 2/3 we may not be making a like-for-like comparison to the results in 2021. For a given geographic area, there may be more premises now than there were in 2021. This table excludes data for the Hull Area. Connected Nations data includes the Hull Area. Due to this and rounding, data discrepancies may be present, and figures may differ to later volumes.

⁷⁵ Ofcom. 8 May 2025. [Connected Nations - Planned Network Deployment](#)

⁷⁶ Ofcom. 19 November 2025. [Connected Nations 2025 interactive data](#).

⁷⁷ We did not define an Area 1 market. See Volume 2, Section 4.

⁷⁸ Residential and commercial premises. Excludes the Hull Area. This compares with data published in the Connected Nations Report that shows FTTP coverage of 78% of premises and gigabit-capable coverage of 87%, based on residential premises and including the Hull Area.

2.37 There are also variations in the breakdown of TAR26 WLA Area 2 and Area 3 across the nations in Table 2.3 below. We define TAR26 WLA geographic areas in Volume 2, Section 4.

Table 2.3: Nations breakdown by TAR26 WLA Area 2 and Area 3

TAR26 WLA Geographic Area	UK		England		Northern Ireland		Scotland		Wales	
	Area 2	Area 3	Area 2	Area 3	Area 2	Area 3	Area 2	Area 3	Area 2	Area 3
% of Postcode Sectors	81%	19%	82%	18%	96%	4%	72%	28%	67%	33%
% of Premises	86%	14%	87%	13%	98%	2%	83%	17%	79%	21%

Note: Annex 3 explains the methodology for the geographic assessment of WLA network coverage. This table excludes data for the Hull Area. Connected Nations data includes the Hull Area. There are 34 postcodes out of 9,705 UK postcode sectors that cross boundaries across the Nations so there is a small amount of double-counting. This does not materially affect the percentages presented.

There is a wide range of network operators involved in the rollout of FTTP

2.38 The rollout of FTTP networks across the UK has been driven by both Openreach and altnets.

2.39 As discussed above, Openreach has already deployed FTTP to 21m premises.⁷⁹ This includes 4.9m premises in WFTMR21 Area 3, which exceeds Openreach’s original commitment to cover 3.2m premises by March 2026.⁸⁰

2.40 As we also mentioned above, VMO2 operates a mainly HFC network covering most urban areas of the UK but is upgrading its HFC network to FTTP by 2028.⁸¹ Additionally, VMO2 is also expanding its coverage as the anchor tenant for the FTTP network being built by wholesale altnet nexfibre. We discuss this further in Volume 2, Section 4.

2.41 There are also a substantial number of altnets rolling out FTTP networks across the UK. We discussed some examples of these above, but there are many more altnets who are delivering connectivity across the country.⁸² Currently, altnets are available to 4 in 10 premises (c43%).⁸³ There are likely to be more than 100 altnets deploying fibre networks in the UK. A relatively small number of these altnets account for the majority of altnet build to date, with a long tail of smaller altnets.⁸⁴ Altnets vary widely in size, geographic location, and business model.

⁷⁹ BT. 5 February 2026. [Results for the nine months to 31 December 2025](#). Accessed 25 February 2025.

⁸⁰ Openreach. 26 June 2020. [Letter to Ofcom](#). Accessed 6 March 2026.

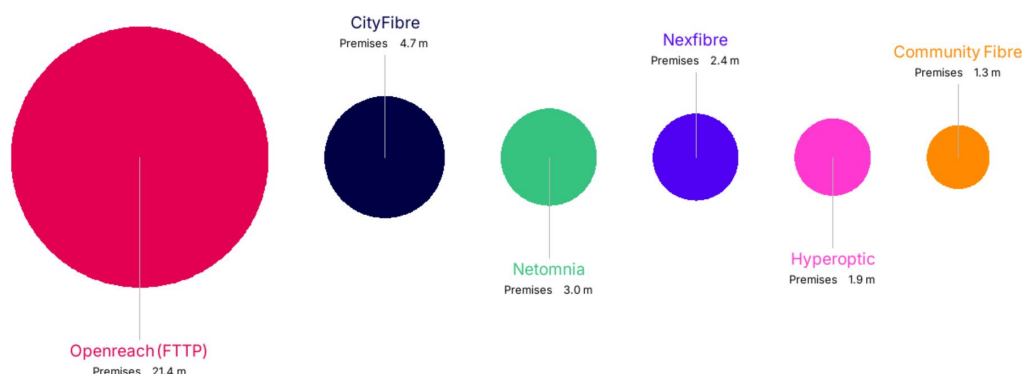
⁸¹ Virgin Media O2. 29 July 2021. [Virgin Media O2 bolsters future network with fibre upgrade plan](#). Accessed 15 January 2025.

⁸² See for instance the list of fixed providers submitting data for our 2025 Connected Nations Report. Ofcom. 19 November 2025. [Connected Nations 2025: Methodology Annex](#). Page 15.

⁸³ Thinkbroadband. September 2025. [The State of Broadband](#). Accessed 19 January 2026.

⁸⁴ Based on the number of PIA users. PIA users include all users, not all may provide all services.

Figure 2.3: Illustration of approximate FTTP coverage of Openreach and some larger altnets⁸⁵



Source: Ofcom. 2026. See also thinkbroadband: The State of Broadband.⁸⁶

2.42 Despite this fragmentation, overall altnet deployment has increased the availability of an alternative network to Openreach. Table 2.4 below shows that in July 2025, across the UK, 74% (23.8m) of premises had access to gigabit-capable broadband from at least one other network in addition to coverage from Openreach.⁸⁷ This includes premises in Area 3 (as defined in 2021), where 49% are covered by at least one competitor to Openreach.

Table 2.4: Percentage of premises covered by Openreach and with current or planned gigabit-capable coverage from at least X other networks⁸⁸

	Coverage as of July 2025	Planned coverage as of March 2031
Coverage from Openreach and at least one other operator	74%	83%
Coverage from Openreach and at least two other operators	28%	44%

⁸⁵ Based on operators’ reports; reporting dates and premises bases vary. For the purposes of illustrating varying sizes of footprint. Approximate information based on operators’ reports. The dates of operators’ reports range from 2024–2025. Premises base may also vary, some operators report premises passed or premises ready for service. BT Group. 5 February 2026. [Trading update for the quarter and nine months to 31 December 2025](#). Accessed 13 February 2026. CityFibre reports 4.7m premises passed and 4.5m premises ready for service. CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 13 February 2026. Netomnia, 28 January 2026. [Netomnia, YouFibre, Brsk Annual Results 2025](#). Accessed 13 February 2026. nexfibre. [Q3 2025 coverage update](#). Accessed 13 February 2026. Community Fibre. [Community Fibre announces continued customer growth. 9 September 2025](#). Accessed 13 February 2026. Hyperoptic. 29 September 2025. [Hyperoptic continues to demonstrate strong growth and network expansion in 2024](#). Accessed 13 February 2026.

⁸⁶ Thinkbroadband. September 2025. [The State of Broadband report](#). Accessed 10 March 2026.

⁸⁷ For Openreach coverage by any technology is taken into account, whereas for other networks only gigabit-capable coverage is included.

⁸⁸ Residential and commercial premises. Excludes the Hull Area. Includes additional planned deployment data provided for the TAR26. This compares with data published in the Connected Nations Report that shows overlap coverage of 75% and 29% respectively, based on residential premises and including the Hull Area.

Source: Ofcom analysis of Connected Nations coverage data (correct as of July 2025, collected in August 2025) and planned network deployment data (correct as of January 2025, collected in May 2025), and additional planned network deployment data provided for TAR2026 (collected in July-September 2025). Base: 32.2m premises.

Note: Some stakeholders were unable to provide coverage plans at UPRN level, therefore plans for these stakeholders have not been included in modelling to produce results.

Altnet consolidation

- 2.43 Despite uncertainty of the exact timing and form of consolidation, evidence suggests that over this review period we can expect some consolidation between altnets. Recent examples of altnet consolidation include Full Fibre and Zzoomm with a combined footprint of 600,000 premises, and Truespeed and County Broadband with a combined footprint of 177,000 premises.⁸⁹
- 2.44 As mentioned above, in February 2026, the owners of the VMO2 network (Liberty Global and Telefonica), and InfraVia, agreed to acquire Substantial Group (including the Netomnia network footprint and retail brands YouFibre and Brsk) through their existing joint venture, nexfibre. The deal is subject to regulatory approval.⁹⁰
- 2.45 We discuss consolidation further in Volume 2, Section 4.

Some network build is publicly subsidised

- 2.46 As discussed in Volume 1, Section 1, public sector investment is also playing an important role in delivering connectivity across the UK to homes and businesses not included in operators' commercial roll-out plans. This includes the Government's Project Gigabit scheme, which is delivered by Building Digital UK (BDUK) working with industry partners and local bodies,^{91 92} as well as separate schemes from the Scottish Government, the Northern Ireland Executive and the Welsh Government.
- 2.47 As of September 2025, a total of about 1.3m premises have received gigabit-capable coverage by BDUK's gigabit programmes since their inception.⁹³ In Scotland, the Reaching 100% (R100) programme seeks to ensure every home and business in Scotland can access superfast broadband. As of November 2025, the R100 programme has delivered over 94,000 connections, including nearly 5,000 through the Scottish Broadband Voucher Scheme.⁹⁴ The Northern Ireland Executive's broadband scheme, Project Stratum, reached over 81,000 predominantly rural premises as of the project's completion in June 2025.⁹⁵ The Welsh Government's Superfast Cymru project was completed in 2023, having connected 44,000 homes and businesses.⁹⁶

⁸⁹ Full Fibre. 27 January 2025. [FullFibre and Zzoomm merge to form one of UK's largest Altnets](#); ISP Review. 18 July 2025. [Rural UK Full Fibre Networks County Broadband and Truespeed to Merge](#). All Accessed 27 November 2025.

⁹⁰ Virgin Media O2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

⁹¹ UK Government. [About us – Building Digital UK](#). Accessed 6 March 2026.

⁹² UK Government. [Project Gigabit](#). Accessed 6 March 2026.

⁹³ UK Government. 13 November 2025. [BDUK delivery performance, quarterly: April 2025 to Sept 2025](#).

⁹⁴ Scottish Government. [About Reaching 100%](#) Accessed 6 March 2026

⁹⁵ Department for the Economy. [Project Stratum](#). Accessed 11 December 2025.

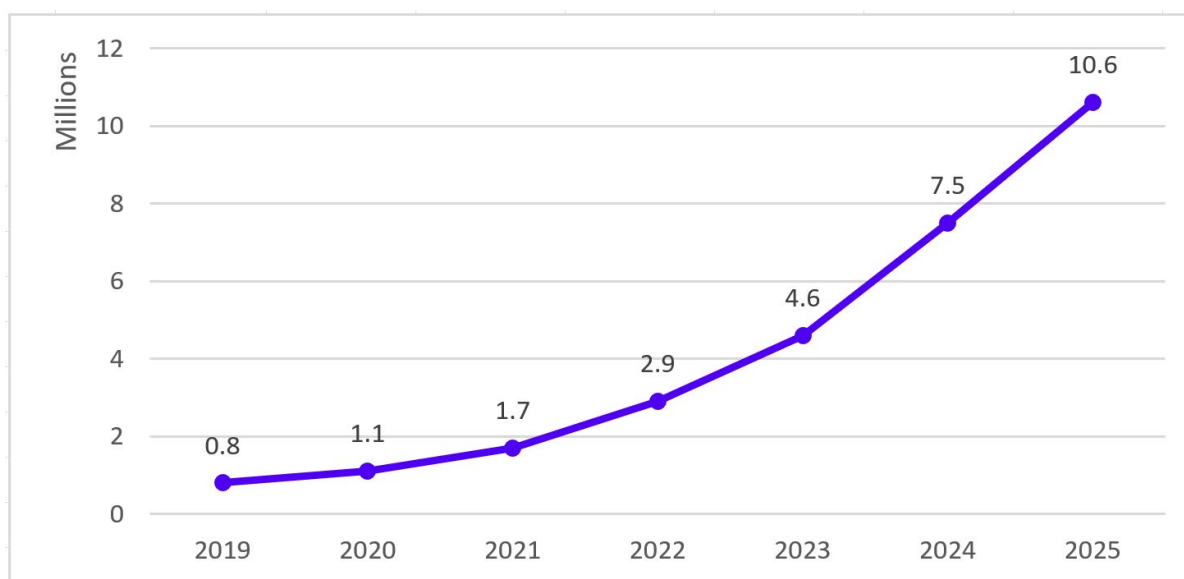
⁹⁶ Welsh Government. 6 December 2023. [Tens of thousands of homes and businesses can access gigabit capable speeds as rollout of full fibre broadband smashes targets](#). Accessed 6 March 2026.

Retail and wholesale broadband take-up

Take-up of gigabit-capable broadband and FTTP is also increasing

- 2.48 As a result of greater coverage and an increase in network operators offering gigabit-capable broadband, take-up of these services has increased across the UK. Gigabit-capable broadband take-up across the UK (as a percentage of premises where a gigabit-capable network is available) is 56% across all premises. This is an increase of seven percentage points from 2024 (49%).⁹⁷
- 2.49 Likewise, take-up of FTTP has increased from 35% in 2024 (of all premises where FTTP is available) or 7.5m premises, to 42% or 10.6m premises in 2025 (Figure 2.4).

Figure 2.4: FTTP take-up, 2019-2025

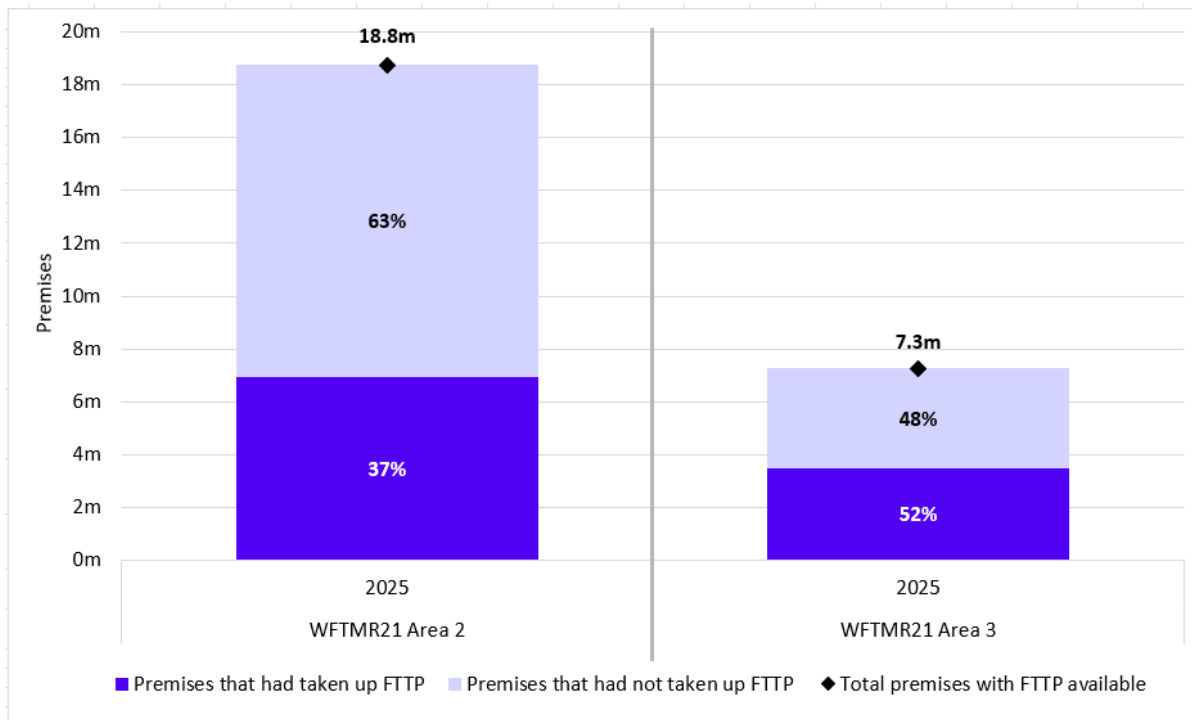


Source: Ofcom. 19 November 2025. [Connected Nations](#).

- 2.50 While FTTP take-up has increased across the UK, take-up as a proportion of premises with coverage available is higher in WFTMR21 WLA Area 3 than in WFTMR21 WLA Area 2 (Figure 2.5). In WFTMR21 WLA Area 2, take-up was 6.9m premises in 2025, which represented 37% of premises with FTTP available. For WFTMR21 WLA Area 3, the equivalent figures were 3.5m premises, or 52% as a proportion of premises with FTTP available. This may be because, compared to WFTMR21 WLA Area 2, a higher proportion of consumers in WFTMR21 WLA Area 3 could not access speeds that met their needs before full-fibre rollout.

⁹⁷ Ofcom. 19 November 2025. [Connected Nations 2025](#).

Figure 2.5: FTTP coverage and estimated take-up by WFTMR21 WLA Area 2 and WFTMR21 WLA Area 3, July 2025



Source: Ofcom analysis of Connected Nations data (collected July 2025).

Note: Only FTTP coverage and active connections in the postcode sectors in the WFTMR21 classifications were included. A small number of active connections could not be allocated to any postcode sector. These figures exclude the Hull Area, whereas the Connected Nations data includes the Hull Area.

Take-up of FTTP differs by providers and networks

2.51 Currently take-up of Openreach FTTP services is over 38%, with 8.2m live connections as of February 2026.⁹⁸ By comparison, an INCA and Point Topic report found that altnets had an average take-up rate of approximately 18%, with 3.5m live connections at the end of 2024.⁹⁹ This is an increase from 2024 where take-up of altnets was c.16.5%, with 2.7m live connections. Further data published by Point Topic (and altnets themselves) shows that take-up varies depending on the altnet.^{100 101 102} For example, CityFibre recently reported

⁹⁸ BT Group. 5 February 2026. [Trading update for the quarter and nine months to 31 December 2025](#). Accessed 13 February 2026.

⁹⁹ Assembly x Point Topic for INCA. 11 March 2026. [State of the Altnets: INCA Annual Report 2026](#). Accessed 11 March 2026.

¹⁰⁰ A Point Topic report found that take-up from a selected group of altnets was on average 17% (as of September 2024), but there was substantial variation, with Hyperoptic, Fibrus Community Fibre and Gigaclear achieving take-up rates in the range of 20-30%. Point Topic. 13 December 2024. [Q3 2024 UK ISP and network supplier metrics – a market overview](#). Accessed 6 March 2026.

¹⁰¹ Hyperoptic reported take-up at 29% of fully serviced homes in June 2024. Hyperoptic. 2024. [Mid-Year Update Report for the Six Months to 30 June 2024](#). Accessed 6 March 2026.

¹⁰² Point Topic, INCA. April 2025. [UK Altnets: Delivering Affordable, High-Speed Connectivity with Unmatched Customer Satisfaction](#). Accessed 6 March 2026.

that its take-up has exceeded 20%,¹⁰³ and Community Fibre was reported to have a take-up rate of 32%.^{104 105}

- 2.52 There are many potential reasons for the differences in take-up rates, including market presence, ability to secure wholesale agreements with ISPs, and the ability to build a brand to attract retail customers.

There has been an increase in take-up at higher speeds

- 2.53 Ofcom analysis found that take-up of faster broadband services has increased since the WFTMR21, with over half (56%) of all premises that have access to a gigabit-capable network having adopted that service.¹⁰⁶
- 2.54 Our analysis of provider forecast data to 2031 indicates that providers expect a decline in the number of connections with speeds below 80 Mbit/s (below 30 Mbit/s connections declining from a low base and 30-80 Mbit/s connections declining from a higher base). The number of connections at speeds greater than 300 Mbit/s is expected to rise substantially over the period to 2031.¹⁰⁷
- 2.55 Providers use various strategies to incentivise take-up of FTTP Network operators have made significant investments in rolling out FTTP networks, and so need to drive take-up of those services to generate revenue and therefore returns. For altnets, this means encouraging consumers to switch from another network onto their FTTP networks.¹⁰⁸ For retail ISPs that offer services over legacy copper-based networks,¹⁰⁹ it also means encouraging consumers to migrate from legacy copper-based networks to FTTP.
- 2.56 This is because many of the retail ISPs on Openreach's network have a large number of existing consumers on the current copper-based infrastructure delivering ADSL and FTTC-based broadband services. Those providers will ultimately need to migrate their base from copper-based services to Openreach's FTTP network or to rival networks. Eventually Openreach's copper-based network can be decommissioned to avoid the costly running of

¹⁰³ CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 10 March 2026.

¹⁰⁴ Thinkbroadband. 29 January 2026. [One in ten Londoners now use Community Fibre](#). Accessed 10 March 2026.

¹⁰⁵ Assembly x Point Topic for INCA. 11 March 2026. [State of the Altnets: INCA Annual Report 2026](#). Accessed 11 March 2026.

¹⁰⁶ Ofcom. 19 November 2025. [Connected Nations Report](#). Page 12.

¹⁰⁷ Ofcom forecasts based on information provided by relevant parties: [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<19 August 2024] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<]; [§<] response dated [§<] to s135 notice dated [§<], question [§<].

¹⁰⁸ Either directly or, if they only offer wholesale services, also indirectly through ISPs.

¹⁰⁹ A service where the physical connection between the local access aggregation node and the network termination equipment (NTE) comprises copper wires either in whole or in part. Openreach products used to deliver these or related services include, but are not limited to WLR, ISDN, LLU, SLU, MPF/SMPPF, FTTC, G.fast, SOTAP, SOGEA, and SOG.fast. See Annex 19, Glossary.

two parallel networks.¹¹⁰ We discuss our regulatory support for copper retirement in Volume 3, Section 2.¹¹¹

- 2.57 To incentivise take-up of FTTP by their consumers, on the retail side, ISPs have used a number of strategies. For instance, they may price FTTP services attractively compared to other broadband services, introduce specific promotional offers for new consumers with discounted rates, or bundle services with additional services such as Pay TV or digital landline.
- 2.58 In some other cases, retail ISPs may also proactively offer existing consumers the opportunity to migrate onto a new FTTP service.¹¹² For example, we have seen evidence of providers trialling approaches to engage with consumers about migrating to FTTP (TalkTalk).¹¹³ We have also seen evidence of providers incentivising migration by offering FTTP for the same price as consumers' lower-bandwidth FTTC service (Sky).¹¹⁴ We discuss the prices of broadband services in more detail below.
- 2.59 On the wholesale side, Openreach introduced offers for its wholesale FTTP services, 'Equinox', which was followed by a second offer, 'Equinox 2'. Those offers introduce lower prices to retail ISPs using the Openreach platform – such as BT, Sky, TalkTalk and Vodafone – if they agree to use mainly Openreach's FTTP products for new orders (where Openreach FTTP is available) instead of Openreach copper-based broadband services products.¹¹⁵ Since the Equinox offer, Openreach has introduced four new offers to incentivise migration to FTTP (see Volume 1, Section 2). For example, in September 2025 Openreach published revisions to its Proactive Upgrades offer, which incentivises migrations to higher speeds initiated by the ISPs.¹¹⁶
- 2.60 Altnets that provide wholesale services can also compete with Openreach with pricing strategies. For example, [X] noted that [X].¹¹⁷ Similarly, [X] noted that [X].¹¹⁸

Retail broadband pricing

- 2.61 The prices of residential FTTP services have reduced considerably since 2021, for example current prices for FTTP services with advertised speeds up to 150 Mbit/s are as low as £24 per month.¹¹⁹ As shown in Figure 2.6 and Figure 2.7 average standalone fixed broadband FTTP prices are similar to the price of FTTC, despite the fact that headline speeds can be

¹¹⁰ Openreach. [Openreach puts the stopper on copper](#). Accessed 17 February 2025.

¹¹¹ In parallel to the upgrading of the broadband infrastructure, the technology used to deliver landline calls needs to be replaced. Providers of traditional landlines, like BT and VMO2, are therefore also in the process of migrating consumers from the traditional Public Switched Telephony Networks (PSTN) to digital landlines provided over broadband. Ofcom. 7 February 2024. [Moving landline phones to digital technology: what you need to know](#). Accessed 5 March 2025.

¹¹² [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X].

¹¹³ TalkTalk Telecom Limited response dated 19 August 2024 to s135 notice dated 8 July 2024, question C1.

¹¹⁴ Sky UK Limited response dated 23 August 2024 to s135 notice dated 8 July 2024, question D2.

¹¹⁵ Ofcom. 2023. [Ofcom's decision on Openreach's 'Equinox 2' pricing offer](#).

¹¹⁶ ISP Review. 12 September 2025. [Openreach to Cut Price of FTTP Broadband Rental on UK Proactive Upgrades to Cut Price of FTTP Broadband Rental on UK Proactive Upgrades](#). Accessed 27 November 2025.

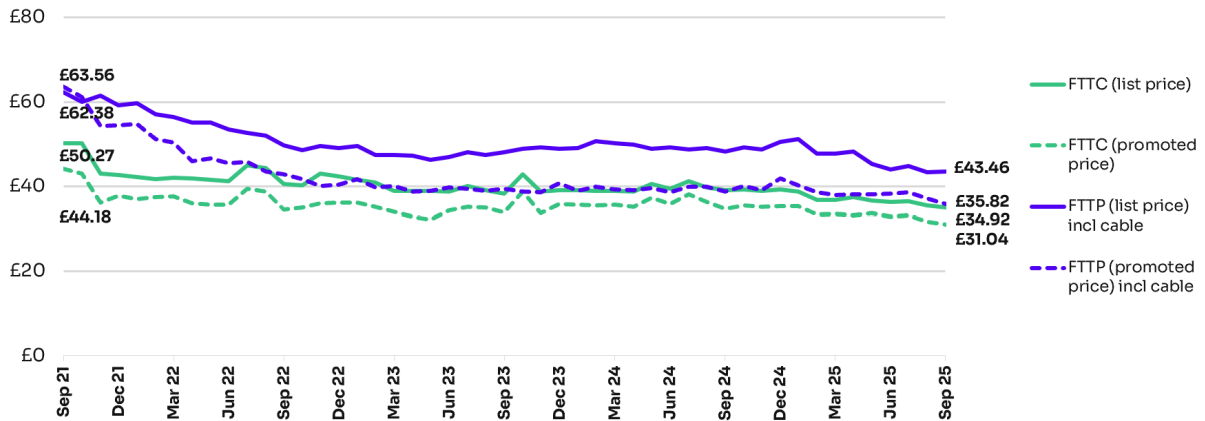
¹¹⁷ [X] response dated [X] to s135 notice dated [X], question [X].

¹¹⁸ [X] response dated [X] to s135 notice dated [X], question [X].

¹¹⁹ TalkTalk offers 150 Mbit/s FTTP services for £24 per month over an 18-month contract. TalkTalk. [TalkTalk select product](#). Accessed 19 January 2026.

higher on FTTP. Furthermore, the majority of residential consumers take broadband as part of a bundle of services, and the average list prices of FTTC broadband bought on a standalone basis, or in a dual-play bundle with a landline, are close to the promoted prices of similar services with full-fibre broadband.

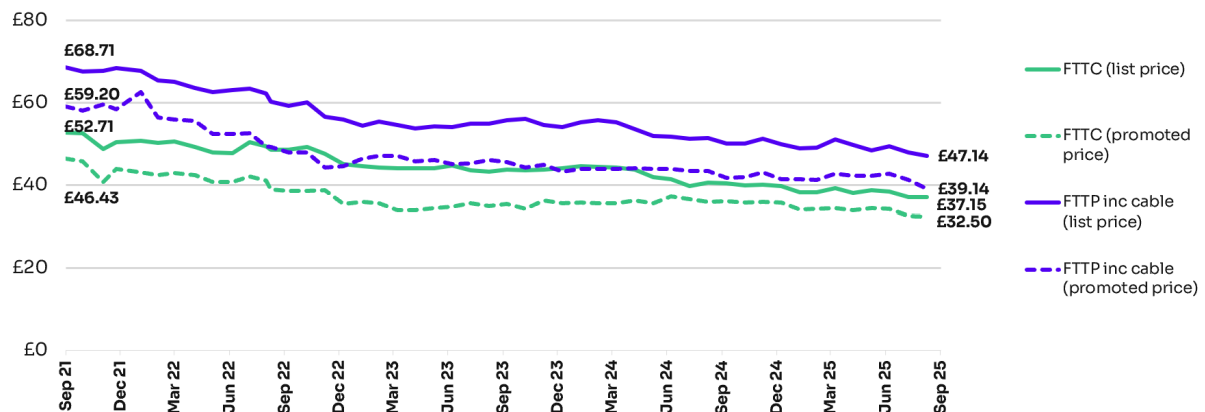
Figure 2.6: Prices for standalone residential broadband services delivered on FTTC and FTTP networks since WFTMR21 (average monthly real-terms prices)



Source: Ofcom / Pure Pricing's Monthly Broadband Pricing Tracker reports.

Notes: Values are the mean average prices of tariffs included in the dataset and are unweighted; Virgin Media offers services over both cable and FTTP and its tariffs are included in the FTTP category; Sky does not specify a technology for some of its services and will provide connectivity using either FTTC or FTTP, according to availability (at the same price); in this analysis, Sky services that can be provided over FTTC (including G.fast) and FTTP are included in both technologies; based on the price a new customer pays when they sign up and excludes the impact of any annual price rises; excludes services with a one-month minimum contractual period; the promoted prices shown are the average monthly cost across the minimum contractual period (MCP), including promotions and any connection/set-up fees, whereas the list price does not include connection/set-up fees. In instances where the value of any promotional discount is lower than the connection fee, the promoted price is higher than the list price; adjusted for CPI (September 2025 prices).

Figure 2.7: Prices for residential dual-play fixed broadband and fixed voice bundles delivered on FTTC and FTTP networks since WFTMR21 (average monthly real-terms prices)



Source: Ofcom / Pure Pricing's Monthly Broadband Pricing Tracker reports.

Notes: Values are the mean average prices of tariffs included in the dataset and are unweighted; Virgin Media offers services over both cable and FTTP and its tariffs are included in the FTTP category; Sky does not specify a technology for some of its services and will provide connectivity using either FTTC or FTTP, according to availability (at the same price); in this analysis, Sky services that can be provided over FTTC (including G.fast) and FTTP are included in both technologies; based on the price a new customer pays when they sign up and excludes the impact of any annual price rises; excludes services with a one-month minimum contractual period; adjusted for CPI (September 2025 prices).

- 2.62 For broadband products targeted at businesses, which may offer additional features compared with residential broadband products as discussed above, prices range from £27 to £70 depending on the nature of the bundle.¹²⁰

Broadband consumers attitudes and usage

Consumers consider several factors when choosing broadband

- 2.63 Reliability, price, and speed appear to be the most important factors in consumers' choice of broadband packages, according to surveys undertaken both on behalf of different ISPs¹²¹ and for Ofcom.¹²²
- 2.64 To ensure good value for money, some consumers recontract with existing providers under new packages or renew their existing contract if they are happy overall with the service. These consumers often look for rewards for their loyalty (i.e. additional package features at no additional cost).¹²³ Consumers who continue to buy their broadband service from the same provider but without renewing or switching to a new contract are referred to as being 'out of contract'.
- 2.65 In other cases, consumers will switch providers if they are looking to improve one or more aspects of their service, including to avoid price rises or to get faster speeds.¹²⁴

There has generally been an increase in data usage in recent years

- 2.66 Since the WFTMR21, there has been an increase in data usage across the UK. Average monthly data usage has increased from 453 GB per connection (across all broadband technologies) in 2021, to 583 GB per connection in 2025.¹²⁵

¹²⁰ For example, see business broadband packages from: Sky. [Superfast 76/19Mbps Unlimited Business Broadband Provider | Sky Business](#); BT. [Our Best Business Broadband & Phone Deals 2024 | BT Business](#); VMO2. [Supercharge your Business with Volt | Virgin Media O2](#); and, TalkTalk. [Full Fibre Broadband for Business | FTTP Deals](#). All Accessed 04 November 2025.

¹²¹ For instance, evidence from [redacted] indicates that reliable connections are most valued amongst its customers, with its consumer research concluding that speed and WiFi guarantee add more value to broadband packages than other features including 4G back-up, [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. Similarly, [redacted] consumer research concluded that reliability was a core customer concern, [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹²² Ofcom. 8 March 2024. [Broadband terminology research](#).

¹²³ For example, see: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹²⁴ For example, [redacted] found in 2023 that the key reasons for choosing a broadband provider were better customer service, followed by price and connections speeds. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

¹²⁵ Ofcom. 19 December 2023. [Connected Nations 2023](#). Page 17; Ofcom. 19 November 2025. [Connected Nations](#). Page 14-15.

- 2.67 Consumers with FTTP broadband connections also appear to have higher data usage than consumers with other types of broadband. Data collected for the 2025 Connected Nations report shows an average monthly data usage of 738 GB for FTTP only connections. These higher usage figures for FTTP may reflect consumers with higher data needs choosing full-fibre broadband, as well as some consumers making more use of data intensive applications once they have migrated to higher speed technologies.¹²⁶
- 2.68 Consumers go online for a wide range of activities, such as emailing, online shopping, making and receiving video calls, or streaming content.¹²⁷ Larger households or family households have greater demand for higher speeds, as multiple occupants are online simultaneously, so tend to value higher speed packages.¹²⁸ Many people regularly work from home, which places an additional importance on the speed, quality, and reliability of their broadband (see Annex 4).¹²⁹

Satisfaction with broadband is generally high

- 2.69 Data from Ofcom’s Comparing Customer Service report shows that the vast majority of consumers are satisfied with their broadband service. Table 2.5 shows that, in 2024, 84% of residential broadband consumers were satisfied with their service overall, and levels of satisfaction were largely in line with this across all providers in this sector, with the exception of Plusnet (whose consumers satisfaction level was the highest).¹³⁰
- 2.70 On average, eighty-three per cent of residential broadband consumers were satisfied with the speed of their service.

Table 2.5: Satisfaction with broadband services among residential consumers, 2024

	BT	EE	Plusnet	Sky	TalkTalk	VMO2	Vodafone	Average
Satisfaction with overall service	85%	87%	91%	84%	77%	83%	86%	84%
Satisfaction with speed of service	85%	86%	84%	82%	75%	82%	87%	83%

Source: Ofcom. 22 May 2025. [Comparing customer service: mobile, home broadband and landline](#). Page 15.

Notes: the ‘satisfaction with speed of service’ metric reflects customers’ perceptions of the speed of their broadband service and does not necessarily reflect actual broadband speeds. The average score reflects the average of the providers highlighted in the table.

¹²⁶ Ofcom. 5 December 2024. [Connected Nations 2024](#). Page 13; Ofcom. 19 November 2025. [Connected Nations](#). Page 14-15.

¹²⁷ Ofcom. 10 December 2025. [Online Nations 2025 – interactive report](#).

¹²⁸ [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]

¹²⁹ For example, [X] research found that majority of workers regularly work from home, which places significant importance on the quality and reliability of their broadband connections. [X] response dated [X] to s135 notice dated [X], question [X]

¹³⁰ Ofcom. 22 May 2025. [Comparing customer service: mobile, home broadband and landline](#). Page 15

Alternative technologies delivering broadband services

2.71 This section has so far focused on fixed line broadband connections. However, broadband services can also be provided to fixed locations using wireless services. We summarise the three main ways to do this, and discuss each in greater detail in Section 4 of this volume.

Mobile broadband

2.72 Consumers can also use mobile networks to meet their broadband service needs.¹³¹

2.73 Currently 4G remains the backbone for mobile broadband, with UK 4G geographic coverage from at least one operator at 96% as of July 2025. The 4G network carries 72% of monthly mobile data traffic. While 5G has the capacity to offer higher speeds than 4G, coverage is still evolving and varies by mobile network operator (MNO) (see Annex 2).

2.74 As of July 2025, 5G geographic coverage from at least one operator stood at 54-65% (across a range covering Very High and High Confidence levels).¹³² While this still lags 4G coverage, there has been steady growth. For example, in September 2023, 5G geographic coverage from at least one operator was at 41%-55% (across a range covering Very High and High Confidence levels).^{133 134}

Fixed wireless access

2.75 In a fixed wireless access (FWA) network, wireless links are used to provide broadband connectivity to a fixed location, such as a residential premises. There are two ways in which FWA can be delivered:

- FWA from MNOs; and
- FWA from wireless internet service providers (WISPs).¹³⁵

2.76 FWA from MNOs is offered on licensed 4G and 5G networks, usually to an indoor customer premises equipment or router. The performance of the broadband connection is dependent on the quality of the mobile signal that is received indoors. Some MNOs provide external antennas in areas where premises suffer from poor signal quality indoors, to improve the quality of the broadband service.¹³⁶ These services share network capacity with mobile users, so the network must be carefully managed to balance the demands of both. In areas of high mobile demand, reliable FWA service may not be possible.

2.77 MNOs such as EE, VodafoneThree, and VMO2 provide home broadband via their 4G and 5G mobile networks. These services, tailored for home use, offer average download speeds of around 30 Mbit/s on 4G and 200 Mbit/s on 5G, though 5G coverage is lower than 4G. Some

¹³¹ They can do so by connecting to a 4G or 5G mobile network when they are at home using their mobile phone, a dongle or similar equipment.

¹³² When reporting on mobile availability predictions, we refer to confidence ranges reflecting the likelihood of on the ground coverage for consumers as high confidence and very high confidence associated with signal strength. For additional detail, please see the [methodology annex of the 2025 Connected Nations report](#).

¹³³ Ofcom. 19 November 2025. [Connected Nations Interactive Report](#)

¹³⁴ We note that mobile coverage in the future may be affected by the Vodafone / Three UK merger. The merger was approved by the CMA on 4 December 2024, and subject to legally binding commitments which include the delivery of a network investment plan to improve network quality across the combined networks. CMA. 4 December 2024. [Vodafone / CK Hutchison JV merger inquiry](#). Accessed 10 March 2025.

¹³⁵ See Annex 2 for further detail on FWA from MNOs and WISPs.

¹³⁶ Ofcom. 19 November 2025. [Connected Nations 2025](#). Page 16.

FWA packages continue to have data caps, the possibility of upfront fees, and prices comparable to fixed broadband with speeds over 300 Mbit/s.¹³⁷

- 2.78 FWA services from WISPs rely on proprietary solutions that need Line of Sight (LoS) or near-LoS wireless connectivity between the provider’s access point (also known as a base station or mast site) and the outdoor antenna on the customer’s premises. The outdoor antenna is linked to indoor customer premises equipment via a wired connection. These connections are especially beneficial in remote, hard-to-reach areas with poor network coverage.
- 2.79 WISPs have traditionally relied on ‘licence exempt’ and ‘light licensed’ spectrum. However, we continue to see the use of shared access spectrum with 5G technology for residential broadband, allowing them to offer superfast speeds more broadly. Performance can be affected by LoS issues, which are more pronounced at higher frequencies. WISPs choose frequencies based on capacity, performance needs, as well as technology and equipment available in a given band.

Satellite broadband

- 2.80 Satellite services have traditionally used geostationary orbit (GSO) satellites, which are positioned a significant distance from the Earth, resulting in lower speeds and higher latency. Non-geostationary orbit (NGSO) satellites, including medium Earth orbit (MEO) and low Earth orbit (LEO) satellites, are now available and offer better service quality, with currently nine licensed NGSOs in the UK.^{138 139}
- 2.81 Since the WFTMR21, coverage and take-up of satellite services have increased. For example, nationwide NGSO satellite broadband coverage is now offered direct-to-consumers by Starlink, with over 110,000 broadband customers in 2025 (up from 87,000 in 2024).¹⁴⁰ We discuss coverage and take-up of these services further in Volume 2, Section 4.
- 2.82 Services provided on GSO satellites have typically provided commercial broadband with download speeds of up to 75 Mbit/s. The cost of subscription packages ranges from £20 to upwards of £80. For example, Freedomsat offer services with up to 75Mbit/s download speed for £39. Cheaper deals can be very restrictive in terms of data allowance, with some only offering a few gigabytes per month.^{141 142}
- 2.83 NGSO satellites, on the other hand, are positioned much closer to the Earth, covering smaller areas than the GSO satellites and allowing for faster response times and higher speeds. Starlink offers one such NGSO satellite broadband service in the UK, with Connected Nations 2025 reporting download speeds of around 210 Mbit/s and upload speeds of 20 Mbit/s. Amazon Leo (formerly Project Kuiper) also has plans to offer similar services in 2026.¹⁴³ BT and Starlink also recently announced a partnership bringing Starlink’s high-speed low latency satellite connectivity to BT and EE consumer broadband customers.

¹³⁷ For examples of FWA packages from MNOs see: Vodafone. [5G and 4G broadband with GigaCube](#); Three. [4G & 5G Home Broadband Deals](#); and, EE. [Pay Monthly Mobile Broadband](#). All Accessed 5 November 2025.

¹³⁸ GSO and NGSO satellite services are detailed in Annex 2.

¹³⁹ Ofcom. 19 December 2025. [Non-geostationary satellite earth station licences](#).

¹⁴⁰ Ofcom. 19 November 2025. [Connected Nations 2025](#).

¹⁴¹ For example, Freedomsat offer home satellite packages costing between £19 to £90. Freedomsat. [Home Broadband Internet Without a Phone Line — Freedomsat Broadband Solutions](#). Accessed 20 January 2026

¹⁴² Compare the market.com. 24 April 2024. [What is satellite broadband?](#) Accessed 6 February 2025. ISP Review. [Satellite Broadband UK ISP List](#). Accessed 24 February 2026

¹⁴³ Ofcom. 19 November 2025. [Connected Nations 2025](#). Page 18.

The collaboration will see BT Group offer ultrafast, low-latency satellite connectivity to customers in rural and remote areas.¹⁴⁴

- 2.84 Prices tend to be above the average price of FTTC or FTTP broadband, for instance, a residential package at the fastest speeds available, for a fixed location is priced at £75/month and a range of 'Priority' services, which are more suitable for businesses, at £39-£324/month. As of January 2026, Starlink also offer a lower priced residential package at £35 for download speeds of 100 Mbit/s.¹⁴⁵
- 2.85 Relative to other premises in the UK, premises using a satellite broadband connection are more likely to be in a rural area, and less likely to have access to either a decent fixed broadband line or FWA broadband service.¹⁴⁶

Leased lines

- 2.86 In this section we give some additional context on the leased line market.
- 2.87 Leased lines provide business users with high quality business connectivity services between two fixed locations, such as an end-user site to a telecoms provider's network, as a connection between provider sites, or in a few cases, as a direct point-to-point connection between end-user sites.
- 2.88 These services tend to be symmetric (the upload and download speeds are the same), uncontended (either the capacity is not shared with other users, or is reserved) to provide a guaranteed speed, and have additional quality of service features, such as high availability, continuous monitoring and support, with fast repair and installation times.
- 2.89 A leased line is typically – but not exclusively – delivered over a dedicated physical connection (providing greater security) and may also provide diverse physical routes, for better resilience by eliminating a single point of failure. As a result of these features, leased lines can be significantly more expensive per end-user than broadband services which are provided over infrastructure shared with many end-users.
- 2.90 Leased lines can be used for:
- business fixed access network connectivity to virtual private networks (VPNs), the Internet and cloud computing services or connectivity between business sites.
 - mobile fixed access network connectivity (often referred to as 'mobile backhaul') which provides connectivity from mobile base stations to the MNO's core network.
 - broadband network connectivity (often referred to as 'fixed backhaul') which provides connectivity from fixed broadband operators' equipment located either in BT exchanges or in operators' own operational buildings back to the operators' backhaul and core networks.
- 2.91 In this section, we provide some background information on the following:
- the structure of the leased line market

¹⁴⁴ BT. 6 November 2025. [BT Group and Starlink pave the way for high-speed home broadband in the UK's hardest to reach places](#). Accessed 14 January 2026.

¹⁴⁵ Starlink. [Starlink for homes](#). Accessed 19 January 2025; Starlink. [Starlink for fixed sites](#). Accessed 19 January 2025; ISP Review. 15 January 2026. [Starlink UK Introduce Cheap £35 100Mbps LEO Satellite Broadband Plan](#)

¹⁴⁶ Ofcom. 19 November 2025. [Connected Nations 2025](#). Page 18.

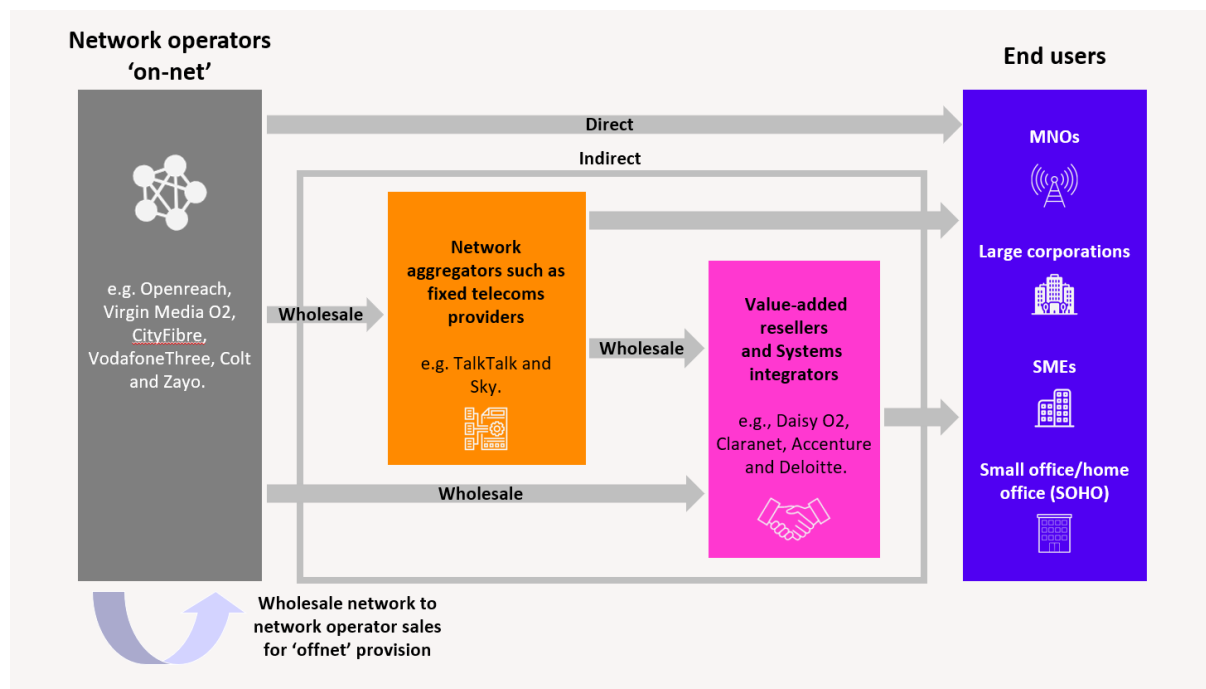
- service take-up and usage of leased lines

Structure of the leased line market

Leased line suppliers

- 2.92 Business connectivity is sold to a wide range of customers – including telecoms providers and retail ISPs. These customers have a number of different supplier options when choosing to buy leased line services, depending on their own preferences and the availability of different services. Some customers choose to purchase different components of a connectivity service separately, for example from different suppliers, whereas others may prefer to purchase all aspects of a connectivity service from one supplier.
- 2.93 An illustration of the business connectivity supply chain is shown in Figure 2.8 and we provide an explanation of the different types of suppliers in the supply chain below.

Figure 2.8: High level view of the business connectivity supply chain



Source: Ofcom. 2026. Analysis based on various industry sources

Companies included in the diagram are provided as examples only and are not intended to provide an exhaustive picture of the leased line telecoms market. Since the March 2025 Consultation was published, Daisy Communications merged its B2B operations with VMO2's business division, resulting in the creation of a new firm called O2 Daisy. Vodafone and Three also merged in 2025 resulting in the creation of the combined business, VodafoneThree.

- 2.94 **Network operators** use their own networks to provide end-to-end network connectivity services to customers. Different network operators can have different types of services (services used for access or backhaul), nationally or regionally. For example, Openreach and VMO2 have large-scale networks, which include access, backhaul and core connections. As in the broadband market, network operators build their networks using physical infrastructure, such as ducts and poles. They may build this physical infrastructure themselves or deploy network in physical infrastructure of third parties.
- 2.95 As with broadband, some network operators sell leased line services directly to end-users or sell leased line services to other telecoms providers who then sell them to end-users.

Network operators selling to other telecoms providers are **wholesale operators**, like Openreach.

- 2.96 Again in the same way as for broadband services, some network operators, for instance VMO2, are also **vertically integrated**. This means they control all stages of business connectivity service delivery, from owning or using physical infrastructure, to selling directly to businesses. Providers selling leased lines directly to end-users are **retail leased line providers** and can be vertically integrated, such as VMO2, or buy services from another operator.
- 2.97 As only Openreach has near universal coverage, other network operators can choose to buy leased line services from Openreach or other network operators and use them alongside their own network (this choice is often referred to as **‘on-net’ versus ‘off-net’**). This may be, for example, if it is more cost effective to buy a third-party leased line service than extend their own network by building (this choice is often referred to as **‘build versus buy’**). We discuss this in greater detail in Section 5 of this volume.
- 2.98 Providers who buy wholesale services from network operators can be:
- **Network aggregators**, who buy connectivity services from one or more network operators and sell them to customers to provide a national service (which may be particularly valued by customers with multiple sites). Network aggregators can be fixed telecoms providers, such as Sky or TalkTalk. Customers, whether end-users themselves or system integrators and value-added resellers, who purchase leased lines through a network aggregator may therefore use services provided over multiple different networks.
 - **Value-added resellers**, who buy connectivity services from network operators and package them with additional products and services, such as cloud services, cybersecurity and VoIP to deliver an end-to-end business connectivity solution. Examples of these are Daisy Communications and Claranet.¹⁴⁷
 - **Systems integrators**, who provide an end-to-end managed service to end-users, where the connectivity provided by leased lines is often integrated with solutions from third-parties (e.g. cloud services, cybersecurity). In contrast to value-added resellers, their offerings are usually ‘highly customised’ and managed on behalf of the customer. Examples of systems integrators are Accenture and Deloitte.
- 2.99 Finally, some providers, for example BT or VodafoneThree, are present in all parts of the value chain, from network operator to user of leased line services i.e. for mobile backhaul.
- 2.100 Leased line providers may specialise in leased lines only, or sell both leased lines and broadband services:
- Specialised leased line providers or ‘leased lines only’ (LL-only) providers serve businesses who specifically require the characteristics of leased lines, for instance in the financial sector, utilities, or mobile backhaul. Many LL-only providers are established providers, such as Colt and Zayo, but there have also been altnet new entrants focusing on the leased line market, such as ITS and Vorboss. Networks built by LL-only providers

¹⁴⁷ Since the March 2025 consultation was published, Daisy Communications merged its B2B operations with VMO2’s business division, resulting in the creation of a new firm called O2 Daisy. Virgin Media O2. 12 May 2025. [Virgin Media O2 and Daisy Group Announce New B2B Company to Create Communications and IT Powerhouse for UK Businesses](#) . Accessed 25 February 2025.

tend to be only available in areas where there is a concentration of businesses which are, or likely to become, leased line customers.

- Some network operators may choose to build networks that cover both businesses and residential customers. These types of networks tend to have a larger geographic availability and provide a wider range of services, i.e. leased lines and broadband. Examples include the two largest networks in the UK, BT and VMO2. In addition, some altnets are now also selling both broadband services and leased lines (either wholesale or to end-users), such as CityFibre.

Leased line customers

2.101 Overall, leased line customers have a range of different needs, and suppliers offer a range of different services in order to meet these, but the core features of leased lines valued by businesses include the following:

- **Speed (bandwidth):**¹⁴⁸ For many leased line customers, speed that is guaranteed and not subject to fluctuations is critical. Compared to residential consumers, businesses may also require high upload speeds, therefore making symmetry of upload and download speeds more important. Finally, some large businesses may also require substantially higher speeds or capacity than what is available over broadband, e.g. 10 Gbit/s or more.
- **Continuity of service and reliability:** As discussed above, many large businesses require bandwidth which is guaranteed, ensuring that they have a continuous service and are not subject to fluctuations. Further, businesses typically rely on connectivity to operate, and so outages are significantly more costly to them, compared to residential consumers. As such, they tend to have a stronger requirement for fast repair times and continuous monitoring and support. For these reasons, we understand that an established reputation with dedicated support services are important features of a leased line provider for leased line customers. We discuss this in greater detail in Section 5 of this volume. While leased line customers particularly value continuity and reliability of service, the relative importance of price and reliability varies depending on the specific requirements of businesses.¹⁴⁹
- **Coverage:** Some leased line customers with multiple sites may take network coverage of operators into account, as higher coverage across the UK means that they can source from fewer providers.

¹⁴⁸ Bandwidth typically refers to the capacity of a transmission link i.e., it is the maximum amount of data that can be transmitted over a transmission link in a given period of time; whereas speed refers to the rate at which the data that can be transmitted between two points in a network. Speed may be less than the bandwidth of the transmission link if the link is shared between multiple users. In the context of leased lines, we are often using the term bandwidth since bandwidth is uncontended in leased lines and therefore the speeds delivered over a leased line can be sufficiently close to the bandwidth of the leased line.

¹⁴⁹ For instance, research by [redacted] found that reliability and reputation were the highest ranked factors business consumers considered when choosing a leased line provider (more so than price), and this was especially the case for larger businesses. [redacted]. Similarly, 2022 research by [redacted] found that among business buyers, reliability was the most important reason for considering switching providers. Additionally, [redacted] documents indicate that different aspects of a service may be more valued by certain segments of business consumers. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. Finally, research by [redacted] indicated that different features of a service may be more important to consumers within a given industry compared to others. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

- **Security and resilience:** Some very large organisations, such as MNOs and large corporates, may particularly value aspects such as security and high levels of resilience.

- 2.102 Historically, larger organisations such as large enterprises, public sector organisations and mobile network operators (MNOs) were more likely to buy leased lines than smaller businesses.¹⁵⁰ ¹⁵¹ Since the WFTMR21, we have also seen the growth of ‘leased line equivalent’ services.¹⁵² Leased line (and leased line-equivalent) customers span different sectors, including finance, utilities, technology, retail, and telecoms. Some, for instance mobile providers, have specific requirements for high bandwidth and high-quality services. Leased line customers can be single or multi-sites, for instance a bank or a chain of retail stores.
- 2.103 While there are many different technologies over which leased lines can be delivered, as discussed below, we consider that potential leased line customers will care about the capabilities and additional features of the services that they purchase like speed, continuity of service and reliability, and security and resilience, rather than the specific technology underpinning those services.
- 2.104 We expect that the main characteristics demanded by leased line customers are unlikely to change during the review period, with the exception of a continuing trend towards higher speeds.

Products offered

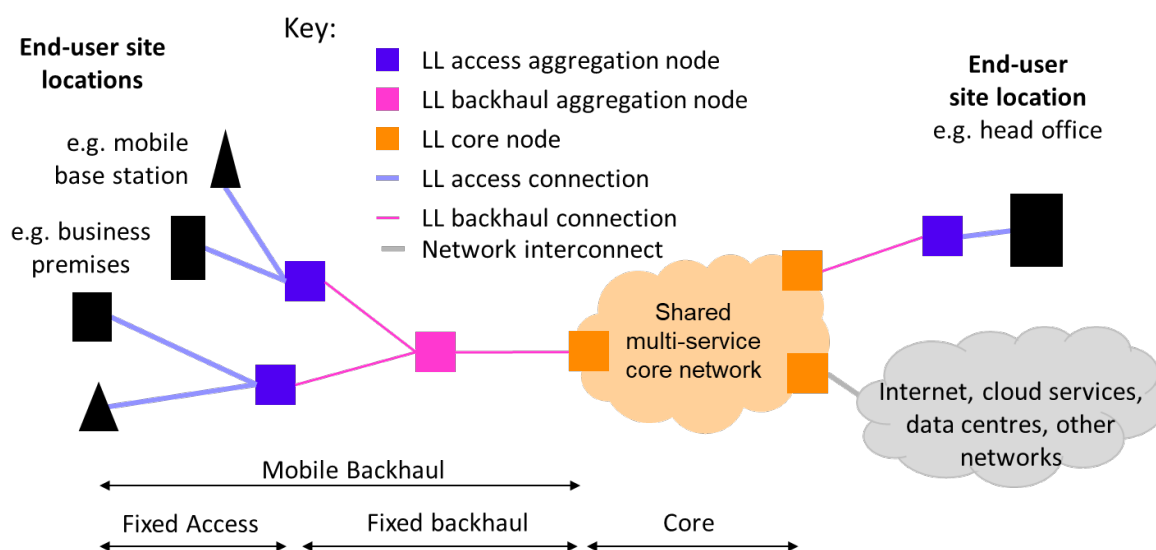
- 2.105 Leased lines generally use optical fibres to make the physical connection between two or more fixed locations, as illustrated in Figure 2.9.

¹⁵⁰ Ofcom. October 2022. [SME consumer experience in the communications market – interactive report](#). In this report, we found that overall 4% of SMEs were using dedicated internet access (leased line) products – this broke down to 3% of micro businesses, 19% of small businesses, and 35% of medium-sized businesses.

¹⁵¹ In response to the March 2025 Consultation, Vorboss commented that leased line providers serve businesses of all sizes. [Vorboss](#) response to TAR26 March 2025 Consultation. We recognise that smaller businesses may also choose leased line services due to direct internet access, particularly those in specialised sectors.

¹⁵² Leased line equivalent services refer to a service with features such as uncontended capacity, symmetric download and upload speeds, and quality of service parameters similar to point-to-point dedicated leased line services (e.g. high availability, fast repair times and installation times, and continuous monitoring and support). These services can be delivered over Ethernet over symmetric PON (e.g. over XGS-PON with 10 Gbit/s capacity in both the downstream and upstream direction). See below for discussion around using Ethernet over symmetric PON services.

Figure 2.9: An illustration of the components used to provide an end-to-end leased line service



Source: Ofcom. 2025.

2.106 Leased lines can be provided with active electronics, which may make use of several different technologies, or without any powered equipment supplied by the network provider; these are often referred to as dark fibre (DF) connections. We use the term leased lines generically to refer to both active leased lines and dark fibre, and explain some of those technologies below, as well as in Section 5 of this volume, and in Annex 2. ¹⁵³

Ethernet

2.107 The widespread use of Ethernet services and the availability of Ethernet equipment means that Ethernet is the preferred technology for the majority of installed leased line circuits in the UK. Point-to-point leased lines are generally based on Ethernet standards and are specified by bandwidth (e.g. 100 Mbit/s, 1 Gbit/s or 10 Gbit/s). ¹⁵⁴ Ethernet leased lines are typically delivered over fibre and changing the bandwidth involves changing, or reconfiguring, the electronics at both ends.

2.108 For example, Openreach provides leased line Ethernet services using its range of EAD (Ethernet Access Direct) products with speeds of up to 10 Gbit/s. Openreach has launched a pilot of a new variant of Ethernet, called EAD2.0, that it is planning to launch in December 2026. ¹⁵⁵ VMO2 also offers leased line Ethernet services, including national Ethernet connectivity and Ethernet extensions, with speeds up to 10 Gbit/s. ¹⁵⁶

¹⁵³ We do not include legacy Traditional Interface (TI) services as although services are still available, they have largely been replaced by more modern packet based technologies like Ethernet, with regulation being removed as set out in [Ofcom's 2019 Business Connectivity Market Review \(BCMR\)](#), Volume 2. Ofcom. 2019. [Business Connectivity Market Review](#).

¹⁵⁴ Ethernet as a technology is described by a set of standards (e.g. IEEE 802.3) maintained by the Institute of Electrical and Electronics Engineers (IEEE). These standards establish the framework for Ethernet technology covering aspects such as data formatting, the transmission medium used (copper, fibre, wireless), and the supported bandwidth speeds (e.g. 100 Mbit/s, 1 Gbit/s, 10 Gbit/s). More information can be found at the IEEE website - [IEEE SA - IEEE 802.3-2018](#). Accessed 10 December 2025.

¹⁵⁵ Openreach response to TAR26 March 2025 Consultation. Document 3. Paragraph 416. Openreach response dated 13 February 2026 to s135 notice dated 3 February 2026, question 9.

¹⁵⁶ Virgin Media Business. [Ethernet](#). Accessed 20 January 2026.

- 2.109 There are several LL-only providers that offer Ethernet services. For example, Neos Networks advertises an Ethernet product for businesses with speeds ranging from 10 Mbit/s to 100 Gbit/s.¹⁵⁷ Colt also offers various Ethernet products for businesses, with speeds ranging from 10 Mbit/s to 100 Gbit/s.¹⁵⁸

Wavelength division multiplexing (WDM)

- 2.110 WDM is also a fibre-based technology with features suited for high-capacity routes (e.g. between core nodes and to data centres) and for higher capacity backhaul connections. WDM is a technology that uses different wavelengths (colours) of light to create separate virtual circuits over the same fibre, or pairs of fibre. WDM circuits generally require electronics and optical lasers built to a higher specification than lower speed circuits.
- 2.111 WDM is particularly attractive where demand is expected to grow over time, as extra capacity can be provided quickly without the need to add more fibres. Once the first circuit is installed, additional circuits can be added simply by adding or lighting an extra wavelength. WDM also offers more flexibility for leased line customers by supporting data transmission technologies other than Ethernet. Different transmission technologies can run over different wavelengths on a single fibre. WDM supports network sharing by allowing different wavelengths to be allocated to different end-users.
- 2.112 WDM systems can provide capacity from 10 Gbit/s to as much as 400 Gbit/s on each wavelength. For example, Openreach offers a WDM product called OSA (optical spectrum access) Filter Connect, which comes with a pre-provided 10 Gbit/s Ethernet service and the option to grow capacity using additional wavelengths and using Ethernet or other transmission technologies as described above. Again, there are several LL-only providers offering WDM products. For instance, Neos offers a product called Optical Wavelengths which enables connections of ranging from 10 Gbit/s to 400 Gbit/s.¹⁵⁹

Ethernet over symmetric Passive Optical Network (PON)

- 2.113 In the WFTMR21, we found that Ethernet provided using Gigabit Passive Optical Network (GPON) could not offer symmetric 1 Gbit/s services.
- 2.114 Developments in technology have meant that some types of access networks, notably XGS-PON¹⁶⁰, can now be configured to offer (typically 1 Gbit/s) symmetric bandwidth services with uncontended capacity. Unlike traditional leased lines, this technology shares ring-fenced capacity among multiple users, rather than providing a dedicated point-to-point service.¹⁶¹ We understand that some providers are already offering such products, and that these include quality of service parameters similar to existing leased line services. This includes ITS¹⁶² and CityFibre.¹⁶³

¹⁵⁷ Neos. [Business Ethernet services](#). Accessed 20 January 2026.

¹⁵⁸ Colt. [Ethernet Services](#). Accessed 20 January 2026.

¹⁵⁹ Neos. [Optical Wavelengths](#). Accessed 20 January 2026.

¹⁶⁰ XGS-PON stands for 10 Gigabit Symmetrical Passive Optical Network, where the letter 'X' represents the number 10, and the letter 'S' stands for symmetrical.

¹⁶¹ See also Annex 2, Overview of telecoms networks.

¹⁶² ITS. [Networks: Improving business connections](#). Accessed 6 March 2026.

¹⁶³ CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, questions 1a, 1b, 1d, 1e.

- 2.115 The development and rollout of further iterations of PON technology (e.g. 50G-PON) appears likely to support even higher speeds in the future.¹⁶⁴
- 2.116 We discuss these developments further, including our decision to include LL-equivalent services delivered over XGS-PON in our leased line product market definition, and implications of this, in Section 5 of this volume. In the context of leased lines, we collectively refer to XGS-PON and future PON technologies (which may offer speeds faster than XGS-PON), as Ethernet over symmetric PON – this does not include GPON.

Dark fibre

- 2.117 Dark fibre providers install and sell fibre to connect between two sites, with the purchaser of the dark fibre adding the active electronics to provide services such as Ethernet or WDM. Dark fibre is, therefore, particularly suited to leased line customers who benefit from the flexibility of selecting their own equipment (e.g. if they expect to need to upgrade their bandwidth over time or require very high bandwidths) and can manage the provision and operation of the electronics. Since the electronic equipment is provided by the customer, rather than the fibre provider, it allows greater choice in how services are provided over the fibre than being limited to just Ethernet or WDM services.

Quality of service parameters

- 2.118 As mentioned in relation to features valued by leased line customers, regardless of the technology over which leased lines are provided, these products have quality of service parameters which distinguish them from residentially-focused broadband services. This includes, for example, better availability service level agreements (e.g. 99.99% or better), faster repair times (e.g. measured in hours rather than days, in the range of 4-6 hours), faster installation times, and continuous (24/7) monitoring and support.¹⁶⁵

Prices

- 2.119 Leased lines are significantly more expensive per end-user than broadband services, even broadband packages specifically targeted at businesses. This is for several reasons, including that leased line products have uncontended capacity, better quality of service parameters compared to broadband (e.g. faster repair times), are more likely to have symmetric upload and download speeds, and because some products use dedicated infrastructure.
- 2.120 For example, at the wholesale level, Openreach's EAD1000 leased line product (upload and download speeds of 1 Gbit/s) has an annual rental price of £2,358,¹⁶⁶ compared to the annual rental price of £1,200 for an FTTP broadband connection with download speeds of 1 Gbit/s (and upload speeds of 220 Mbit/s).¹⁶⁷
- 2.121 Similarly, at the retail level, VMO2's business broadband products are several times cheaper than leased line services which offer roughly equivalent download speeds. It advertises a 100 Mbit/s leased line product for £312 per month, with a 1 Gbit/s leased line product available at £358 per month.¹⁶⁸ Looking at business broadband products which offer similar

¹⁶⁴ Ofcom. September 2023. [Evolution of fixed access networks](#). Figure 5: PON standards evolution.

¹⁶⁵ Product characteristics taken from provider websites: BT Business, [Choose your leased line plan](#); ITS, [Product portfolio](#); CityFibre, [Fibre Leased Lines for your business](#); Vorboss, [Business](#); Colt, [Why choose Colt Leased Line?](#) and [Colt IP Access Datasheet](#); All Accessed 11 December 2025.

¹⁶⁶ Openreach, [Price list, Ethernet Access Direct \(EAD\) including EAD Enable](#). Accessed 2 March 2026.

¹⁶⁷ Openreach. [Price list, Generic Ethernet Access \(FTTP\)](#). Accessed 10 December 2025.

¹⁶⁸ Virgin Media Business. [Dedicated Internet Access](#). Accessed 12 February 2026.

download speeds, VMO2's Voom 200 product (download speeds of 200 Mbit/s) is advertised at £29 per month, while their Voom Gig1 product (download speeds of 1 Gbit/s) is advertised at £53 per month.¹⁶⁹

Service take-up and usage

2.122 Over the WFTMR21 review period, usage and take-up of leased lines has evolved with changing end-user demand, including for different bandwidths, by different end-users (e.g. MNOs) and across the geographic areas that were identified in the WFTMR21. We present some of this indicative data below.

Volumes by bandwidth¹⁷⁰

2.123 Figure 2.10 below shows the breakdown of wholesale leased line connections by bandwidth, and dark fibre connections, and how this has evolved over time. This was compiled using data provided by a range of operators. There are some limitations with this data, for example it [redacted] and [redacted]. However, we consider that this will not materially affect the proportionate split of these connections as shown in this Figure, [redacted].

2.124 Since the WFTMR21, we have seen a decline in the proportion of leased lines with bandwidths of 100 Mbit/s or less, from 57% in September 2021 to 36% as of March 2025, a decrease of 21 percentage points. The proportion of leased lines with bandwidths greater than 100 Mbit/s up to and including 1 Gbit/s rose by 14 percentage points from 34% to 48%.

2.125 Demand for bandwidths of greater than 1 Gbit/s ('very high bandwidth' or 'VHB' services) has also continued to increase. However, 84% of total leased line access circuits remain at speeds of 1 Gbit/s or below.

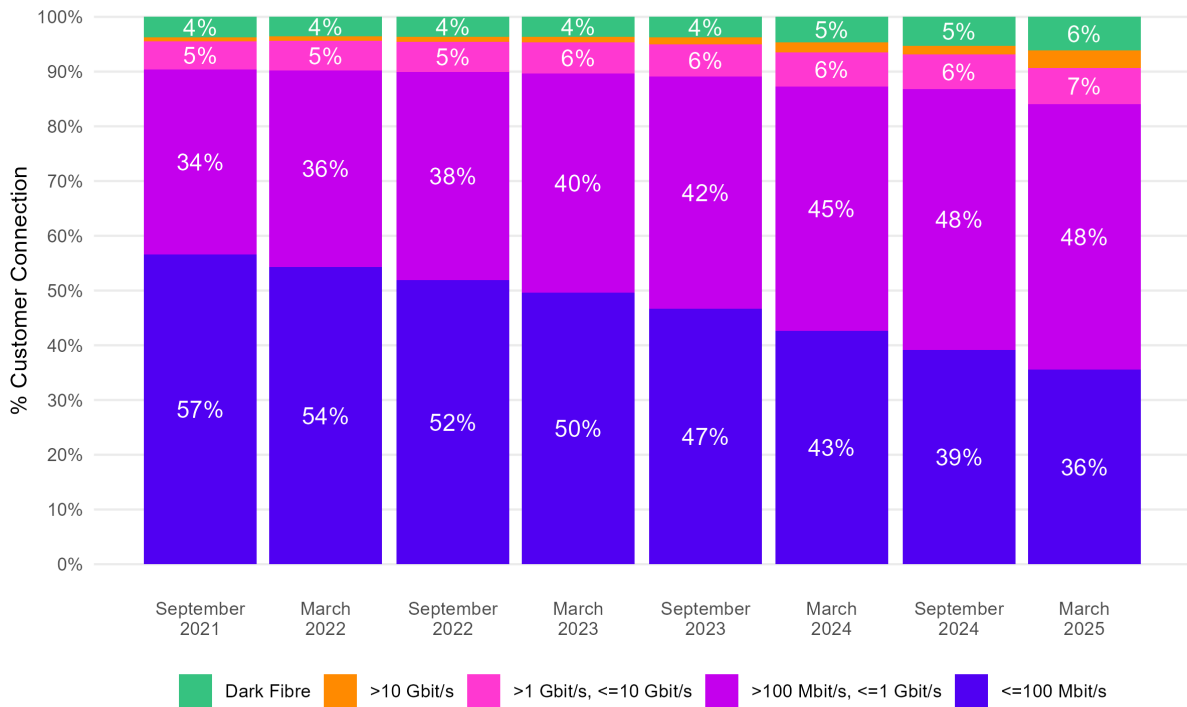
2.126 Usage of dark fibre as a proportion of all leased lines has been relatively stable since 2021.¹⁷¹

¹⁶⁹ Monthly prices reflect advertised price after any promotional period. Virgin Media Business, [Voom Fibre business broadband and phone deals](#). Accessed 10 December 2025.

¹⁷⁰ Data presented in this section excludes volumes in the CLA.

¹⁷¹ This includes [redacted].

Figure 2.10: Wholesale leased line connections by bandwidth and dark fibre, 2021 to 2025



Source: Ofcom analysis of provider data submitted July 2024 – January 2026 ¹⁷²

Notes: Access connections only – does not include inter-exchange connections. On-net connections only. Dark fibre can be configured to provide any speed. Wholesale volumes only, does not include retail volumes. [§]. [§]. ¹⁷³ [§]. ¹⁷⁴ [§]. ¹⁷⁵ [§]. ¹⁷⁶ [§]. ¹⁷⁷

2.127 We expect that these trends will continue in the 2026-31 review period. Specifically, we expect that the share of leased lines at bandwidths of 100 Mbit/s or less will continue to fall, and there will be an increase in the usage of leased lines at bandwidths greater than 1

¹⁷² [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§] and its response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§] and its response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to our clarificatory question dated [§] concerning the s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§] and its response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to our clarificatory question dated [§] concerning the s135 notice dated [§], question [§] and its response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§].

¹⁷³ [§] responses dated [§] and [§] to s135 notice dated [§], question [§]. [§] response dated [§] to s135 notice dated [§], question [§].

¹⁷⁴ [§] response dated [§] to s135 notice dated [§], question [§];

¹⁷⁵ [§] response dated [§] to s135 notice dated [§], question [§]

¹⁷⁶ [§] response dated [§] to s135 notice dated [§], question [§];

¹⁷⁷ [§] response dated [§] to s135 notice dated [§], question [§]

Gbit/s, though we expect that the majority of leased line circuits will still be at 1 Gbit/s and below. We additionally expect demand for dark fibre to increase over the next five years.¹⁷⁸

2.128 We note the comment from Vorboss that it is surprised by our expectations that the volume of leased lines at 1Gbit/s and below will continue to form the majority of leased line volumes.¹⁷⁹ Our view is based on provider data collected on wholesale leased line connections by bandwidth and forecast volumes. As our data is based on national data, and incorporate a range of customer requirements, it is possible that the types of services sold by Vorboss may be different.¹⁸⁰

MNO volumes¹⁸¹

2.129 MNOs purchase a substantial volume of leased line access services (including dark fibre).¹⁸² MNOs use these to connect their mobile base stations to a point of aggregation in their core networks, known as mobile backhaul.

2.130 Figure 2.11 below shows a breakdown of the bandwidths of leased lines and dark fibre used for each MNO. Take-up by bandwidth differs by MNO. However, compared to leased line users more generally, MNOs are more likely to use higher bandwidth services. As of March 2024, approximately a third of leased line access services (including dark fibre)¹⁸³ used by MNOs were at very high bandwidth (VHB), compared with around 10% of all leased line services at very high bandwidth.¹⁸⁴ The majority of circuits used by MNOs remain at 1 Gbit/s or below.

Figure 2.11: MNO leased line volumes by bandwidth, by MNO

[X]

Source: Ofcom analysis of provider data, submitted August-October 2024.¹⁸⁵

Note: We have not updated this chart since the March 2025 consultation as we do not have updated data.

[X].¹⁸⁶ [X].

¹⁷⁸ Ofcom analysis of provider forecasts, based on the available information.

¹⁷⁹ [Vorboss](#) response to TAR26 March 2025 Consultation. Page 3.

¹⁸⁰ We note that Vorboss's comments are centred around forecast data presented in the March 2025 consultation, which included volumes from the CLA. Data in the section on volume by bandwidth excludes volumes from the CLA.

¹⁸¹ Data presented in the section on MNO volumes includes volumes in the CLA.

¹⁸² In 2021, we estimated that by 2023 they would collectively use over 40,000 leased line circuits. Ofcom. 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Paragraph 2.123.

¹⁸³ This excludes wireless backhaul (such as microwave, satellite or other wireless links).

¹⁸⁴ 7% per cent of leased lines are 1 Gbit/s-10 Gbit/s. Some of the dark fibre lines may be being used to deliver services between 1 Gbit/s-10 Gbit/s, but only 5% of total leased lines circuits are dark fibre, as shown in Figure 2.9. Therefore, no more than 12% of total leased lines are 1 Gbit/s-10 Gbit/s.

¹⁸⁵ [X] response dated [X] and [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X].

¹⁸⁶ [X] response dated [X] to s135 notice dated [X], question [X] and [X] response dated [X] to s135 notice dated [X], question [X].

- 2.131 MNOs also make use of fixed wireless links, such as microwave links for the purposes of mobile backhaul. We understand that a significant minority of mobile backhaul circuits are wireless or microwave links.¹⁸⁷

Inter-exchange connectivity

- 2.132 While we have focused on leased line connections to end-user sites so far, we also distinguish leased lines based on whether they are used to connect to an end-user site and carry traffic from that end-user site back to a provider's aggregation node, or they are used for trunk services, and in particular, inter-exchange connectivity ('IEC') services.
- 2.133 IEC services carry aggregated traffic between BT exchanges located in different geographic areas. BT exchanges act as network nodes, which are used to aggregate traffic and can act as interconnection points between networks and other network nodes. Demand for IEC comes from telecoms providers that need to carry aggregated traffic between BT exchanges to reach their own networks.
- 2.134 IEC services can be supplied from a range of technologies, Ethernet, WDM or dark fibre connections, and with a range of speeds, though we also understand that higher bandwidths account for a greater proportion of IEC circuits. We discuss IEC services in Section 6 of this volume.

¹⁸⁷ [redacted] response dated [redacted] and [redacted] to s135 notice dated [redacted], question [redacted] and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted].

3. Physical infrastructure market

- 3.1 In this section we explain our market definition and SMP assessment for the physical infrastructure market.
- 3.2 Based on the evidence we have gathered, and having taken into account responses from stakeholders, we have decided, in line with the March 2025 Consultation proposals:
- a) To define a single product market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network.
 - b) To define a single national geographic market for wholesale access to telecoms physical infrastructure for deploying a telecoms network, for the purposes of making a market power determination. We have concluded that this market meets the three criteria test.
 - c) To conclude that BT has SMP in the national market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network that we have defined.
- 3.3 The rest of this section covers the proposals we made in the March 2025 Consultation, stakeholder responses to this consultation and the reasoning behind our decisions for each of:
- a) Product market definition for physical infrastructure;
 - b) Geographic market definition for physical infrastructure; and
 - c) SMP assessment.

Product market definition

Our proposals

- 3.4 In the March 2025 Consultation, we provisionally concluded that there is a single product market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network,¹⁸⁸ which includes all physical infrastructure purpose-built to deploy fixed telecoms networks, such as ducts and poles, irrespective of the owner of that infrastructure.
- 3.5 We provisionally excluded physical infrastructure deployed to host radio transmission and reception equipment, non-telecoms physical infrastructure (such as those built for electricity and gas networks), and wireless technologies from the product market.¹⁸⁹

Stakeholder responses

- 3.6 The majority of stakeholders supported our proposals on the product market definition.¹⁹⁰ On the other hand, Openreach commented that our market definition is overly narrow and

¹⁸⁸ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 3.2.

¹⁸⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 3.8-3.27.

¹⁹⁰ [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 2. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 23. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [Community Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 4.4. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 55. [nexfibre](#) response to TAR26 March 2025

fails to reflect the diversity of infrastructure options and deployment strategies available to access seekers. We set out the concerns raised below.^{191 192}

Choice of focal product

- 3.7 nexfibre and VMO2 agreed with our proposed choice of focal product,¹⁹³ which provisionally defined as wholesale access to telecoms physical infrastructure for deploying fixed telecoms.¹⁹⁴ VMO2 added that while there may be differences, for example, between specific forms of this physical infrastructure, the selected focal product has a homogenous underlying role in the hosting of fixed telecoms network elements, despite these variations.¹⁹⁵
- 3.8 Openreach did not comment explicitly on our choice of focal product but made comments relating to it. In particular, it considered that our analysis failed to look at the differences in overhead and underground infrastructure. Openreach also said that by focusing solely on Openreach's physical assets, our proposed approach leads to a pre-determined finding of SMP.¹⁹⁶
- 3.9 In addition, Openreach commented that the exclusion of 'mobile' physical infrastructure from the market and SMP analysis is flawed if we consider that PIA¹⁹⁷ can be used by mobile or wireless operators.¹⁹⁸

Non-telecoms physical infrastructure

- 3.10 Openreach suggested that we did not adequately consider the use of non-telecoms infrastructure (e.g. electricity networks and sewers), which it stated are increasingly being used for telecoms deployment.¹⁹⁹
- 3.11 Others agreed with our finding that non-telecoms physical infrastructure is not part of the product market. Some stakeholders noted in their responses that they have examined the use of non-telecoms infrastructure in the past and based on their experience, they were deemed unsuitable.²⁰⁰ Stakeholders agreed that there are practical challenges and

Consultation. Main response. Page 2. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 12-13. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 16-17.

¹⁹¹ Openreach also commented that we have not assessed whether downstream retail markets are competitive or already regulated, which is essential under the modified Greenfield Approach, and essential for proper upstream market definition and assessing SMP. See [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 2 and 10. As this relates to our approach to market definition, we have addressed this in Volume 2, Section 1.

¹⁹² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 7.

¹⁹³ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 2. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 23-24.

¹⁹⁴ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 3.8-3.11.

¹⁹⁵ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 23-24.

¹⁹⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 2.

¹⁹⁷ As defined in Annex 19, PIA refers to 'Physical Infrastructure Access'.

¹⁹⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 12.

¹⁹⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 2.

²⁰⁰ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 2. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 25-26.

complexities associated with the use of non-telecoms physical infrastructure to deploy fixed telecoms networks that prevent substitutability at scale.²⁰¹

- 3.12 In addition to the practical challenges described in the consultation, nexfibre indicated that non-telecoms infrastructure is often not configured in a manner that allows for useful sharing of the infrastructure even where it is technically possible to build a telecoms network using the infrastructure. It said that this can include distance from properties to be served and geographic placement of the infrastructure. nexfibre also noted that use of non-telecoms infrastructure, in particular electricity infrastructure, requires additional training and raises particular concerns around ongoing access and maintenance.²⁰²

Wireless technologies

- 3.13 Stakeholders who commented on whether wireless technologies are part of the product market agreed with our proposals to exclude them from the market.²⁰³

Supply-side substitution

- 3.14 VMO2 commented that supply-side substitution is not plausible during the review period.²⁰⁴

Our reasoning and decisions

Background

- 3.15 In the WFTMR21, we defined a single product market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network.
- 3.16 The term physical infrastructure is typically used to refer to all parts of a network which can be used to host elements of a telecoms network. It can include pipes, masts, ducts, inspection chambers, manholes, cabinets, buildings or entries to buildings, antenna installations, towers and poles.
- 3.17 There are several physical infrastructures in the UK which could potentially support the deployment of telecoms networks by third party access seekers. These vary in their geographic coverage, the type of end-users they connect, and the way in which they connect to end-users.
- 3.18 Some of these infrastructures were purpose-built to deploy telecoms networks (such as those owned by BT (but operated by Openreach) and VMO2), whereas others were built to supply non-telecoms services such as electricity, gas, water and railways.

Our approach

Choice of focal product

- 3.19 We define a focal product of wholesale access to telecoms physical infrastructure for deploying a telecoms network.

²⁰¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 2. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 25-26.

²⁰² [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 2.

²⁰³ [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 2. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 23. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 27-30. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 16-17.

²⁰⁴ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 46.

- 3.20 As we discuss in more detail below, our focal product includes all physical infrastructure which is:
- a) deployed for the purposes of supporting a telecoms network (i.e. we exclude non-telecoms physical infrastructure), irrespective of the owner of that infrastructure; and
 - b) deployed to host fixed (or ‘wired’) elements of telecoms networks (e.g. ducts, poles and chambers). We exclude physical infrastructure which is deployed to host the radio transmission and reception equipment needed for wireless connections in a telecoms network (e.g. masts and antenna installations).
- 3.21 In response to Openreach’s comments in relation to the exclusion of mobile physical infrastructure from the market, we understand that the physical infrastructure intended to support wireless elements of telecoms networks is largely separate from physical infrastructure intended to support fixed elements of telecoms networks (although in the longer term, innovation may lead to there being a higher degree of overlap in the use of these two infrastructures). Therefore, we consider it appropriate to exclude it from the focal product.
- 3.22 Potential buyers in the physical infrastructure market are access seekers looking to roll out fixed telecoms networks, including multi-service networks, networks providing services for residential premises and small businesses, and leased line only providers. Therefore, we start with telecoms physical infrastructure, as it is already being used to host telecoms networks and built for that purpose. We include all fixed telecoms physical infrastructure within the focal product, irrespective of the owner of that infrastructure, as the underlying product made available to access seekers is broadly similar and would be used for the same purpose (i.e. deploying a telecoms network).
- 3.23 We therefore disagree with Openreach’s comment that our proposed approach leads to a predetermined finding of SMP by focusing solely on Openreach’s physical infrastructure assets. We have considered all fixed telecoms physical infrastructure in our competitive assessment, irrespective of the owner of that infrastructure.
- 3.24 We recognise there might be some differences between telecoms physical infrastructures owned by different operators, particularly in relation to geographic coverage of the network, the breadth and contiguity of that coverage, and the types of premises to which they connect. We consider these differences in our analysis of geographic markets, as they are likely to be important factors in determining the competitive constraints posed by different operators.
- 3.25 As Openreach also noted in its response, there are also differences between specific forms of telecoms physical infrastructure, such as overhead and underground infrastructure. However, these perform a similar function – carrying cables or fibres between two points. Therefore, we consider it appropriate to include both of them in the focal product.
- 3.26 In the following subsections, we consider whether other types of physical infrastructure (non-telecoms and wireless) should be included within the relevant product market, by assessing whether they are potential substitutes. As set out in Annex 1, using the hypothetical monopolist test framework, we assess whether a hypothetical monopolist of the focal product would find it profitable to impose a small but significant non-transitory increase in price (‘SSNIP’) above the competitive level.

- 3.30 There are instances where providers have used non-telecoms physical infrastructure, but this is complementary to the use of telecoms physical infrastructure.²⁰⁹ For example, some access seekers use local authority duct only as part of public sector contracts, and would generally use alternatives, such as BT's telecoms physical infrastructure, over non-telecoms physical infrastructure.²¹⁰ In addition, the evidence shows access seekers generally minimise the number of alternative infrastructures used to deploy their network.²¹¹ We consider this is due to the costs and uncertainty associated with combining multiple infrastructures, as set out in Paragraph 3.67.²¹²
- 3.31 For the reasons set out above, we expect non-telecoms physical infrastructure to be a weak substitute to telecoms physical infrastructure, and so we would not expect sufficient switching in response to a SSNIP to justify widening our product market definition.

Wireless technologies

- 3.32 As explained in the WFTMR21, some telecoms networks use wireless connections in place of fixed connections. For those parts of delivery where a wireless connection is used, access to physical infrastructure to house cables is not required. Wireless therefore represents, in principle, a potential constraint on a hypothetical monopolist of access to telecoms physical infrastructure.
- 3.33 The constraint could be direct and/or indirect. In particular, wireless technologies could represent a direct constraint if, in response to a SSNIP, access seekers of physical infrastructure would consider deploying their networks using wireless technologies and reduce the use of telecoms physical infrastructure. In addition, wireless technologies could represent an indirect constraint if, for example, in response to a SSNIP, access seekers would pass the price increase onto end-users, and these end-users would consider switching to retail broadband services delivered over wireless technologies. We assess both the direct and the indirect constraints.
- 3.34 The forms of wireless connections can be grouped into:
- a) connections that replace WLA connections. For example, using fixed wireless access (FWA), mobile, or satellite to deliver broadband services; and
 - b) connections that replace LLA connections. For example, using microwave links or satellite for mobile backhaul.
- 3.35 Satellite, mobile broadband and FWA technology can be used to provide retail broadband services. These wireless technologies can replace WLA connections which are used to provide fixed retail broadband services and are hosted in telecoms physical infrastructure. Therefore, wireless technologies can also replace the need to use certain elements of telecoms physical infrastructure (e.g. lead-ins). As a result, we consider whether the

²⁰⁹ See footnote 208.

²¹⁰ [X] response dated [X] to s135 notice dated [X], question [X]. [X] responses dated [X] to s135 notice dated [X], questions [X].

²¹¹ See footnote 208.

²¹² We note Openreach's reference to the Analysys Mason report and the DCMS's Future Telecoms Infrastructure Review, which it also referenced in its response to the WFTMR21 to provide evidence for the use of non-telecoms infrastructure. In the WFTMR21 we noted these submissions and concluded that non-telecoms infrastructure should not be included in the relevant physical infrastructure market (see Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Paragraphs 3.37-3.42.). As we set out above, we consider this continues to be the case for the same reasons.

potential for retail customers to switch to broadband delivered over wireless technologies is an indirect constraint on physical infrastructure, and whether the opportunity for telecoms physical infrastructure access seekers to use wireless technologies instead of physical infrastructure is a direct constraint on physical infrastructure.

- 3.36 As set out in Section 4 of this volume, our analysis suggests that wireless technologies (in particular FWA, mobile broadband, and satellite) are at this time unlikely to be a substitute to fixed broadband for a sufficiently large number of customers at the retail level. Therefore, we expect any indirect constraint on telecoms physical infrastructure would be limited.
- 3.37 Given wireless technologies are unlikely to be a substitute to fixed broadband for a sufficiently large number of customers at the retail level, any direct constraint from the opportunity for telecoms physical infrastructure access seekers to deploy an FWA network instead of using telecoms physical infrastructure would also be limited. This is consistent with the evidence we have gathered, which indicates that the large majority of WLA providers do not currently use or plan to use FWA to achieve their planned coverage.²¹³
- 3.38 In relation to LLA connections, satellite and microwave links are sometimes used by mobile network operators for backhaul. These wireless backhaul links can replace leased line connections, which are hosted in telecoms physical infrastructure. We therefore consider whether the potential for mobile network operators switching from leased lines to satellite or microwave for backhaul is an indirect constraint on telecoms physical infrastructure, and whether the opportunity for telecoms physical access seekers to use wireless technologies instead of physical infrastructure is a direct constraint on physical infrastructure.
- 3.39 As set out below in Section 5, we understand that wireless technologies are not a strong substitute to leased lines for mobile backhaul. Therefore, any indirect constraint on telecoms physical infrastructure would be limited.
- 3.40 Given that wireless technologies are unlikely to be a strong substitute for leased lines for mobile backhaul at the downstream level, any direct constraint from the opportunity for telecoms physical infrastructure access seekers to use wireless technologies instead of using telecoms physical infrastructure would also be limited.
- 3.41 For the reasons set out above, any direct or indirect constraint on telecoms physical infrastructure would be limited, and so we would not expect sufficient switching in response to a SSNIP to justify widening our product market definition to include wireless technologies. Stakeholders who commented on whether wireless technologies are part of

²¹³ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

the product market also agreed with our proposals to exclude them from the market.²¹⁴ Therefore, our view remains that wireless technologies are not in the product market.

Supply-side substitution

- 3.42 Supply-side substitutability is used to measure the extent to which suppliers other than those offering the product or service in question would have the ability and incentive to rapidly switch, or increase, production to supply the relevant products or services.
- 3.43 Potential entry to supply telecoms physical infrastructure access takes considerable time and involves incurring significant sunk costs, as we also discuss below when assessing barriers to entry and expansion to the physical infrastructure market. We acknowledge that during the review period, some network providers may build their own infrastructure and provide access to it, albeit we expect this build to be of limited scale. As we explain below, ubiquity is the key factor for access seekers, but installing new and ubiquitous physical infrastructure requires very high levels of investments and takes considerable time. As such, we do not expect sufficient supply-side substitution in response to a SSNIP.²¹⁵
- 3.44 We also note that VMO2 agreed that there are no supply-side substitutes. VMO2 added that with many network operators slowing down or completing their network expansion activities, it does not appear plausible that new entrants would emerge in the future.²¹⁶ Therefore, we conclude that there are no supply-side substitutes for access to telecoms physical infrastructure.

Our conclusions on product market definition

- 3.45 For the reasons set out above, we conclude that there is a single product market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network.
- 3.46 We exclude non-telecoms physical infrastructure and wireless technologies from that product market.

Geographic market definition

Our proposals

- 3.47 In the March 2025 Consultation, we proposed a single national geographic market²¹⁷ for wholesale access to telecoms physical infrastructure for deploying a telecoms network.²¹⁸

²¹⁴ [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 2. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 23. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 27-30. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 16-17.

²¹⁵ We note that a group of altnets within INCA have created a new infrastructure sharing venture. This is a nascent initiative, and we understand that it is intended to complement existing PIA products. (See INCA. 22 October 2025. [Altnet sector unveils new infrastructure sharing venture to win market share in mobile and datacentre markets](#). Accessed 11 December 2025.)

²¹⁶ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 46.

²¹⁷ References to a 'national' geographic market in this section exclude the Hull Area.

²¹⁸ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 3.32.

- 3.48 We proposed that ubiquity is the key factor for access seekers in determining which physical infrastructure to use, such that a ubiquitous infrastructure is likely to have material advantages over non-ubiquitous infrastructure.²¹⁹
- 3.49 Although there are geographic variations in the availability of alternative telecoms physical infrastructure, we considered that access to BT's ubiquitous physical infrastructure network has important advantages for potential access seekers. This also includes cost and capacity advantages from BT's overhead lead-ins and practical limitations on the extent to which alternative telecoms physical infrastructure can be shared. This means that competitive conditions are likely to be similar in all areas (even where alternative physical infrastructure is available), such that we should provisionally define a national market.²²⁰
- 3.50 We explained that this is unlikely to change in the review period, particularly as many networks have already been deployed in BT's existing infrastructure and switching costs are very high.²²¹

Stakeholder responses

- 3.51 Overall, stakeholders broadly supported our proposals on the geographic market definition,²²² except for Openreach.²²³

Approach to geographic market definition

- 3.52 Openreach noted that in a previous review, we identified four distinct geographic categories (A-D) based on the presence of alternative infrastructure. Openreach added that we could have retained a sub-national market approach to better reflect the competitive landscape and ensure proportionate and consistent regulation in those sub-national markets. Openreach noted that the geographic market definition for the physical infrastructure market contrasts with the geographic segmentation in other markets (e.g. WLA and LLA), leading to inconsistent regulatory treatment.²²⁴
- 3.53 nexfibre commented that it agreed with our proposed approach of a qualitative assessment of the conditions of competition based on the needs of telecoms infrastructure access seekers due to the lack of an active market. It explained this approach provides a better insight as to how users of physical infrastructure approach and assess its use.²²⁵

²¹⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 3.37-3.40.

²²⁰ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 3.41-3.50.

²²¹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 3.51.

²²² [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 2. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 23. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [Community Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 4.4. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 57. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 31. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 18.

²²³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 4-6.

²²⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 4-6.

²²⁵ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3.

Ubiquity is the key factor for access seekers

- 3.54 Openreach commented that we assume that ubiquitous infrastructure is necessary for competition, despite evidence that successful operators (e.g. VMO2) operate without full coverage.²²⁶
- 3.55 Others agreed that ubiquity is essential for access seekers.²²⁷ Stakeholders agreed that, compared to a non-ubiquitous physical infrastructure, a ubiquitous physical infrastructure allows access seekers the flexibility to adapt build plans²²⁸ and avoids certain additional costs and complexities, such as the costs associated with managing the multiple supplier relationships.²²⁹

Identifying physical infrastructure geographic markets

Availability and ubiquity of alternative telecoms physical infrastructure

- 3.56 Openreach did not support our proposal to define a single national geographic market. Openreach said that the availability and use of physical infrastructure varies significantly between areas such as the CLA, HNR areas, and rural regions. In addition, it commented that the types of services demanded (e.g. leased lines, broadband services) and the infrastructure available to meet those demands differ by region.²³⁰
- 3.57 Other stakeholders agreed with our proposal to define a single national geographic market.²³¹ Stakeholders said that there are no other providers who have built physical infrastructure as ubiquitous as BT's,²³² with significant portions of alternative network build relying upon access to BT's physical infrastructure.²³³ Stakeholders therefore commented that there are no effective substitutes to BT's physical infrastructure.²³⁴

²²⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 10.

²²⁷ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 57. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 32.

²²⁸ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 34.

²²⁹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [Community Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 4.3. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 34 and 44.

²³⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 4-5.

²³¹ [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 2. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 23. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 57. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 31.

²³² [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 3-4. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 44.

²³³ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3.

²³⁴ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 59. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3.

Characteristics of alternative telecoms physical infrastructure

- 3.58 Stakeholders also indicated that telecoms physical infrastructure from alternative providers may not be suitable for sharing due to its physical attributes. For example, if the alternative provider uses modern build techniques such as narrow trenching.²³⁵
- 3.59 In relation to VMO2's physical infrastructure specifically, CityFibre noted that it would be difficult to access even if VMO2 were prepared to grant access.²³⁶ VMO2 agreed with our assessment of the relative drawbacks of VMO2's duct and other physical infrastructure in comparison to BT's. VMO2 explained it does not routinely deploy overhead infrastructure and has made extensive use of direct bury, narrow trenching and 'Toby box' termination points. It said this makes it more expensive and often unusable for sharing.²³⁷
- 3.60 VMO2 added that existing capacity constraints on its physical infrastructure are likely to be exacerbated by its FibreUp programme to overlay HFC with XGS-PON, particularly in certain sections of its network. It added that there are also likely to be unique circumstances associated with lead-in connections and that variations are challenging to predict prior to physical inspection at the point of deploying the overlay.²³⁸

Our reasoning and decisions

Approach to geographic market definition

- 3.61 In this review, our key consideration in defining geographic market(s) is whether the conditions of competition are sufficiently homogenous across all areas such that we should define a single market, or whether there are any areas in which competitive conditions are likely to be appreciably different and distinguishable such that we should consider defining a segmented market.
- 3.62 We disagree with Openreach's comment that our approach for the geographic market definition of the physical infrastructure market has led to inconsistent regulatory treatment. Despite geographic differences in the existing presence of alternative telecoms physical infrastructures, we consider that competitive conditions are sufficiently similar across the UK to define a single national market, for the reasons we set out below.
- 3.63 As noted in the product market definition section, there are geographic differences between telecoms physical infrastructures owned by different operators, particularly in relation to coverage of the network, the breadth and contiguity of that coverage, and the types of premises to which they connect. These are characteristics that access seekers may consider in deciding which telecoms physical infrastructure to deploy their networks in.
- 3.64 In practice, outside the regulated provision of PIA by Openreach, there is currently no significant active market in the supply of wholesale access to telecoms physical infrastructure, as physical infrastructure is largely used only for self-supply.²³⁹ Therefore, in order to identify geographic markets, we have undertaken a qualitative assessment of the conditions of competition based on the needs of telecoms physical infrastructure access

²³⁵ [redacted] confidential response to TAR26 March 2025 Consultation. [redacted]. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 44.

²³⁶ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143.

²³⁷ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 37.

²³⁸ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 38.

²³⁹ See footnote 208.

seekers. This is because, in the absence of an active market, existing market conditions provide limited insight on competitive conditions. nexfibre agreed with our approach.²⁴⁰

- 3.65 As we discuss in the following section, we consider that ubiquity is the most important factor for network builders seeking access to physical infrastructure and therefore a key characteristic we consider in assessing the competitive conditions in an area.

Ubiquity is the key factor for access seekers

- 3.66 We conclude that a ubiquitous infrastructure is likely to have material advantages over non-ubiquitous infrastructure for access seekers, wherever and however they seek to deploy. By ubiquitous, we mean an infrastructure which provides the ability to connect to any premises or site within a given geographic area, rather than an infrastructure which provides national coverage (although an infrastructure which provides national coverage will also be ubiquitous).²⁴¹ Most stakeholders agreed that ubiquity is essential for access seekers for the reasons we set out below.²⁴²
- 3.67 We consider ubiquity to be important for two main reasons.
- a) The ability to connect any premises or site using a ubiquitous infrastructure allows an access seeker the flexibility to adjust and expand the scale and scope of its deployment beyond its initial plans with lower additional connection cost and time lags,²⁴³ compared to using a non-ubiquitous infrastructure and building further physical infrastructure to support new deployments beyond initial plans. This provides an option value to access seekers, reducing the need to pre-specify roll-out plans. This flexibility is likely to be important for risky investments where demand may evolve over time. In response to Openreach's comments, we agree that some access seekers do not deploy a network to all residential premises and/or business sites within a deployment area. However, our view on the advantage that a ubiquitous infrastructure offers is not predicated on access seekers needing to connect to all premises and sites for their business model to be viable. Access seekers will prefer a physical infrastructure that allows them to deploy to any premise within an area and/or adjust their plans, even if they do not plan to deploy to every premise within that area.
 - b) In addition, we consider access seekers are likely to seek to minimise the number of alternative infrastructures used to deploy their network, due to the costs and uncertainty associated with combining multiple infrastructures. These include the cost and time of undertaking civil works to break in and out of different infrastructures, and the duplication of maintenance costs associated with multiple infrastructures. A ubiquitous infrastructure will allow a provider to reach any set of premises that could be reached by combining multiple alternative telecoms physical infrastructures.

²⁴⁰ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3.

²⁴¹ For the avoidance of doubt, the advantages we outline below mainly derive from the ability to connect to any premises or site within a given geographic area. However, there are further advantages which derive from national coverage.

²⁴² [CityFibre](#) response to TAR26 March 2025 Consultation. Page 143. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 57. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 32.

²⁴³ For example, [redacted] told us that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] stated that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] told us that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] told us that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

- 3.68 We recognise that access seekers may combine multiple telecoms physical infrastructures.²⁴⁴ For example, capacity constraints in the existing network (including directly buried lead-ins which cannot be used by access seekers) may compel an access seeker to use alternatives to provide those connections.²⁴⁵ However, we understand that use of multiple physical infrastructures is based on necessity rather than preference, complementing the use of a ubiquitous physical infrastructure rather than substituting it. Indeed, the evidence shows that the majority of a telecoms provider's network tends to be deployed over one physical infrastructure.²⁴⁶
- 3.69 We therefore conclude that a ubiquitous infrastructure is likely to provide material advantages for most access seekers. Therefore, this is the key characteristic we consider in assessing the geographic homogeneity of competitive conditions.

Identifying physical infrastructure geographic markets

- 3.70 To identify the relevant geographic markets, we identify areas within which competitive conditions are sufficiently homogeneous to enable them to be grouped together as one geographic market.
- 3.71 As Openreach noted, there are geographic differences in the presence of telecoms physical infrastructures across the UK. We also recognise that the types of services demanded which require use of physical infrastructure (e.g. leased lines, broadband services) and the infrastructure available to meet those demands differ by region. However, despite these geographic differences, we consider that competitive conditions are sufficiently similar across the UK to define a single national market, for the reasons we set out below.
- 3.72 BT is the only national infrastructure provider which passes virtually all premises. In some areas there are no or limited alternatives, while in others there are varying degrees of alternatives, in particular those owned by VMO2, altnets and leased line providers that build their own physical infrastructures. We have considered the extent to which competitive conditions vary depending on where these alternatives are present (both individually and in aggregate). We do so based on the characteristics of the physical infrastructures that would meet the needs of telecoms physical infrastructure access seekers, the key such characteristic being the ubiquity of that network.
- 3.73 VMO2 remains the largest alternative physical infrastructure provider. Therefore, as in the WFTMR21, we start by considering the competitive conditions in areas where VMO2 has telecoms physical infrastructure. In the areas where VMO2 has a material presence, our understanding is that its ubiquity is below that of BT, based on evidence on VMO2's network coverage and the physical infrastructure it uses to deploy its network.²⁴⁷ Therefore overall VMO2's physical infrastructure will offer less flexibility to access seekers deploying at scale than BT's, and is unlikely to be sufficient on its own without multi-sourcing.
- 3.74 In any event, where VMO2 and BT cover the same individual premises, BT's lead-in infrastructure is likely to offer cost and capacity advantages in terms of connecting

²⁴⁴ See footnote 208.

²⁴⁵ [redacted] told us that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] also indicated that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

²⁴⁶ See footnote 208.

²⁴⁷ VMO2 uses some third-party physical infrastructure, as well as self-built physical infrastructure. This suggests its physical infrastructure coverage is lower than its network coverage. VMED O2 UK Limited response dated 23 August 2024 to s135 notice dated 8 July 2024, questions E1, E2.

premises. As noted in the WFTMR21, this is because BT's infrastructure delivers more lead-ins overhead rather than underground compared to VMO2. This difference in mix of lead-ins means that connecting customers using BT's infrastructure is likely to be quicker and cheaper than using VMO2's infrastructure.²⁴⁸

- 3.75 In addition, poles offer greater certainty over whether the existing infrastructure is useable as access seekers can more easily assess the state and capacity of a pole than they can an underground duct. Moreover, where VMO2's underground lead-ins are directly buried from a termination box ('Toby box') to outside of the customer's premise, or have been built using narrow trenching techniques, there is effectively no duct network for access seekers to use.²⁴⁹
- 3.76 Therefore, given these disadvantages to using VMO2's physical infrastructure, we consider that its impact on competitive conditions is likely to be limited, meaning the competitive conditions where it is present are unlikely to be materially different to where only BT has physical infrastructure.
- 3.77 Next, we consider competitive conditions in areas in which altnets are present and have built their own physical infrastructure. In addition to VMO2's network, there has been significant rollout of fibre networks since the March 2021 Statement was published. While this has resulted in the build of some alternative telecoms physical infrastructures, many altnets use Openreach PIA.²⁵⁰ Any alternative telecoms physical infrastructure build remains relatively small scale and significantly less ubiquitous compared to that of BT and VMO2, based on evidence on altnets' network coverage and the physical infrastructure they use to deploy their networks.²⁵¹ Therefore for similar reasons as described above for VMO2, we expect the presence of altnets' telecoms physical infrastructure to have a limited impact on competitive conditions, both individually and in aggregate.
- 3.78 Finally, there are geographic areas with alternative telecoms physical infrastructure deployed to connect to large business and mobile sites.²⁵² We consider that competitive conditions in areas with such alternative physical infrastructures will not be appreciably different from the rest of the UK, for the following reasons:
- a) The ability to connect to every large business or mobile site in that area using physical infrastructure from an alternative provider is likely to be lower compared to that of BT, given BT's infrastructure is typically ubiquitous. The evidence we have gathered shows that Openreach PIA is being used and/or is planned to be used for network in-fill and/or customer-specific network extensions by leased line providers who have their own

²⁴⁸ Overhead lead-ins are likely to be the lowest cost means of connecting individual premises to a network. This is because using an aerial cable avoids the costly civil works required to deploy underground lead-ins.

²⁴⁹ Ofcom. June 2019. [Promoting competition and investment in fibre networks: review of the physical infrastructure and business connectivity markets](#). Annex 3.

²⁵⁰ See footnote 208.

²⁵¹ The altnets with the highest network coverage use third-party physical infrastructure in parts of their network. This suggests their physical infrastructure coverage is lower than their respective network coverage. [§<] response dated [§<] to s135 notice dated [§<], questions [§<]. [§<] response dated [§<] to s135 notice dated [§<], questions [§<]. [§<] response dated [§<] to s135 notice dated [§<], questions [§<].

²⁵² There are areas where presence of these types of alternative telecoms physical infrastructure is higher than in other areas, such as the Central London Area (CLA) and High Network Reach (HNR) Area, as described in Volume 2, Section 5.

physical infrastructure.²⁵³ For this reason, in order to deploy throughout an area, or to any given set of sites within that area, an access seeker would face greater costs, time and complexity if it needs to combine multiple infrastructures, as set out in Paragraph 3.67, relative to using BT's ubiquitous infrastructure.

- b) For access seekers who want to connect to residential premises, telecoms physical infrastructure that has been built for the sole purpose of supplying leased lines is much less attractive, as coverage of residential premises is typically lower than BT's ubiquitous infrastructure. The evidence we have gathered shows altnets' use of telecoms physical infrastructure built by leased line providers is limited.²⁵⁴

3.79 In aggregate, these are significant disadvantages to using physical infrastructures which are not ubiquitous, particularly due to the costs and challenges associated with combining multiple infrastructures, as set out in Paragraph 3.67. Therefore, we think their impact on competitive conditions is likely to be limited, meaning competitive conditions are sufficiently similar across all areas.

3.80 We also note that fibre network builders may seek access to multiple geographic areas, including areas where the presence of alternative telecoms physical infrastructure is low. The additional costs of combining the use of multiple non-ubiquitous infrastructures, as set out in Paragraph 3.67, are likely to limit the impact of smaller competing physical infrastructure providers on competitive conditions.

3.81 Therefore, although there are geographic variations in the availability of alternative telecoms physical infrastructure, we consider that access to BT's physical infrastructure network has important advantages for potential access seekers. The comparative disadvantages of using non-ubiquitous physical infrastructures significantly limit their impact on competitive conditions even where present. This means that competitive conditions in supplying access to physical infrastructure are sufficiently similar in all areas (even where alternative physical infrastructure is available), such that we should define a national market.

3.82 We do not foresee any developments in the availability of alternative physical infrastructure that would change this conclusion. We recognise that providers may build some new telecoms physical infrastructure during the review period. However, we do not expect this to be of sufficient scale that it would lead to appreciably different competitive conditions in those areas where it occurs. Additionally, some providers of telecoms physical infrastructure use construction techniques, such as micro-trenching, which may not be

²⁵³ [X] largely own their own physical infrastructure [X] and have indicated they use or plan to use Openreach for network infill and/or customer-specific network extensions. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], questions [X]. [X] response dated [X] to s135 notice dated [X], questions [X]. [X] response dated [X] to s135 notice dated [X], questions [X].

²⁵⁴ See footnote 208.

suitable for use by access seekers. Where suitable build does occur, it is likely to rely on access to BT's telecoms physical infrastructure in some parts of the network.^{255 256}

- 3.83 Overall, our view is that we can consider all areas of the UK to have sufficiently similar conditions of competition. Differences in the existing presence of alternative telecoms physical infrastructures, individually and in aggregate, do not imply appreciably different competitive conditions between areas.

Our conclusions on geographic market definition

- 3.84 For the reasons set out above, we define a single national geographic market for wholesale access to telecoms physical infrastructure for deploying a telecoms network.

Application of the three criteria test

Our proposals

- 3.85 In this subsection, we consider whether the three criteria set out in section 79(2B) of the Act are met in relation to the physical infrastructure market.
- 3.86 As set out in Annex 1, in determining whether to identify a market for the purposes of making a market power determination, we must consider whether the three criteria set out in subsection 79(2B) of the Act are met. Where we do not consider that the three criteria are met, we may not identify a market for this purpose.
- 3.87 We assess the three criteria at a general level, taking into account overall characteristics and structure in the relevant product market.
- 3.88 In the March 2025 Consultation, we proposed that the physical infrastructure market which we proposed to define met the three criteria test.²⁵⁷

Stakeholder responses

- 3.89 Overall, stakeholders supported our proposals on the three criteria test,²⁵⁸ except for Openreach.²⁵⁹

²⁵⁵ Most altnet physical infrastructure build is expected to be relatively limited, our evidence suggests that altnets are likely to mostly rely on access to BT's telecoms physical infrastructure. Generally, our evidence suggests that leased line providers expect to build more of their own physical infrastructure compared to altnets, although some plan to largely use BT's telecoms physical infrastructure. See footnote 208. In any event, it remains uncertain the extent to which self-build from leased line providers overcomes the issues described in Paragraph 3.78, such that these alternative physical infrastructures would be able to exert an effective competitive constraint on BT's physical infrastructure.

²⁵⁶ We also note that a group of altnets within INCA have created a new infrastructure sharing venture. This is a nascent initiative, and we understand that it is intended to complement existing PIA products. (See INCA. 22 October 2025. [Altnet sector unveils new infrastructure sharing venture to win market share in mobile and datacentre markets](#). Accessed 11 December 2025.)

²⁵⁷ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 3.53-3.63.

²⁵⁸ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 47-49. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 19-22.

²⁵⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 7.

High and non-transitory barriers to entry

- 3.90 Openreach commented that the barriers to entry are not uniformly high across all geographies or use cases. It said that in new build sites, altnets face the same or fewer barriers than Openreach, and that network adjustments are increasingly self-provided by altnets, indicating operational parity. Openreach added that alternative deployment methods (e.g. micro-trenching, direct burying) reduce the dependency on Openreach infrastructure.²⁶⁰
- 3.91 Other stakeholders agreed that there are high and non-transitory barriers to entry due to the high levels of investment and considerable time required to install new and ubiquitous physical infrastructure.²⁶¹ They commented that any new physical infrastructure built during the review period will likely supplement use of BT's infrastructure²⁶² and be of limited scale such that they will not impose a constraint on BT.²⁶³

A market which does not tend towards effective competition

- 3.92 Openreach said we have not demonstrated that all areas lack the potential for effective competition, and that in areas like the CLA and new builds, competition is already emerging or could emerge with targeted regulatory support. It added that the lack of focus on improving the ATI Regulations undermines the potential for infrastructure competition.²⁶⁴
- 3.93 Other stakeholders agreed that the market is not tending towards effective competition, as barriers to entry are high and costs to switching to an alternative physical infrastructure provider would be prohibitive.²⁶⁵ VMO2 noted that with many operators slowing down or pausing further network build, the prospect of competition emerging is more remote during this review period than the last.²⁶⁶

Insufficiency of competition law

- 3.94 Openreach commented that while we proposed that competition law has limitations, it said that we have not justified the imposition of broad, unrestricted access obligations. It added that less intrusive remedies could address any identified competition concerns and achieve regulatory objectives without distorting the market or discouraging investment.^{267 268}
- 3.95 Other stakeholders agreed that competition law would not be sufficient to address competition concerns relating to BT's SMP in the market.²⁶⁹ nexfibre added that *ex post* competition enforcement would not be sufficient to ensure access on a timely and cost

²⁶⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 7.

²⁶¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 20.

²⁶² [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 47.

²⁶³ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144.

²⁶⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 7.

²⁶⁵ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4. [PIA Coalition](#) response to TAR26 March 2025 Consultation. Paragraph 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 46, 48. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 21.

²⁶⁶ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 48.

²⁶⁷ Volume 3, Section 5 sets out the requirements on Openreach in relation to physical infrastructure access and the rationale for the requirements.

²⁶⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 7.

²⁶⁹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 49. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 22.

effective basis, and that the widespread use of Openreach PIA in the last five years for fibre network rollout has significantly increased the importance of regulatory certainty regarding Openreach PIA for access seekers and investors in this market, both for the upcoming review period and into the future.²⁷⁰ VMO2 said that the *ex ante* framework has resulted in growth in network competition which otherwise would have not been possible, by giving access seekers the necessary clarity to ensure the product will sustain and the terms of access will remain stable over the course of their network investments and operation.²⁷¹

Our reasoning and decisions

High and non-transitory barriers to entry

- 3.96 The market we are considering exhibits high and non-transitory barriers to entry. In particular, there are significant structural barriers to entry, as entry would require very high levels of investment and would take considerable time to install new and ubiquitous physical infrastructure. Moreover, the costs associated with such investment are, to a large degree, likely to be sunk.
- 3.97 In response to Openreach's comment that altnets face the same or fewer barriers than Openreach in new build sites, and that network adjustments are increasingly self-provided by altnets, we do not consider that this undermines our conclusion that the cost and time to install new and ubiquitous physical infrastructure are high.
- 3.98 As we explained in the March 2025 Consultation, we do expect providers to deploy new networks, or expand existing networks, during the review period,²⁷² as set out in Sections 4 and 5 below. However, these network deployment plans in many cases rely on continued regulated access to BT's infrastructure in some areas or parts of the network rather than building new physical infrastructure,²⁷³ and where self-build of physical infrastructure does occur it is likely to be limited in scale (see discussion below). Therefore, we consider this is consistent with our view that barriers to entry in physical infrastructure are high and non-transitory.
- 3.99 While alternative deployment methods (e.g. micro-trenching, direct burying) may reduce the dependency on Openreach infrastructure, as Openreach commented, generally any build during the review period is likely be of limited scale²⁷⁴ and complement use of BT's physical infrastructure rather than substitute for it.²⁷⁵
- 3.100 We remain of the view that the barriers to installing a ubiquitous physical infrastructure are high and non-transitory.

A market which does not tend towards effective competition

- 3.101 We assess competitive conditions in the physical infrastructure market in the SMP assessment section below. In summary, we consider that during the review period, BT's market power will be significant and entrenched, and we have not observed any material changes to this position over time despite rollout of additional alternative physical infrastructure.

²⁷⁰ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4.

²⁷¹ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 49.

²⁷² Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 3.54.

²⁷³ See footnote 208.

²⁷⁴ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144.

²⁷⁵ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 47.

- 3.102 We disagree with Openreach’s comment that we have not demonstrated that all areas lack the potential for effective competition. As explained above, we consider that access to BT’s ubiquitous physical infrastructure has important advantages for potential access seekers, such that competitive conditions are likely to be similar in all areas, even where alternative physical infrastructure is available. In the forthcoming market review period, we do not consider that deployment of alternative physical infrastructure will occur to a sufficient extent to provide effective competition (as explained in the next section).
- 3.103 We are also not aware of factors that may materially reduce the barriers to entry we have identified. For instance, so far, we have not identified any technological developments that will make it easier and cheaper to deploy new telecoms physical infrastructure suitable for access seekers in the foreseeable future.
- 3.104 Moreover, the choice of which telecoms physical infrastructure to use to deploy a network in a given area is likely to be a one-off permanent decision – once a network is rolled out using a given telecoms physical infrastructure and connected to residential premises, large business or mobile sites, there are very high barriers to switching that network into a different physical infrastructure. Stakeholders agreed that it would likely be cost prohibitive and not commercially viable for access seekers to move across to a new provider, even if one emerged.²⁷⁶
- 3.105 In addition, in response to Openreach’s comment on the lack of focus on improving the ATI Regulations, we note that our market definition analysis reflects the ATI regulations as they exist today, and that reviewing the ATI Regulations is not in scope of this review.
- 3.106 Therefore, we consider that the market we have defined will not, in the absence of regulation, tend towards effective competition.

Insufficiency of competition law

- 3.107 We set out in the next section our conclusion that BT has SMP in the market we have identified, and in Section 7 of this volume we explain in more detail our competition concerns arising from BT’s SMP in this market.
- 3.108 Competition law, in particular the rules prohibiting the abuse of a dominant position, is an important part of the legal framework with which BT needs to comply. Given its historic position of SMP (which equates to the competition law concept of dominance) BT has a special responsibility not to allow its actions on the market (where conditions of competition are weak) to distort or impair competition.
- 3.109 However, we consider that competition law remedies would be insufficient to address the identified competition concerns on their own in this context.
- a) First, competition law would focus on tackling the abuse of a dominant position and would not be as effective as *ex ante* regulation in promoting downstream competition.
 - b) Second, regulation must remain effective for the review period, and *ex ante* regulation better enables us to do this as it can be tailored to the particular circumstances in the market and services provided.
 - c) Third, competition law does not provide enough regulatory certainty, which itself can undermine downstream competition where there is upstream SMP – and regulatory

²⁷⁶ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4. [PIA Coalition](#) response to TAR26 March 2025 Consultation. Paragraph 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 46. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 21.

certainty is important in encouraging long-term investment in competing networks. In contrast, a benefit of *ex ante* regulation is that all industry stakeholders are clear in advance on the regulation that will apply.

- d) Fourth, *ex ante* regulation can facilitate more timely enforcement due to the greater certainty and specificity provided.

3.110 On that basis, while competition law enforcement may be used in appropriate circumstances, we do not consider that it would be sufficient to rely on it alone and that *ex ante* regulation is required.

Our conclusions on the three criteria test

3.111 We consider that the physical infrastructure market which we are defining meets the three criteria test and, therefore, is susceptible to *ex ante* regulation.

3.112 We therefore identify the following market for the purposes of making a market power determination: a single national geographic market for wholesale access to telecoms physical infrastructure used for deploying a telecoms network.

SMP assessment

Our proposals

3.113 In the March 2025 Consultation, we provisionally concluded that BT has SMP in our proposed national geographic market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network.²⁷⁷

Stakeholder responses

3.114 Stakeholders,²⁷⁸ except for Openreach,²⁷⁹ ²⁸⁰ agreed with our provisional conclusion that BT has SMP in the proposed market.

Strength of competition from other owners of telecoms infrastructure

3.115 As noted above under the geographic market definition, some stakeholders agreed that there are no other providers who have built physical infrastructure as ubiquitous as BT's,²⁸¹

²⁷⁷ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 3.68-3.82.

²⁷⁸ [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 3. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 24. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [Community Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 4.4. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 4-5. [PIA Coalition](#) response to TAR26 March 2025 Consultation. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3. [UKCTA](#) response to TAR26 March 2025 Consultation. Paragraph 16. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 50. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 23. [Vorboss](#) response to TAR26 March 2025 Consultation. Page 9.

²⁷⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 9.

²⁸⁰ We also note that Openreach commented that our assessment is focused on applying the SMP framework, which it considered does not fit well for the physical infrastructure market definition. (See [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 6.) Annex 1 sets out the regulatory framework relevant to the market review process, which requires us to apply the SMP framework when we undertake a market assessment.

²⁸¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 3-5. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 44. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 20.

and that any competitive constraint to BT's physical infrastructure remains limited.²⁸² Stakeholders also indicated that this is unlikely to change during the review period,²⁸³ due to the high barriers to entry associated with rolling out physical infrastructure²⁸⁴ and the increased importance of PIA to access seekers.²⁸⁵ nexfibre indicated that the majority of network build which has taken place in the last number of years has utilised PIA to some degree, and that access to PIA on a long-term, cost effective basis is a key assumption in build and business plans.²⁸⁶

- 3.116 Openreach commented that our SMP assessment lacks analytical depth. In particular, it said that we overemphasise the importance of ubiquity despite evidence that successful operators (e.g. VMO2) operate without full coverage, and that we disregard the competitive constraint posed by alternative infrastructure, including VMO2's network. Openreach also said that our SMP finding ignores the significant differences in competitive conditions across geographic areas.²⁸⁷

Scope for entry and expansion

- 3.117 Stakeholders who commented on the scope for entry and expansion agreed there is limited scope for this, such that any competitive constraint to BT's physical infrastructure remains limited.²⁸⁸ nexfibre added that the ubiquity of BT's physical infrastructure also reinforces its SMP position.²⁸⁹

Countervailing buying power

- 3.118 VMO2 agreed that it does not consider that telecoms providers have countervailing buyer power that would weaken BT's market power, given the high switching costs and the fact that BT's use of its own physical infrastructure is material compared to the use by third-party access seekers.²⁹⁰

External constraints

- 3.119 Openreach said that we have disregarded the competitive constraint posed by alternative infrastructure, including non-telecoms infrastructure.²⁹¹

²⁸² [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 59. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 3-5. [TechUK](#) response to TAR26 March 2025 Consultation. Page 3. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 50. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 23.

²⁸³ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 24. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 5. [UKCTA](#) response to TAR26 March 2025 Consultation. Paragraph 16. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 23.

²⁸⁴ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 23. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 144. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 23.

²⁸⁵ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 5. [UKCTA](#) response to TAR26 March 2025 Consultation. Paragraph 16.

²⁸⁶ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 4-5.

²⁸⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 10.

²⁸⁸ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 4. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 50.

²⁸⁹ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 4-5.

²⁹⁰ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 50.

²⁹¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 10.

Our reasoning and decisions

Background

3.120 In the WFTMR21, we concluded that BT has SMP in a national market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network.

Our approach and evidence considered

3.121 To evaluate the extent to which BT would face a competitive constraint in the physical infrastructure market, we have adopted a similar approach as in the WFTMR21, and assessed the following:

- a) **Strength of competition from existing competitors:** we consider whether BT would be constrained by telecoms providers switching to alternative telecoms physical infrastructure already in the market.
- b) **Scope for entry and expansion by new or existing operators deploying new telecoms physical infrastructure,** including whether access seekers can enter the market themselves by self-supplying infrastructure.
- c) **Countervailing buyer power:** we also consider whether telecoms providers have countervailing buyer power which weakens BT's market power.
- d) **External constraints:** we consider the extent to which out-of-market products may reduce BT's market power.

3.122 In assessing SMP on the market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network, we adopt the modified Greenfield approach, which means we consider existing market conditions and expected or foreseeable market developments in the absence of existing SMP regulation in that particular market (see also Annex 1). However, access seekers' recent strategies and plans reflect the existence of that regulation. We therefore use our judgment and inferences from how providers are rolling out their networks to inform our analysis.

Strength of competition from other owners of telecoms infrastructure

3.123 Generally, in an SMP analysis, we would consider market shares within the market being considered. However, trying to calculate market shares in the supply of access to infrastructure is difficult and not very informative of market position. The reason for this is that outside of Openreach's PIA products (which are regulated), there is no significant active market in the supply of wholesale access to telecoms physical infrastructure.²⁹² Physical infrastructure is largely used only for self-supply.²⁹³ This means that like-for-like comparisons of usage of the infrastructure, or revenues from it, cannot easily be assessed. Instead, we focus on assessing the strength of competition to BT from other providers of physical infrastructure based on our understanding from access seekers about what matters to them, including in relation to the characteristics of those networks.

3.124 We disagree with Openreach's comments that we overemphasise the importance of ubiquity and that we have disregarded the competitive constraint posed by VMO2. As set out in the geographic market definition, a ubiquitous telecoms physical infrastructure is

²⁹² We acknowledge that a group of altnets within INCA have created a new infrastructure sharing venture. This is a nascent initiative, and we understand that it is intended to complement Openreach PIA. (See INCA. 22 October 2025. [Altnet sector unveils new infrastructure sharing venture to win market share in mobile and datacentre markets](#). Accessed 11 December 2025.) We do not expect that this will exert a material constraint on BT during the review period.

²⁹³ See footnote 208.

likely to be preferred by access seekers to alternative telecoms physical infrastructure which is not ubiquitous. We recognise that telecoms physical infrastructure of other operators could theoretically provide an alternative to BT's telecoms physical infrastructure, where available. However, the importance of ubiquity for access seekers and BT's ability to connect to premises of any type within an area (i.e. large business sites, mobile sites, residential premises), along with the costs and uncertainty associated with combining multiple infrastructures, means BT is unlikely to face a material competitive constraint even where such alternative infrastructure is present.

- 3.125 The cost and time benefits of BT's lead-in infrastructure further weakens the competition from alternative physical infrastructure providers where they are not already connected.
- 3.126 In addition, as noted above, many networks have been deployed using BT's infrastructure and the costs to switching to an alternative physical infrastructure provider would be prohibitive. This also weakens the competition from other owners of telecoms infrastructure.
- 3.127 As the evidence suggests, use of wholesale access to other providers' telecoms physical infrastructure other than BT's to support further network rollout is, and is expected to remain, limited.²⁹⁴
- 3.128 Therefore, we conclude that existing alternative infrastructure is unlikely to exert a material constraint on BT, and that this situation is unlikely to change over the period of this review.

Scope for entry and expansion

- 3.129 Entry into the market for constructing this kind of physical infrastructure to support large-scale roll-out would require very high levels of investment, a large proportion of which are likely to be sunk costs, and which would take a considerable period of time to deploy. We therefore consider that, in general, there are high entry barriers to constructing new physical infrastructure.
- 3.130 As mentioned above, we do expect providers to continue to deploy new networks, or expand existing networks, during the review period (see in particular Section 4). However, we understand that many build plans are dependent on:
- a) wholesale access to BT's existing telecoms physical infrastructure via the existing PIA remedy²⁹⁵ (and so is not relevant under a modified Greenfield approach); and/or
 - b) where practical, faster and more efficient construction techniques, such as micro-trenching, which may not be suitable for use by access seekers (so this entry could, therefore, only exert an indirect constraint on BT).
- 3.131 We consider these factors to be a reflection of the high barriers facing potential entrants to the infrastructure market.
- 3.132 Deployment of some new infrastructure is expected. In some cases, some providers may prefer deploying their own infrastructure for self-supply. In addition, there will be parts of network builds where this is either necessary or the above options are not available. But we expect such entry to be geographically limited in scale, and so is unlikely to place a sufficient constraint upon BT.

²⁹⁴ See footnote 208.

²⁹⁵ See footnote 208.

- 3.133 In addition, as noted above, many networks have been deployed in BT's infrastructure and the costs to switching to an alternative physical infrastructure provider would be prohibitive. This makes the scope for entry and expansion even more unlikely.
- 3.134 For these reasons, we conclude that the threat of entry or expansion by new or existing operators would not effectively constrain BT.

Countervailing buying power

- 3.135 In general, purchasers may have a degree of buyer power where: a) they purchase a significant and material proportion of a supplier's total volumes; and b) they have a credible threat of switching to an alternative supplier, or to self-supply, to an extent that would materially impact the supplier's profitability.
- 3.136 The largest user of BT's physical infrastructure is BT itself. BT's involvement downstream weakens its incentive to offer supply of its infrastructure at scale, absent regulation. Even if it did, and an access seeker purchases significant volumes of access to infrastructure (as some currently do), it is highly unlikely that there would be a credible threat of it switching sufficient volumes, given the prohibitively large switching costs and service disruption that would be involved in removing and re-deploying its network in alternative physical infrastructure. It is also unclear that an alternative provider would be willing to supply access to its infrastructure in such volumes, reflecting the historical position that there has not been an active wholesale market for telecoms physical infrastructure.

External constraints

- 3.137 In response to Openreach's comment that we have disregarded the competitive constraint posed by non-telecoms infrastructure, we have identified various practical challenges and complexities to the use of non-telecoms physical infrastructure which limit its substitutability at scale, as noted in the product market definition. Therefore, we do not consider that non-telecoms physical infrastructure will exert a significant competitive constraint on BT.

Our findings

- 3.138 For the reasons given above we conclude that BT has SMP in a national market for the supply of wholesale access to telecoms physical infrastructure for deploying a telecoms network.
- 3.139 We have noted above the importance of ubiquity to access seekers, the high barriers to constructing a ubiquitous telecoms physical infrastructure and the prohibitive costs for access seekers of switching to alternative physical infrastructure. While we cannot fetter our discretion in relation to future decisions on market analysis or SMP and will consider the evidence available at the time of our next review,²⁹⁶ our expectation is that BT's SMP is likely to be enduring.

²⁹⁶ We are required by the Act to review this market again within a period of five years.

4. Wholesale local access market

- 4.1 In this section we explain our market definition and SMP assessment for the wholesale local access (WLA) market.
- 4.2 Based on the evidence²⁹⁷ and having taken into account the responses from stakeholders, we have decided, in line with our March 2025 Consultation proposals:
- a) To define a single product market for the supply of WLA at a fixed location which includes all fixed networks and speeds, and residential and business services.
 - b) To identify two geographic markets – Area 2 and Area 3 – for WLA for the purposes of making a market power determination. We have concluded that these markets meet the three criteria test.
 - c) To conclude that BT has SMP in Area 2 and Area 3.
- 4.3 The table below sets out the results of our geographic market analysis.

Table 4.1: Summary of results of geographic market analysis

WLA geographic market	Count of postcode sectors	Count of UK premises	% of UK postcode sectors	% of UK premises
Area 2	7,824	27.8m	81%	86%
Area 3	1,881	4.4m	19%	14%

Source: Ofcom analysis of Connected Nations data and additional planned deployment data (collected August-September 2025). See Annex 3.

Note that all figures exclude 46 Hull Area postcode sectors.

- 4.4 The rest of this section covers the proposals we made in our March 2025 Consultation, stakeholder responses to this consultation and the reasoning behind our decisions for each of:
- a) Product market definition for WLA;
 - b) Geographic market definition for WLA; and
 - c) SMP assessment.

Product market definition

Our proposals

- 4.5 WLA relates to network assets used to provide telecoms services at a fixed point close to the end-user. Demand for WLA is derived from consumers’ retail demand for different products and bundles, including broadband, TV and landline services.²⁹⁸

²⁹⁷ Between July 2024 and October 2025, we issued information notices related to our analysis of the WLA market. This involved sending detailed questions to over 50 stakeholders. See Annex 21 for more detail on our sources of evidence.

²⁹⁸ When referring to consumers throughout this section, we mean residential consumers and businesses that use broadband services similar to residential consumers.

- 4.6 In the March 2025 Consultation, we proposed to define a focal product to be the supply of WLA services by fixed networks to support the delivery of broadband services to consumers.
- 4.7 We provisionally concluded that there is a single product market for the supply of WLA at a fixed location which includes:²⁹⁹
- a) all fixed networks;
 - b) all speeds; and
 - c) residential and business services.
- 4.8 We provisionally excluded services in the LLA market, and wireless services.

Stakeholder responses

Choice of focal product

- 4.9 Openreach, Virgin Media O2, nexfibre, AllPoints Fibre, and INCA all agreed with defining a single focal product.³⁰⁰

Wireless technologies

- 4.10 None of the stakeholders that submitted a response to our March 2025 Consultation disagreed with our proposal to exclude wireless technologies from the WLA product market definition; AllPoints Fibre, CityFibre, VodafoneThree, Advisory Committee for Scotland, Virgin Media O2, Openreach, INCA and nexfibre explicitly made this point in their responses.³⁰¹ Several of these responses suggested that due to a low number of customers, the competitive constraint on wired connections continues to be weak.
- 4.11 Several stakeholders also noted that in some rural hard-to-reach locations, alternatives to FTTP may be the only viable option or effective and more economic substitute for fixed services to some customers.³⁰² nexfibre also recognised the theoretical potential of Low Earth Orbit satellite services to provide effective substitute, but considered that at present the use of the service was too low to be considered an effective substitute, and therefore it should not be part of the market.³⁰³

²⁹⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 4.2-4.3.

³⁰⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 12. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 17-18, and 48. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Response to question 2.5. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 27. [INCA](#) response to TAR26 March 2025 Consultation. Page 42.

³⁰¹ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 27. [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.5. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 10. Response to question 2.5. [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Response to question 2.5. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 17-18, and 48. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 12. [INCA](#) response to TAR26 March 2025 Consultation. Page 42. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Response to question 2.5.

³⁰² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 12. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 17-18, and 48.

³⁰³ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Response to question 2.5.

LLA and WLA are separate product markets³⁰⁴

- 4.12 AllPoints Fibre, Virgin Media O2, CityFibre and INCA agreed with excluding leased line services from the WLA product market definition.³⁰⁵ AllPoints Fibre suggested that competition has not developed sufficiently to define a single product market for wholesale access services. INCA referred to its pre-consultation submission where it said it had not observed anything to suggest leased lines are becoming a substitute for broadband services and that the relatively higher cost of leased lines services acted as a barrier to customers switching from broadband to a leased line service.³⁰⁶
- 4.13 Similarly, Gamma and UKCTA agreed with maintaining separate product market definitions for WLA and LLA.³⁰⁷ Gamma considered it important to recognise that a significant proportion of businesses depend on FTTP services and UKCTA suggested that separate product markets for WLA and LLA reflected the distinct nature of business connectivity and was vital to ensuring proportionate, evidence-based regulation.
- 4.14 nexfibre said that leased line services should be excluded from the WLA product market definition as they fulfil a different business need and are provided by different technologies.³⁰⁸ However, it considered that this position should be kept under review as connectivity for business services develops. Similarly, VodafoneThree argued that as leased lines products are targeted business connectivity solutions, they are not suitable substitutes for WLA services.³⁰⁹ VodafoneThree also considered business FTTP as well as XGS-PON, both of which use WLA infrastructure, to be part of the WLA market.

Speeds

- 4.15 CityFibre, INCA and nexfibre agreed that all speeds should be included in the WLA product market definition.³¹⁰ Virgin Media O2 noted that due to material economies of scope in FTTP network deployment, there is no clear and consistent distinction between different speed tiers or product features.³¹¹

³⁰⁴ In its response to our March 2025 Consultation, Openreach suggested that there is convergence in the supply of LLA and WLA services, reflecting the technical capability of operators of full-fibre networks currently offering WLA services to additionally offer LLA services. Openreach suggested that our March 2025 Consultation did not give sufficient weight to the ability of any supplier of WLA services over full-fibre networks to extend their range of services to meet the needs of leased line customers. We discuss Openreach's comment about convergence between WLA and LLA in Section 5. [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Paragraph 62.

³⁰⁵ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraphs 20 and 27. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 18. Paragraph 56. Page 48, response to question 2.5. [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.5. [INCA](#) response to TAR26 March 2025 Consultation. Page 42. Paragraph 167.

³⁰⁶ [INCA](#) response to TAR26 March 2025 Consultation. Page 42. Paragraph 167. [INCA](#) pre-consultation submission to TAR26. Pages 11-14.

³⁰⁷ [Gamma](#) response to TAR26 March 2025 Consultation. Page 3. [UKCTA](#) response to TAR26 March 2025 Consultation. Paragraph 2.

³⁰⁸ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Response to question 2.5.

³⁰⁹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 10. Response to question 2.5.

³¹⁰ [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.5. [INCA](#) response to TAR26 March 2025 Consultation. Page 42. Paragraph 167. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Response to question 2.5.

³¹¹ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 48. Response to question 2.5.

Residential and business services

- 4.16 nexfibre agreed that the WLA product market definition should include WLA services delivered to business customers given the underlying technology is the same.³¹²
- 4.17 UKCTA suggested that while combining the review of residential and business services into one process may offer administrative efficiency, the material differences between these markets must be fully accounted for both in the evidence gathering and the design of remedies.³¹³

Our reasoning and decisions

Our approach

Choice of focal product

- 4.18 We define a focal product to be the supply of WLA services by fixed networks to support the delivery of broadband services to consumers.
- 4.19 This reflects economies of scope inherent in supplying multiple downstream broadband services (i.e. across different speeds) from a single access connection. Having built fibre networks, operators will have a strong incentive to serve the whole of the broadband market including demand for lower and higher bandwidth services. Once a connection is in place, it can be used and adapted to compete to attract customers across a range of fixed broadband services.
- 4.20 This is what we see in practice.³¹⁴ A network capable of offering WLA services can be used to provide a wide range of broadband speeds.³¹⁵ Openreach is replacing its legacy copper network with FTTP and, once this is completed, will also be able to offer a wide range of speeds on most of its network.³¹⁶ Openreach has already deployed FTTP to 21m premises, and is on track to build to 25m premises by the end of 2026.³¹⁷ In addition, BT Group recently announced plans to extend full fibre to 30 million premises, beyond the existing 25m target.³¹⁸
- 4.21 Overall, our view is that supply-side considerations point to a single market undifferentiated by speeds.³¹⁹ Given these supply side considerations, we do not consider it necessary for us to come to a view on the demand-side considerations separately, that is to

³¹² [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Response to question 2.5.

³¹³ [UKCTA](#) response to TAR26 March 2025 Consultation. Paragraph 3.

³¹⁴ See Annex 2 for further detail on the speeds that can be provided using different access network technologies.

³¹⁵ There will be a technical upper limit on the speeds that can be provided over a given technology, however, all FTTP networks are able to offer gigabit-capable services, which are likely to be sufficient for broadband consumers. There is also an expectation that providers will be able to upgrade their PON systems to higher speed PON systems when demand evolves. Ofcom. September 2023. [Evolution of fixed access networks](#). Figure 5: PON standards evolution.

³¹⁶ In most areas, Openreach's FTTC network cannot supply download speeds higher than 80 Mbit/s (in areas where Openreach has deployed G.fast equipment, it can offer services with download speeds of up to 330 Mbit/s). See Annex 2. These speeds will continue to be relevant during the review period. See Volume 2, Section 2, and Annex 5.

³¹⁷ BT. 5 February 2026. [Results for the nine months to 31 December 2025](#). Accessed 25 February 2026.

³¹⁸ BT Group. 12 February 2026. [Chancellor welcomes BT's investment into the UK's best networks](#). Accessed 25 February 2026.

³¹⁹ For the avoidance of doubt, this includes Openreach's legacy network and VMO2's cable network, as well as FTTP.

say, whether broadband services of different speeds are substitutable from a consumer's perspective.

- 4.22 As proposed in the March 2025 Consultation, we include broadband products targeted at businesses, particularly SMEs, as well as residential customers within our focal product, as the wholesale products used to supply those different retail services are the same. As UKCTA pointed out, there are some differences in residential and business services, but we do not think this impacts on our WLA product market definition.³²⁰ The differentiation between business products and products targeted at residential customers is based on retail market features, for instance longer helpline opening times or Wi-Fi wrap-arounds.³²¹
- 4.23 We therefore conclude, as we did in 2021, that defining a single focal product reflects the nature of competition in the WLA market.
- 4.24 We do not include leased line products in our focal product.³²² Technology continues to evolve, and some providers offer a range of services over XGS-PON. In Section 5, we conclude that some services delivered over XGS-PON are part of the LLA market, namely services offering symmetric bandwidth with uncontended capacity and which have quality of service parameters (such as fast repair times) similar to point-to-point leased lines. Where services delivered over XGS-PON do not meet these requirements, for example, because they are contended and do not offer a guaranteed bandwidth, we include them as part of the WLA market.
- 4.25 While over time, greater economies of scope may emerge between the provision of broadband and leased line services, at this stage we think it appropriate to start our analysis with separate focal products for each of the WLA and LLA markets.

Wireless technologies

- 4.26 As proposed in the March 2025 Consultation, we conclude that wireless technologies are not in the relevant WLA product market.
- 4.27 In the WFTMR21, we concluded that wireless technologies were not sufficiently close substitutes for fixed connections to be included in the market. We have examined whether developments since 2021 mean the product market should be broadened to include wireless technologies. In particular, we examined the demand-side and supply-side substitutability of the following services:³²³
- a) fixed wireless access (FWA) services, including those delivered by mobile network operators (MNOs) and wireless ISPs (WISPs);
 - b) mobile broadband services; and
 - c) satellite broadband services.
- 4.28 Some ISPs use wireless technologies in place of fixed connections to deliver retail broadband services. In circumstances where a wireless connection is used, WLA is not

³²⁰ See Section Volume 2, Section 2 where we set out the differences in residential and business services.

³²¹ For example, Virgin Media O2, TalkTalk and BT offer their business broadband customers support packages with a range of customer service issue resolution services, digital voice, contract lengths, and other services typically not available to residential customers. Virgin Media O2. [Business broadband](#). TalkTalk. [Business fibre broadband](#). BT. [Business broadband for small & medium enterprises](#). All accessed 22 January 2026.

³²² In addition to assessing whether leased lines should be included in the focal product, we considered whether leased lines should be considered part of the WLA market set out below, and similarly considered whether WLA should be part of the LLA market in Volume 2, Section 5.

³²³ Annex 2 describes these wireless services in more detail.

required. Wireless technologies therefore represent, in principle, a potential constraint on a hypothetical monopolist of WLA. In the following sub-sections, we consider the competitive constraint that downstream retail broadband services delivered over wireless technologies exert on those delivered over wired connections.

- 4.29 As set out in Annex 1, we adopt the hypothetical monopolist test framework. Therefore, to include wireless technologies in the WLA product market, we would need to find that a hypothetical monopolist of the focal product would not find it profitable to impose a small but significant non-transitory increase in price ('SSNIP') above the competitive level. This means that we would need to find that both:
- a) a sufficiently large number of customers would be willing to switch to these wireless services, and give up their fixed broadband³²⁴, in response to the SSNIP; and
 - b) the providers of these wireless services would have the ability and incentive to supply those customers on their networks.

FWA from MNOs

- 4.30 The evidence shows that product characteristics of FWA broadband services from MNOs have changed since the last review. For example, some retail packages now offer unlimited data at monthly prices comparable to fixed broadband deals, although some providers, depending on the deal, may charge an upfront fee or for the router. Coverage and capacity have also improved, such that FWA from MNOs is available to more consumers, including 5G FWA.³²⁵ Additionally, some of the available deals offer increased flexibility for customers who are looking for shorter contracts.³²⁶
- 4.31 However, the evidence suggests take-up is expected to be relatively low compared to fixed broadband in this review period. Forecasts data from prior to the March 2025 Consultation from [redacted] suggests MNO FWA broadband may reach just over [redacted] active connections by 2028/29.³²⁷ Evidence from providers indicates that reasons for relatively low take-up include low awareness of the product and consumers' views that fixed broadband better meets their needs.³²⁸
- 4.32 The evidence also shows there may be capacity constraints, particularly in parts of an MNO's network where it is already or close to being congested.³²⁹ Furthermore, depending on traffic and capacity in the mobile network, speeds in an MNO based FWA network can vary. This may prevent MNOs from being able to offer a service of sufficient quality to a sufficiently large number of customers, and so they may be unable to constrain a hypothetical monopolist of fixed broadband.

³²⁴ We refer to 'fixed-line broadband' as 'fixed broadband'.

³²⁵ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³²⁶ For example, Vodafone offers a 30-day GigaCube Unlimited and GigaCube plans for £60 and £40 respectively with a £150 upfront fee. [5G and 4G broadband with GigaCube](#). Accessed 6 February 2026. Most of the other available deals from the MNOs are for 12-, 18-, and 24- month contracts.

³²⁷ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³²⁸ [redacted] response dated [redacted] to s13 notice dated [redacted], questions [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³²⁹ For example, [redacted] indicated that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. In addition, [redacted] indicated that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

- 4.33 In addition, we note that in practice some of the MNOs who provide FWA also offer fixed broadband. This may impact their incentives to encourage customers to switch away from fixed broadband to FWA, in response to a SSNIP in the price of fixed broadband, where fixed broadband is available. For example, the evidence we gathered prior to our March 2025 Consultation showed that [redacted].³³⁰ Separately, we also note that [redacted].³³¹ As discussed above, stakeholders who responded to our March 2025 Consultation either agreed with our provisional position or provided no evidence to suggest that FWA should be included in the WLA product market definition.
- 4.34 We acknowledge that the Vodafone/Three merger may increase the merged entity's ability to supply FWA. However, we consider that the extent to which take-up may increase and the merged entity's incentives to encourage further FWA take-up are unclear, although the merged entity may be in a better position to offer FWA due to its spectrum holdings.³³² This is consistent with evidence set out in the CMA's final report in relation to the merger.³³³
- 4.35 More broadly, Ofcom's work to promote innovation and competition by enabling growth in a wide range of wireless applications, including 5G FWA, will continue over the coming years. In recent months, we have varied UK Broadband Limited's 3.9 GHz licence to enable it to use that spectrum for 5G FWA and completed the mmWave auction making more spectrum available for new services, including 5G FWA.^{334 335} However, it is too early to conclude what the impact of these developments will be on the availability and use of FWA from MNOs.
- 4.36 We recognise overseas take-up for FWA is higher. However, for the reasons set out above, we think the market in the UK is different.³³⁶
- 4.37 Therefore, although we expect to see the take up of FWA to grow during the review period for the reasons set out above, we do not think it will become a substitute to fixed broadband for a sufficiently large number of customers in response to a SSNIP of fixed services, and so we conclude that FWA from MNOs is not in the WLA product market.

³³⁰ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³³¹ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³³² See Ofcom. 18 July 2025. [Consultation: Award of 1492-1517 MHz spectrum for mobile services](#). Figure 3.1.

³³³ In particular, on the supply side, the CMA stated that FWA "only makes economic sense where the Parties have spare network capacity that cannot be commercialised by other means, as FWA customers are very high data users [...]. BTEE also submitted that the Merged Entity will have access to both fixed and mobile networks, and presumably will always preferentially sell fixed broadband as it is more profitable." On the demand side, the CMA found that demand for FWA services is relatively limited, and it is an alternative primarily of interest to specific customer segments. Competition and Markets Authority. 5 December 2024. [Vodafone / CK Hutchison JV merger inquiry - Final report](#). Accessed 6 March 2026.

³³⁴ UK Broadband is wholly owned by Hutchison 3G UK Ltd. Hutchison 3G UK Ltd is a wholly owned subsidiary of VodafoneThree Holdings Ltd, which is jointly owned by Vodafone Group (51%) and CK Hutchison Group Telecom Holdings (49%).

³³⁵ See Ofcom. 17 July 2025. [Statement: Optimal use of 3.9 GHz spectrum](#) and Ofcom. 25 October 2025. [Ofcom spectrum auction: final results announced](#). Accessed 6 March 2026.

³³⁶ The use of FWA is more widespread elsewhere, for example, in Austria and Italy in Europe, the US, and India take-up is higher. Telecoms.com. 6 August 2025. [FWA in the 5G and 6G Era: From Last-Mile Fix to Strategic Growth Engine](#). Telecoms.com. 26 June 2024. [FWA market matures as operators look to monetise 5G](#). Both Accessed 15 December 2025. New Street Research, 2025. 24 November 2025. FWA is on the horizon. Accessed 6 March 2026.

FWA from WISPs

- 4.38 Around 8% of all UK premises (residential and SME) have decent broadband coverage from a wireless ISP (WISP) network.³³⁷ We do not consider that this coverage alone is sufficient to constrain a hypothetical monopolist supplier. FWA from WISPs coverage tends to be regional and more prominent in remote and hard to reach places, and as it can be difficult to deploy in built up areas such as city centres, this limits its capability to constrain a hypothetical monopolist supplier everywhere. For this reason, we do not consider that the current around 8% coverage can constrain a hypothetical monopolist.
- 4.39 Furthermore, over the last few years, this coverage has remained relatively unchanged, and based on previous trends of coverage of WISP FWA networks, we do not expect it to increase during the review period to such an extent that they will become a potential substitute to fixed broadband for a sufficiently large number of customers in response to a SSNIP of fixed services.^{338 339}
- 4.40 Therefore, we conclude that FWA from WISPs is not in the WLA product market.

Mobile broadband

- 4.41 As set out in Annex 2, mobile broadband (provided via a mobile handset, a dongle or similar equipment) and FWA from MNOs or WISPs share many characteristics and use the same 4G/5G mobile networks. We understand take-up of mobile broadband as an alternative to fixed broadband in homes and businesses is currently – and is expected to remain – relatively low, although it is possible that it may increase over the review period.³⁴⁰ This is consistent with evidence we have gathered on the use of mobile broadband and FWA, for example [redacted] indicated that the [redacted].³⁴¹ Consumers who use mobile services also tend to use fixed services, suggesting that mobile services are generally complementary rather than a substitute for fixed services.³⁴²
- 4.42 We would not expect mobile broadband to be a substitute for fixed broadband for a sufficiently high number of customers in response to a SSNIP in fixed broadband services. Therefore, we conclude that mobile broadband is not a sufficiently close substitute to include it in the WLA product market.

Satellite broadband

- 4.43 As set out in Annex 2, satellite broadband services can be offered using geostationary (GSO) satellites or non-geostationary (NGSO) satellites. There are currently nine licensed NGSOs in

³³⁷ Ofcom. 19 November 2025. [Connected Nations 2025](#).

³³⁸ See: Ofcom. 19 November 2025. [Connected Nations 2025](#); Ofcom. 5 December 2024. [Connected Nations 2024](#); Ofcom. 19 December 2023. [Connected Nations 2023](#); Ofcom. 15 December 2022. [Connected Nations 2022](#); Ofcom. 16 December 2021. [Connected Nations 2021](#); and Ofcom. 17 December 2020. [Connected Nations 2020](#).

³³⁹ Ofcom. 8 May 2025. [Connected Nations - Planned Network Deployments 2025](#). Ofcom. 19 November 2025. [Connected Nations 2025](#).

³⁴⁰ Additionally, we recognise that some households rely on mobile phone network data to access internet. In 2025, this share of households was around four percent, but it is possible that this will increase further over the review period as this group skews towards younger users (those aged 18-34) who may continue to prefer, or only be able to, access the internet on mobile (Technology Tracker is based on a nationally representative survey of those aged 16+ in the UK). Ofcom. 1 October 2025. [A demographic deep dive into internet use](#). Analysis using Ofcom's Technology Tracker 2025.

³⁴¹ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³⁴² Ofcom. 17 July 2025. [The Communications Market 2025](#).

the UK.³⁴³ Starlink currently offers the only direct-to-consumer NGSO satellite broadband service in the UK, with Amazon Leo (formerly known as Project Kuiper) expected to also supply these services in the next few years. In addition, business-to-business (B2B) services are available from OneWeb.³⁴⁴ This section focuses on NGSO satellite broadband services, as they can offer lower latency and faster response time and a better internet connection for users compared to GSO satellite broadband.

- 4.44 Since the last review, coverage and take-up of satellite broadband services have increased. Nationwide NGSO satellite broadband coverage is now offered direct-to-consumers by Starlink, with over 110,000 broadband customers in 2025 (up from 87,000 in 2024) in the UK.³⁴⁵ In addition, in November 2025, BT and Starlink announced an agreement which will make Starlink’s satellite services available to BT and EE customers in rural and remote areas with the service expected to be available to customers in the latter half of 2026.³⁴⁶ We have recently increased the amount of spectrum available to NGSO satellite operators in the UK, and propose to make more available in the future.^{347 348 349 350} We expect these changes to substantially boost the capacity of NGSO operators. As technology advances and more NSGOs begin supplying services in the UK, we expect to see greater take-up of these services during the review period.
- 4.45 Compared to fixed broadband, however, take-up of satellite broadband services is relatively low. This is likely to be partly because the service is still comparatively new and consumer awareness of this service is relatively low.^{351 352} Furthermore, where available to customers, fixed broadband providers can often offer a service with better performance typically at lower retail prices (as set out in Volume 2, Section 2),^{353 354} although the price difference between satellite and fixed broadband has narrowed recently. In the UK, Starlink offers a Residential Lite product with unlimited data for £35/month for download speeds of 100 Mbit/s and £55/month for download speeds of 200 Mbit/s in selected areas.^{355 356}
- 4.46 In addition, we have gathered evidence to understand ISPs’ and WLA providers’ views of the competitive constraint that broadband services delivered over wireless technologies, including satellite, exert on those delivered over wired connections. There is limited evidence from providers, but the evidence we have suggests providers consider the

³⁴³ Ofcom. 19 December 2025. [Non-geostationary satellite earth station licences](#). Accessed 11 March 2026.

³⁴⁴ Ofcom. 5 December 2024. [Connected Nations 2024](#).

³⁴⁵ Ofcom. 19 November 2025. [Connected Nations 2025](#).

³⁴⁶ BT. 6 November 2025. [BT Group and Starlink pave the way for high-speed home broadband in the UK’s hardest to reach places](#). Accessed 15 December 2025.

³⁴⁷ Ofcom. 3 February 2025. [Statement: Increasing use of the 27.5-30 GHz and 32 GHz bands - Ofcom](#).

³⁴⁸ We have recently granted temporary licences to Starlink to use E band frequencies for gateway use at three sites and we have consulted on making the Q/V band available for use by gateways in future.

³⁴⁹ Ofcom. 28 October 2025. [Statement: Temporary NGSO gateway access to E band](#).

³⁵⁰ Ofcom. 22 July 2025. [Consultation: Expanding spectrum access for satellite gateways](#).

³⁵¹ Ofcom first issued a licence to Starlink in November 2020. Ofcom. 19 February 2025. [Non-geostationary satellite earth station licences](#). Accessed 11 March 2026.

³⁵² [X] response dated [X] to s135 notice dated [X], question [X].

³⁵³ For example, see [X] response dated [X] to s135 notice dated [X], question [X].

³⁵⁴ For comparison, the current prices of residential FTTP services with speeds up to 150 Mbit/s are as low as £24 per month. See Volume 2, Section 2.

³⁵⁵ Starlink. [Starlink for homes](#). Accessed 22 January 2026. For comparison, the current prices of residential FTTP services with speeds up to 150 Mbit/s are as low as £24 per month. See Volume 2, Section 2.

³⁵⁶ In Germany, Starlink introduced a satellite broadband at €29/month undercutting Deutsche Telekom’s copper-based tariff of c. €48. Barclays – Satellite Services – To Infinity and Beyond – Volume 4, 1 October 2025.

competitive constraint on fixed broadband is likely to be limited. Consistent with this, we recognise that, although Starlink indicates average download speeds of around 210 Mbit/s and average upload speeds to be around 20 Mbit/s,³⁵⁷ this will be dependent on the specific deployment, available capacity at the site, and the number and location of users, as set out in Annex 2. Overall, we did not see evidence suggesting providers were concerned about the competitive constraint that satellite broadband may exert on the fixed broadband market.

- 4.47 Ongoing developments, such as technological change and new entrants in the provision of satellite broadband services, will impact the use of satellite broadband in the longer term. We expect capacity and take-up of these services to increase during the review period. However, we do not expect they will increase to such an extent (or with sufficient certainty) that they will emerge as a mass-market substitute for fixed broadband services during the review period. Therefore, based on the evidence currently available to us and for the reasons set out above, we conclude that satellite broadband is not in the WLA product market.

Overall conclusion on wireless services

- 4.48 Prior to the publication of our March 2025 Consultation, we gathered evidence to understand ISPs' and WLA providers' views of the competitive constraint that broadband services delivered over wireless technologies exert on those delivered over wired connections. There is limited evidence from providers, but the evidence we have suggests providers consider the competitive constraint on fixed access is likely to be limited.³⁵⁸ None of the feedback from stakeholders in response to our consultation contradicted this.
- 4.49 We consider that wireless technologies will play an increasingly important role in delivering broadband services to some consumers, particularly in hard-to-reach areas. However, based on the evidence available to us, we consider it unlikely they will emerge as a mass-market substitute for fixed broadband services during the review period. Awareness and take-up of broadband services delivered over wireless technologies remains relatively low compared to that of fixed access broadband. In addition, currently the maximum available speeds are not comparable to what fixed broadband services can offer, and we think this is likely to be the case throughout the review period. We therefore do not expect that, during this review period, a sufficiently large number of consumers would be willing and able to switch to wireless services in response to a SSNIP by a hypothetical monopolist of fixed broadband, in order to prevent such a SSNIP from being profitable.
- 4.50 Based on the evidence set out above, and the stakeholder feedback we received in response to our March 2025 Consultation, we do not extend the product market to include wireless technologies.

Leased lines as a substitute for broadband

- 4.51 We do not include any leased line services in the WLA product market.³⁵⁹

³⁵⁷ Ofcom. 19 November 2025. [Connected Nations 2025](#). Page 18.

³⁵⁸ For example, [redacted] indicated that due to [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. In addition, [redacted] indicated that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] also indicated that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and that [redacted], see [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

³⁵⁹ As described and defined in more detail in Volume 2, Section 5.

- 4.52 We expect that residential consumers will not see leased lines or leased line equivalent services as a substitute for broadband, given that these services are in general priced significantly above broadband services and offer many features they may not need.³⁶⁰ Most businesses that currently take broadband services are also unlikely to see leased lines as a substitute for similar reasons.³⁶¹ We therefore do not expect significant switching to leased lines or leased line equivalent services in response to a SSNIP of broadband services.
- 4.53 On the supply side, the geographic location of networks built to solely provide traditional point-to-point leased lines is often different to those which also (or only) provide broadband services.³⁶² Access networks which only supply leased line services generally locate access points near a business district and extend the network to the end-user in response to a retail order. They tend not to focus on covering residential premises and small businesses, which are often located in different geographic areas.³⁶³ Therefore, they are unlikely to be able to rapidly deploy broadband to homes in response to a SSNIP of broadband services, as they would need to construct an access network covering residential premises. In addition to any costs that leased line providers would need to incur to construct an access network for the provision of broadband, there may be additional barriers to overcome in order to actually supply and compete in the WLA market.³⁶⁴ [REDACTED].³⁶⁵
- 4.54 In theory, it may be easier for leased line networks to provide broadband services to businesses where they are already connected to those business sites. However, given that they have existing leased line connections, these sites are likely to demand leased line services rather than broadband services.³⁶⁶ In any case, demand for broadband services from those businesses is likely to account for only a small proportion of overall demand for broadband services, and therefore unlikely to constrain a hypothetical monopolist of all WLA services from profitably sustaining a small price rise.

³⁶⁰ For examples, see Volume 2, Section 2.

³⁶¹ It is possible that over time, as demand for their own services increases, business customers may migrate from a residential grade service to a leased line service. However, this migration would arise because broadband services no longer meet their needs, rather than in response to a small change in the price or quality of the broadband products.

³⁶² Under the hypothetical monopolist test framework, we are considering the constraints on a potential hypothetical monopolist of all networks built for the provision of broadband services. Therefore, here we focus on the ability of a network focused solely on providing leased lines to substitute providing broadband services. We acknowledge that in practice some networks are designed to supply both broadband services and leased lines.

³⁶³ As we discuss in Volume 2, Section 2, and Volume 2, Section 5, we understand that some providers are supplying symmetric bandwidth services with uncontended capacity over symmetric PONs (such as XGS-PON), which have quality of service parameters similar to point-to-point leased lines. However, the same geographic limitations on extending to residential premises are likely to apply where that network has initially been designed solely to serve leased lines demand.

³⁶⁴ See below for further explanation of the barriers to entry and expansion faced in the provision of WLA services.

³⁶⁵ See [REDACTED] response dated [REDACTED] to s135 dated [REDACTED], question [REDACTED], [REDACTED] response dated [REDACTED] to s135 dated [REDACTED], question [REDACTED], [REDACTED] response dated [REDACTED] to s135 dated [REDACTED] question [REDACTED], [REDACTED] response dated [REDACTED] to s135 dated [REDACTED], question [REDACTED] and [REDACTED] response dated [REDACTED] to s135 dated [REDACTED], question [REDACTED].

³⁶⁶ A leased line customer is unlikely to switch to a broadband service. See Volume 2, Section 5.

Our conclusions on product market definition

4.55 We have decided that there is a single product market for the supply of WLA at a fixed location which includes all fixed networks and speeds, and residential and business services.

Geographic market definition

4.56 In this section we set out the evidence, analysis and reasoning we have undertaken to reach our geographic definitions for the WLA market for the 2026-31 market review period. In Annex 3 we discuss our methodology for assessing altnets' network coverage and WLA market shares in more detail.

Background

4.57 In the WFTMR21 statement we identified two geographic markets for WLA for the purposes of making a market power determination:

- a) WLA Area 2: postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks; and
- b) WLA Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.

4.58 To determine the boundaries of WLA Area 2 and WLA Area 3, we looked at altnets' business plans, altnet business models (e.g. wholesale vs retail), stakeholders' views and BT internal documents, and concluded that the likely competitive constraint on BT posed by each of VMO2 and CityFibre was clearly an order of magnitude different from that posed by the other smaller altnets.

4.59 As such, we assessed that only areas of CityFibre and/or VMO2 presence (existing or planned) provided the potential for material and sustainable competition to BT for WLA services (Area 2). This resulted in the areas set out in Table 4.2.

Table 4.2: Size of Area 2 and Area 3 in WFTMR21 statement³⁶⁷

Area	Postcode sectors	% of UK premises
2	6,079	70.2%
3	4,021	29.8%

Source: Ofcom. 18 March 2021. [Statement: Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2, page 136.

4.60 We also considered defining an 'Area 1' market, where there are at least two established rival networks to BT. Although we identified a small number of areas that had seen investment by two rivals to BT, we considered that competition was not yet sufficiently well established in those areas to differentiate them from Area 2. We did not therefore define an Area 1 market.

³⁶⁷ Excluding the Hull Area.

Our proposals

- 4.61 In the March 2025 Consultation, we proposed to define two geographic markets for the provision of WLA services, consistent with the WFTMR21:³⁶⁸
- a) WLA Area 2: postcode sectors in which there already is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks,³⁶⁹ and
 - b) WLA Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.
- 4.62 We proposed to define Area 2 by reference to the existing and planned footprint of any provider planning to cover at least 50,000 premises by 2031.³⁷⁰ As we explained in the March 2025 Consultation, we were of the view that the proposed change to our previous approach reflects how competitive conditions have evolved since 2021 and how they are likely to develop during the 2026-31 review period.³⁷¹
- 4.63 In the March 2025 Consultation, we also considered whether to define an ‘Area 1’ market where competitive conditions are appreciably different from our proposed Area 2 and Area 3. Although we identified candidate postcode sectors, we considered that competition was not yet sufficiently well established in those postcode sectors to differentiate them from Area 2, and therefore we did not propose to define an Area 1 market.³⁷²

Stakeholder responses

- 4.64 In this section we set out the responses we received from stakeholders on our proposed geographic market definition.

Our approach to geographic market definition in WLA

Market reviews are forward-looking

- 4.65 Openreach suggested that the approach outlined in the March 2025 Consultation was not sufficiently forward-looking and placed too much weight on current market shares.^{373 374 375}
- ³⁷⁶ In particular: in relation to the WLA market, Openreach said in defining the market, we had not considered a range of structural and behavioural factors that shape competition

³⁶⁸ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Paragraph 4.41.

³⁶⁹ In the rest of this volume, for convenience and ease of reading, we sometimes use the shorter formulation “there is the potential for”.

³⁷⁰ As opposed to the presence of VMO2 and/or CityFibre that we used to draw the boundaries of Area 2 in the WFTMR21.

³⁷¹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Paragraph 4.42.

³⁷² Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Paragraph 4.43.

³⁷³ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 23. Paragraph 67.

³⁷⁴ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 8-9. Paragraphs 11-17.

³⁷⁵ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026](#). Page 3 and 8.

³⁷⁶ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 11-15. Paragraphs 24-36.

conditions.³⁷⁷ Openreach pointed to rapid growth in altnets' footprints, changes in altnet take-up, reports of potential consolidation and the impact of wholesale agreements as evidence that this is a rapidly evolving market, requiring forward-looking analysis.^{378 379} Openreach recommended using updated Connected Nations figures on build and take-up, as well as evidence on recent developments in the wholesale market.^{380 381}

We distinguish between areas that have the potential for competition from areas where this potential is unlikely

- 4.66 We received a number of responses relating to certain aspects of our conceptual approach to defining geographic markets.
- 4.67 INCA and Gigaclear consider that market definition should be rooted in where competition is economically viable, not the likelihood of emergence of competition to BT.^{382 383} INCA noted that BDUK funded build, which is distributed across Areas 2 and 3, is an indicator of areas that are unlikely to financially support network competition, which would make these areas good candidates for Area 3.³⁸⁴
- 4.68 Competition in wholesale markets relies on the presence of networks with the ability or potential to sufficiently overcome barriers to entry and expansion. Openreach commented that our approach to assessing competitive conditions was too simplistic. In relation to the WLA market, Openreach claimed that our approach focused too narrowly on the current or planned presence of certain networks (those that belong to current or potential material and sustainable competitors), without considering a range of structural and behavioural factors that shape competitive conditions.^{385 386}

Identifying areas with actual or potential material and sustainable competition

- 4.69 BT and Openreach commented on the competitive strength of specific altnets.
- 4.70 BT and Openreach highlighted that Community Fibre, which we provisionally considered to be a potential (but not current) material and sustainable competitor, has recently made significant progress in securing take-up and advancing towards sustainability. Openreach stated that Community Fibre is a "clear and well-established scale competitor" in London, citing its 1.3m premise footprint, its wholesale agreement with Vodafone and ~30% take-up

³⁷⁷ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 20-21. Paragraph 52-59.

³⁷⁸ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 11-15. Paragraphs 24-36.

³⁷⁹ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026](#). Page 3 and 8.

³⁸⁰ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 9. Paragraph 16.

³⁸¹ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 16. Paragraph 40.

³⁸² [INCA](#) response to TAR26 March 2025 Consultation. Pages 45-46. Paragraph 180

³⁸³ [Gigaclear](#) response to TAR26 March 2025 Consultation. Paragraphs 17-20.

³⁸⁴ [INCA](#) response to TAR26 March 2025 Consultation. Pages 48. Paragraph 192.

³⁸⁵ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 20-21. Paragraphs 52-59.

³⁸⁶ In the section setting out our reasoning on WLA geographic market definition we explain that we consider a range of factors to determine which providers are, or have the potential to be, material and sustainable competitors. We also explain that this is only the first step to defining geographic markets.

across its network.^{387 388} On similar grounds, BT stated that Community Fibre is “achieving local sustainability.”³⁸⁹

- 4.71 Openreach stated that, as a wholesaler, CityFibre exerts a clear competitive constraint in its footprint, pointing to Openreach line losses.³⁹⁰
- 4.72 INCA, VodafoneThree and VMO2 commented on our view that altnets with current or planned coverage over 50,000 premises can become material and sustainable competitors to BT through consolidation, while this is less likely for altnets with smaller footprints.
- 4.73 INCA argued that the 50,000-premise threshold was too simplistic, noting that consolidation decisions are driven by additional factors such as shared investors, synergies with BDUK contracts, and proximity of network assets than by scale alone.³⁹¹
- 4.74 VodafoneThree considered the threshold too low. It stated that unlike routes to becoming a material and sustainable competitor to BT that larger altnets have access to, potential consolidation is more speculative. It noted that adding a network of 50,000 premises into a larger footprint would not give an existing wholesaler the ability to pose a material constraint to BT. Finally, it noted that acquiring and integrating an existing network takes a minimum of 18 months, meaning the impacts of any consolidation would occur well into the review period. According to VodafoneThree, the areas where there currently is or there is likely to be potential for material and sustainable competition to BT consists of areas covered by VMO2, CityFibre, Gigaclear, Hyperoptic, Community Fibre or Netomnia/Brsk.^{392 393}
- 4.75 VMO2 welcomed that we reflected the potential for consolidation in our analysis. However, it stressed that smaller altnets with over 50,000 premises passed or planned are unlikely to reach sustainability by merging with each other. Instead, it suggested that sustainability could be achieved through merging with VMO2 or CityFibre.³⁹⁴

No Area 1

- 4.76 nexfibre, Sky and PXC agreed with our assessment that there is currently no area where competition is sufficiently well-established to differentiate it from the proposed Area 2.³⁹⁵
^{396 397}

³⁸⁷ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 16. Paragraph 40.

³⁸⁸ Community Fibre. 9 September 2025. [Community Fibre announces continued customer growth](#). Accessed 29 January 2026.

³⁸⁹ [BT Group](#) response to TAR26 March 2025 Consultation. Box 2.1.

³⁹⁰ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026](#). Page 7

³⁹¹ [INCA](#) response to TAR26 March 2025 Consultation. Page 47. Paragraphs 186-187.

³⁹² In light of the merger between Netomnia and Brsk we treat them as one entity with one network and refer to the merged entity as Netomnia/Brsk.

³⁹³ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Pages 10-11. Paragraphs 9-14.

³⁹⁴ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 18. Paragraph 57. Page 20. Paragraph 64.

³⁹⁵ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 9. Question 2.7

³⁹⁶ [Sky](#) response to TAR26 March 2025 Consultation. Pages 3-4. Paragraphs 11-13.

³⁹⁷ [PXC](#) response to TAR26 March 2025 Consultation. Page 3. Paragraphs 2.1-2.4.

- 4.77 INCA also agreed with our assessment and submitted that it is important that Ofcom provides transparency on the parameters it considers to identify an Area 1.³⁹⁸
- 4.78 VMO2 recognised that there is some geographic variation in BT’s market share across postcode sectors but argued that it would be premature to assume that current trends would persist. Therefore, it agreed with Ofcom’s conclusion that there is no Area 1.³⁹⁹
- 4.79 PXC agreed that there is no Area 1. In support, it cited actual and expected market shares, the prevalence of retail-only altnets that can only pose an indirect constraint to BT and the fact that many altnets still have a relatively small footprint.⁴⁰⁰
- 4.80 Sky highlighted that uncertainty around altnet consolidation means it is uncertain that there will be an Area 1 over the course of the review period.⁴⁰¹
- 4.81 Openreach stated that Ofcom had based its decision to not define a separate geographic Area 1 on a preliminary view of SMP, which reversed the correct analytical sequence. It pointed to Ofcom’s use of market share data and its consideration of the constraint to BT in the absence of regulation as evidence of this reversed analysis.⁴⁰²
- 4.82 Openreach also stated that postcode sectors where two rivals to BT (BT+2) are present should form a separate Area 1. It claimed this is because competition in BT+2 is stronger than elsewhere in Area 2. In support, it cited BT’s lower market share in BT+2 compared to the rest of Area 2 and claimed prices are lower where two rivals are present.⁴⁰³
- 4.83 Openreach further stated that recent and ongoing network expansion and the likely impact of potential wholesale agreements and consolidation, means that current evidence likely understates the competitive impact of rivals to BT in BT+2 over the review period. The report states that the potential future developments in BT+2 provide a strong reason to define BT+2 as a separate Area 1 geographic market.⁴⁰⁴
- 4.84 Similarly, Openreach provided evidence that showed that the number of postcode sectors with 2 or more rivals to BT grew between March and September 2025, that BT’s market share within BT+2 has declined, and that the number of postcode sectors where BT’s market share is below 50% has grown between March and September 2025. It stated that this evidence provides grounds to define an Area 1 today. In addition, it submitted that this data points to a trend that should be considered as part of our forward-looking assessment.^{405 406}

³⁹⁸ [INCA](#) response to TAR26 March 2025 Consultation. Page 43. Paragraphs 169-174.

³⁹⁹ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 26. Paragraph 86.

⁴⁰⁰ [PXC](#) response to TAR26 March 2025 Consultation. Page 3. Paragraphs 2.1-2.4.

⁴⁰¹ [Sky](#) response to TAR26 March 2025 Consultation. Pages 3-4. Paragraphs 11-13.

⁴⁰² [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 15. Section 2.1.2.

⁴⁰³ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 17-19. Sections 2.2.1-2.2.2.

⁴⁰⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 20-33. Section 2.4.

⁴⁰⁵ It further mentioned that [Ofcom’s Connected Nations report published in November 2025](#) shows that over 12 months the proportion of residential premises with access to three or more networks has increased by 6 percentage points to 29% of all residential premises.

⁴⁰⁶ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026](#). Page 4 and 6.

Homogeneity of competitive conditions in Area 2

- 4.85 BT, Openreach and VodafoneThree disagreed with our view that Area 2 has sufficiently homogenous competitive conditions to constitute a single geographic market. They were of the view that the competitive conditions in our proposed Area 2 are too varied.^{407 408 409}
- 4.86 In support of this claim, BT highlighted differences in network presence: it noted that while some parts of Area 2 are served by at least three networks, others have only one active network alongside future build commitments.⁴¹⁰
- 4.87 BT also pointed to price evidence, stating that retail prices in areas with three or more networks are about 30% lower than in areas served solely by Openreach.^{411 412} Openreach highlighted similar patterns and further noted that retail prices from the same ISP can vary depending on whether Openreach FTTP is available. It stated that this indicates clear geographic variation in competitive conditions.^{413 414}
- 4.88 Openreach also argued the presence of specific operators give rise to differences in competitive conditions.
- 4.89 It stated that postcode sectors where both BT and VMO2 are present exhibit different competitive conditions, citing VMO2's relatively higher take-up compared to other rivals and the potential for wholesaling to amplify this effect.⁴¹⁵
- 4.90 In addition, Openreach stated that CityFibre's relatively large footprint and wholesale agreements with major ISPs, creates different competitive conditions along CityFibre's network compared to where it is not present.⁴¹⁶
- 4.91 Based on its view that our 50,000 premises-threshold is too low and consolidation potential too speculative, VodafoneThree stated that Area 2 has vast variations in the "potential" for competition. It suggested that Area 2 can be considered to consist of Area 2a and Area 2b, with different levels of certainty of the potential for competition for each. VodafoneThree stated that Area 2 had expanded from the WFMTR21 to include areas covered by Gigaclear, Hyperoptic, Community Fibre and Netomnia, in addition to VMO2 and CityFibre, but that potential competition from smaller altnets remains more nascent and speculative.⁴¹⁷

⁴⁰⁷ [BT Group](#) response to TAR26 March 2025 Consultation. Page 3. Paragraph 1.10.

⁴⁰⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 36. Paragraph 105.

⁴⁰⁹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 10. Paragraph 9.

⁴¹⁰ [BT Group](#) response to TAR26 March 2025 Consultation. Page 10. Paragraph 2.15.

⁴¹¹ [BT Group](#) response to TAR26 March 2025 Consultation. Pages 12-14. Paragraphs 2.24-2.28.

⁴¹² [BT Group](#) response to TAR26 March 2025 Consultation. Annex 3.

⁴¹³ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Pages 17-18. Paragraphs 45-48.

⁴¹⁴ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026.](#) Pages 9-10.

⁴¹⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Pages 36-37. Paragraphs 107-111.

⁴¹⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 38. Paragraphs 112-119. Pages 51-52. Paragraph 171.

⁴¹⁷ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 10. Paragraphs 9-14.

Establishing the Area 2 and Area 3 market boundaries

- 4.92 Openreach stated that the use of postcode sector averages as the relevant geographic unit, understates the impact of competition by including premises not yet covered by rivals. It suggested using premises as the relevant geographic unit instead.^{418 419}
- 4.93 Gigaclear stated that by basing its Area 2 and Area 3 market boundaries on the presence and build plans of networks other than Openreach, Ofcom has wrongly assumed that Openreach will build everywhere that can economically sustain one network.⁴²⁰
- 4.94 CityFibre⁴²¹ and Gigaclear⁴²² argued that our 50% coverage threshold for counting a provider as being present in a postcode sector meant that a significant number of their premises end up in Area 3, which they considered was not appropriate.

Our reasoning and decisions

Our approach to market definition in WLA

Market reviews are forward-looking

- 4.95 We have used our statutory powers to collect updated evidence from network providers, ISPs, and other stakeholders on factors likely to shape market dynamics over the review period. This evidence includes data on existing and planned build, internal documents detailing stakeholders' business models, information on potential future wholesale deals, consolidation prospects and competitive strategies.
- 4.96 We use our regulatory judgment to take a view on likely developments over this review period, taking into account this evidence.
- 4.97 There is inherent uncertainty in defining forward-looking geographic markets, particularly during a dynamic period in which network competition is still developing. We have set out our approach to defining markets in light of this uncertainty in Section 1 of this volume.

We distinguish between areas that have potential for competition to develop, and those that do not

- 4.98 In line with a forward-looking assessment, we note that since 2021 there has been significant investment by Openreach and other network operators in deploying new FTTP networks. There is also further deployment planned after 2026, albeit slowing down from the current pace.⁴²³ However, altnets are still in the process of establishing themselves, with take-up of their services varying between providers and geographic areas.
- 4.99 Given that network competition is therefore still developing, in line with our proposed approach in the March 2025 Consultation, we continue to distinguish markets where there already is, or there is likely to be the potential for, material and sustainable competition,

⁴¹⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 19. Section 2.2.3.

⁴¹⁹ We explain our reason for using postcodes sectors in Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Paragraphs 4.118-4.119.

⁴²⁰ [Gigaclear](#) response to TAR26 March 2025 Consultation. Pages 20-21. Paragraphs 75-80.

⁴²¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Pages 30-31. Paragraphs 3.14-3.18.

⁴²² [Gigaclear](#) response to TAR26 March 2025 Consultation. Pages 27-28. Paragraph 103.

⁴²³ As confirmed by information we have gathered since the March 2025 Consultation.

and markets where we believe this is unlikely. We base this assessment on the existing or planned presence⁴²⁴ of current or potential material and sustainable competitors.⁴²⁵

- 4.100 We then assess whether there are any areas that where competitive conditions are sufficiently different so that they constitute a separate geographic market.
- 4.101 We therefore do not agree with INCA and Gigaclear that we should draw on BDUK areas to draw our Area 2/3 boundaries.
- 4.102 BDUK funding does not determine whether long-term network competition is – or is not – viable. For this review period, what matters is that BDUK helps funds commercial build, and it is important that this network is reflected in our analysis. We recognise that some of these areas may not support network competition in the longer term, but making such an assessment is beyond the scope and time-frame of this review.⁴²⁶

Steps we take to define geographic markets

- 4.103 Our approach to identifying areas within which competitive conditions are sufficiently homogeneous for the purposes of defining geographic markets consists of three main steps.
- 4.104 First, as explained above, we distinguish between areas where there already is, or there is likely to be potential for, material and sustainable competition. In order to identify these areas, we assess where there are providers present that are or have the potential to become material and sustainable competitors and, hence, in which areas there already is, or there is the potential for, material and sustainable competition. This is a practical first step in defining geographic markets, based on differences in competitive conditions over the forward-look. This starting point provides us with an initial set of areas for which we can then assess whether competitive conditions within them are sufficiently homogeneous.
- 4.105 Second, we assess whether competitive conditions in each of these areas are sufficiently homogeneous to form distinct geographic markets, or whether appreciable differences exist that justify defining additional separate markets.
- 4.106 Third, after defining the geographic markets, we explain how we allocate postcode sectors to each market in practice.

Identifying actual or potential material and sustainable competitors

- 4.107 We begin our market definition exercise by identifying which networks exert, or have the potential to exert, a material and sustainable competitive constraint. This is because we expect that competitive conditions over the review period will differ in areas where these networks are present (or plan to be present) compared to areas where they will not be present.
- 4.108 Stakeholders have made specific comments about the extent of the constraint imposed by particular competitors, and we have considered these comments. Whether providers are current or potential material and sustainable competitors is relevant for the next step of our assessment, in which we examine whether there are appreciable differences in competitive conditions within the candidate geographic markets we have identified.

⁴²⁴ We describe how we have assessed presence further below.

⁴²⁵ As BT has a ubiquitous network (taking into account our product market definition), we assess competitive conditions for the purpose of geographic market analysis by assessing the presence of other networks that have the ability or potential to be material and sustainable competitors to BT.

⁴²⁶ For example, in some of these areas, there may be no other (existing or planned) network available except Openreach's legacy copper-based network, which will eventually be decommissioned.

- 4.109 We assess sustainability alongside materiality of the constraint because both affect competitive conditions. Competition depends not only on whether providers can compete on price and quality to gain market share today, but also on whether they can continue to do so over time. Sustainability is central to this: until a network has the ability to operate viably and to continue offering competitive prices and quality in the future, uncertainty remains as to whether any constraint it poses will persist.⁴²⁷
- 4.110 To make this assessment, we look at a number of factors which determine the actual or potential competitive strength of different networks. These include:
- a) **Business models:** for example, wholesale altnets can pose a material direct constraint at the wholesale level since these altnets can gain a large share of WLA demand by winning deals with ISPs. In comparison, retail altnets provide more of an indirect constraint to the wholesale level, through competition for end-users.
 - b) **Scale of build:** everything else being equal, a network with larger scale is likely to be a more efficient and more effective competitor (e.g. due to economies of scale, greater brand recognition). Moreover, they may be better positioned to win demand from (large) ISPs, some of which may be less willing to integrate with smaller networks.
 - c) **Level of take-up:** a greater level of penetration (either current or future) can be one of the indicators of a network's competitive strength, since it evidences an ability to attract and retain customers (i.e. provide competition). However, take-up is also critical in its own right for a network's ability to become a material and sustainable competitor. For example, take-up means the networks are generating revenue which is necessary for them to become sustainable companies (and therefore competitors) in the long term. Future network build also relies on current and expected levels of take-up, as it determines the investment case and is also important to raise further funding and access existing debt facilities. In addition, due to the existence of economies of scale in operating a network, a higher level of take-up would likely reduce altnets' per line costs, allowing them to compete more effectively (e.g. through sustainable lower prices).⁴²⁸
 - d) **Current and future deals with ISPs:** securing a deal to wholesale to an ISP who can move its existing or new customers onto the altnet's network can help strengthen the competitive position of an altnet, as it is better placed to win significant volumes.⁴²⁹
 - e) **Prospects of consolidation:** consolidation may lead to an increase in scale and result in a consolidated entity which may be able to exert a stronger competitive constraint in the market than pre-consolidation.
 - f) **Views on competition and consolidation:** what BT, rival networks and ISPs believe about competitors and consolidation is likely to inform their strategic decisions (e.g. who do network operators consider to be key competitor(s), who do ISPs consider to be the main credible alternatives, what do different network operators think about prospects of consolidation, and how will they react to this?).
- 4.111 We consider all of these aspects in the round in order to form a view on whether certain competitors are already, or are likely to have the potential to become, material and sustainable competitors. This assessment does not hinge on any one particular indicator. For example, take-up or market share does not on its own determine the materiality of the constraint a network poses, nor does take-up in parts of the footprint necessarily evidence

⁴²⁷ We agree with Openreach that a network may gain this ability through consolidation, should consolidation make the network sustainable.

⁴²⁸ For more detail on the importance of take-up see Volume 3, Section 1.

⁴²⁹ We discuss some of these factors in our SMP assessment below.

that a network has become sustainable. Instead, it depends on the development of the network as a whole, as indicated by a range of factors, rather than its performance on a single indicator or in individual postcode sectors.

4.112 As detailed in the following paragraphs, we remain of the view set out in the WFTMR21 that VMO2 and CityFibre respectively exert, or are likely to have the potential to exert, a material and sustainable competitive constraint. In addition, our assessment of the evidence is that some other altnets also likely have the potential to exert a material and sustainable constraint. In the following paragraphs, we set out this assessment in more detail.

VMO2 and CityFibre respectively exert or are likely to have the potential to exert a material and sustainable constraint

4.113 In line with our conclusions from the WFTMR21, we conclude that, over the review period, VMO2 will continue to be a material and sustainable competitor in WLA, and CityFibre is likely to have the potential to become a material and sustainable competitor.

VMO2

4.114 VMO2 is a material and sustainable competitor to BT:

- a) VMO2 has an established network presence that covered around 18.8m premises in December 2025^{430 431} (and [redacted] premises according to July 2025 information submitted to Ofcom.⁴³² VMO2 plans to expand to cover around [redacted] premises by 2031, according to July 2025 information submitted to Ofcom.⁴³³ VMO2 announced in 2021 that it would be upgrading its HFC network to FTTP by 2028.⁴³⁴ As of December 2025, VMO2 and nexfibre's combined FTTP coverage is approximately 7m premises.⁴³⁵
- b) As of December 2025, VMO2 supplied around 5.7m broadband connections.⁴³⁶

4.115 In addition, while VMO2 has so far focused on retail competition in broadband, it has stated an intention to offer wholesale access on its own network outside of its retail group.^{437 438} It is taking steps to enable offering this access, including:

- a) [redacted].⁴³⁹

⁴³⁰ As discussed in the following paragraphs, due to the arrangements between them, we use the combined VMO2 and nexfibre data on coverage and active lines for the purpose of defining geographic markets.

⁴³¹ Virgin Media O2. 18 February 2026. [Virgin Media O2 Q4 2025 Financial Results](#). Accessed 18 February 2026.

⁴³² Coverage figures may differ between providers' reported figures and data submitted to Ofcom in July 2025 due to a number of factors, for instance continued build.

⁴³³ Network expansion is undertaken by nexfibre who is planning to cover a total of around [redacted] premises by 2031. [redacted] response to [redacted], date [redacted]. [redacted] response to [redacted], date [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴³⁴ Virgin Media O2. [Virgin Media O2 bolsters future network with fibre upgrade plan](#). Accessed 6 March 2026.

⁴³⁵ ThinkBroadband. 19 February 2026. [Exactly how much new fibre is Virgin Media O2/Nexfibre buying with Netomnia?](#) Accessed 24 February 2026. Virgin Media O2. 18 February 2026. [Virgin Media O2 Q4 2025 Financial Results](#). Accessed 6 March 2026. VMO2 has now started to make FTTP available to some of its existing HFC customers. (For more details, see: ISP Review. 28 January 2026. [Virgin Media Start Opening FTTP Upgrade Areas to Existing UK Customers](#). Accessed 29 January 2026.

⁴³⁶ Virgin Media O2. 18 February 2026. [Virgin Media O2 Q4 2025 Financial Results](#). Accessed 25 February 2026.

⁴³⁷ See [nexfibre. 9 January 2025. network passes 2 million premises - nexfibre](#) Accessed 6 March 2026.

⁴³⁸ Virgin Media O2. 17 September 2025. [Virgin Media O2 brings together new team to challenge the fixed wholesale market](#). Accessed 6 March 2026.

⁴³⁹ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

- b) Creating a dedicated Fixed Wholesale unit to consolidate consumer and business-facing wholesale teams.⁴⁴⁰
- 4.116 However, currently VMO2 has not announced any wholesale agreement outside of its retail group. The completion, terms and impact of any potential agreements therefore remain uncertain.⁴⁴¹
- 4.117 Potential future wholesale entry by VMO2 also faces challenges. For example:
- a) VMO2 [redacted].^{442 443}
 - b) We also note that, as mentioned in Section 2, although VMO2 is upgrading its network to offer FTTP, and is the anchor tenant for nexfibre’s FTTP footprint, it is currently offering HFC on the majority of its footprint. The evidence suggests that this may add complexity to any future negotiations with other ISPs. For example, in its internal documents, [redacted].⁴⁴⁴
- 4.118 Moreover, VMO2’s presence in the retail market means that wholesaling is likely to lead to some cannibalisation of its own customer and revenue base. This may be perceived as a risk by ISPs (e.g. because VMO2 may advantage its retail arm in areas where it is competing with ISPs⁴⁴⁵) and make VMO2’s network less attractive compared to other altnets.⁴⁴⁶
- 4.119 While we consider that wholesaling by VMO2 has a strong potential to create an additional form of direct competition in WLA, the evidence regarding the actual likelihood and impact of VMO2 wholesaling is still limited. Therefore, we consider that, as a retail-focused provider, VMO2 currently poses an indirect constraint on BT.
- 4.120 Nonetheless, considering the evidence in the round, we conclude that VMO2 is a material and sustainable competitor in WLA.
- 4.121 As discussed in Section 2 of this volume, VMO2 and nexfibre have entered into an agreement whereby nexfibre will carry out VMO2’s new network build (in areas where VMO2 is not already present) with VMO2 operating as a build partner.
- 4.122 VMO2 and nexfibre are separate companies, and nexfibre can sell its services to other ISPs and [redacted].⁴⁴⁷ In areas where nexfibre is or plans to be present, VMO2 will act as wholesale customer of nexfibre (as the anchor tenant) and use nexfibre’s network to provide broadband services.

⁴⁴⁰ ISP Review. 17 September 2025. [Virgin Media UK Create Fixed Wholesale Broadband Unit for Consumer and Business](#). Accessed 25 November 2025.

⁴⁴¹ We note the publicly available details of the deal to acquire Substantial Group by Liberty Global, Telefonica and InfraVia include terms relating to VMO2 buying wholesale access on the expanded nexfibre footprint (which overlaps with VMO2’s existing footprint). This deal is subject to regulatory clearance. VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

⁴⁴² [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁴³ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁴⁴⁴ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. In particular, in its internal documents [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁴⁴⁵ We recognise that these risks may be mitigated by contractual clauses but agreeing such clauses may add to the costs of dealing with VMO2.

⁴⁴⁶ We understand nexfibre and VMO2 intend to wholesale their networks to other ISPs together, but do not consider this significantly affects the challenges to wholesaling we have identified. See [nexfibre. 9 January 2025. network passes 2 million premises - nexfibre](#). Accessed on 6 March 2026.

⁴⁴⁷ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]

- 4.123 Due to the arrangement between them, we use the combined VMO2 and nexfibre data on coverage and active lines for the purpose of defining geographic markets. In particular, when we refer to the presence of VMO2, we mean VMO2 on the footprint that includes nexfibre, unless otherwise specified.
- 4.124 In February 2026, the owners of the VMO2 network (Liberty Global and Telefonica), and InfraVia, agreed to acquire Substantial Group (including the Netomnia network footprint and retail brands YouFibre and Brsk) through their existing joint venture, nexfibre. As the deal is not yet complete and subject to regulatory approval, we continue to consider the Netomnia network footprint as separate from VMO2/nexfibre.⁴⁴⁸

CityFibre

- 4.126 Since the WFTMR21, CityFibre has continued to expand its footprint (including through acquisitions), it has won BDUK contracts and is gaining take-up through wholesale deals with ISPs.⁴⁴⁹ On the basis of the latest evidence that is available to us, we find that:
- CityFibre has a network that covers around 4.7m premises as of the end of 2025.⁴⁵⁰
 - CityFibre has stated an ambition to reach around 8 million.⁴⁵¹ It has publicly noted a strategic shift from a primarily organic build to relying on participation in the BDUK programme and acquisitions for further growth.⁴⁵²
 - It has acquired a number of altnets including Connexin,⁴⁵³ and is in (or has had) discussions with others, including [redacted].^{454 455} [redacted].⁴⁵⁶
 - As of the end of 2025, CityFibre supplied around 848,000 consumer broadband connections and expects to supply [redacted] broadband connections by the end of the review period.^{457 458}
 - CityFibre has entered into wholesale agreements with all of the large independent ISPs, and many smaller ones.⁴⁵⁹
- 4.127 Openreach stated that, as a wholesaler, CityFibre exerts a clear competitive constraint in its footprint, [redacted].⁴⁶⁰ We recognise that since our March 2025 consultation, CityFibre's ISP partnerships have strengthened its potential to substantially increase its take-up, including the wholesale agreement with Sky that has gone live. Sky has started to migrate customers

⁴⁴⁸ VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

⁴⁴⁹ CityFibre. 20 January 2025. [Full speed ahead: CityFibre's build now underway in all Project Gigabit areas](#). Accessed 2 March 2026.

⁴⁵⁰ We note that CityFibre distinguishes between 4.7m premises passed by their network, 4.5m premises that are 'ready for service', and CityFibre's RFS consumer footprint of 4.15m premises. CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 29 January 2026.

⁴⁵¹ CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 29 January 2026.

⁴⁵² CityFibre. 11 February 2025. [CityFibre delivers first full year of profitability, with Sky to launch in 2025](#). Accessed 29 January 2026.

⁴⁵³ Connexin. 24 March 2025. [CityFibre acquires Connexin's full fibre infrastructure in strategic agreement](#). Accessed 29 January 2026.

⁴⁵⁴ [redacted].

⁴⁵⁵ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁵⁶ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁵⁷ CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 29 January 2026.

⁴⁵⁸ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁵⁹ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁶⁰ Openreach further response to TAR26 March 2025 Consultation. Further evidence on the Wholesale Local Access market - slide deck Jan 2026. Confidential version. [redacted].

to CityFibre, resulting in an increase in CityFibre’s take-up to over 20% across its FTTP consumer footprint.⁴⁶¹ We consider that CityFibre’s ISP agreements strengthen its ability to exert a competitive constraint in WLA.

4.128 However, we do not think that CityFibre’s agreements have persisted for a long enough period for CityFibre to have become a sustainable competitor. While the agreements have resulted in increased take-up, this has only recently materialised and any increases in take-up are starting from a relatively low base.⁴⁶² In addition, CityFibre is still in the process of expanding its footprint and connecting customers, which requires substantial funding.

4.129 There also remains uncertainty around whether these higher (and increasing) volumes and the associated revenues will necessarily persist in the future, especially in the absence of regulation. For example:

- a) [redacted], and [redacted].^{463 464}
- b) CityFibre [redacted].⁴⁶⁵

4.130 Therefore, we consider that CityFibre has clear potential to become a material and sustainable competitor, but there remains uncertainty about its competitive position over this review period in the absence of regulation. In reaching this conclusion we are aware of the fact that Cityfibre’s take-up, and therefore its market share, is higher in some parts of its footprint than in others. As explained above, this is consistent with a network that is developing its competitive strength, but not in itself indicative of the materiality of the constraint, or whether the network has become sustainable overall.

Other altnets are also likely to have the potential to exert a material and sustainable constraint

4.131 Since 2021, the market has evolved and a number of additional altnets have reached a considerable amount of network coverage, have gained take-up and have the potential to further strengthen their market position by extending their network, increasing their sales and/or implementing deals with ISPs.

4.132 By way of example, we highlight four altnets in this position (CityFibre and nexfibre are discussed above).⁴⁶⁶ These are Gigaclear, Hyperoptic, Community Fibre and Netomnia/Brsk and we observe the following.⁴⁶⁷

- a) The current coverage of these four altnets ranges between approximately 0.6m (Gigaclear) and 3m (Netomnia) premises.⁴⁶⁸ Their planned coverage ranges between

⁴⁶¹ CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 29 January 2026. Take-up exceeds 20% across CityFibre’s RFS consumer footprint of 4.15m.

⁴⁶² CityFibre had take-up of around 12.6% across its RFS consumer footprint of 4.1m by the end of 2024. See: CityFibre. 11 February 2025. [CityFibre delivers first full year of profitability, with Sky to launch in 2025](#). Accessed 4 March 2026.

⁴⁶³ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁶⁴ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁶⁵ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁶⁶ These four altnets have been identified to better illustrate the type of evidence we have considered. However, we believe there are other altnets with a similar market position.

⁴⁶⁷ We note recent reports about the position of Gigaclear. (See: ISP Review. 19 January 2026. [Creditors Allegedly Set to Take Control of Rural UK Broadband ISP Gigaclear](#). Accessed 24 February 2026.) What this means for the future of Gigaclear is uncertain. In any case, we consider that Gigaclear would have the potential to become a material and sustainable competitor through consolidation (for reasons set out in the next section), if not on its own.

⁴⁶⁸ Approximate information basis on operators’ reports. Operators’ reported premises counts draw on data from 2024 or 2025. Premises bases may also vary, for instance some operators report premises passed or

[redacted] premises by 2031.⁴⁶⁹ Taken together this group of altnets currently cover up to 7m premises.⁴⁷⁰ The sum of their individual expansion plans indicates planned coverage of [redacted] premises by 2031.^{471 472}

- b) The current take-up of these four altnets ranges between [redacted].⁴⁷³ Taken together these four altnets account for a significant number of active FTTP lines ([redacted]).⁴⁷⁴
- c) Community Fibre has been successful in securing and implementing a wholesale agreement with VodafoneThree.⁴⁷⁵ It has also signed an agreement with PXC.⁴⁷⁶
- d) [redacted] has been engaging with [redacted].⁴⁷⁷
- e) Hyperoptic says it is the largest UK retail only altnet.⁴⁷⁸

- 4.133 This indicates that a range of altnets – the four discussed above and others with a similar market position – can compete with BT by winning end-users’ or ISPs’ demand in the areas where they are present.
- 4.134 However, we consider these altnets are not yet current material and sustainable competitors. Several factors limit their current impact, which may vary across providers. These include the need to build further scale, secure and implement agreements with ISPs, and increase customer take-up. To exert a sustainable competitive constraint, they also

premises ready for service. [Gigaclear](#) response to TAR26 March 2025 Consultation. Page 1. Paragraph 2. Netomnia. 28 January 2026. [Netomnia, YouFibre, brsk Annual Results 2025](#). Accessed 13 February 2026. [Community Fibre announces continued customer growth. 9 September 2025](#). Accessed 13 February 2026. Hyperoptic. 29 September 2025. [Hyperoptic continues to demonstrate strong growth and network expansion in 2024](#). Accessed 13 February 2026.

⁴⁶⁹ [redacted] response to [redacted], dated [redacted]. [redacted] response to [redacted], dated [redacted]. [redacted] response to [redacted] dated [redacted]. [redacted] response to [redacted] dated [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁴⁷⁰ [Gigaclear](#) response to TAR26 March 2025 Consultation. Page 1. Paragraph 2. Community Fibre. 9 September 2025. [Community Fibre announces continued customer growth. 9 September 2025](#). Accessed 13 February 2026. Hyperoptic. 29 September 2025. [Hyperoptic continues to demonstrate strong growth and network expansion in 2024](#). Accessed 13 February 2026.

Netomnia. 28 January 2026. [Netomnia, YouFibre, brsk Annual Results 2025](#). Accessed 13 February 2026. ⁴⁷¹ [redacted] response to [redacted], dated [redacted]. [redacted] response to [redacted], dated [redacted]. [redacted] response to [redacted] dated [redacted]. [redacted] response to [redacted] dated [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁴⁷² This figure reflects the arithmetic sum of the altnets’ individual coverage plans and does not account for potential overlap between networks.

⁴⁷³ Ofcom calculations based on Connected Nations data. [redacted] response to [redacted], dated [redacted]. [redacted] response to [redacted], dated [redacted]. Netomnia. 28 January 2026. [Netomnia, YouFibre, brsk Annual Results 2025](#). Accessed 24 February 2026. Community Fibre. 29 January 2026. [Community Fibre announces record revenue growth](#). Accessed 29 January 2026.

⁴⁷⁴ Ofcom calculations based on Connected Nations data. [redacted] response to [redacted], dated [redacted]. [redacted] response to [redacted], dated [redacted]. Netomnia. 28 January 2026. [Netomnia, YouFibre, brsk Annual Results 2025](#). Accessed 24 February 2026. Community Fibre. 29 January 2026. [Community Fibre announces record revenue growth](#). Accessed 29 January 2026.

⁴⁷⁵ Community Fibre. 12 June 2025. [Community Fibre announces strategic wholesale agreement with VodafoneThree](#). Accessed 29 January 2026.

⁴⁷⁶ PXC. 18 November 2025. [Community Fibre partners with PXC to continue upscaling its fibre services for customers](#). Accessed 29 January 2026.

⁴⁷⁷ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁴⁷⁸ [Hyperoptic](#) response to TAR26 March 2025 Consultation. Page 5.

need to ensure that the impact of any such agreements or increased sales and take-up is sustained over time.

- 4.135 BT noted in its response to the March 2025 Consultation that, in its view, Community Fibre is achieving local sustainability.⁴⁷⁹ Openreach commented that Community Fibre is a “clear and well-established scale competitor to Openreach” in London, citing its 1.3m premise footprint, its wholesale agreement with Vodafone and take-up of around 30%.⁴⁸⁰
- 4.136 We recognise Community Fibre’s strong retail performance and recent wholesale agreements, resulting in take-up reaching just under 32% across its footprint.⁴⁸¹ However, as explained above, our assessment of whether a network exercises, or has the potential to exercise, a material and sustainable competitive constraint does not rely on take-up alone. In Community Fibre’s case, both the growth in its retail base and the effects of its wholesale agreement with VodafoneThree remain recent, and therefore its path to becoming a material and sustainable competitor cannot be assumed to be certain absent regulation.⁴⁸²
- 4.137 [REDACTED].⁴⁸³
- 4.138 Looking ahead, we consider that Community Fibre, the altnets listed above and those with a similar market position have the potential to become material and sustainable competitors as they expand coverage, increase take-up, and deepen wholesale partnerships
- 4.139 Therefore, we believe that there is a range of altnets which have the potential to exert a material and sustainable constraint.
- 4.140 There are also many other altnets which are comparatively smaller and are likely to face greater challenges to become sustainable competitors by winning end-users or ISP demand in the areas where they are present.
- 4.141 Many of these altnets are planning to build new networks or to extend existing networks, often in less densely populated areas. In particular, their (current or expected) footprint is significantly smaller and often targets less densely populated areas where build costs are higher and potential customer demand lower.⁴⁸⁴
- 4.142 This suggests that these smaller altnets are less likely to pose a material and/or sustainable competitive constraint, even when taken together. However, the evidence we have seen indicates that altnet consolidation could significantly strengthen the competitive positioning of these smaller altnets (e.g. by incorporating them into an existing larger network or by creating an additional large network, where there is limited network overlap between the parties), such that they become material and sustainable competitors. We discuss the competitive impact of potential consolidation in the next section.

⁴⁷⁹ [BT Group](#) response to TAR26 March 2025 Consultation. Box 2.1.

⁴⁸⁰ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 16. Paragraph 40.

⁴⁸¹ Community Fibre. 29 January 2026. [Community Fibre announces record revenue growth](#). Accessed 29 January 2026.

⁴⁸² Take-up reached 25% at the end of 2024, sitting at 17.2% in 2023 (ISP Review. 23 May 2025. [Full Fibre Broadband ISP CommunityFibre Grows UK Take-up to 25 Percent](#). Accessed 2 February 2026).

⁴⁸³ [REDACTED] response dated [REDACTED] to s135 notice dated [REDACTED], question [REDACTED].

⁴⁸⁴ For example, [REDACTED]. [REDACTED] response dated [REDACTED] to s135 notice dated [REDACTED], question [REDACTED].

Altnets also have the potential to become material and sustainable competitors through consolidation

- 4.143 Defining geographic markets requires us to consider expected or foreseeable developments and assess whether these are likely to affect competitive conditions over the 2026-31 review period.
- 4.144 We have therefore examined evidence on prospects of consolidation with a view to assessing the likely impact on competitive dynamics over the review period (rather than trying to forecast specific market acquisitions or mergers).⁴⁸⁵
- 4.145 The evidence gathered for our March 2025 Consultation and subsequently continues to indicate that there is consensus that the market is highly fragmented. Some consolidation has already occurred⁴⁸⁶, and internal documents we have gathered from operators⁴⁸⁷ and publicly available reports⁴⁸⁸ consistently support the view that this is likely to continue.⁴⁸⁹
- 4.146 Our review of network operators' internal documents and business plans indicate that some network operators (specifically [X]) are actively considering options for consolidation and are engaging in exploratory discussions with potential targets. For example:
- In its internal documents [X] monitors a variety of altnets for acquisition and discussed a range of altnets including [X] as a potential acquisition target.⁴⁹⁰
 - [X] periodically updates its list of acquisition targets. In the latest version [X].⁴⁹¹
 - [X] submitted initial offers for the acquisition of various altnets, such as [X] and had been engaging with [X].^{492 493}
- 4.147 While the exact timing and form of consolidation remains uncertain, this evidence suggests that there is likely to be some consolidation during the review period. Although the actual impact on competitive conditions will depend on the specifics of the consolidation event, we consider consolidation could materially affect competition in WLA. This could be, for instance, where two (or more) networks have limited existing overlap and the acquisition target is incorporated into an existing larger altnet, or the altnets are of similar size and

⁴⁸⁵ In other words, we do not need to conclude on the exact nature and timing of consolidation events but only assess whether (and where) altnet consolidation is a foreseeable market development and, if so, whether the potential for consolidation to happen in the foreseeable future is likely to materially affect competitive dynamics over the review period.

⁴⁸⁶ For example, the 2024 merger between Netomnia and brsk, see: Netomnia. 15 June 2024. [Netomnia and brsk to merge creating the second largest altnet in the United Kingdom](#). Accessed 6 March 2026. Similarly, Community Fibre announced its acquisition of Box Broadband in 2021, see: Community Fibre. 11 August 2021. [Community Fibre announces acquisition of Box Broadband](#). Accessed 6 March 2026.

⁴⁸⁷ For example, [X] considers it likely that the market will either consolidate around three players (namely, Openreach, VMO2 and CityFibre) or around one scale competitor to Openreach (namely, VMO2). [X] response dated [X] to s135 notice dated [X], question [X]. [X] considers consolidation as inevitable [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁸⁸ ISP Review. 30 October 2024. [Enders Analysis Finds 20 Largest UK Altnet BT Rivals Lost £1.3bn in 2023](#). Accessed 6 March 2026.

⁴⁸⁹ As noted above, in February 2026, the owners of the VMO2 network and InfraVia agreed to acquire Substantial Group through their existing joint venture, nexfibre. The deal is not yet complete and subject to regulatory approval.

⁴⁹⁰ [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹¹ [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹² [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹³ [X] response dated [X] to s135 notice dated [X], question [X].

merge to create a single larger network with greater potential to become a material and sustainable competitor. Therefore in the WLA market, a wide range of networks have the potential to become material and sustainable competitors on the basis of consolidation.⁴⁹⁴

- 4.148 Even absent actual consolidation, we consider that the fact that consolidation could happen is likely to have an impact on the strategic behaviour of WLA network operators and therefore affect competitive conditions over the review period. In particular, the evidence indicates [X].⁴⁹⁵
- 4.149 Overall, we believe this evidence indicates that prospects of consolidation represent a foreseeable development which is likely to materially affect competitive conditions over the course of the review period.
- 4.150 We have therefore sought to reflect the potential for consolidation to occur when identifying areas where there is potential for material and sustainable competition to develop. We consider this is appropriate for the purposes of geographic market definition, but note that the actual impact of any particular consolidation event on competitive conditions will depend on the specific details, including the market position and geographic location of the relevant parties (and cannot always be assumed to be positive).

Size of network as an indicator of likely prospects for consolidation

- 4.151 While this is clearly an inherently uncertain assessment, the evidence suggests that coverage is a critical determinant of the attractiveness of an altnet as a potential acquisition target. In particular, we have some evidence of the size of networks that are being considered as acquisition targets.
- 4.152 For example, footprint size is mentioned as a key requirement in [X]'s process of identifying potential targets, with potential targets being generally above [X] premises passed.⁴⁹⁶ Similarly, [X] submitted that it would be unlikely to acquire an altnet with a footprint of less than [X] premises because of the costs of integration.⁴⁹⁷
- 4.153 In the March 2025 Consultation, we proposed that altnets that currently cover or plan to cover over 50,000 premises during the review period, are likely potential targets for consolidation. In light of stakeholder responses about this 50,000 premises threshold, we have considered additional and updated evidence on consolidation targets.
- 4.154 While [X], we consider that the 50,000-premise threshold remains appropriate.⁴⁹⁸ Recent consolidation activity supports this view: we have seen consolidation of altnets with network footprints that are slightly smaller than the [X] premises requirement mentioned by [X] and [X].
- 4.155 For example, CityFibre bought most of Connexin's network at 80,000 premises passed.⁴⁹⁹ In addition, FibreNest was sold to OFNL/BUUK with around 54,000 premises passed.⁵⁰⁰ Setting

⁴⁹⁴ This differs to the position in the LLA market, where the potential impact of consolidation activity is much more dependent on the identity of the merging parties. See Section 5.

⁴⁹⁵ Specifically, [X]. [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹⁶ [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹⁷ [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹⁸ [X] response dated [X] to s135 notice dated [X], question [X].

⁴⁹⁹ ISP Review. 24 March 2025. [CityFibre to Acquire Connexin's UK FTTP Broadband Network UPDATE](#). Accessed 29 January 2026.

⁵⁰⁰ thinkbroadband. 14 May 2025. [Persimmon Homes sells FibreNest to BUUK/OFNL for £100m](#). Accessed 29 January 2026.

the threshold at 50,000 therefore reflects the scale referenced by other operators while also capturing recent market behaviour. We also tested different thresholds to assess their effect on the geographic market boundary and found that even substantial changes, such as doubling the premise threshold to 100,000, had no material impact on the proportion of postcodes classified as Areas 2 and 3.⁵⁰¹

- 4.156 We acknowledge INCA’s view that other factors—such as commonality of investors, synergies with BDUK contracts, and proximity of network assets—also influence consolidation potential. While we agree these factors matter, the evidence from potential acquirers and observed transactions indicates that scale remains a necessary condition for meaningful consolidation.
- 4.157 In addition, we consider that the 50,000 premises threshold provides an objective and transparent way to distinguish altnets with realistic prospects for consolidation from those where such opportunities are limited. This does not imply that scale is the only characteristic that matters, but it is a practical and evidence-based benchmark for assessing consolidation potential.⁵⁰²
- 4.158 We acknowledge VodafoneThree’s view that there is uncertainty around consolidation and that integration takes time, but disagree that this means our threshold relies on us overestimating the potential competitive impact of consolidation during the review period.
- 4.159 First, we consider that the evidence above shows that despite uncertainty, altnets with over 50,000 premises passed could be candidates for consolidation.
- 4.160 Second, while integration may take time, some stakeholders provided us with integration timelines that fit comfortably in the 5-year review period: for example, [X] indicated that [X] integration [X].⁵⁰³ Given that providers are currently engaged in discussions with potential targets, we consider it is likely that we would see the impacts of these potential consolidation activities during the review period.
- 4.161 Importantly, our assessment does not rely on, as VodafoneThree appears to have suggested, a view that adding 50,000 premises to a provider’s network alone would make a provider a material competitor. Rather, our view is that altnets exceeding the 50,000-premises threshold could be consolidated into a network operated by a provider that is, or could become, a material and sustainable competitor. It is also possible that several such altnets could merge, thereby creating a material and sustainable competitor. On that basis, the areas in which these altnets are present, or plan to be present, are locations with potential for material and sustainable competition.
- 4.162 For similar reasons, we disagree with VMO2 that consolidation could only result in a material and sustainable competitor if an altnet were acquired by VMO2 or CityFibre. As we explain above, there are providers in addition to VMO2 and CityFibre that have the potential to become material and sustainable competitors through routes other than consolidation. Based on the evidence on consolidation, we consider that these providers

⁵⁰¹ See Annex 3 for more detail.

⁵⁰² As detailed in Annex 3, to conduct this assessment, we consider altnets’ coverage across the UK, including the Hull Area. This is because we think the potential for an altnet to be considered as an acquisition target will likely depend on their total coverage across the UK, including the Hull Area. However, as further detailed below and discussed in Annex 3, we do not consider any build within the Hull Area for the purpose of delineating the boundaries between Area 2 and Area 3.

⁵⁰³ [X] response dated [X] to s135 notice dated [X], question [X].

might acquire other altnets. If this occurs, we are of the view that the merged entity could be or have the potential to be a material and sustainable competitor.⁵⁰⁴

- 4.163 As such, we consider that altnets that currently cover, or plan to cover, over 50,000 premises during the review period are likely potential targets for consolidation. Areas in which these altnets are present, or plan to be present, should be treated as areas in which there is likely to be the potential for material and sustainable competition to develop.⁵⁰⁵
- 4.164 There are other altnets who cover or plan to cover less than 50,000 premises by the end of the review period. We recognise that these altnets play an important role in providing fibre to rural areas and will continue to contribute towards the goal of providing fibre to most of the UK. We also acknowledge that – notwithstanding our view of what the current evidence indicates – some of these altnets may still consolidate with others. However, we are required to identify markets based on expected or foreseeable developments that may result in geographic differences (or similarities) in competitive conditions. For that purpose, based on the evidence available to us, we think altnets who cover or plan to cover less than 50,000 premises are less likely to be considered attractive targets for consolidation and, absent consolidation, we do not expect them to pose a material and sustainable competitive constraint. Therefore, we have not used their footprint to determine where there is likely to be the potential for material and sustainable competition to develop over this review period.

Candidate geographic markets

- 4.165 In summary, we consider that VMO2 and CityFibre will respectively continue to exert, or have the potential to exert, a material and sustainable constraint on WLA.
- 4.166 We have also identified additional altnets which – due to their potential scale and market position – are likely to have the potential to exert a material and sustainable constraint on WLA.
- 4.167 Other altnets are less likely to exert a material and sustainable constraint. However, the evidence indicates that those who plan to cover at least 50,000 premises by 2031 may be particularly attractive targets for potential acquisition or consolidation.
- 4.168 Overall, we consider that any areas where VMO2, CityFibre or any altnet covering at least 50,000 premises by 2031 is present or plans to be present should be treated as areas where there already is, or there is likely to be potential for, material and sustainable competition to BT.
- 4.169 We consider that in areas where neither VMO2, nor CityFibre, nor any altnets covering at least 50,000 premises by 2031 are present, or plan to be present, there is not, and there is unlikely to be potential for, material and sustainable competition to BT.
- 4.170 Therefore we consider that, over the review period, there will be appreciable differences in competitive conditions between the following areas which we treat as candidate geographic markets:

⁵⁰⁴ It is also possible that two or several altnets, which on their own do not have the potential to become material and sustainable competitors, form a larger altnet which does.

⁵⁰⁵ We detail how we identify these areas in practice below. However, we note that the results of our modelling and as such the boundaries of the area where there is or there is likely to be potential for material and sustainable competition would not change materially if we were to use, for example, a 100,000 threshold.

- a) WLA candidate Area 2: postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks. In practice, this is made up of postcode sectors where there is current or planned presence by at least one of VMO2, CityFibre or any altnet that plans to cover at least 50,000 premises by 2031; and
- b) WLA candidate Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks. This would encompass any postcode sectors not included in Area 2.

4.171 In the next sections we evaluate whether it is appropriate to further sub-divide these areas before reaching our conclusion on geographic market definition. We first discuss our assessment of WLA candidate Area 2, and then present our evaluation of WLA candidate Area 3.

Homogeneity of competitive conditions in candidate Area 2

4.172 In this section, we evaluate whether the competitive conditions within candidate Area 2 are similar enough for it to be considered a single geographic market, or whether conditions differ appreciably within it such that we should sub-divide it.

4.173 We note that many stakeholders considered competitive conditions were sufficiently homogenous within each of candidate Area 2 and Area 3. Allpoints Fibre, Advisory Committee for Scotland, Consumer Scotland and the Scottish Government agreed with our proposal that candidate Area 2 is a distinct geographic market and that there are no separate geographic markets in addition to candidate Area 2 and candidate Area 3.⁵⁰⁶ In addition, INCA, nexfibre, Sky and PXC noted that there is currently no area where competition is sufficiently well-established to differentiate it from the proposed candidate Area 2.⁵⁰⁷ However, Openreach, in Annex 1 of its response, proposed several areas within candidate Area 2 that, in its view, constitute additional, separate geographic markets, which we consider below.

How we assess competitive conditions in candidate Area 2

4.174 Our candidate Area 2 consists of areas where there already is, or there is the potential for, material and sustainable competition. This is a starting point from which we assess whether competitive conditions within this area are sufficiently homogeneous to constitute a single geographic market or if there are appreciable differences that warrant defining separate geographic markets.⁵⁰⁸ In this assessment, we consider competitive conditions in the absence of current WLA remedies.⁵⁰⁹

⁵⁰⁶ [Allpoints Fibre](#) response to TAR26 March 2025 Consultation. Page 2. Paragraph 8. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Pages 6-8. Question 2.6. [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Page 4. [Consumer Scotland](#) response to TAR26 March 2025 Consultation. Page 6. [Scottish Government](#) response to TAR26 March 2025 Consultation. Page 2.

⁵⁰⁷ [INCA](#) response to TAR26 March 2025 Consultation. Page 43. Paragraphs 169-172. [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Page 9. Question 2.7. [Sky](#) response to TAR26 March 2025 Consultation. Pages 3-4. Paragraphs 11-13. [PXC](#) response to TAR26 March 2025 Consultation. Page 3. Paragraphs 2.1-2.4.

⁵⁰⁸ See our discussion of the approach we take to market definition above.

⁵⁰⁹ We referred to this in the March 2025 Consultation as the modified Greenfield approach. Openreach submitted that we had misapplied the modified Greenfield approach and that it was not appropriate for us to assess markets that are separated horizontally, as separate geographic markets are, in the absence of existing ex ante regulation in those markets. We do not agree with that submission - see Volume 2, Section 1. In any

- 4.175 We recognise that candidate Area 2 is broad and, as pointed out by BT, includes variations in network presence, ranging from postcode sectors where two or more rivals to BT are present, and postcode sectors that currently only have planned build by an altnet in addition to BT.⁵¹⁰
- 4.176 However, we consider that counting the current number of network operators present in a postcode sector is not, on its own, a good basis for identifying appreciably different competitive conditions within WLA candidate Area 2 over the review period. This is for the following reasons.
- 4.177 First, competitive conditions in the WLA market do not depend solely on the number of rivals present in an area but also on their competitive strength, as indicated by their scale, ability to win customers and their business model.⁵¹¹
- 4.178 Second, our assessment of competitive conditions is forward-looking, taking into account expected or foreseeable developments that may affect competition in the market over the review period.⁵¹² We base our market definition on differences in competitive conditions that are expected to be stable over that period, so that the boundaries drawn reflect enduring competitive constraints as accurately as possible. Basing market definition on temporary fluctuations in prices, take-up, or performance metrics would risk mischaracterising competition over the review period and undermining regulatory stability.⁵¹³
- 4.179 Changes (either increases or, potentially, decreases) in the presence of networks and their competitive position are likely to occur over the review period. Where and how these changes will occur is uncertain, however.⁵¹⁴ This is because:
- a) The number of providers that are present in a postcode sector could change due to entry (as planned build is completed) or exit (if a network is not acquired and exits the market). The number of competitors could also change through consolidation (e.g. where the consolidating entities have overlapping networks). Whether, when and where this will occur is uncertain.
 - b) Consolidation could also change the identity of providers that are present in a postcode sector, and their competitive strength.⁵¹⁵ The extent, timing and location of consolidation – as well as the impact on competitive conditions – is uncertain.⁵¹⁶

event, regardless of the terminology used to describe the approach we have taken, we consider it to be reasonable and logical for us to define geographic markets in the absence of current WLA remedies. To do otherwise would risk introducing circularity into our market analysis and our regulation being self-defeating.

⁵¹⁰ [BT Group](#) response to TAR26 March 2025 Consultation. Page 10. Paragraph 2.15.

⁵¹¹ As we explain in more detail above, competitive strength depends on a range on a range of factors.

⁵¹² We explain how we do this in more detail where we set out our forward-looking approach to market definition above and in Volume 2, Section 1.

⁵¹³ VMO2 and Liberty Global welcomed the regulatory stability that our proposed geographic markets in the March 2025 Consultation provided. ([Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 65-71. [Liberty Global](#) response to TAR26 March 2025 Consultation. Page 1.)

⁵¹⁴ We discuss this in Volume 2, Section 1.

⁵¹⁵ See our discussion on the potential for consolidation above.

⁵¹⁶ For example, [X] has pursued multiple acquisitions but [X] and [X] has identified a “strategic shortlist” of potential acquisition partners but [X]. ([X] response dated [X] to s135 notice dated [X], question [X], [X] response dated [X] to s135 notice dated [X], question [X]).

- c) Providers that have not yet signed wholesale agreements with ISPs could gain competitive strength and take-up by doing so.⁵¹⁷ Which additional providers will be successful in agreeing and implementing wholesale deals is uncertain.⁵¹⁸
 - d) Providers that have already signed wholesale agreements could see an increase in competitive strength if those agreements result in continued increases in take-up. Whether this will happen is uncertain.⁵¹⁹
 - e) Conversely, it is possible that some providers could lose momentum, for example providers could also lose volumes if ISPs place them elsewhere in the future,⁵²⁰ or retail altnets could struggle to win end customers.⁵²¹
- 4.180 Therefore, drawing geographic boundaries based on the current number of networks, or their current competitive strength, without further investigation, risks misrepresenting competitive conditions over the forward-look.
- 4.181 As set out above, competitive strength is likely to change over the review period, but the direction, timing and scale of those changes are uncertain. In addition, current competitive outcomes have developed under the existing WLA regulatory regime. These outcomes may not be indicative of the level of competitive strength that providers would achieve in the absence of or under different regulation, and in many cases could overstate the competitive position that operators would otherwise have.
- 4.182 Therefore, we cannot assume that recent increases in competitive strength observed to date will continue over the review period. They might continue or even increase for some networks (should they agree and operationalise new wholesale agreements, for example). This is still highly uncertain, however, and therefore we disagree with Openreach that forward-looking market definition should extrapolate forward from recent trends, especially given that these trends occurred with regulation in place which aims to promote competition. For example, rising take-up on newly built networks does not necessarily imply that similar rates of increase will occur in future years, or that take-up achieved on earlier build cohorts will be replicated for more recently deployed networks. Equally, operators could experience slower growth or even reductions in competitive strength relative to current levels, depending on market developments.
- 4.183 Recent developments illustrate the risks of extrapolating current trends into the future. Enders Analysis reports that Openreach’s broadband line losses slowed in Q3 of 2025, underscoring that recent changes in BT market shares cannot simply be extrapolated into the future on an assumption that past trends will continue.⁵²² Further, Enders Analysis says that it expects reduced competitive pressure on Openreach in 2026.⁵²³

⁵¹⁷ See our discussion on the engagement between altnets and ISPs on wholesale agreements above.

⁵¹⁸ For example, [redacted] [redacted] [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁵¹⁹ See our discussion on the uncertainty of the continued impact of wholesale agreements.

⁵²⁰ [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

[redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁵²¹ See the discussion above on the uncertainty around continued increases in take-up.

⁵²² Enders Analysis. 10 February 2026. [BT: The altnet threat starts to recede](#). Publicly available summary. Accessed 11 February 2026.

⁵²³ This sentiment was also echoed by the Financial Times. Financial Times. 5 February 2026. [BT stems customer losses as broadband competition abates](#). Accessed 11 February 2026.

- 4.184 VMO2 made a similar point in its consultation response: it recognised that there is some geographic variation in BT’s market share across postcode sectors but argued that it would be premature to assume that current trends would persist.⁵²⁴
- 4.185 These considerations inform our approach to assessing the homogeneity of Area 2: we 1) consider network presence alongside evidence on factors that determine competitive strength (such as the scale of network providers, their ability to gain take-up, and market shares); 2) consider forward-looking evidence and take a view on likely developments over the review period. Based on this, we use our regulatory judgment to determine whether there are any areas within candidate Area 2 where competitive conditions are expected to be appreciably different and stable over this review period to warrant defining separate markets.⁵²⁵
- 4.186 We do this by considering whether specific areas within candidate Area 2, as suggested by stakeholders, should be defined as separate geographic markets. Stakeholders identified several groups of postcode sectors that, in their view, exhibit appreciably different competitive conditions compared to the rest of candidate Area 2.
- a) First, Openreach submitted that postcode sectors where two or more rivals to BT are currently present (BT+2) should be defined as a separate geographic market, particularly if we consider competitive conditions in these postcode sectors on a forward-looking basis (Openreach referred to these as ‘Area 1’).⁵²⁶
 - b) Second, Openreach stated that postcode sectors where both BT and VMO2 are present (BT+VMO2) exhibit materially different competitive conditions from the rest of candidate Area 2.⁵²⁷
 - c) Third, Openreach also stated that CityFibre’s scale and wholesale arrangements mean that competitive conditions are different where it is present (BT+CityFibre) compared to where it is not present.⁵²⁸
 - d) Finally, VodafoneThree suggested that postcode sectors where VMO2, CityFibre, Gigaclear, Hyperoptic, Community Fibre or Netomnia/Brsk are present (BT+larger providers) should be separate from the rest of Area 2, as in their view competition is more likely to develop in this area.⁵²⁹

Potential market 1: BT+2 (candidate Area 1)

Openreach submissions

- 4.187 Annex 1 of Openreach’s response to the March 2025 Consultation stated that postcode sectors where two or more rivals to BT are present (BT+2) should form a separate Area 1 because competition there is stronger than elsewhere in candidate Area 2. In support, it provided analysis based on its own data that showed that BT’s market share is lower in BT+2 compared to the remaining candidate Area 2 ([<]). It also stated that an analysis by

⁵²⁴ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 26. Paragraph 86.

⁵²⁵ This is the approach we take to identify whether any locations qualify as an Area 1, which INCA requested greater transparency on.

⁵²⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 17. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Section 2.2.1-2.3.3.

⁵²⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1, Pages 36-37. Paragraphs 107-111.

⁵²⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1, Page 38. Paragraphs 112-119. Pages 51-52. Paragraph 171.

⁵²⁹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 11. Paragraph 14.

BT of retail prices shows that prices are lower where two rivals are present, indicating that a second rival has a competitive impact.⁵³⁰

- 4.188 The report also stated that recent and ongoing network expansion, and the likely impact of potential wholesale agreements and consolidation, means that current evidence understates the competitive impact of rivals to BT over the review period. Openreach stated that the future expansion and maturation of networks, and the potential impact of wholesale agreements on altnet take-up, provide a strong reason to define BT+2 as a separate Area 1 geographic market.⁵³¹
- 4.189 Openreach also highlighted that there is rapid development in the market. It submitted that its analysis of network coverage and market shares over time reveals trends that should be taken into account in our forward-looking assessment:⁵³²
- a) The number of postcode sectors with two or more rivals to BT grew by [X] between March and September 2025, resulting in BT+2 consisting of [X] postcode sectors. This would correspond to [X]% of the postcode sectors in our candidate Area 2.
 - b) According to Openreach's own calculations, BT's market share within BT+2 has declined by [X] between [X] to [X]%.
 - c) The number of postcode sectors where BT's market share is below 50% has grown by [X] in the same timeframe, coming to [X] postcode sectors in total.
 - d) Openreach also pointed to Ofcom's Connected Nations report published in November 2025 which shows that over 12 months the proportion of residential premises with access to three or more networks has increased by 6 percentage points to 29% of all residential premises.⁵³³
- 4.190 To define a separate BT+2 geographic market, we would need to see appreciably different competitive conditions between BT+2 postcode sectors and the remaining candidate Area 2 postcode sectors absent regulation, and that these differences are likely to be sufficiently stable over time that it would be appropriate to reflect them in a five-year forward-looking market definition. In the rest of this section, we set out our analysis of current and likely future competitive conditions, explaining the reasoning behind our conclusion that BT+2 does not constitute a separate geographic market. The analysis presented in this section uses outputs from the modelling, based on the approach set out below.

Presence of networks in the current BT+2 postcode sectors

- 4.191 Our analysis indicates that as of July 2025, there are 2,453 postcode sectors where two or more rival networks to BT are currently present (this accounts for 31% of candidate Area 2).⁵³⁴

⁵³⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 17-19. Sections 2.2.1-2.2.2.

⁵³¹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 20-33. Section 2.3.

⁵³² Openreach further response to TAR26 March 2025 Consultation. Further evidence on the Wholesale Local Access market - slide deck Jan 2026. Confidential version. [X].

⁵³³ Ofcom. 19 November 2025. [Connected Nations](#). Page 9.

⁵³⁴ One of the reasons that Openreach's postcode-sector count is higher than ours (as mentioned in [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Section 2.2.2. Page 19) because its analysis includes all altnets, whereas we include only those with the potential to become material and sustainable competitors (i.e. altnets with >50,000 premises passed or planning to pass). We consider this approach appropriate given our conclusion that smaller altnets are unlikely to have the potential to pose a material and sustainable competitive constraint. Excluding this longer tail of very small operators means that Openreach's market share is likely to be lower under our approach than under one that includes all altnets.

- 4.192 BT+2 consists of postcode sectors where, alongside BT:
- a) VMO2 and one (or more) altnet(s) are present. These postcode sectors include a variety of altnets of different sizes being present alongside VMO2. For example, this could be BT+VMO2+CityFibre, or it could be BT+VMO2+another altnet. The postcode sectors where VMO2 is present make up the vast majority [X] of BT+2; or⁵³⁵
 - b) VMO2 is not present, but two (or more) altnets are. Again, these postcode sectors include combinations of a larger altnet such as CityFibre and Hyperoptic and one (or more) smaller altnets, multiple larger altnets or multiple smaller altnets. E.g. this could be BT+CityFibre+Hyperoptic, or it could be BT+CityFibre+smaller altnet, or it could be BT+smaller altnet+ smaller altnet. These postcode sectors make up a minority [X] of BT+2.
- 4.193 The remaining candidate Area 2 is the BT+1 postcode sectors, and accounts for 69% of candidate Area 2. It consists of postcode sectors where currently only one rival is present (83% of the remaining candidate Area 2) or where currently there is only planned build (17% of the remaining candidate Area 2).⁵³⁶ If planned build is realised, some of these postcode sectors could see the presence of two or more rivals over the review period.⁵³⁷

Current competitive conditions in the BT+2 postcode sectors

- 4.194 As described above, we need to assess whether there is, over the course of the review period, an appreciable difference in competitive conditions between the BT+2 postcode sectors and the remaining candidate Area 2.
- 4.195 In responding to Openreach's argument that BT+2 constitutes a separate geographic market, we start by looking at market shares in these postcode sectors. We find that they indicate that the second rival may currently only have a limited impact on competitive conditions:
- a) Across all of the BT+2 postcode sectors, more than half [X] of all connections are on the Openreach network, 21%-30% [X] are on VMO2's network, and less than 10% are on the network of the second rival.^{538 539} We recognise, as noted in Openreach Annex 1⁵⁴⁰, that BT's market share is lower in the BT+2 postcode sectors than in the rest of candidate Area 2. However, this market share is similar to the market shares we find across all postcode sectors where VMO2 is present (BT+VMO2), including areas where

⁵³⁵ Ofcom analysis of Connected Nations data, see Annex 3. [X] response to CN request named [X], referenced [X], dated [X]. [X] response to CN request named [X], referenced [X], dated [X].

⁵³⁶ That is, a rival that we consider is or has the potential to be a material and sustainable competitor. The remaining candidate Area 2 does not include altnets with a current or planned footprint below 50,000 premises.

⁵³⁷ Based on build plans submitted to us, BT+2 could grow to [X] postcode sectors by the end of the review period if all planned build is realised.

⁵³⁸ As discussed above, the identity of the second rival will vary. Less than 10% [X] of connections are on CityFibre's network. Ofcom analysis of Connected Nations data, see Annex 3.

⁵³⁹ We acknowledge concerns about the dilution of market shares as a result of using postcode sectors as the relevant geographic unit, expressed by Openreach. We consider that, on balance, the use of postcode sectors as the relevant geographic unit is preferable to premises for reasons set out in our discussion on the choice of geographic unit below. As discussed below, we recognise that in some instances this understates the market share of rivals to Openreach and are mindful of this when interpreting market shares. We also note that our assessment of competitive strength of providers is not based solely on market shares, but includes a range of evidence.

⁵⁴⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Section 2.3.

no second rival is present: 61%-70% [X].⁵⁴¹ We therefore consider that the difference in BT's market shares in the BT+2 postcode sectors primarily reflects the competitive constraint imposed by VMO2, rather than the impact on competitive conditions of a second rival (and therefore appreciably different competitive conditions). This finding is consistent with VMO2 being a material and sustainable competitor to BT, rather than the number of rivals per se being the key determinant of competitive conditions.

b) In the parts of BT+2 where VMO2 is not present, Openreach has 71%-80% [X] of all connections while the second rival has no more than 10% [X] of all connections.⁵⁴² This is similar to the market shares we find in the remaining candidate Area 2 [X].

- 4.196 We have also looked at market shares at the postcode sector level and have particularly looked at postcode sectors where BT's share is below 50%. We have done so as this might be indicative of areas where competitive conditions differ because the second rival has made more progress towards gaining competitive strength. We find 648 of such postcode sectors.⁵⁴³ When we look across these, they similarly show that the impact of the second network is more limited, as across these 648 postcode sectors, 41%-50% [X] of all connections are on the Openreach network, 31%-40% [X] on VMO2, and the second largest rival's share was less than 20% [X].⁵⁴⁴
- 4.197 Therefore, we conclude that current market shares do not clearly indicate that competitive conditions in the areas where BT+2 networks are present are appreciably different from those where just VMO2 is present (which would fall within the rest of candidate Area 2).
- 4.198 We recognise that within the 648 postcode sectors where BT's market share is below 50% there will be pockets of contiguous postcode sectors where altnets' share is higher, and the number of these has increased since the consultation. For example, there are 19 postcode sectors in [X] and 17 postcode sectors each in [X] and [X] where BT's share is below 50% while two rivals have a share above 11%-30% [X].⁵⁴⁵
- 4.199 However, we consider that altnets having a higher share in a limited number of areas is not on its own a clear indicator of their competitive strength, especially on a forward-looking basis and in the absence of regulation.⁵⁴⁶ As we explain above, when considering the competitive conditions that are created by the presence of different competitors, we need to look at their overall competitive strength, as indicated by a range of relevant factors, and not just market shares in individual postcode sectors. Higher or lower market shares in individual areas can be consistent with a network that either is already, or has the potential to become, a material and sustainable constraint, and therefore do not on their own indicate any particular competitive conditions.
- 4.200 We also considered the retail pricing evidence that Openreach submitted as part of its response, which in its view demonstrates that retail prices are lower in BT+2 than in BT+1

⁵⁴¹ Ofcom analysis of Connected Nations data, see Annex 3.

⁵⁴² Ofcom analysis of Connected Nations data, see Annex 3.

⁵⁴³ This accounts for 7% of all postcode sectors, and is an increase from 321 since July 2024. This illustrates that in some areas, as we have set out above, there has been network build and rivals to Openreach have gained take-up (some of which will likely have been driven by wholesale deals).

⁵⁴⁴ As discussed above, the identity of the second rival will vary. Less than 20% [X] of connections are on CityFibre's network. Ofcom analysis of Connected Nations data, see Annex 3.

⁵⁴⁵ Ofcom analysis of Connected Nations data, see Annex 3.

⁵⁴⁶ For example, in the absence of regulation, BT could respond strategically to altnet expansion, by engaging in strategic behaviour in areas where rivals gain traction. Such conduct could limit altnets' ability to achieve scale and sustainability.

postcode sectors, indicating that a second rival has a competitive impact.⁵⁴⁷ We note that retail price evidence is not necessarily informative of competitive conditions at the wholesale level, as they can be shaped by strategic decisions and factors other than competitive conditions at the wholesale level, and therefore this is not compelling evidence of competitive conditions in the BT+2 postcode sectors.

How competitive conditions in BT+2 will develop over the review period

- 4.201 Looking forward over the review period, we consider that, given future build in the remaining candidate Area 2 and the significant uncertainty about how individual providers will develop, drawing geographic boundaries based on where two or more networks are currently present risks misrepresenting competitive conditions over the review period.
- 4.202 First, we note that planned build will be completed over the review period, meaning that some postcode sectors that are part of the remaining candidate Area 2 could also have two or more networks present in the future (and could even have more networks present than the sectors in BT+2) over this period.⁵⁴⁸ Therefore, even if competitive conditions were primarily determined by the number of networks present, drawing geographic boundaries based on current differences in network presence would likely misrepresent conditions over the review period.
- 4.203 Second, how the competitive strength and the presence of providers will develop over the review period is too uncertain to conclude that there are stable, appreciable differences in competitive conditions in BT+2 from the remaining candidate Area 2 over the review period.
- 4.204 As set out previously, there are several potential future developments that would affect competitive conditions, such as wholesale agreements and consolidation.
- 4.205 Some providers in BT+2 could gain significant take-up through wholesale agreements, and become a material and sustainable competitors, while others may not be successful in completing agreements or translating these into sustained increases in take-up.
- 4.206 Consolidation could also materially alter the number and/or strength of rivals in a postcode sector, and therefore decrease or increase competition. For example, a merger between two providers with overlapping networks could reduce the number of competitors from two to one in those areas where they overlap, which could reduce competition in those areas. Conversely, if a smaller altnet which poses less of a constraint were acquired by a larger, well-established provider this would increase the strength of the competitive constraint in the footprint of the smaller altnet (where they do not overlap). In other postcode sectors, smaller rivals may remain small in scale throughout the review period.
- 4.207 Moreover, and especially when considering the market absent regulation, there is also a possibility that some providers may exit or scale back their operations.
- 4.208 Therefore, it is possible that BT+2 could become a patchwork of postcode sectors, including:

⁵⁴⁷ We also note that in its analysis Openreach uses the unweighted average of the Average Monthly Cost (AMC) as the metric for price. This is by construction likely to lead to lower prices in areas where more altnets are present, even if additional altnets have minimal or no take-up and most customers face an average monthly cost above this unweighted average.

⁵⁴⁸ Based on current and planned build, 23 postcode sectors of the remaining candidate Area 2 postcode sectors could have the presence of 3 rival networks.

- a) Postcode sectors with two or more material and sustainable competitors.
- b) Postcode sectors with one material and sustainable competitor and one or more competitors that have a more limited impact on competitive conditions.
- c) Postcode sectors with multiple providers whose presence does not have a material impact on competitive conditions.⁵⁴⁹
- d) Postcode sectors with only one provider (due to consolidation or exit).

4.209 Due to the uncertainty around future developments, we cannot determine what proportion of current BT+2 will fall within each of these categories over the review period.

4.210 In addition, given these potential developments we cannot rely on changes to market shares between March and September 2025 (as provided in Openreach’s response) to make reliable predictions about market shares in BT+2 over the review period.

How competitive conditions in the rest of candidate Area 2 will develop over the review period

4.211 Competitive conditions in the remaining candidate Area 2 will also evolve over the review period, and some postcode sectors in this area could develop competitive conditions similar to those seen in parts of BT+2.

4.212 First, given planned build in some parts of the remaining Area 2, certain postcode sectors may themselves become BT+2 areas, with two rivals that both have the potential to be material and sustainable competitors.

4.213 Second, if a provider in the remaining candidate Area 2 develops significant scale and competitive strength—whether through take-up, wholesale agreements or consolidation—its presence alone could generate competitive conditions comparable to those BT+2 sectors where effectively only one material and sustainable competitor (VMO2) is shaping competition.

4.214 For these reasons, we consider that the evidence does not demonstrate appreciable differences in competitive conditions between current BT+2 and the remaining candidate Area 2 that are stable over time.

4.215 In conclusion, we do not consider that the evidence supports defining BT+2 as a separate geographic market from the remaining candidate Area 2.

Potential market 2: BT+VMO2

4.216 Openreach’s response to the March 2025 Consultation stated that postcode sectors where both BT and VMO2 are currently present (BT+VMO2) exhibit different competitive conditions from the remaining candidate Area 2.^{550 551} In support, it cited VMO2’s relatively higher take-up compared to other rivals, Openreach’s lower market share across VMO2’s footprint and the potential for wholesaling to amplify this effect.

4.217 We have considered this submission, and for us to find BT+VMO2 to be a separate geographic market, we would need to see that postcode sectors where VMO2 is present give rise to appreciably different competitive conditions compared to the remaining

⁵⁴⁹ For example, there are currently postcode sectors in BT+2 where the two rivals are [X] and [Y]. [X] currently covers approximately [Z] premises and [Y] covers approximately [Z] premises. If these providers do not gain significant competitive strength over the review period, the postcode sector would see conditions as described in c).

⁵⁵⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Pages 36-37. Paragraphs 107-111.

⁵⁵¹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 33-37. Section 2.4

candidate Area 2.⁵⁵² We would also have to find that these differences are likely to be sufficiently stable over time that it would be appropriate to reflect them in a five-year forward-looking market definition.

- 4.218 We have assessed the likely competitive conditions in BT+VMO2 and the remaining candidate Area 2 over the review period. In this case, the remaining candidate Area 2 consists of postcode sectors where one or more altnets is already present (but VMO2 is not) and areas which currently only have planned build by one or more rivals to BT.^{553 554}
- 4.219 We recognise that VMO2 is currently the only material and sustainable WLA competitor, and this is in contrast to the altnets in the rest of candidate Area 2, which have the potential to become material and sustainable competitors but are not yet. The market shares that Openreach points to are consistent with our view that VMO2 has thus far been more successful than other competitors in competing with Openreach.⁵⁵⁵ Based on our data, BT has more than half of the market share in BT+VMO2 [3<], while VMO2 has less than 30% [3<]. BT's market share in the remaining candidate Area 2 is 71%-90% [3<].⁵⁵⁶
- 4.220 However, based on the evidence, our view is that BT+ VMO2 is not appreciably different to the remaining candidate Area 2 over the course of the review period. This is because:
- a) The evidence suggests that there is potential for providers in the remaining candidate Area 2 to develop into material and sustainable competitors over the review period.
 - b) It is likely VMO2's footprint will expand into the remaining candidate Area 2.
 - c) BT+VMO2 may itself not develop uniformly over time.
- 4.221 We discuss each of these reasons in turn.
- 4.222 First, given the potential developments that providers may experience over the review period, as set out above we consider that, although not certain, it is possible that the position of some altnets in the remaining candidate Area 2 may develop such that they also become a material and sustainable competitor, which may mean that they exert a competitive constraint that is not significantly different to VMO2's (and how or where this would happen is uncertain).
- 4.223 For example, retail and wholesale altnets have the potential to gain take-up over the review period. Wholesale-focused providers in particular have the potential to gain substantial ISP

⁵⁵² As discussed above, VMO2 and nexfibre are separate companies, but due to the arrangement between them we use the combined VMO2 and nexfibre data on coverage and active lines for the purpose of defining geographic markets. Accordingly, when we refer to the presence of VMO2, we mean VMO2 on the footprint that includes nexfibre, unless otherwise specified.

⁵⁵³ That is, a rival that we consider is or has the potential to be a material and sustainable competitor. The remaining candidate Area 2 does not include altnets with a current or planned footprint below 50,000 premises.

⁵⁵⁴ It appears that Openreach also considered its proposed BT+VMO2 market as including only current build by VMO2. For example, Openreach states: "Ofcom's methodology means that the majority of the 18.3 million homes passed by VMO2's ultrafast capable network will be within the proposed Area 2 postcode sectors . . . There are clear reasons why competitive conditions within these postcode sectors will be different from other postcode sectors within Area 2 across the TAR period" ([Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Paragraph 107). (For clarity, this would put postcode sectors in which VMO2 is currently not present, but is planning to be, in Openreach's remaining candidate Area 2).

⁵⁵⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1 Confidential version. Section 2.4.

⁵⁵⁶ Ofcom analysis of Connected Nations data, see Annex 3.

volumes through wholesale agreements.⁵⁵⁷ Furthermore, as discussed, we consider that all the altnets in the remaining candidate Area 2 have the potential to become material and sustainable competitors through consolidation.

- 4.224 If such developments occur, there could be BT+altnet postcode sectors with similar competitive conditions to BT+VMO2 postcode sectors.
- 4.225 In addition, as a retail-focused provider VMO2 currently poses an indirect rather than a direct constraint on BT.
- 4.226 VMO2's constraint is currently indirect because VMO2's competitive pressure comes from dynamics at the retail level: if BT wholesale charges to ISPs were to increase and these increases were passed through into retail prices, some customers might respond by switching to VMO2. However, unlike a wholesale rival, VMO2 does not give other ISPs an alternative wholesale supply route. It is therefore unlikely to strengthen other ISPs' bargaining position with wholesale network operators. As a result, we consider that VMO2's competitive impact on WLA is currently an indirect, retail-level effect rather than a direct constraint in the wholesale market. Altnets competing at the wholesale level, in contrast, have the potential to pose a direct competitive constraint by directly competing for ISP volumes, and depending on their competitive strength could exert a constraint that is not necessarily much different from that of a larger retail-only rival.
- 4.227 As discussed above, we recognise Openreach's point that VMO2 has taken steps in the direction of competing as a wholesale provider. VMO2 wholesale agreements would create a similar potential for VMO2 to create an additional form of direct competition to BT. However, we consider that the evidence regarding the likelihood and impact of VMO2 wholesaling on its own network remains uncertain.⁵⁵⁸
- 4.228 Therefore, we cannot conclude that current differences between BT+VMO2 and the remaining candidate Area 2, which arise from the fact that VMO2 is currently the only material and sustainable competitor, are likely enough to be stable over time.
- 4.229 Second, over the review period, VMO2 may become present in parts of the remaining candidate Area 2. Not only will VMO2's presence expand within candidate Area 2 if some of its or nexfibre's planned build in this area is realised, it is also possible that its presence will grow through consolidation.^{559 560} However, the extent to which VMO2 will consolidate,

⁵⁵⁷ See the evidence on altnet take-up above.

⁵⁵⁸ We note the publicly available details of the deal to acquire Substantial Group by Liberty Global, Telefonica and InfraVia include terms relating to VMO2 buying wholesale access on the expanded nexfibre footprint (which overlaps with VMO2's existing footprint). This deal is subject to regulatory clearance. VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

⁵⁵⁹ ISPreview. 7 November 2025. [Nexfibre Publish Q3 2025 UK Full Fibre Broadband Build Update – 2.44M Premises](#). Accessed 12 February 2026.

As discussed above, we use the combined VMO2 and nexfibre data on coverage and active lines for the purpose of defining geographic markets (i.e. we see the nexfibre footprint as no different to if VMO2 were expanding its footprint directly for the purposes of identifying VMO2's presence).

⁵⁶⁰ 1%-10% [3<] of the remaining candidate Area 2 contains planned build by nexfibre or VMO2.

and with which altnets, is uncertain.^{561 562} Hence, defining a separate geographic market based on VMO2's current footprint – which may change because of the realisation of planned build and consolidation – risks misrepresenting competitive conditions over the review period.

4.230 Third, BT+VMO2 itself may not develop uniformly over time. Some BT+VMO2 postcode sectors may evolve into areas with two material and sustainable competitors if additional rivals develop scale or enter through build or consolidation. Others may remain areas where VMO2 is the only material and sustainable competitor to BT.⁵⁶³

4.231 In conclusion, while VMO2 is currently the only material and sustainable competitor, we consider that the evidence does not demonstrate appreciably different competitive conditions between BT+VMO2 and the remaining candidate Area 2 which are likely to be sufficiently stable over the review period. Hence, we do not define a separate geographic market for BT+VMO2.

Potential market 3: BT+CityFibre

4.232 Openreach states that CityFibre's scale and wholesale agreements (which are driving an increase in its take-up) mean that competitive conditions are different where it is present compared to where it is not present.⁵⁶⁴

4.233 We have considered this submission, and for BT+CityFibre to be a separate geographic market, we would need to see appreciably different competitive conditions in postcode sectors where CityFibre is present compared to the rest of candidate Area 2, where VMO2 and other altnets are present. We would also have to find that these differences are likely to be sufficiently stable over time that it would be appropriate to reflect them in a five-year forward-looking market definition.

4.234 We have assessed the likely competitive conditions in BT+CityFibre and the remaining candidate Area 2 over the review period. In this case, the remaining candidate Area 2 consists of postcode sectors where one or more providers (including VMO2) is present, but not CityFibre, and areas which currently only have planned build by one or more rivals to BT.^{565 566 567}

⁵⁶¹ We consider that altnets with over 50,000 premises are potential consolidation targets for VMO2, CityFibre and others. However, as noted above, the extent, timing and location of consolidation is uncertain.

⁵⁶² As discussed above, in February 2026, the owners of the VMO2 network and InfraVia agreed to acquire Substantial Group through their existing joint venture, nexfibre. The deal is not yet complete and subject to regulatory approval.

⁵⁶³ We also note that VMO2's current footprint includes both older network areas and newer (nexfibre) build. Competitive conditions may differ across these parts of the footprints (for example nexfibre could make wholesale arrangements with other ISPs).

⁵⁶⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1, Page 38. Paragraphs 113-120. Pages 51-52. Paragraph 171.

⁵⁶⁵ That is, a rival that we consider is or has the potential to be a material and sustainable competitor. The remaining candidate Area 2 does not include altnets with a current or planned footprint below 50,000 premises.

⁵⁶⁶ It appears that Openreach' proposed BT+CityFibre market only includes current build by CityFibre. For example, Openreach states: "The evidence is clear, therefore, that competitive conditions any area where CityFibre has network available are different from areas where it is not present." (Paragraph 119). This would put postcode sectors in which CityFibre is currently not present, but is planning to be, in the remaining candidate Area 2.

⁵⁶⁷ Openreach's response is not clear on whether additional markets (such as BT+VMO2) would necessarily be defined alongside BT+CityFibre. Here we compare BT+CityFibre to the remaining candidate Area 2 (which is

- 4.235 We recognise that CityFibre is currently the largest altnet in terms of premises passed⁵⁶⁸ and that it has been successful in securing wholesale agreements with ISPs. However, as explained in above, we consider that the impacts of these agreements are still developing and so CityFibre remains a potential material and sustainable competitor like other altnets. In addition, in response to Openreach’s suggestion that Cityfibre’s wholesale agreements distinguish it from other altnets, we note that there are other altnets with wholesale agreements in place.⁵⁶⁹ As a result, we do not consider that CityFibre’s presence has an appreciably different impact on competitive conditions (in BT+CityFibre) compared to other altnets (in the remaining candidate Area 2).
- 4.236 In addition, for the same reasons as set out in above , we consider that other altnets could also secure wholesale agreements, increase take-up and make progress towards becoming material and sustainable competitors.⁵⁷⁰ In addition, the scale of other altnets could grow to surpass CityFibre’s footprint: [X].⁵⁷¹ This means that any current differences between competitive constraints in BT+CityFibre and the remaining candidate Area 2 may not be stable over the review period.
- 4.237 Furthermore, over the review period CityFibre may become present in part of the remaining candidate Area 2 if its build plans are completed⁵⁷² and if it consolidates other altnets into its network (though which altnets this would be is uncertain).⁵⁷³ This would likely result in similar competitive conditions in BT+CityFibre parts of the remaining candidate Area 2.
- 4.238 Therefore, we do not consider that the evidence indicates that there are appreciably different competitive conditions in BT+CityFibre and the remaining candidate Area 2 that are likely to be sufficiently stable over the review period. Hence, we do not define a separate geographic market for BT+CityFibre.

Potential market 4: BT+larger providers

- 4.239 VodafoneThree suggested that postcode sectors where VMO2, CityFibre, Gigaclear, Hyperoptic, Community Fibre or Netomnia/Brsk are present (BT+larger providers) should be separate from the remaining candidate Area 2, as in its view competition is more likely to develop in the former area.⁵⁷⁴
- 4.240 Central to VodafoneThree’s comment is the view that smaller altnets (which, on its proposed definition, would be in the remaining candidate Area 2) are less likely to gain competitive strength during the review period, because these altnets are less likely to be consolidation targets and less likely to gain scale and take-up through wholesale agreements. In the section on actual and potential material and sustainable competitors

not sub-divided further). However, based on the arguments in this section and the sections on BT+VMO2 and BT+2, we consider that there are also no appreciable, stable differences in competitive conditions between these markets.

⁵⁶⁸ Thinkbroadband. September 2025. [The State of Broadband – September 2025](#). Accessed 17 February 2026.

⁵⁶⁹ See the evidence on take-up of Community Fibre and other mid-sized altnets above.

⁵⁷⁰ As discussed above, altnets besides CityFibre have been engaging with ISPs about wholesale agreements that could increase take-up and help them to become sustainable.

⁵⁷¹ [X] response to [X] dated [X]

[X] response dated [X] to our clarificatory question dated [X] concerning the s135 notice dated [X], questions [X]. [X] response to [X] dated [X] and [X] response to the s135 notice [X], questions [X].

⁵⁷² CityFibre has planned build in less than 10% [X] of the remaining candidate Area 2.

⁵⁷³ See our discussion of potential consolidation and the associated uncertainty above.

⁵⁷⁴ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Paragraphs 9-14.

above, we explain why we consider that all altnets above 50,000-premise threshold have the potential to become material and sustainable competitors.

- 4.241 We consider that the same reasons why BT+CityFibre is not a separate geographic market, apply to the BT+larger providers area: for reasons set out above, it is possible that there will be significant changes to current differences in the scale, take-up and sustainability between providers. In addition, the footprint of providers will change over the review period. Therefore, we cannot conclude that there are appreciable difference in competitive conditions that are stable over time, between areas that are defined based on the footprint of one or more specific providers.

Conclusion on homogeneity of competitive conditions in candidate Area 2

- 4.242 Having assessed competitive conditions across candidate Area 2 as a whole—including, but not limited to, the potential market subdivisions proposed by stakeholders—we do not find evidence of appreciably different competitive conditions within this area that would remain sufficiently stable over the review period.
- 4.243 We therefore remain of the view that competitive conditions across candidate Area 2 are sufficiently homogeneous over the review period such that it constitutes a single geographic market.
- 4.244 We recognise that candidate Area 2 is broad and includes postcode sectors with varying current network presence and different stages of rival network development. However, after examining the various possible paths that the development of competitive conditions could take over this review period, we do not consider that any parts of Area 2 exhibit appreciably different and sufficiently stable competitive conditions that would justify defining a separate geographic market.⁵⁷⁵
- 4.245 We recognise that this is a highly dynamic market and there is significant uncertainty about how the Area 2 market will develop over the review period. We have designed some of our remedies to incorporate a level of flexibility so that we can take into account changing market conditions and any increase in competition as we apply those remedies during the five year period (see Volume 3, Section 1).

Homogeneity of competitive conditions in candidate Area 3

- 4.246 We do not consider that candidate Area 3 should be subdivided further, as competitive conditions are sufficiently homogeneous within this area.
- 4.247 Candidate Area 3 includes postcode sectors with no current or planned presence⁵⁷⁶ of current or potential material and sustainable competitors. Therefore we consider that the competitive conditions across candidate Area 3 are sufficiently similar. We expect these to remain throughout the review period.
- 4.248 We recognise that there is some network in our defined Area 3. This is the result of our approach to establishing network presence in our modelling which, as we explain below, we

⁵⁷⁵ Our assessment of stakeholder-proposed subdivisions is based on current network presence (e.g. BT+2 is based on where two rivals are currently present), consistent with our understanding of those proposals. However, even if we were to incorporate expected future build in those areas (e.g. BT+2 is based on where two rivals are present or plan to be present), for the reasons set out above, we do not consider that this would give rise to appreciably different and sufficiently stable competitive conditions that would justify defining separate geographic markets over the review period.

⁵⁷⁶ We describe further below how we have assessed presence in our modelling.

consider to be reasonable and practical for the purposes of identifying geographic areas with sufficiently homogenous competitive conditions.

- 4.249 Our view remains that any differences in network coverage across Area 3 are not significant enough to justify defining separate geographic markets. Separating out areas with coverage from networks that are unlikely to have the potential to become material and sustainable competitors, or those where coverage does not meet our coverage threshold, would risk overstating the degree of competitive differentiation.

We define two geographic markets for WLA

- 4.250 Based on the above discussion, we define the following geographic markets:
- a) WLA Area 2: postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks. In practice, this is made up of postcode sectors where there is current or planned presence by at least one of VMO2, CityFibre or any altnet that plans to cover at least 50,000 premises by 2031; and
 - b) WLA Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks. This would encompass any postcode sectors not included in Area 2.

Establishing the Area 2 and Area 3 market boundaries

- 4.251 In this subsection we set out how we analytically identify the boundaries of the Area 2 and Area 3 geographic markets.
- 4.252 We consider that in the long term, a material and sustainable competitor would provide a constraint across its entire footprint, meaning that competition would operate across larger geographical areas. However, a number of more granular modelling choices and approximations need to be made in order to identify where those who are, or have the potential to be, material and sustainable competitors are present, or plan to be present, and therefore establish the geographic market boundary. In particular:
- a) **Geographic unit:** at what level of geographic granularity should the assessment be conducted?
 - b) **Coverage threshold:** what percentage of premises within a geographic unit does an operator need to cover in order to be considered as present?
 - c) **Modelling the evidence:** how should we process the information on existing network and build plans that we have obtained from operators?

Geographic unit

- 4.253 Our first step is to break down the UK into smaller geographic units within which we can examine the presence of networks. Geographic units that meet our definition of Area 2 and Area 3 (as set out above) can then be aggregated into geographic markets.
- 4.254 Geographic units cannot be too large as there could be significant differences in the level of competitors' presence across a large unit. On the other hand, more granular analysis may be impracticable.
- 4.255 On balance, in line with the approach used in 2021, in the March 2025 Consultation we proposed using postcode sectors as our geographic unit of assessment. We considered that postcode sectors are well-established, relatively stable and strike a good balance between being granular enough to capture variations in the presence of competitors but not so

granular that they are impracticable. There are around 10,000 postcode sectors in the UK, with an average of 3,000 premises in each.

- 4.256 In response to our consultation, Openreach proposed that premises, rather than postcode sectors, should be used as the geographic unit for market definition, as in its view, postcode sectors lead to a dilution of rival market shares, which would understate the competitive strength of a rival at the premises where it is present.⁵⁷⁷
- 4.257 We have considered this submission but maintain that postcode sectors provide a sufficiently granular geographic unit to assess competitive conditions, while remaining practical.
- 4.258 Defining geographic markets at the premises level would not be practical. The number and location of individual premises in the UK is constantly changing. In addition, using premises would prevent us from fully capturing planned network build, which we consider essential for a forward-looking assessment. When requesting build plans, several providers were unable to provide build plans at the premises level and provided them at the postcode or postcode sector level instead. This reflects the fact that operators themselves do not always plan at the premises level but at broader geographic units such as postcode sectors. Using premises would therefore exclude important forward-looking evidence that is only available at lower levels of granularity.
- 4.259 We do recognise that, as Openreach has highlighted, the use of postcode sectors means that the calculation of a provider's market share may at times include premises where the provider is not (yet) present. However, we consider that this does not undermine our ability to produce an informed market definition and SMP assessment.
- 4.260 First, as a sense-check we calculated market share at the premises level for a limited number of providers where we were able to do so and found the differences in market shares at the premise and postcode sector-level do not appear to be substantial. For example, we have calculated VMO2's share using both bases, and we see differences no greater than four percentage points.⁵⁷⁸ Second, our market definition (and SMP assessment) does not hinge solely on market shares but are based on a range of factors on which we have collected evidence. We remain cognisant of the fact that market shares may in some circumstances understate competition. We therefore assess this evidence in the round to come to an informed assessment.
- 4.261 On balance, we remain of the view that postcode sectors provide a workable and proportionate geographic unit for assessing competitive conditions, allowing us to incorporate both current and planned build and avoiding unnecessary complexity.

Coverage threshold

- 4.262 As individual network operators' current and planned deployments will not map precisely to postcode sectors (i.e. their rollout in a postcode sector will not always cover 100% of premises in that sector) we must consider a coverage threshold for a network to be regarded as being 'present' in any postcode sector.
- 4.263 If a high coverage threshold is used, then a postcode sector could be considered as having no network presence despite there being many premises within the postcode sector which

⁵⁷⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 19. Section 2.2.3.

⁵⁷⁸ [3<]. However, the impact of this is limited as [3<] of VMO2's volumes.

have coverage, and consequently the operator (and the constraint it provides) would be under-represented. Conversely, if a low coverage threshold is used, then a postcode sector could be considered as having network presence even though there would be many premises within the postcode sector that do not have coverage, and therefore the operator's network (and the constraint it provides) would be over-represented.

- 4.264 In line with our approach in the WFTMR21, in the March 2025 Consultation we proposed using a coverage threshold of 50% of premises, as on average, any under- or over-representation should balance out. This means that an operator will be considered as present in a postcode sector if its existing or planned network covers at least 50% of the premises in that postcode sector.
- 4.265 We have investigated the concerns expressed by CityFibre and Gigaclear in response to the consultation that the 50% threshold leads to their network being classed as 'not present' in postcode sectors where they have significant build, resulting in a substantial amount of their premises being in Area 3.
- 4.266 We found that substantially fewer Cityfibre premises fall into Area 3 when using updated build plans than in the March 2025 consultation, when we used 2024 build plans. Using updated build plans provided by stakeholders, many of the premises CityFibre previously counted as falling in Area 3 are now classified as being in Area 2 or have been removed from their build plans.
- 4.267 As a result, Area 3 includes significantly fewer of CityFibre's premises than the cited [X]. Based on updated plans, CityFibre's build in Area 3 is [X] across [X] postcode sectors. This accounts for less than 10% [X] of CityFibre's total network coverage (including plans).
- 4.268 Gigaclear, based on updated plans, now passes [X] across [X] postcode sectors in Area 3. This accounts for [X] of Gigaclear's total network coverage (including plans).
- 4.269 We acknowledge that our coverage threshold of 50% of premises will lead to there being some build in areas that are assessed as not having networks present. Any coverage threshold would have this effect, to varying degrees. For the reasons set out above, we have chosen the 50% threshold as it best balances the risks of over- and under-representing networks, and we therefore remain of the view that it is a reasonable proxy for determining networking presence for the purposes of assessing competitive conditions.

Modelling evidence on existing networks and build plans

- 4.270 Having identified the relevant geographic unit and the coverage threshold, we need to process the existing and planned build data that we obtain from network operators to model their expected presence over the review period.
- 4.271 As discussed above and in Annex 3, we used information on current and planned build gathered for our Connected Nations report and supplemented this with additional data on planned build obtained through our statutory powers.
- 4.272 In line with the approach used in 2021, we have used all planned deployment to model expected presence over the 2026-31 review period.⁵⁷⁹ We are using plans as a way to assess where build is most likely to be attractive and, as a result, where there is the potential for competition to be material and sustainable.

⁵⁷⁹ As opposed to, for example, only plans that are fully funded or are in the process of being built.

- 4.273 In addition, our analysis suggests that planned deployment is not an unrealistic representation of the level of future coverage that could be achieved over the review period. This is because our analysis indicates that, in aggregate, the future build rate required to achieve the entirety of all planned build appears to be lower compared to past build rate.⁵⁸⁰ That is broadly consistent with other evidence indicating that, over the review period, we might expect further build, albeit at a lower rate.
- 4.274 While clearly relevant to our forward-looking market analysis, we recognise that evidence from operators' plans is necessarily prospective and can only ever provide an approximation of reality. We note in particular that build plans do not always cover the entirety of the review period and can change over time, particularly when looking over the longer term. However, there is always a level of uncertainty in forward-looking assessments, and we believe this is the best information available to us.

⁵⁸⁰ For example, to complete their plans between July 2025 and July 2031 altnets would need to build, in aggregate, around 1.07 m premises every four months. Between May 2023 and July 2024 altnets have built an average of 1.80m premises every four months.

Identification of the postcode sectors that constitute each of the WLA geographic markets

4.275 We now delineate the WLA geographic markets using the results of our modelling.

Area 3

4.276 Area 3 comprises postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT. As discussed above, this equates to postcode sectors which are BT-only, or where the only other networks present are those which do not currently plan to cover more than 50,000 premises by the end of the review period.

4.277 Based on the results of our modelling, Area 3 represents 19% of UK postcode sectors and 14% of UK premises.

Area 2

4.278 Area 2 comprises postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT. As discussed above, this equates to postcode sectors with existing or planned presence by at least one of VMO2, CityFibre or any altnet covering at least 50,000 premises by 2031.

4.279 We find that Area 2 represents 81% of UK postcode sectors and 86% of UK premises.

4.280 As discussed above, we do not define an Area 1.

4.281 These results are summarised in Table 4.3 below. The list of postcode sectors making up the geographic markets that we have identified can be found in Schedule 2.

Table 4.3: Summary of results of geographic market analysis

WLA geographic market	Count of postcode sectors	Count of UK premises	% of UK postcode sectors	% of UK premises
Area 2	7,824	27.8m	81%	86%
Area 3	1,881	4.4m	19%	14%

Source: Ofcom analysis of Connected Nations data and additional planned deployment data. See Annex 3. Note that all figures exclude 46 Hull Area postcode sectors.

The review process

4.282 BT stated that Ofcom should explore, and implement, processes for conducting more frequent regulatory reviews. It stated that this approach could be incorporated into existing regulatory project cycles that Ofcom conducts.⁵⁸¹

4.283 Openreach stated that Ofcom should use regulatory mechanisms for dealing with uncertainty and pointed to Ofgem's use of uncertainty mechanisms in its price control framework.⁵⁸²

⁵⁸¹ [BT Group](#) response to TAR26 March 2025 Consultation. Pages 3-4. Paragraph 1.14.

⁵⁸² [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 26. Paragraph 76.

- 4.284 nexfibre stated that determining the absence of SMP is a rigorous and complex process and reassessing this during the review period would significantly burden stakeholders and jeopardise valuable regulatory certainty.⁵⁸³
- 4.285 We recognise, as BT and Openreach have highlighted, that this is a highly dynamic market where competitive conditions can change rapidly, and there is significant uncertainty about how the market will develop over the review period. We do not consider that more frequent regulatory reviews, as suggested by BT, would be the best way to manage this uncertainty.⁵⁸⁴
- 4.286 We consider that a longer (five year) review period provides regulatory stability and certainty for investors which is important during a period of network build and significant investment. nexfibre highlighted that more frequent reviews would impose significant burdens on stakeholders and undermine regulatory clarity.⁵⁸⁵ We have designed some of our remedies to incorporate a level of flexibility so that we can take into account changing market conditions and any increase in competition as we apply those remedies during the five-year period (Volume 3, Section1).

Application of the three criteria test

Our proposals

- 4.287 In this subsection, we consider whether the three criteria set out in section 79(2B) of the Act are met in relation to the WLA markets.
- 4.288 As set out in Annex 1, in determining whether to identify a market for the purpose of making a market power determination, we must consider whether the three criteria set out in subsection 79(2B) of the Act are met. Where we do not consider that the three criteria are met, we may not identify a market for this purpose.
- 4.289 In the WLA market, we expect an increase in competition in certain areas of the UK, but not in others, leading us to define sub-national markets. However, we consider it appropriate to assess the three criteria at a more general level, taking into account overall characteristics and structure in the relevant product market, and to leave the assessment of competition at a sub-national level to our SMP assessment. We approach the three criteria test for WLA on this basis.
- 4.290 In the March 2025 Consultation, we proposed that the WLA markets which we proposed to define met the three criteria test.

Stakeholder responses

- 4.291 Openreach disagreed with Ofcom's application of the three criteria test, arguing that given the presence of alternative networks, many providers have been able to overcome barriers to build new infrastructure and that legal or regulatory barriers are minimal. It criticised Ofcom for not conducting a sufficiently forward-looking assessment of whether the market is trending toward effective competition. Openreach also contended that competition law

⁵⁸³ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. [3].

⁵⁸⁴ The Act provides that we must review SMP findings at least every five years. In the WFTMR21, we decided to adopt a five-year period for our market review to provide as much regulatory stability for investment as we could, and have taken the same approach in this review. We retain the power to step in and review the market before that and cannot fetter our discretion as to future decisions, but we currently do not expect to review the market again before 2031.

⁵⁸⁵ [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. [3].

should adequately address any remaining concerns, provided markets are correctly defined.⁵⁸⁶

- 4.292 VMO2 strongly supported Ofcom’s conclusion that the market is not yet trending toward effective competition without existing WLA remedies. It emphasised that, absent SMP protections, BT would retain both the ability and incentive to undermine emerging competition, and therefore Ofcom should adopt a cautious approach. VMO2 also agreed that competition law alone would not be sufficient to safeguard competitive conditions.⁵⁸⁷
- 4.293 CityFibre, nexfibre, VodafoneThree, and the Advisory Committee Scotland, expressed agreement with Ofcom’s conclusions on the three criteria test.⁵⁸⁸

Reasoning and decisions

High and non-transitory barriers to entry

- 4.294 There are significant barriers to entry and expansion in the WLA markets, arising from the cost of constructing a significant scale local access network and connecting customers. Further, in the WLA market, the existence of high upfront costs in establishing coverage across an area creates significant economies of scale, because once the investment in network build has been made, these costs can be spread across a large number of active customers.
- 4.295 There are also other factors that could present some challenges or create uncertainties for the rollout of rival networks across the UK,⁵⁸⁹ and in some parts of the UK, low density of premises constitutes a challenge.
- 4.296 Additional network build is expected to be more limited during the review period, compared to the build we have seen to date. However, the costs associated with connecting customers will likely be particularly relevant given the need to increase take-up. While PIA can reduce some of these costs, these are likely to remain high over the review period.
- 4.297 While we agree with Openreach that some operators have successfully built new networks, barriers to sustainable entry remain high. Altnets need to achieve sufficient take-up and revenues, as well as scale, to become material and sustainable competitors. As discussed as part of the SMP assessment, absent regulation, this is likely to be highly challenging. Competition is also likely to be particularly vulnerable to BT’s strategic behaviour, as BT’s incentives would be high to deter ISPs from switching and multi-sourcing.
- 4.298 Accordingly, high and non-transitory barriers to entry are likely to persist in WLA markets at a national level. Where barriers are likely to be lower in sub-national markets, we take this into account in our SMP assessment.

⁵⁸⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 15-16. Paragraphs 25-27. Openreach also stated that our assessment overlooked convergence between WLA and LLA services. We address this statement in Section 5.

⁵⁸⁷ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 86-88 and 90-95.

⁵⁸⁸ [CityFibre](#) response to TAR26 March 2025 Consultation. Q2.7; [nexfibre](#) response to TAR26 March 2025 Consultation. Main response. Q2.7; [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 11. Paragraph 15 ; [Advisory Committee for Scotland](#) response to TAR26 March 2025 Consultation. Q2.7.

⁵⁸⁹ For example, as set out at in the SMP assessment sub-section below, completing the rollout and connecting customers can be affected by the need for wayleaves, availability of resources (including workforce) and the need for street works.

A market which does not tend towards effective competition

- 4.299 We assess competitive conditions in WLA markets in the SMP assessment section below. In summary, while entry and expansion of alternative network providers over the WFTMR21 period has started to reduce BT's market share in some parts of Area 2, it is still high and, as further discussed as part of the SMP assessment, is likely to remain so over the review period.
- 4.300 Although there has been significant build by altnets in parts of the UK, altnets need to achieve sufficient take-up and revenues, as well as scale, to become sustainable competitors to BT. As explained in more detail above, there is considerable uncertainty over whether they will secure the scale needed, establish robust ISP partnerships, and convert build into meaningful customer take-up. The completion, integration and impact on take-up of wholesale agreements remains uncertain. Market consolidation could reshape competitive dynamics, but its timing and impact remain uncertain.
- 4.301 In other parts of the UK, we do not expect sustainable competition to BT to emerge in the foreseeable future.
- 4.302 Accordingly, we do not consider the market will tend towards effective competition at a national level. We take account of increasing competition at a sub-national level in our SMP assessment.
- 4.303 We do not agree with Openreach that this assessment is insufficiently forward-looking. As explained above, we relied on evidence on potential future developments to come to these conclusions. For reasons set out in relation to the WLA product market definition, we consider LLA and WLA services to be in separate markets. Because the three criteria test has to be satisfied for the market we have defined, we do not consider the potential convergence of LLA and WLA services as part of this assessment.⁵⁹⁰

Insufficiency of competition law

- 4.304 We set out in more detail, in Section 7 below, our competition concerns arising from BT's SMP in WLA markets. Absent regulation, BT's SMP would give it the incentive and ability to engage in forms of conduct that could distort competition and/or harm consumers. These forms of conduct fall into two broad categories:
- **Exclusionary behaviour** by BT to prevent potential competitors from competing in the WLA market or prevent them from gaining market share.
 - **Exploitative behaviour** by BT at the expense of its wholesale access customers in the WLA markets, ultimately harming end-users who purchase services from BT's wholesale access customers in the downstream markets.
- 4.305 Although our concerns vary according to whether the behaviour is exclusionary or exploitative, both ultimately lead to poorer outcomes for end-users.
- 4.306 For example, in the absence of regulation, BT could respond strategically to altnet expansion, by engaging in strategic behaviour in areas where rivals gain traction.⁵⁹¹ Such conduct could limit altnets' ability to achieve scale and sustainability, thereby reducing ISPs' long-run alternatives. This in turn could limit the ISPs in their ability to constrain BT through

⁵⁹⁰ In addition to the section on product market definition, we also discuss convergence between LLA and WLA services in Volume 2, Section 5.

⁵⁹¹ We discuss the potential for OR to act strategically in our SMP assessment.

the threat of switching, and harm end-users by limiting the ISPs in their ability to offer best quality and value service.

- 4.307 Competition law, in particular the rules prohibiting the abuse of a dominant position, is an important part of the legal framework with which BT needs to comply. Given its position of SMP (which equates to the competition law concept of dominance) BT has a special responsibility not to allow its actions on the market (where conditions of competition are weak) to distort or impair competition.
- 4.308 However, we consider that competition law remedies would be insufficient to address the identified competition concerns on their own in this context and disagree with Openreach's view on this matter.
- a) First, competition law would focus on tackling the abuse of a dominant position and would not be as effective as ex ante regulation in promoting and protecting competition from rival networks in the WLA market and in downstream retail markets.
 - b) Second, regulation must remain effective for the review period, and ex ante regulation better enables us to do this as it can be tailored to the particular circumstances in the markets and services provided.
 - c) Third, competition law does not provide enough regulatory certainty, which itself can undermine competition – and regulatory certainty is important in encouraging long-term investment in competing networks. In contrast, a benefit of ex ante regulation is that all industry stakeholders are clear in advance on the regulation that will apply.
 - d) Fourth, ex ante regulation can facilitate more timely enforcement due to the greater certainty and specificity provided. Although significant fines can be levied for breaches of competition law, which do have some reputational and commercial implications, cases often take considerable time, by which point the damage to competition may be irreversible.
- 4.309 On that basis, while competition law enforcement may be used in appropriate circumstances, we do not consider that it would be sufficient to rely on it alone and so consider that ex ante regulation is required.

Our conclusions on geographic market definition and the three criteria test

- 4.310 We consider that the three criteria test set out in section 79(2B) of the Act is met.
- 4.311 We therefore identify the following markets for WLA for the purposes of making a market power determination:
- a) WLA Area 2 – postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks; and
 - b) WLA Area 3 – postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.

SMP assessment

- 4.312 The following sections set out our SMP assessment and are structured as follows:
- a) First, we set out the proposals we made in the March 2025 Consultation.
 - b) Second, we summarise stakeholder responses to the Consultation.
 - c) Third, we set out our SMP findings, and the underlying analysis and evidence for each market.

Our proposals

- 4.313 In the March 2025 Consultation, we proposed that BT has SMP in both WLA Area 2 and WLA Area 3, although for different reasons.
- 4.314 In Area 3, we found that competition was very limited and barriers to entry and expansion were particularly high. BT had far greater network coverage than any rival, and smaller operators faced structural constraints that made increasing scale and attracting customers difficult. These conditions meant BT was likely to remain the main supplier of WLA services in Area 3 over the review period, with little prospect of material change.⁵⁹²
- 4.315 In Area 2, we found that competition was more developed, with rival networks such as VMO2 and CityFibre expanding their footprints and playing an increasingly important role. However, BT retained substantially greater coverage and competitive advantages, including its large installed base and ability to influence ISP behaviour. Barriers to entry and expansion persisted, and there was uncertainty around the effectiveness of future wholesale competition. Countervailing buyer power remained limited and was unlikely to materially constrain BT.⁵⁹³
- 4.316 For these reasons, we provisionally concluded that BT would continue to hold SMP in each of WLA Area 3 and WLA Area 2 and proposed market power determinations accordingly.

⁵⁹² Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 4.214-4.223.

⁵⁹³ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 4.224-4.243.

Stakeholder responses

Approach to SMP assessment

- 4.317 Openreach stated that Ofcom should take a forward-looking approach in its SMP assessment, rather than relying on a static assessment of market shares. It suggested that recent wholesale agreements and evidence on future market developments should be considered as part of this forward-looking analysis.⁵⁹⁴
- 4.318 Openreach provided case-studies from Estonia, Ireland, Italy, and the Netherlands where each respective regulator has in recent years found areas of its country where the established WLA providers no longer has SMP and urged Ofcom to consider these examples as part of our assessment.⁵⁹⁵

SMP findings

- 4.319 The following stakeholders expressed broad agreement with Ofcom's SMP findings: Allpoints Fibre, CityFibre, [3<], VodafoneThree, Sky, the Welsh Government, the Advisory Committee for Scotland, Gamma, Liberty Global, the PIA Coalition, Tech UK, and Substantial Group.⁵⁹⁶
- 4.320 While agreeing overall, Allpoints Fibre noted that the most likely reason SMP could change would be if VMO2 or nexfibre began offering wholesale access.⁵⁹⁷ Similarly, the Welsh Government queried whether VMO2 and nexfibre together could represent a material constraint on BT during the review period.⁵⁹⁸
- 4.321 In contrast, BT stated that Ofcom should revise its SMP assessment in BT+2 postcode sectors (currently part of Area 2), based on its view that Openreach's market share will fall below 50% over the course of the review period. It argued this will happen because of increasing altnet take-up, nexfibre expansion, and the potential for increased wholesaling from VMO2 and altnets.⁵⁹⁹ In addition, BT stated that strong retail price competition and the increasing buying power of customers meant that the SMP assessments should be re-evaluated.⁶⁰⁰
- 4.322 Openreach⁶⁰¹ also noted that BT might not have SMP in BT+2 areas now or on the forward-look, using the same evidence as it did to support the submission that BT+2 areas are or will be an Area 1.⁶⁰²

⁵⁹⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Paragraphs 65-72.

⁵⁹⁵ Openreach [Response to Ofcom's Telecoms Access Review 2026-31](#) Consultation, Annex 3, Pages 14-31.

⁵⁹⁶ [Allpoints Fibre](#) response to TAR26 March 2025 Consultation. Page 5. Paragraph 29. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 2.7. [3<] response to TAR26 March 2025 Consultation. [3<]. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 12. Paragraph 19. [Sky](#) response to TAR26 March 2025 Consultation. Page 3-4. Paragraphs 11-12. [Welsh Government](#) response to TAR26 March 2025 Consultation. Page 2. [Gamma](#) response to TAR26 March 2025 Consultation. Page 3. [Liberty Global](#) response to TAR26 March 2025 Consultation. Page 1. [PIA Coalition](#) response to TAR26 March 2025 Consultation. Page 4. [TechUK](#) response to TAR26 March 2025 Consultation. Page 4. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 3.

⁵⁹⁷ [Allpoints Fibre](#) response to TAR26 March 2025 Consultation. Page 5. Paragraph 29.

⁵⁹⁸ [Welsh Government](#) response to TAR26 March 2025 Consultation. Page 2.

⁵⁹⁹ [BT Group](#) response to TAR26 March 2025 Consultation. Page 3. Paragraph 1.14.

⁶⁰⁰ [BT Group](#) response to TAR26 March 2025 Consultation. Pages 18-19. Paragraph 2.45.

⁶⁰¹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Section 2.3.

⁶⁰² [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 21-33. Section 2.3.

- 4.323 Openreach submitted that Ofcom did not provide clear evidence in the March 2025 Consultation for why Openreach holds SMP in the VMO2 footprint.⁶⁰³ It stated that where VMO2 is present, “a proper assessment might well conclude that Openreach does not have SMP in this area”. The report also stated that VMO2’s scale is understated by Ofcom, as it uses postcode sectors as the relevant geographic unit, including premises where VMO2 is not present in its calculation of VMO2’s market share.⁶⁰⁴

Market shares

- 4.324 Openreach commented that evidence on market shares must be up to date, based on the appropriate geographic unit and that Ofcom should take account of the rapid acceleration in the migration of volumes between networks.⁶⁰⁵

Barriers to entry and expansion

- 4.325 [S&K], FCS and Gigaclear agreed with our preliminary findings in the March 2025 Consultation on barriers to entry and expansion.⁶⁰⁶
- 4.326 FCS highlighted the costs involved with terminating contracts and the costs of number porting.⁶⁰⁷
- 4.327 Gigaclear highlighted the specific challenges that altnets face in rural areas. Gigaclear was particularly concerned about the possibilities of socially inefficient overbuild that Openreach may carry out in rural areas due to its incumbency advantages.⁶⁰⁸ It also identified the unpredictability of Openreach’s roll-out as a significant barrier to entry in the rural WLA market.⁶⁰⁹
- 4.328 In contrast, Openreach stated that Ofcom placed too much emphasis on the challenges faced by retail altnets in attracting customers and by wholesale altnets in securing ISP agreements.⁶¹⁰ Openreach pointed to recent developments in the wholesale market as evidence of progress, including CityFibre signing deals with TalkTalk, Vodafone, Sky, and Zen, with the now live Sky–CityFibre agreement.⁶¹¹

Countervailing buyer power

- 4.329 Openreach stated that Ofcom had not given sufficient weight to the current state of wholesale agreements when assessing countervailing buyer power. It highlighted that CityFibre now has deals with all major ISPs, including a live agreement with Sky [S&K].⁶¹² Openreach also noted that all major communications providers are now multi-sourcing, which it views as clear evidence that ISPs are both willing and able to switch between

⁶⁰³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 42. Paragraph 134.

⁶⁰⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 33-37. Section 2.4.

⁶⁰⁵ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 25. Paragraph 73.

⁶⁰⁶ [S&K] response to TAR26 March 2025 Consultation. [S&K]. [FCS](#) response to TAR26 March 2025 Consultation. Pages 4-5. [Gigaclear](#) response to TAR26 March 2025 Consultation. Pages 17-18.

⁶⁰⁷ [FCS](#) response to TAR26 March 2025 Consultation. Pages 4-5.

⁶⁰⁸ [Gigaclear](#) response to TAR26 March 2025 Consultation. Pages 16-17.

⁶⁰⁹ [Gigaclear](#) response to TAR26 March 2025 Consultation. Pages 17-18.

⁶¹⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Paragraphs 138-146.

⁶¹¹ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 17. Paragraph 41.

⁶¹² Openreach confidential response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. [S&K].

wholesale suppliers. In its view, this demonstrates the presence of countervailing buyer power in the market.⁶¹³

- 4.330 VodafoneThree highlighted that Openreach’s decision to not voluntarily agree to QoS terms with external ISPs is evidence of the lack of countervailing buyer power in the WLA market.⁶¹⁴

Prices

- 4.331 Openreach mentioned that, in its view, Ofcom had been too quick to dismiss competition as a factor influencing recent price offers. It noted that ISPs have requested additional price reductions from Openreach to compete against alternative networks, which it views as a clear sign of competitive pressure.⁶¹⁵

Our reasoning and decisions

Approach and relevant evidence

- 4.332 To assess whether BT has a position of SMP in any geographic market, we assess the strength of the competition it faces in that market. We ultimately need to evaluate the extent to which over the review period – absent regulation in the WLA market – BT would have the power to behave to an appreciable extent independently of competitors, its own customers and ultimately consumers.
- 4.333 In practical terms, our SMP assessment takes account of a number of factors including: market shares, competition from existing network infrastructure, barriers to entry and expansion, countervailing buyer power, pricing and out-of-market constraints.
- 4.334 We agree with Openreach that our SMP assessment must be forward-looking, and our analysis reflects this. We take into account market dynamics and expected and foreseeable developments that may impact on competitive conditions.⁶¹⁶
- 4.335 To support this, we have gathered updated evidence from stakeholders, including business plans, existing and possible future wholesale agreements, and internal documents addressing operational factors such as the cost and duration of onboarding new providers. This ensures our assessment is based on recent, reliable information.
- 4.336 Openreach stated that Ofcom should consider international examples of deregulation as part of our assessment. We have considered the evidence submitted to us, and while such comparisons can provide useful context, they are not central to our SMP assessment. Market conditions, regulatory frameworks, and competitive dynamics vary significantly across countries, meaning outcomes in other jurisdictions cannot be directly applied to the UK. Our approach is grounded in UK-specific evidence and a forward-looking analysis of developments in this market, which we consider the most appropriate basis for determining SMP.
- 4.337 In the rest of this subsection, we discuss analysis and evidence relating to the factors we have outlined above across the two WLA geographic markets. As noted above, some of the

⁶¹³ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 14. Paragraph 33. Pages 15-17. Paragraphs 41-43. Page 25. Paragraph 73.

⁶¹⁴ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 12. Paragraph 19.

⁶¹⁵ [Openreach](#) further response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. Page 26. Paragraph 73.

⁶¹⁶ See section 79(1A) of the Act.

analysis and evidence underlying our SMP assessment may also underpin the assessment we have conducted for the purpose of defining WLA geographic markets. This is because, albeit with a different purpose, both the geographic market definition and the SMP assessment will need to examine competitive conditions. The former with a view to determining geographic areas where competitive conditions are sufficiently similar and the latter with the aim to assess whether, within each of these geographical areas, competitive conditions are indicative of SMP such that ex ante regulation is necessary over the review period.

4.338 In the following subsections, we therefore draw on and – where relevant expand on – the analysis and evidence presented in previous sections.

Market shares

4.339 Take-up or market shares do not on their own determine the intensity of competition, but they can provide a useful first indicator of competitive conditions.

4.340 Table 4.4 below presents BT’s market share in the supply of WLA in Areas 2 and 3.⁶¹⁷

Table 1.4: Summary of market shares for WLA markets⁶¹⁸

	Area 2	Area 3
BT’s share of connections	61%-80% ([<]%)	81%-90% ([<]%)
Largest rival (VMO2), share of connections	11%-30% ([<]%)	0%-10% ([<]%)
Second largest rival⁶¹⁹ (CityFibre) share of connections	0%-20% ([<]%)	0%-10% ([<]%)

Source: Ofcom analysis of Connected Nations data and additional planned deployment data. See Annex 3.

4.341 Openreach submitted that we should take account of the rapid acceleration of volumes lost to competing networks. It stated that, based on Openreach’s data, BT’s market share within BT+2 had declined by [<] between [<] to [<], while BT’s market share within BT+1 had declined by [<] in the same timeframe. It submitted that this data points to a trend that should be part of our forward-looking assessment.⁶²⁰

4.342 We have compared market shares between July 2024 and July 2025, [<].

⁶¹⁷ We have estimated market shares in Areas 2 and 3 based on shares of July 2025 active broadband connections. Our analysis is based on data collected from network operators and the same underlying dataset discussed in relation to WLA geographic market definition. We set out more detail on our approach to this analysis in Annex 3.

⁶¹⁸ We acknowledge concerns about the dilution of market shares expressed by Openreach. We consider that on balance, the use of postcode sectors as the relevant geographic unit is preferable to premises. However, we recognise that this means that market shares may on occasion understate competition to some degree. We discuss this in more detail in the subsection on geographic market definition where we explain our choice of geographic unit. We also note that our SMP assessment is not based solely on market shares, but relies on a range of evidence.

⁶¹⁹ Defined by total current footprint.

⁶²⁰ Openreach further response to TAR26 March 2025 Consultation. [Further evidence on the Wholesale Local Access market - slide deck Jan 2026](#). Pages 4-6.

Table 2.5: Market shares for WLA markets in July 2024 versus July 2025

	Area 2 (Jul 2024)	Area 2 (Jul 2025)	Area 3 (Jul 2024)	Area 3 (Jul 2025)
BT's share of connections	61-80% [<]	61-80% [<]	91%-100% [<]	81-90% [<]
Largest rival (VMO2), share of connections	11-30% [<]	11-30% [<]	0%-10% [<]	0%-10% [<]
Second largest rival (CityFibre) share of connections	0%-20% [<]	0%-20% [<]	0%-10% [<]	0%-10% [<]

Source: Ofcom analysis of Connected Nations data and additional planned deployment data. See Annex 3.

4.343 However, as discussed above it is not possible to predict future market shares based on what has occurred to date (with regulation in place), due to the uncertain nature of developments around wholesale agreements, take-up and consolidation. As mentioned, this is highlighted by a recent slow down in line losses.⁶²¹ We take a forward-looking approach to SMP by considering a range of forward-looking evidence in our assessment of barriers to entry and expansion and countervailing buyer power, but it would not be appropriate or informative to include in this a simple extrapolation from previous market shares.

Competition from network infrastructure

4.344 Where competing networks have existing infrastructure, they are more able to provide a degree of competition to BT for customers in that area.

4.345 When defining geographic markets, we looked at coverage data to identify altnets that are, or have the potential to be, material and sustainable competitors and determine where they are present with the aim of defining the boundaries of WLA Area 2 and WLA Area 3. When setting out our SMP findings, we draw on the same evidence and combine it with other considerations to assess the level of constraint on BT in each of those geographic markets.

4.346 Table 4.6 below presents the percentage of premises already covered by BT's largest rivals in each of the proposed geographic markets.

Table 4.6: Summary of current coverage from VMO2 and second largest rival for WLA markets

	Area 2	Area 3
Total number of premises	27.8m	4.4m
Largest rival (VMO2) % premises passed	61%-70% ([<]%)	11%-20% ([<]%)
Second largest rival (CityFibre) % of premises passed	11%-20% ([<]%)	0%-10% ([<]%)

⁶²¹ Enders Analysis. [BT: The altnet threat starts to recede](#). Accessed 11 February 2026.

Financial Times. [BT stems customer losses as broadband competition abates](#). Accessed 11 February 2026.

Source: Ofcom analysis of Connected Nations data and additional planned deployment data. See Annex 3.

4.347 Network build is expected to continue over the review period (although at a more limited scale than we have seen to date). Table 4.7 below presents the percentage of premises that BT's largest rivals plan to cover over the review period in each of the geographic markets.

Table 4.7 Summary of current and planned coverage from VMO2 and the second largest rival for WLA markets

	Area 2	Area 3
Total number of premises	27.8m	4.4m
Largest rival (VMO2) % premises passed	61%-70% ([>]%)	11%-20% ([>]%)
Second largest rival (CityFibre) % of premises passed	11%-20% ([>]%)	0%-10% ([>]%)

Source: Ofcom analysis of Connected Nations data and additional planned deployment data. See Annex 3.

Barriers to entry and expansion

4.348 The economics of building and operating telecoms networks means that altnets' entry may not be viable in all areas, and even in areas where entry is viable, altnets face challenges before they can establish themselves as sustainable competitors to BT.

4.349 In the following paragraphs we assess the nature and scale of these challenges. First, we discuss the costs of rolling out a network. Then, we explain why rolling out a network is not sufficient for sustainable entry into WLA markets. In addition to roll-out, altnets would need to achieve sufficient levels of take-up and revenues, as well as scale, which is a lengthy and challenging process, especially in light of BT's incumbency advantages.

High costs of roll-out

4.350 Building a network that supports WLA services involves significant capital investment to cover the material costs of construction and customer connections. There is a large economy of scale because once the high fixed cost of investment in network build has been made, these can be spread across a large number of active customers. In a similar fashion, there are also economies of scale arising from the fixed cost of operating a network such as marketing, customer operations and maintenance.

4.351 PIA can be used by networks to reduce build costs, and since the last review we have seen substantial rollout of rival networks supported by PIA. However, even with PIA the costs and time required to complete any additional network build are still likely to be substantial.⁶²²

4.352 As discussed above, we have seen significant build since the last review and many network operators have plans to continue to build, suggesting some altnets are overcoming this barrier in some areas. However, we recognise that additional network build is expected to

⁶²² As set out in Table A11.4 of Annex 11, we estimate that with the use of PIA a reasonably efficient operator would incur a cost per premise passed of between £307 and £466.

be more limited compared to the build we have seen to date, and the costs associated with connecting customers as they increase take-up are still significant.

- 4.353 As such, over the review period, build costs are likely to remain a barrier, and a particularly high barrier in some areas of the UK (e.g., in more rural or less densely populated areas). Stakeholder responses highlight these cost-related challenges. FCS pointed to the costs of terminating contracts and number porting as key obstacles for altnets, while Gigaclear emphasised the high costs of rural deployment.^{623 624}
- 4.354 In addition to build costs, completing the rollout and connecting customers can be affected by the need for wayleaves, availability of resources (including workforce) and the need for street works.⁶²⁵ For example, a number of providers ([redacted]) noted that gaining permission to install new fibre optic cables at properties, [redacted], slows down network build while increasing its cost.⁶²⁶
- 4.355 Network operators may also be able to increase scale by consolidating or partnering with other network operators. However, as noted above, the process of consolidation is at an early stage and is likely to involve financial and technical challenges.⁶²⁷ As such consolidation will not always constitute a materially quicker (or cheaper) entry option compared to organic build.

Challenges of achieving sufficient take-up

- 4.356 Even where alternative networks have overcome the barriers to building a network, rollout is not sufficient to become a material and sustainable competitor to BT. As set out in Volume 3, Section 1, take-up is critical, as it underpins the ability of altnets to exert a strong competitive constraint on Openreach in the long term, and so for competition to be sustainable.
- 4.357 To increase take-up, both wholesale and retail altnets are currently pricing competitively to attract ISPs or end-users. For example, [redacted] noted that the [redacted] offers competitive pricing [redacted].⁶²⁸ Similarly, [redacted] noted that [redacted].⁶²⁹
- 4.358 However, while some providers have made progress in increasing take-up⁶³⁰ (see Section 2), challenges remain. The evidence indicates that there are a number of underlying challenges, many of which are likely to persist into this review period, which we discuss further below. In particular:
- a) attracting retail customers can be difficult due to switching costs;

⁶²³ FCS response to TAR26 March 2025 Consultation. Pages 4-5.

⁶²⁴ Gigaclear response to TAR26 March 2025 Consultation. Pages 17-18.

⁶²⁵ We recognise BT may face similar costs in rolling out its FTTP network. However, in contrast to altnets, BT would have the advantage of an established legacy network which it can keep using to compete in the market for WLA services.

⁶²⁶ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁶²⁷ For example, [redacted] indicated that the integration capex incurred from consolidation [redacted] was significant, amounting to [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] estimated the integration costs [redacted] to be material ([redacted]). [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁶²⁸ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁶²⁹ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁶³⁰ For example, CityFibre. We discuss its progress above.

- b) securing deals with large wholesale customers can assist new entrants in becoming established, but can be a lengthy and complex process;
- c) even when a deal is signed and implemented, there remain challenges in increasing take-up; and
- d) in the absence of SMP regulation of the WLA markets, BT would have the ability to make it more difficult for altnets to gain take-up, as well as deter additional network build, in order to undermine the development of network competition.⁶³¹

4.359 In contrast, Openreach benefits from having downstream BT (including Plusnet and EE) as an anchor customer and having a large installed base across other ISPs with which it has established relationships.⁶³²

Customers' switching costs

4.360 One of the core challenges for new entrants is the time and cost it takes to achieve customer switching, as perceived or actual switching costs can deter customers from changing supplier. Changing supplier may involve additional financial costs (such as the cost of a new connection), and some disruption to the end-user. In addition, retail customers can be less likely to take-up a service from brands with which they are not familiar.⁶³³ As such, new entrants, especially vertically-integrated network operators, will need to establish brand and reputation which may take some time.

4.361 We recognise that some of these barriers are likely to be lower for customers that have not yet migrated to FTTP. Before customers have migrated, suppliers offering FTTP can seek to attract customers with higher speeds and improved reliability compared to their existing technology.⁶³⁴ For customers that have already migrated to FTTP, the focus of competition may shift more to pricing, customer service and more incremental improvements in quality.

Challenges in securing and implementing deals with large wholesale customers

4.362 One important avenue for new network operators to gain the necessary take-up is through wholesale deals with larger ISPs. Given that these potential wholesale customers currently have large subscriber bases, existing customer relationships and recognised brands, such deals could enable entrants to grow customer penetration quickly and reduce risks.

4.363 Securing such deals is dependent on ISPs being willing to engage with entrants, and there are factors such as footprint and pricing that suggest it may be challenging for new entrants that have not yet secured deals to secure this engagement, particularly for smaller networks.⁶³⁵ Even once this engagement has started, these can be complex, bespoke negotiations

⁶³¹ We discuss the potential for OR to act strategically in our SMP assessment..

⁶³² BT has the largest retail market share (30% in 2024) while Openreach also supplies wholesale services to other large retail providers such as Sky, TalkTalk and Vodafone. Ofcom. 17 July 2025. [Communications Market Report 2025](#). Interactive Data, Telecoms and Networks, Fixed telecoms connections by ISP (%). As discussed below, altnets are increasingly dealing with these large retail providers but this is still at an early stage of development and/or not sufficient to constrain BT.

⁶³³ For example, the findings of a customer survey from [redacted] indicate that [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]

⁶³⁴ See Volume 2, Section 2.

⁶³⁵ For example, analysis by [redacted] conducted to decide on wholesale agreements with altnets, namely [redacted], identified existing and planned footprint, along with discounted prices as compared to Equinix offer prices as the two key deciding factors. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

- 4.364 It is important to note that even if a deal has been signed between a network operator and an ISP, successfully implementing it is dependent on a number of additional challenges and uncertainties, including: completing any residual network build; completing any required product, operations, service and/or systems development; maintaining a competitive price offering; gaining a reputation as a wholesale partner; and securing enough orders over time.⁶³⁶ Thus, even with signed agreements, barriers persist.
- 4.365 Therefore the process of negotiating and implementing wholesale deals takes time, and involves costs. As an example, in order to switch or multi-source, ISPs would typically need to integrate their IT systems with the new network. This is usually a lengthy and costly process which is easier to justify in cases where ISPs can migrate large volumes to the rival networks. For example:
- a) VodafoneThree stated that onboarding a new wholesaler would come with [redacted] in IT integration costs alone.⁶³⁷
 - b) VodafoneThree also noted that it took a considerable amount of time to onboard Community Fibre, [redacted].⁶³⁸
 - c) [redacted] noted that onboarding new providers is complex, resource-heavy and would require significant investments. Specifically, [redacted].⁶³⁹
 - d) [redacted] said it has to offer significant incentives to ISPs to attract them onto the [redacted] network, including payments for systems integration.⁶⁴⁰
 - e) [redacted] internal documents suggest that it might take between three and nine months to onboard a new provider.⁶⁴¹
- 4.366 Nonetheless some altnets have been able to secure deals with ISPs, some of which have been successfully implemented over the last few years,⁶⁴² for example:
- a) CityFibre has had active deals with Vodafone and TalkTalk since 2017 and 2020 respectively. CityFibre’s agreement with Sky went live in July 2025, resulting in an increase in CityFibre’s take-up to over 20% across its FTTP consumer footprint.^{643 644 645 646}

⁶³⁶ For example, [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁶³⁷ VodafoneThree confidential response to TAR26 March 2025 Consultation. [redacted].

⁶³⁸ VodafoneThree confidential response to TAR26 March 2025 Consultation. [redacted].

⁶³⁹ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁶⁴⁰ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁶⁴¹ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁶⁴² We also understand that a number of common wholesale platforms have been launched and that orders have been placed on at least one of these platforms. Such platforms have the potential to create scale by aggregating access across multiple smaller networks and reducing the time and costs associated with switching or multi-sourcing.

⁶⁴³ CityFibre. 9 November 2017. [Vodafone and CityFibre bring gigabit-speed fibre to the UK](#). Accessed 29 January 2026.

⁶⁴⁴ CityFibre. 21 January 2020. [CityFibre acquires FibreNation and adds TalkTalk as strategic customer, increasing its rollout plans to pass up to 8 million premises](#). Accessed 29 January 2026.

⁶⁴⁵ CityFibre. 9 July 2025. [Sky becomes UK’s fastest major broadband provider with launch of new 5 Gbps Full Fibre speed and WiFi 7 hub](#). Accessed 29 January 2026.

⁶⁴⁶ CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#). Accessed 29 January 2026. Take-up exceeds 20% across CityFibre’s RFS consumer footprint of 4.15m.

- b) Community Fibre has wholesale arrangements with VodafoneThree and PXC.^{647 648}
 - c) Freedom Fibre has deals with TalkTalk⁶⁴⁹ and Zen.⁶⁵⁰
 - d) Trooli has an agreement with TalkTalk.⁶⁵¹
 - e) MS3 announced an agreement with Zen in September 2025.⁶⁵²
- 4.367 These agreements have the potential to substantially increase take-up for the relevant altnets, and we have already seen some increases in volumes.⁶⁵³ However, there remains uncertainty about whether these volumes will necessarily persist in the future.
- 4.368 This is particularly the case if those agreements place significant commitments on the network operators, and/or do not commit the ISPs to particular volumes. The significant efforts and ongoing challenges required to implement these deals, [redacted], demonstrate that entry remains difficult and costly.
- 4.369 It is also especially the case if we consider the market absent regulation. As set out in Section 1, under the modified Greenfield approach we assess SMP in the absence of regulation in the WLA market. This means that our assessment includes conduct that could take place if BT faced no regulation in the WLA market.
- 4.370 Absent such regulation, competitors also remain vulnerable to strategic behaviour by Openreach. BT could have the incentive, and in the absence of regulation the ability, to leverage its incumbency advantage to deter ISPs from switching or multi-sourcing, thereby exacerbating barriers to entry and expansion for altnets.
- 4.371 For example, [redacted] noted that Openreach’s ability to react and punish [redacted] decision to multi-source is very strong and could erode the value of a multi wholesale supply model.⁶⁵⁴
- 4.372 Moreover, we note that [redacted].⁶⁵⁵ This may increase BT’s ability to implement strategic behaviour to deter ISPs from placing orders with rival networks.⁶⁵⁶
- 4.373 Looking ahead, the outlook for wholesale deals remains positive but uncertain. We have seen the completion and implementation of some wholesale deals, with altnets increasing volumes as a result. However, the impact of these deals over the review period is still uncertain, and we note for those without wholesale deals in place, many of the implementation challenges identified above are likely to persist.

⁶⁴⁷ Community Fibre. 12 June 2025. [Community Fibre announces strategic wholesale agreement with VodafoneThree](#). Accessed 29 January 2026.

⁶⁴⁸ PXC. 18 November 2025. [Community Fibre partners with PXC to continue upscaling its fibre services for customers](#). Accessed 29 January 2026.

⁶⁴⁹ Freedom Fibre. [Freedom Fibre partners with Talk Talk](#). Accessed 29 January 2026.

⁶⁵⁰ Zen. 5 November 2024. [We’ve partnered with Freedom Fibre](#). Accessed 29 January 2026.

⁶⁵¹ PXC. 8 December 2025. [PXC and Trooli partnership enters next phase](#). Accessed 29 January 2026.

⁶⁵² ISP Review. 25 September 2025. [ISP Zen Internet Signs Deal to Harness MS3’s UK Full Fibre Network UPDATE](#). Accessed 29 January 2026.

⁶⁵³ For example, in its consultation response Openreach provided evidence of line losses [redacted]. (Openreach further response to TAR26 March 2025 Consultation. Further evidence on the Wholesale Local Access market - slide deck Jan 2026. Confidential version. [redacted].)

⁶⁵⁴ More specifically, [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁶⁵⁵ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

⁶⁵⁶ We note that BT’s incentive to deter ISPs from switching or multi-sourcing to a rival network may be particularly strong during the FTTP migration period. This is because, as noted above, rival networks may find it more challenging to gain take-up once customers have migrated to Openreach’s FTTP network.

Countervailing buyer power

Countervailing buyer power in the WLA market

- 4.374 Purchasers may have a degree of buyer power where: a) they purchase a significant and material proportion of a supplier's total volumes; and b) they have a credible threat of switching to an alternative supplier, or to self-supply, to an extent that would materially impact the supplier's profitability.
- 4.375 In the WLA market, a number of ISPs have large customer bases which, if switched to a rival network operator, would generate economies of scale and support rival entry or expansion. This means that large ISPs may be able to use the threat of switching as leverage in negotiations to obtain more favourable terms from Openreach.
- 4.376 Whether an ISP has countervailing buyer power in practice will depend on a number of factors including whether rival network provider(s) are present and have sufficient coverage to provide a credible alternative to BT, the time taken and cost involved for new networks to be built, the degree of commitment/risk required from the buyer and the cost and speed of switching to (multiple) alternative wholesale providers.
- 4.377 Openreach submitted that ISP's have countervailing buyer power in the WLA market, stating that CityFibre now has deals with all major ISPs, [redacted] and that all major ISPs are now multi-sourcing. In contrast, VodafoneThree pointed to Openreach's decision to not voluntarily agree to QoS terms with external ISPs as evidence of the lack of countervailing buyer power in the WLA market.^{657 658}
- 4.378 We agree that wholesale agreements by altnets and multi-sourcing by major communications providers could strengthen ISPs' countervailing buyer power. In addition, the degree of ISPs' countervailing buyer power could increase if VMO2 – which has a much more mature network compared to new entrants – were to wholesale to ISPs. We also note that Allpoints Fibre and the Welsh Government submitted that VMO2 and nexfibre may, potentially through offering wholesale access, impact BT's SMP over the review period. However, as discussed above, whether and when VMO2 will wholesale to ISPs is uncertain.
- 4.379 We consider that while ISPs now have more options to shift volumes away from BT by using altnets that have the necessary scale to be attractive wholesale partners⁶⁵⁹, ISPs will remain reliant on BT to serve a portion of their customer base, not least because Openreach's network in some places is and will be the only available network.⁶⁶⁰ The extent of this reliance will depend on the future development of alternative networks to provide coverage across the UK and become viable candidates for wholesale partnerships, the costs involved in multi-sourcing across different networks, and whether VMO2 becomes a wholesaling network.
- 4.380 Therefore, while we agree with Openreach that the increased prevalence of wholesale deals in the market is indicative of an increase in ISPs' countervailing buyer power, the

⁶⁵⁷ Openreach confidential response to TAR26 March 2025 Consultation. Assessment of WLA market and approach to regulation. [redacted].

⁶⁵⁸ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 12. Paragraph 19.

⁶⁵⁹ And we recognise that it is possible that the range of network providers that are attractive wholesale partners may increase over the review period.

⁶⁶⁰ Currently, in 29% of postcode sectors there is no alternative to Openreach from providers with more than 50,000 premises passed or planned. If all planned build materialises, this would be 20%. However, it is not certain that all planned build will materialise, and some of it may only be completed near the end of the review period.

impact of this remains to some extent uncertain, and for the purposes of SMP assessment needs to be considered in the context of the other factors we set out in this section.

- 4.381 In the following paragraphs, we assess the extent to which wholesaling by VMO2 in particular might increase the competitive constraint on BT and impact ISPs' countervailing buyer power.

Potential for VMO2 to provide wholesale services

- 4.382 As noted above, VMO2 has announced an intention to offer wholesale access on its network beyond its retail group and has taken some preparatory steps to enable this. However, currently VMO2 has not publicly announced any wholesale agreement outside of its retail group, and faces a number of challenges in doing so, as set out in the discussion of VMO2 in the geographic market definition section. The completion, terms and impact of any potential agreements therefore remain uncertain.⁶⁶¹
- 4.383 Absent regulation, VMO2's ability to enter and expand in the wholesale market could also be constrained, as certain types of strategic actions by BT across VMO2's footprint could create conditions that limit VMO2's opportunities to secure ISP partnerships and provide competitive offerings.
- 4.384 Therefore, while we consider that wholesaling by VMO2 has a strong potential to create an additional form of direct competition to BT (which could in turn increase countervailing buyer power), the evidence regarding the actual impact of VMO2 wholesaling is still limited, and it is not clear that it would sufficiently undermine BT's market power over the review period.
- 4.385 In light of this, and given that VMO2 currently exerts only an indirect constraint as a retail-focused operator (as explained in our discussion of VMO2 in the market definition section), for the purposes of our assessments below, we focus on this existing retail and indirect constraint, reflecting the uncertainty around its wholesale position. We nonetheless consider, where relevant, the potential for VMO2's wholesale activities to influence our conclusions.

Openreach pricing

- 4.386 While pricing behaviour can in principle inform an assessment of market power, in the markets under review, BT's pricing practices may be driven by a number of factors other than SMP, including regulatory considerations and investment decisions. We therefore consider evidence on BT's pricing practices with these caveats in mind.
- 4.387 In line with our approach in 2021, we have first considered BT's pricing relative to the cap on rental charges.⁶⁶² Pricing up to the cap might indicate that other constraints are insufficiently strong to hold prices below the level of the cap and therefore be consistent with a finding of SMP.
- 4.388 We have therefore considered evidence that Openreach has set its headline prices to its regulated caps in 2021/22, 2022/23, 2023/24 and 2024/25. In the case of WLA this includes

⁶⁶¹ We note the publicly available details of the deal to acquire Substantial Group by Liberty Global, Telefonica and InfraVia include terms relating to VMO2 buying wholesale access on the expanded nexfibre footprint (which overlaps with VMO2's existing footprint). This deal is subject to regulatory clearance. VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

⁶⁶² A price cap (or charge control) sets a limit on the maximum amount BT can charge for specific services. In 2021, Ofcom imposed charge controls on MPF rental, FTTC 40/10 rental, and FTTP 40/10 rental.

a charge control on MPF SML1 rentals, FTTC 40/10 rentals and SOGEA 40/10 rentals. For each of these services Openreach has set its headline prices to its regulated caps in 2021/22, 2022/23, 2023/24 and 2024/25.⁶⁶³

- 4.389 We acknowledge Openreach's view that recent price offers it has made, including those it claims to be driven by requests from ISPs for further reductions to compete with altnets, may reflect competitive pressure. Such behaviour is consistent with competition beginning to develop in some areas. However, this does not imply that BT no longer has SMP. Price discounts can occur where an operator with SMP seeks to protect its position and maintain a high market share, while still retaining substantial control over wholesale terms.
- 4.390 In this context we have also looked at Equinox Offer discounts for BT's FTTP services. Although competition was cited as one factor,⁶⁶⁴ pricing decisions were also informed by additional factors, including the ability to bring forward the stop sell date,⁶⁶⁵ the ability to drive faster adoption of FTTP⁶⁶⁶ and the ability to provide more pricing certainty in the long-run.⁶⁶⁷
- 4.391 Overall, we consider that Openreach's pricing behaviour is not inconsistent with a finding of SMP. However, in light of the evidence and caveats set out above, we do not consider pricing to be a very informative indicator of SMP conditions. As such, we do not consider it further as part of our SMP assessment.

External constraints

- 4.392 We have also considered the extent to which external constraints may reduce BT's market power i.e. out-of-market products such as fixed wireless access (FWA), satellite broadband and mobile broadband, which may be a demand-side substitute for some consumers.
- 4.393 As outlined above, while these technologies have been gaining some traction since the last review, take-up of these products is still relatively low compared to that of fixed broadband (and in some cases, complementary), and we expect that to be the case throughout the review period.
- 4.394 Given this evidence, we do not consider that these services will exert a significant competitive constraint on BT in WLA Area 2 or in WLA Area 3 within the review period.

Our findings

Finding that BT has SMP in WLA Area 3

- 4.395 As discussed above, we define WLA Area 3 as the area in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks. Area 3 accounts for 19% of postcode sectors and 14% of premises in the UK.
- 4.396 In the following paragraphs we consider whether BT has SMP in Area 3.

⁶⁶³ BT. [WFTMR21 Compliance Model 2024-25](#), tabs '12B - LLU Comp Outcome' and '12C - VULA'. Accessed 6 March 2026.

⁶⁶⁴ Openreach Limited response dated 11 May 2023 to s135 notice dated 22 February 2023, question 10.

⁶⁶⁵ Ofcom. September 2021. Statement on Openreach proposed FTTP offer (Equinox). Paragraph 3.15.

⁶⁶⁶ Openreach Limited response dated 11 May 2023 to s135 notice dated 22 February 2023, question 10.

⁶⁶⁷ Openreach Limited response dated 13 September 2021 to s135 notice dated 16 August 2021, question 4.

Market shares

4.397 BT's share of active broadband connections is currently 81%-90% ([>]) in Area 3, as shown in Table 4.4. The share of its largest rival VMO2 is less than 10% ([>]).

Competition from presence of network infrastructure

4.398 Coverage analysis presented in Table 4.6 above shows that BT has significantly larger coverage than any of its rivals in Area 3, with BT's largest rival covering less than 20% [>] of premises in Area 3. Even allowing for planned build, this is not expected to significantly change over the review period (Table 4.7).

Barriers to entry and expansion

4.399 Area 3 includes postcode sectors that are typically less densely populated and where only smaller altnets might be present (i.e. those with a total current or planned coverage below 50,000 premises).

4.400 We have discussed above the nature of the barriers to entry and expansion that altnets are likely to face in WLA markets. In Area 3, the scale of these barriers is likely to be particularly material. This is because in less densely populated areas, completing any additional build and increasing take-up is more challenging. Building networks is more likely to be higher cost due to lower density of customers, and the altnets present in these areas would only be able to spread these costs amongst fewer customers. As a result, over the next review period, we expect limited entry and expansion by altnets in Area 3. Moreover, as discussed above, due to their size, the altnets who are present in Area 3 are less likely to be seen as an attractive partner by ISPs⁶⁶⁸ and/or as targets for consolidation.

4.401 Therefore we expect that BT will continue to be the main supplier of WLA services in Area 3 over the next review period.

Absence of countervailing buyer power

4.402 Since rival presence in Area 3 is very limited and consolidation or expansion is unlikely, over the review period ISPs will likely remain heavily reliant on BT, except in small areas and/or potentially in areas where alternative networks have been built using public subsidies.

4.403 Therefore, we would not expect countervailing buyer power to be a material constraint on BT in Area 3.

Conclusion

4.404 On the basis of the evidence above, we conclude that BT has SMP in Area 3. In particular, we note BT's high market share and that barriers to entry and expansion in Area 3 are particularly high and likely to persist over the review period, with very limited presence of competing networks expected. Therefore, we are making a market power determination that BT has SMP in WLA Area 3.

Finding that BT has SMP in WLA Area 2

4.405 As set out above, we define WLA Area 2 as the area in which there already is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks. Area 2 accounts for 81% of postcode sectors and 86% of premises in the UK.

4.406 In this subsection we consider whether BT has SMP in Area 2.

⁶⁶⁸ As discussed above ISPs are more reluctant to engage with smaller networks.

Market shares

- 4.407 BT's share of active broadband connections is 61-80% ([>]) in our defined WLA Area 2, as shown in Table 4.4. The next largest provider, VMO2, has a share of 11-30% ([>]), and the third largest, CityFibre has a share of less than 20% ([>]).
- 4.408 While entry and expansion of altnets over the WFTMR21 period has slightly reduced BT's market share in some parts of Area 2, it is still high overall. As we discuss above, we cannot accurately extrapolate current market share trends into the future given the uncertainty about future developments in this market. However, we rely on other forward-looking evidence, including evidence on future network build and barriers to entry and expansion, to develop a view of how competition will evolve over the review period.
- 4.409 As discussed above, we recognise that BT's share of connections is below 50% in a limited number of postcode sectors. However, we are also mindful of the fact that altnets compete across their footprint, and their competitive position is dependent on reaching sufficient scale and market position (including take-up) overall (for the reasons discussed above). Therefore we consider that comparatively stronger performance in some areas of their footprint would not be inconsistent with a finding of market power.

Competition from presence of network infrastructure

- 4.410 We recognise that BT faces some competition from rival networks in Area 2. However, coverage analysis presented in Table 4.6 and 4.7 above shows that BT has significantly larger coverage than any of its rivals in Area 2, and this is expected to remain the case over this review period.
- 4.411 VMO2 and Cityfibre are currently the largest competitors in Area 2, and we recognise that they play an important role in retail and/or wholesale competition. However, having passed 61%-70% ([>]) and 11%-20% ([>]) of Area 2 respectively, VMO2's and CityFibre's coverage is currently more limited than BT's (current coverage from other altnets is even more limited).⁶⁶⁹ While some further build is expected over this review period (and the coverage of individual competitors could also change through consolidation), BT is still expected to have significantly larger coverage than its rivals.
- 4.412 We also note that the largest rival (VMO2) currently exerts only an indirect constraint where it is present as a retail-focused operator (as explained in our discussion of VMO2 in the market definition section). While its plans to provide wholesale access to its network could create a new form of direct competition to BT, there is uncertainty around how this may develop (as discussed above).

Barriers to entry and expansion

- 4.413 Since the last review we have seen substantial rollout of rival networks in Area 2 supported by PIA and expect additional – albeit likely more limited – build over the review period. In line with this, we anticipate that over the review period altnets will largely focus on gaining sufficient take-up and revenues to secure continued investment, complete any residual build, sustain ongoing network operations and potentially consolidate, with a view to ultimately establishing themselves as material and sustainable competitors to BT. While we recognise that take-up by altnets has been increasing, we consider they still face material barriers to achieve sufficient levels of take-up to strengthen the competitive constraint they

⁶⁶⁹ However, as discussed below, some of them have the potential to further expand, gain traction and / or consolidate.

exert over time. In comparison, BT has a number of competitive advantages including having a large installed base across other ISPs.

- 4.414 As described above, we believe this competitive process is likely to take time, will involve challenges and – in the absence of WLA regulation – may be particularly vulnerable to the risk of strategic behaviour by BT aimed at deterring ISPs switching or multi-sourcing.
- 4.415 As a result, while potentially lower than in Area 3, we expect that even in Area 2 barriers to entry and expansion are likely to persist over the review period.

Absence of countervailing buyer power

- 4.416 As discussed above, ISPs could in principle leverage their position to get a good deal in Area 2 by switching – or threatening to switch – some (or all) of their customer base to a rival network. As discussed above, we consider that increasing prevalence of wholesale agreements by altnets and multi-sourcing by major communications providers could therefore strengthen ISPs' countervailing buyer power. However, in practice, this is limited to areas where altnets are present, and even where they are present there are still material challenges rival networks have to address before they can establish their position in the market and represent a sustainable alternative to BT. Therefore the impact of this remains to some extent uncertain.
- 4.417 We also discussed that VMO2's plan to provide wholesale access to its network has the potential to create a new form of direct competition to BT thereby promoting greater countervailing buyer power. As mentioned above, currently VMO2 has not announced any wholesale agreement outside of its retail group, and there is uncertainty around how effective this entry might prove to be in future.
- 4.418 Overall, we recognise that since 2021, ISPs have been better able to exert countervailing buyer power and have the potential to do so increasingly as competition evolves over the review period. However, for the reasons set out above, we consider that there are limitations to this which are likely to persist over the review period, limiting the constraint on BT's position as a supplier of WLA services in Area 2 over the review period.

Stakeholder comments on sub-areas of Area 2

- 4.419 BT⁶⁷⁰ and Openreach⁶⁷¹ stated that BT may not have SMP in the areas where two or more rivals to BT are currently present, partially on the ground that, in their view, BT's market share will fall below 50% in this area over the review period.
- 4.420 Openreach⁶⁷² also stated that Ofcom did not provide clear evidence in the March 2025 Consultation for why Openreach holds SMP in the VMO2 footprint.
- 4.421 For reasons set out in the geographic market definition section, we do not define either BT+2 areas or BT+VMO2 areas as separate geographic markets, and we therefore do not conduct an SMP assessment in relation to these areas. In addition, as we have noted above, we consider that we cannot extrapolate current market share trends, so do not draw conclusions about SMP on that basis.

⁶⁷⁰ [BT Group](#) response to TAR26 March 2025 Consultation. Paragraph 2.45.

⁶⁷¹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 33. Section 2.3.

⁶⁷² [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Paragraphs 134-137. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 33. Section 2.4.

Our conclusion

- 4.422 On the basis of the evidence we have set out, we consider that BT has SMP in Area 2. In particular, we note BT's high market share, significantly larger coverage than its rivals and the existence of high barriers to entry and expansion, which indicates BT could have the incentive and, absent WLA regulation, the ability to exacerbate through strategic behaviour aimed at deterring ISPs from switching and multi-sourcing.
- 4.423 As such, we make a market power determination that BT has SMP in WLA Area 2.

5. Leased line access market

- 5.1 In this section we explain our market definition and SMP assessment for the leased line access (LLA) market.
- 5.2 In line with our March 2025 Consultation proposals, we have decided:
- That there is a single product market for LLA services, unchanged from our position set out in our March 2025 Consultation.
 - To identify three geographic markets – the High Network Reach (HNR) Area, Area 2 and Area 3 - for LLA for the purposes of making a market power determination. We have concluded that these markets meet the three criteria test.
 - That BT has SMP in the HNR Area, Area 2 and Area 3.
- 5.3 This decision is based on the evidence we have gathered and takes into account stakeholder responses.
- 5.4 The table below sets out the results of our geographic market analysis:

Table 5.3: Summary of LLA geographic markets

Geographic market	Postcode sectors		Demand sites		LLA circuit ends provisioned in 2020 to 2024	
	Number	Share of UK excl. the Hull Area	Number	Share of UK excl. the Hull Area	Number	Share of UK excl. the Hull Area
HNR	930	9%	52,892	13%	61,280	17%
Area 2	5,391	54%	218,728	55%	202,719	55%
Area 3	3,416	34%	102,392	26%	70,587	19%

Source: Ofcom analysis of provider data and CACI D&B Business Data.

Note: Percentages do not sum to 100% as CLA figures are included in the total number of postcode sectors, demand sites and leased lines circuit ends provisioned in 2020 to 2024.

- 5.5 The rest of this section covers the proposals we made in our March 2025 Consultation and November 2025 Further Consultation, stakeholder responses, and the reasoning underpinning our decisions in relation to the:
- Product market definition for LLA;
 - Geographic market definition for LLA; and
 - SMP assessment.

Product market definition

Our proposals

- 5.6 In the March 2025 Consultation, we proposed to define a single product market for LLA services at all bandwidths, that includes:⁶⁷³
- a) all wholesale fibre-based Ethernet and Wavelength Division Multiplexing (WDM) services, at all bandwidths;
 - b) LL-equivalent services delivered over symmetric PON (e.g. XGS-PON),⁶⁷⁴ and
 - c) dark fibre used to supply or self-supply leased line services.
- 5.7 We proposed that the product market definition excludes:
- a) broadband services;
 - b) wireless technologies (including fixed wireless access (FWA), satellite, and point-to-point wireless links, such as microwave links, used to provide mobile backhaul); and
 - c) IEC services between BT exchanges.

Stakeholder responses

Bandwidth

- 5.8 AllPoints Fibre, VMO2, VodafoneThree and CityFibre agreed that there should be a single product market for leased line services at all bandwidths.⁶⁷⁵

Dark fibre

- 5.9 CityFibre considered dark fibre and Ethernet as close supply side substitutes for leased line services.⁶⁷⁶ VMO2 agreed that there is supply side substitutability between active leased line services and dark fibre but suggested that demand may skew towards high bandwidth leased line services.⁶⁷⁷ VodafoneThree agreed that dark fibre plays a critical role in self-provisioned leased line services.⁶⁷⁸
- 5.10 INCA disagreed with the inclusion of dark fibre services.⁶⁷⁹ It explained that because customers do not have the expertise to use it, it is unlikely that a 5-10% non-transitory increase in Ethernet pricing would cause sufficient switching to dark fibre to render that price increase non-profitable.

⁶⁷³ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Page 91. Paragraphs 5.2 and 5.3.

⁶⁷⁴ By 'leased line equivalent' we mean services with features such as uncontended capacity, symmetric download and upload speeds, and quality of service parameters similar to point-to-point leased line services (e.g. fast repair times compared to WLA services). These services can be provided over symmetric PONs e.g. XGS-PON with 10 Gbit/s capacity in both the downstream and upstream direction. We also refer to these services as 'Ethernet over symmetric PON'. GPON technology, which typically has asymmetric capacity (2.5 Gbit/s in downstream and 1.25 Gbit/s in upstream direction), is less able to provide 'leased line equivalent' services. We discuss this in more detail later in this section.

⁶⁷⁵ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. [VMO2](#) response to TAR26 March 2025 Consultation. Page 28. Paragraph 98. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 37. Paragraph 48. [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.9.

⁶⁷⁶ [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.9.

⁶⁷⁷ [VMO2](#) response to TAR26 March 2025 Consultation. Page 28. Paragraph 98.

⁶⁷⁸ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 37. Paragraph 49.

⁶⁷⁹ [INCA](#) response to TAR26 March 2025 Consultation. Page 71. Paragraph 276.

Leased line equivalent services delivered over symmetric PON (such as XGS-PON)

- 5.11 CityFibre, VMO2 and INCA agreed with the inclusion in the LLA product market of LL-equivalent services delivered over symmetric PON.⁶⁸⁰ CityFibre suggested that LL-equivalent services are indistinguishable from traditional leased line services for customers and that innovation is likely to increase speeds available over symmetric PON.⁶⁸¹
- 5.12 Openreach agreed with the inclusion of XGS-PON and highlighted that there are a number of providers who have XGS-PON capability and are either offering or able to offer LL-equivalent services.⁶⁸²
- 5.13 Openreach however suggested that our proposed definition of LL-equivalent services is too narrow. Openreach said that GPON can also provide a symmetric service akin to a leased line, and that GPON should be part of our LLA market definition so that it aligns with the modern single fibre networks Openreach and altnets are building (see below).⁶⁸³
- 5.14 In contrast, AllPoints Fibre, PXC, TechUK, VodafoneThree and Vorboss disagreed with including LL-equivalent services delivered over symmetric PON in the LLA product market.⁶⁸⁴ They argued that LL-equivalent services are significantly different from leased lines and would not act as an effective competitive constraint. TechUK suggested that leased line customers typically need dedicated point-to-point circuits, rapid repairs, resiliency features, and low latency, which XGS-PON, in their view, does not provide.⁶⁸⁵
- 5.15 Vorboss said that businesses prefer point-to-point leased lines to XGS-PON because they offer higher bandwidths, uncontended capacity over 1 Gbit/s, simple upgrade paths and easy requests for route diversity.⁶⁸⁶ Vorboss also suggested that dedicated leased lines also offer greater power resilience and more flexibility in physical fibre routing,⁶⁸⁷ greater reliability and security (as the connection is not shared) and are able to offer a superior level of service agreement. Vorboss also noted that leased lines are significantly more expensive and require more fibre in the ground.^{688 689}

⁶⁸⁰ [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.9. [VMO2](#) response to TAR26 March 2025 Consultation. Page 28. Paragraphs 99 and 100. INCA [response to Ofcom's Telecoms Access Review 2026-31](#) Consultation. Page 70. Paragraph 276.

⁶⁸¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.9.

⁶⁸² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 23-29. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 42-43.

⁶⁸³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 24-29. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 2.

⁶⁸⁴ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. [PXC](#) response to TAR26 March 2025 Consultation. Pages 13-14. [TechUK](#) response to TAR26 March 2025 Consultation. Response to question 2.9. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Pages 37-39. [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 3-5. Vorboss further response to TAR26 March 2025 Consultation. Proposed Redefinition of 'Leased Line Equivalent'.

⁶⁸⁵ [TechUK](#) response to TAR26 March 2025 Consultation. Response to question 2.9.

⁶⁸⁶ [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 3-5.

⁶⁸⁷ Vorboss expects this flexibility to be important as the demand for higher bandwidths will increase in the future as the current XGS-PON solutions are not a substitute for leased lines at all bandwidths.

⁶⁸⁸ [Vorboss](#) response to TAR26 March 2025 Consultation. Page 3.

⁶⁸⁹ [Vorboss](#) further response to TAR26 March 2025 Consultation. Proposed Redefinition of 'Leased Line Equivalents'.

- 5.16 Vorboss considered that including XGS-PON in the LLA market would undermine the benefits of leased lines and incentives to invest in direct internet access.⁶⁹⁰ It said that services only offering uncontended capacity at 1 Gbit/s should not be considered a substitute for leased lines, particularly given ambitions for business growth and productivity improvements in the UK.⁶⁹¹
- 5.17 VodafoneThree said that most XGS-PON deployments are designed for shared, contended broadband. They explained that while XGS-PON can technically deliver symmetric, uncontended capacity, it remains a niche and unproven use case.⁶⁹² VodafoneThree also noted that configuring XGS-PON to deliver uncontended capacity reduces the bandwidth available for other users on the same PON.⁶⁹³ Furthermore, VodafoneThree suggested that delivering LL-equivalent services over XGS-PON requires bespoke provisioning, traffic management, and service-level guarantees that are neither standardised nor widely adopted.⁶⁹⁴
- 5.18 VodafoneThree considered that FTTP-based services are primarily an extension of the broadband market for customers who typically do not require guaranteed performance, dedicated capacity or high service assurance.⁶⁹⁵ VodafoneThree further suggested that including XGS-PON in the leased line market definition risks conflating two fundamentally different service models; shared broadband and dedicated business connectivity.⁶⁹⁶
- 5.19 In addition, INCA and WightFibre stated that Ofcom wrongly excluded point-to-point (P2P) networks from its LL-equivalent product description. INCA considered this to be an error as P2P network can deliver equivalent and higher performing LL-equivalent services compared to XGS-PON networks.⁶⁹⁷

Services provided by WLA networks

- 5.20 AllPoints Fibre, FCS, VMO2, VodafoneThree, INCA and UKCTA agreed that business broadband should be excluded from the LLA product market definition.⁶⁹⁸
- 5.21 Similarly, PXC and Gamma agreed that the LLA and WLA markets are two different markets and PXC considered that this is unlikely to change in the review period.⁶⁹⁹
- 5.22 On the contrary, Openreach said that Ofcom failed to recognise the convergence of WLA and LLA markets and suggested that there is supply-side substitution where WLA providers could technically and commercially substitute into the LLA market (see the discussion in the

⁶⁹⁰ [Vorboss](#) further response to TAR26 March 2025 Consultation. Proposed Redefinition of ‘Leased Line Equivalents’.

⁶⁹¹ [Vorboss](#) response to TAR26 March 2025 Consultation. Page 5.

⁶⁹² [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 37. Paragraph 52.

⁶⁹³ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 38. Paragraph 54 (c).

⁶⁹⁴ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 37. Paragraph 52.

⁶⁹⁵ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 38. Paragraph 54 (b).

⁶⁹⁶ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 38. Paragraph 55.

⁶⁹⁷ [INCA](#) response to TAR26 March 2025 Consultation. Page 70, footnote 89. [WightFibre](#) response to TAR26 March 2025 Consultation. Paragraphs 12-15.

⁶⁹⁸ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. [FCS](#) response to TAR26 March 2025 Consultation. Page 2. [VMO2](#) response to TAR26 March 2025 Consultation. Page 29. Paragraph 101.

[VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 34. Paragraph 26. [INCA](#) response to TAR26 March 2025 Consultation. Page 70. Paragraph 275. [UKCTA](#) response to TAR26 March 2025 Consultation. Pages 2-3.

⁶⁹⁹ [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2. [Gamma](#) response to TAR26 March 2025 Consultation. Page 3.

geographic market definition section) and demand-side substitution where LLA customers could switch to business FTTP services.⁷⁰⁰

- 5.23 On the latter, Openreach said FTTP services are, or will be, a substitute for a sizeable proportion of users because:
- a) Business FTTP products are not vastly dissimilar to leased line services on features such as service level agreements and repair times.⁷⁰¹ Moreover, Openreach said that quality improvements to full-fibre asymmetric broadband services over time could mean that business FTTP services become better able to meet the needs of some leased lines customers from a demand-side perspective.⁷⁰²
 - b) FTTP already offers a cost-effective connection for businesses that can tolerate some variability in speeds and upload time.⁷⁰³
 - c) Some switching to business FTTP is already occurring. In particular, Openreach submitted: (i) research suggesting that [redacted]% of Ethernet users have already replaced Ethernet with FTTP while [redacted]% have plans to do so⁷⁰⁴ (ii) three examples of network providers who are delivering their business services over FTTP networks⁷⁰⁵ (iii) an analysis of a time trend in LLA net additions [redacted].⁷⁰⁶
- 5.24 In practice, to assess the degree of any current or potential convergence between WLA and LLA markets we draw from evidence regarding competitive conditions at several stages of our market definition:
- a) As part of this section, we assess whether WLA networks can be used to provide LL services (supply side substitution) and / or whether business FTTP is a substitute for LL services (demand side substitution). This is with a view to conducting the hypothetical monopolist test and defining a product market.
 - b) As part of geographic market definition, we assess the extent to which WLA networks are providing, or have the potential to provide, LL services over the review period. This is with a view to assessing areas where the conditions of competition are sufficiently homogeneous (and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different).

Wireless Technologies

- 5.25 The Welsh Government encouraged Ofcom to include wireless technologies in the product market definition as leased lines are uneconomic in rural areas, and alternatives such as fixed wireless access and other wireless technologies are required.⁷⁰⁷
- 5.26 VMO2 broadly agreed with our assessment that wireless technologies should be excluded from the LLA product market definition. They noted that these technologies would in

⁷⁰⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 20. Paragraphs 35-36. Page 22. Paragraphs 44-48. Page 24. Paragraphs 51-71. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 2.

⁷⁰¹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 49.

⁷⁰² [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 48.

⁷⁰³ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 47.

⁷⁰⁴ Openreach confidential response to TAR26 March 2025 Consultation. [redacted].

⁷⁰⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 25. Paragraph 53.

⁷⁰⁶ Openreach confidential response to TAR26 March 2025 Consultation. [redacted].

⁷⁰⁷ [Welsh Government](#) response to TAR26 March 2025 Consultation. Page 2.

varying degrees fulfil the role of a temporary or back-up solution, or a ‘last resort’ option where a fixed connection is not available.⁷⁰⁸

Mobile Backhaul

- 5.27 Openreach suggested that we should not include mobile backhaul in the LLA product market definition because the provision of these services is different to connecting other business sites. Openreach said that MNOs buy larger volumes of LLA services and, in general, mobile backhaul contracts are of higher value and have more sophisticated procurement.⁷⁰⁹ In addition, Openreach noted that MNOs tend to require nationwide coverage, higher bandwidths, and higher security standards and levels of resilience than other leased line customers.
- 5.28 Responses to our November 2025 Further Consultation on buffer distance suggested that VodafoneThree and CityFibre view the provision of, and contracting for, mobile backhaul as different from other leased line services.⁷¹⁰ We discuss this further as part of our assessment of buffer distance below.

Our reasoning and decisions

- 5.29 LLA services are services which connect between end-user sites and the first point of aggregation, or in some cases, are a point-to-point connection between end-user sites.⁷¹¹
- 5.30 In the WFTMR 2021, we defined a single product market for LLA services, which:
- included all wholesale fibre-based Ethernet and WDM services;
 - included dark fibre used to supply or self-supply leased line services;
 - excluded business-grade connectivity services provided over EFM, broadband and microwave links used to provide mobile backhaul; and
 - excluded IEC services between BT exchanges.
- 5.31 As set out in Section 2 of this volume, typically, LLA services have offered:
- capacity which is uncontended or has reserved bandwidth (so speeds do not fluctuate and are not subject to reduction) and symmetric (the capacity is the same in both directions);
 - additional quality of service features, such as high availability, continuous monitoring and support, with fast repair times and installation times; and
 - typically, a dedicated physical connection (providing greater security) with diverse physical routes often available (for better resilience by eliminating a single point of failure).
- 5.32 These are different from other services such as consumer and business broadband connections which tend to be asymmetric and contended. In addition, leased lines tend to be significantly more expensive as costs are less likely to be shared across many users.
- 5.33 As set out in Section 2 of this volume, we understand that some providers are rolling out an upgraded PON technology, XGS-PON. This can be configured to offer symmetric bandwidth

⁷⁰⁸ [VMO2](#) response to TAR26 March 2025 Consultation. Page 29. Paragraph 102.

⁷⁰⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 60-61.

⁷¹⁰ [CityFibre](#) response to TAR26 November 2025 Consultation. [VodafoneThree](#) response to TAR26 November 2025 Consultation.

⁷¹¹ This is different to connections between points of aggregation (such as inter-exchange circuits).

services (typically 1 Gbit/s) with uncontended capacity.⁷¹² We understand that some providers are already offering such services over these networks, and that these are able to replicate many of the key quality of service parameters as point-to-point leased lines. Although these will not offer a dedicated physical connection.

- 5.34 While it is early days, we expect these services to become an increasing feature of the market over the course of the 2026-31 review period. The development, trialling, and rollout of further iterations of PON technology (e.g. 25G-PON and 50G-PON) appears likely to support even higher speeds in the future.^{713 714 715} We consider whether these services should be considered part of the LLA market below.

Our approach

- 5.35 Our starting point for defining the product market is wholesale fibre-based point-to-point leased lines used to connect to customer sites at all bandwidths. This includes fibre-based Ethernet services and WDM services of different bandwidths. Both Ethernet and WDM technologies are used to deliver point-to-point connections able to offer symmetric high bandwidth services with uncontended capacity.⁷¹⁶
- 5.36 We first consider the substitutability of different bandwidths of leased lines, to assess whether the product market should include all bandwidths.
- 5.37 We then consider whether any of the following access services are sufficiently close substitutes that they should be considered in the same product market:
- a) dark fibre services;
 - b) Ethernet services delivered over XGS-PON;
 - c) services provided by WLA networks (including those delivered over GPON); and
 - d) wireless technologies.
- 5.38 Finally, we consider whether IEC services should be considered as part of the product market.
- 5.39 As set out in Annex 1, we use the evidence collected and consider the responses to the March 2025 Consultation to apply the hypothetical monopolist test framework. In this test, a product is considered to constitute a separate market if the hypothetical monopolist supplier could impose a small but significant non-transitory increase in price (“SSNIP”) above the competitive level without losing sales to such a degree as to make this price rise unprofitable. If such a price rise would be unprofitable, because consumers would switch to other products or because suppliers of other products would begin to compete with the hypothetical monopolist, then the market definition should be expanded to include the substitute products.

⁷¹² Providers are able to offer uncontended capacity services on XGS-PON by ‘ringfencing’ part of the shared capacity for a particular end-user, to whom the capacity appears uncontended. See Annex 2, Overview of telecoms networks, Paragraph A2.40 and A2.41.

⁷¹³ ISPreview, 2022. [Ogi Become First UK ISP to Deploy Nokia's 25Gbps Full Fibre Tech - ISPreview UK](#). Accessed 13 January 2026.

⁷¹⁴ ISPreview, 2025. [Netomnia Goes Live with First 50Gbps UK Full Fibre Broadband Network](#). Accessed 17 February 2026.

⁷¹⁵ Telecoms.com, 2025. [Openreach tests out Nokia's 50G PON tech](#). Accessed 1 December 2025.

⁷¹⁶ For more detail on Ethernet and WDM see Volume 2, Section 2.

Bandwidths

- 5.40 We conclude that all bandwidths are part of the same product market, based on supply-side substitutability. In response to a small increase in the price of a given bandwidth, we anticipate that a sufficient number of providers of leased lines at different bandwidths would be willing and able to substitute their current supply for leased lines of that bandwidth in a sufficiently timely manner such as to make a SSNIP by a hypothetical monopolist of a given bandwidth unprofitable.
- 5.41 Where a provider is offering point-to-point leased lines, it is equally able to supply all bandwidths, and so able to switch between them at low cost and quickly in response to a small increase in the price of a given bandwidth. This is because:
- a) The equipment used to supply point-to-point leased lines scales easily up to 100 Gbit/s, and some providers can offer 400 Gbit/s without requiring significant additional investment.⁷¹⁷ Therefore, where a telecoms provider has an existing connection to the customer site, it can be used to provide the full range of leased line bandwidths. We note that in practice most providers offering point-to-point leased lines offer a range of different leased line bandwidths.
 - b) Where a telecoms provider is not already connected, it will need to extend its network in order to connect to an end-user site. For any customer-specific network extension, the provider will have the same ability to supply any bandwidth. In addition, based on the available data, in the March 2025 Consultation, we found that the digging behaviour was broadly similar for different bandwidths.⁷¹⁸ This suggests that there is no significant difference in either the propensity of providers to extend their networks for different bandwidths, or in the distances that providers are willing to extend their networks for different bandwidths. We therefore would not expect nearby networks to act as a greater constraint for one type of bandwidth than another.⁷¹⁹
- 5.42 We acknowledge that some leased line customers may have greater demand for higher bandwidth services. For example, MNOs tend to have greater demand for higher bandwidth services, which is likely to grow over time as 5G rollout continues.⁷²⁰ However, given we find that there is supply-side substitutability between different bandwidths, we do not consider it necessary for us to come to a view on the demand-side considerations, that is to say, whether leased line services of different bandwidths are substitutable from a customer's perspective.

⁷¹⁷ See [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted], [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted], [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted] and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] noted that supplying higher bandwidths of leased line may also require additional investment in backhaul capacity. See [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁷¹⁸ See Annex 5.

⁷¹⁹ We note that providers' actual decisions on extending their networks will reflect the prevailing prices and margins of different bandwidths, which may not reflect the competitive price levels relevant for the SSNIP test.

⁷²⁰ See Volume 2, Section 2.

5.43 Overall, therefore, we conclude that all bandwidths are part of the same product market. We note that several stakeholders supported this conclusion in their consultation responses.⁷²¹

Dark fibre

5.44 We conclude that dark fibre is part of the same product market based on supply-side substitutability:

- a) Dark fibre services can be used to offer a full range of leased line bandwidths because the customer uses its own equipment to determine the bandwidth.
- b) Where networks are already connected to an end-user site, they would be able to switch between supplying dark fibre and LLA services sufficiently quickly and at minimal cost.
- c) Where networks are not already connected, dark fibre providers are equally able to supply LLA services as any other supplier, as the incentives to extend their networks will be broadly similar for both types of services.

5.45 In practice, we understand that the main dark fibre providers also supply active products.

5.46 We disagree with INCA that dark fibre should be excluded from the LLA market. We recognise INCA's point that some customers have limited expertise to consume dark fibre. We also acknowledge that demand for dark fibre can vary depending on the type of customers.⁷²² However, given that we find that there is supply-side substitutability between dark fibre and LLA services (which other stakeholders agreed with)⁷²³, we do not consider that differences in demand from different leased line customers imply a significant difference in competitive conditions for supplying to different customer groups. Given this, we would expect that applying a SSNIP to Ethernet pricing would cause sufficient switching to dark fibre making the price increase unprofitable.

Ethernet over symmetric PONs (such as XGS-PON)

5.47 As set out in Section 2 of this volume, we expect that for many leased line customers, the key service features will be symmetry of upload and download speeds, uncontended capacity, which is not subject to significant fluctuations, and the continuity and reliability of the service. In addition, quality of service parameters such as fast repair times and continuous monitoring and support to ensure outages are quickly resolved are important.

5.48 As discussed in the March 2025 Consultation, these features can be offered on a comparable basis by Ethernet over symmetric PONs (such as XGS-PON) for bandwidths typically less than or equal to 1 Gbit/s (as explained in below).⁷²⁴ If a service has these

⁷²¹ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. [VMO2](#) response to TAR26 March 2025 Consultation. Page 28. Paragraph 98. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 37. Paragraph 48. [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.9.

⁷²² For example, Three prefers to use dark fibre compared to active leased lines where possible. See Hutchison 3G UK Limited response dated 9 August 2024 to s135 notice dated 8 July 2024, questions A2a, A2bii, A2c.

⁷²³ Including CityFibre, VodafoneThree and VMO2, and discussed in paragraph 5.9.

⁷²⁴ There are use cases of higher speed PONs (e.g. 25G-PON and 50G-PON) that can offer higher uncontended capacity without requiring a point-to-point leased line connection. For example, Ogi offers symmetric business connectivity over 25G-PON which has the capability to offer 2 x 10 Gbit/s symmetrical and uncontended services. [Ogi](#) response to TAR26 March 2025 Consultation. Leased Line Access. We also understand that the use of 50G-PON is currently limited and mainly in use in China. FDM/CCS Insight. [Growing Adoption of 50G-PON in Enterprise and Consumer Segments](#). Accessed 7 January 2026.

features, we consider it to be equivalent to a leased line service from a customer perspective.

- 5.49 To determine whether these services should be included within the same product market, we considered whether a SSNIP by a hypothetical monopolist of all point-to-point leased lines would be profitable. In other words, whether a sufficiently large number of leased line customers would switch to Ethernet over symmetric PONs (such as XGS-PON). To inform this, we have considered the following:
- a) First, we assess the current and expected commercial use of this technology. A low commercial usage might suggest that this technology is unlikely to meaningfully constrain a hypothetical monopolist of all point-to-point leased lines.
 - b) Secondly, we assess the extent to which LL-equivalent services are substitutable with point-to-point leased lines.

Current and expected use of LL-equivalent services

- 5.50 As set out above and discussed in our March 2025 Consultation, we understand that some providers are currently providing LL-equivalent services, which have similar quality of service parameters to existing point-to-point leased line services. These providers can offer uncontended capacity services on symmetric PON by ‘ringfencing’ part of the shared capacity for a particular end-user, to whom the capacity appears uncontended.⁷²⁵
- 5.51 The evidence indicates that there is sufficient current and potential future usage of LL-equivalent services to suggest that these are technologically and commercially tested services.⁷²⁶
- 5.52 For example, evidence gathered both prior to and since the March 2025 Consultation indicates that:
- a) CityFibre is providing some of its services for leased line customers over its full-fibre network, which is currently based on XGS-PON.⁷²⁷ Going forward, CityFibre intends to typically provision services for all leased line customers over this full-fibre network.⁷²⁸ This includes services which offer a 1 Gbit/s symmetric bandwidth and uncontended (guaranteed) capacity, with the same quality of service parameters (such as fast repair

⁷²⁵ See Annex 2, Overview of telecoms networks. Paragraphs A2.40 and A2.41.

⁷²⁶ For convenience and to avoid unnecessary repetition, we set out this evidence in more detail in the geographic market definition section. As noted above, some of the evidence that we have collected and analysed as part of our product market definition assessment is also the part of the evidence base used to undertake our geographic market definition and our SMP assessments. This is because: (i) the evidence base is drawn from the same information gathering processes. Between May 2024 and October 2025, we issued information notices related to our analysis of the LLA market. In total, this involved asking around 100 different questions to around 50 different stakeholders, resulting in over 1,000 responses to individual questions; and moreover (ii) all of these assessments need to examine evidence regarding competitive conditions, albeit with different purposes. For product market definition, it is with a view to conducting the hypothetical monopolist test. For geographic market definition, it is with a view to assessing areas where the conditions of competition are sufficiently homogeneous (and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different). For the SMP assessment it is to assess whether, within each of the geographical areas, competitive conditions are indicative of SMP such that ex ante regulation is necessary over the review period.

⁷²⁷ CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 1a.

⁷²⁸ CityFibre Infrastructure Holdings Limited response dated 20 August 2024 to s135 notice dated 8 July 2024, questions A3a and A4d.

times), and priced the same as, its 1 Gbit/s point-to-point leased line services.^{729 730} In its March 2025 Consultation response, CityFibre said that these XGS-PON based services are indistinguishable from traditional leased line services from a customer perspective.⁷³¹

- b) ITS's FibreBright services can be delivered over its XGS-PON and point-to-point.⁷³² When delivered over its XGS-PON or point-to-point, it offers symmetric bandwidth,⁷³³ guaranteed capacity services and includes a 5-hour fix time and continuous support.⁷³⁴
- c) nexfibre intends to launch business services over its XGS-PON during the review period including a service that offers a guaranteed 1 Gbit/s symmetric bandwidth and with quality of service parameters comparable to existing leased line providers in the market. VMO2 will provide a sales channel for nexfibre for these services.⁷³⁵

5.53 Consistent with the above evidence, we note that:

- a) historical volumes indicate that the number of customers using these services has increased since LLA network providers first adopted LL-equivalent products in their product portfolio.⁷³⁶
- b) some wholesale customers are using or planning to use providers that are able to offer services over XGS-PON networks to deliver leased lines. For instance, ITS has relationships with both Sky and PXC.^{737 738}

5.54 The above examples illustrate that – while not all providers are offering large volumes of LL-equivalent services – LL-equivalent services are being increasingly used to offer business

⁷²⁹ CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, questions 1a, 1b, 1d, 1e.

⁷³⁰ For the purpose of this Statement, we consider CityFibre's Ethernet Flex 1Gbit/s product to be a LL-equivalent service due to its features including a symmetric 200 Mbit/s ringfenced capacity, and additional quality of service features such as 24/7 monitoring and support, high availability, and 5-hour repair time. This forms part of CityFibre's LL-equivalent portfolio of products which include an Ethernet Over XGS-PON 500 product (with symmetric 500 Mbit/s ringfenced capacity) and Ethernet over XGS-PON 1 Gbps product (with symmetric 1 Gbit/s ringfenced capacity) both of which also deliver the additional quality of service features mentioned above. CityFibre response dated 5 February 2026 to our clarification question dated 27 January 2026 concerning the s135 notice dated 23 June 2025, question D1.

⁷³¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Response to question 2.9.

⁷³² ITS Technology Group Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 1a.

⁷³³ ITS Technology Group Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 1a.

⁷³⁴ ITS Technology Group Limited response dated 7 January 2026 to our clarification question dated 12 December 2025 concerning the s135 notice dated 23 June 2025, question D1.

⁷³⁵ nexfibre response dated 27 January 2026 to our clarification question dated 19 January 2026 concerning the S135 notice dated 23 June 2025, question D1. It also intends to offer point-to-point leased lines and dark fibre during the review period. nexfibre response dated 19 February 2025 to s135 notice dated 10 February 2025, question 2.

⁷³⁶ Between December 2024 and June 2025, the number of customers using LL-equivalent products from [redacted] increased [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. Similarly, the number of [redacted] customers increased [redacted] between March 2021 and September 2025. [redacted] response dated [redacted] to our clarification question dated [redacted] concerning the s135 notice dated [redacted], question [redacted].

⁷³⁷ For example, at the time of our March 2025 Consultation data collection, Sky was expecting to use ITS to deliver leased lines, and these could be provided over ITS' XGS-PON. See Sky UK Limited response dated 19 August 2024 to s135 notice dated 8 July 2024, question A3 and Sky UK Limited response dated 21 February 2025 to s135 notice dated 10 February 2025, question 1a.

⁷³⁸ PXC is currently taking leased line circuits from ITS. See PXC response dated 12 February 2025 to s135 notice dated 10 February 2025, question 1c.

connectivity akin to traditional leased lines. This is expected to continue over the review period. For this reason, we disagree with VodafoneThree that LL-equivalent services delivered over XGS-PON are untested and do not have a widespread commercial use.

- 5.55 Based on the above discussion, we also consider that LL-equivalent services delivered over XGS-PON can be differentiated from business-grade broadband services.⁷³⁹ This differentiation is such that we consider business-grade broadband services delivered by WLA networks to be a poor substitute to LL-equivalent services. This is due to the additional service features that LL-equivalent offer which are comparable to features typically offered with point-to-point services. For this reason, we disagree with VodafoneThree who suggested that FTTP-based services are only an extension of the broadband market.⁷⁴⁰
- 5.56 Lastly, we agree with VodafoneThree that LLA providers offering customers uncontended capacity over XGS-PON reduces the bandwidth available for other users on the same PON. We also agree that most XGS-PON deployments may be designed for shared contended broadband delivery. However, the widespread commercial use of this technology indicates LLA service provider offering to provision a new customer extension over a PON are aware of this trade-off and what this means for other existing or future customers served over the same PON.⁷⁴¹

Substitutability of traditional LL with LL equivalent services

- 5.57 As we discussed in our March 2025 Consultation, LL-equivalent services do not replicate every feature of a point-to-point leased line.
- 5.58 For example, as TechUK suggests, some leased line customers require dedicated point-to-point circuits due to their business requirements. For example, for security or capacity reasons. We recognise that because the fibre itself is not dedicated (even if the provider has guaranteed the capacity of the service offered to the customer), it might not offer the same degree of security. This also suggests that LL-equivalent services do not meet the connectivity requirements of all potential and current leased line users.
- 5.59 As Vorboss highlighted in its response, we also recognise that as of today, these services will not be a substitute for point-to-point leased lines at all bandwidths. The uncontended capacity which can be offered on any symmetric PON (such as XGS-PON) will be limited by the type of PON technology installed. It will be also below the headline bandwidth of that PON technology. An XGS-PON can be configured to offer multiple 1 Gbit/s symmetric bandwidth services with uncontended capacity, but it is not possible to deliver a 10 Gbit/s service with uncontended capacity over XGS-PON.⁷⁴²

⁷³⁹ These services typically only offer asymmetric speeds (i.e. the upload speed is different to the download speed), contended capacity, which is not guaranteed and / or do not have comparable quality of service parameters.

⁷⁴⁰ More specifically, VodafoneThree suggested that FTTP-based services, including those delivered over e.g. XGS-PON (which we would refer to as LL-equivalent, in specific circumstances, as explained in paragraphs 5.47 and 5.48 above), are only an extension of the broadband market for customers who do not require guaranteed performance, dedicated capacity or high service assurance.

⁷⁴¹ We expect this to require careful network management for the LLA provider to (i) continue to offer uninterrupted and uncontended symmetric service to its leased line customers and (ii) serve its other potential customers as per its existing customer agreements.

⁷⁴² See Annex 2, Paragraph A2.41. It may be possible to offer intermediate bandwidths such as 2 Gbit/s, 3 Gbit/s or 5 Gbit/s, but it will not be possible to offer 10 Gbit/s. PON technology shares capacity among multiple end-users, rather than providing a dedicated point-to-point service.

- 5.60 As such, LL-equivalent services might not be directly substitutable for leased line customers that require 10 Gbit/s or higher bandwidth services (such as MNOs). However:
- a) From a bandwidth perspective, the majority of demand for leased line services could be supported by symmetric bandwidth services with uncontended capacity over XGS-PON. Currently around 90% of leased lines are 1 Gbit/s or less. We expect that the majority of circuits will remain at 1 Gbit/s or less by the end of the review period.⁷⁴³
 - b) A provider delivering services over XGS-PON could install a dedicated point-to-point connection (which could either be an active leased line service or dark fibre) to deliver a 10 Gbit/s service with uncontended capacity where the customer requires it. For example, we understand that in practice, ITS delivers lower bandwidth symmetric uncontended leased line services over XGS-PON (e.g. 5 Gbit/s and below). We also understand that for higher bandwidths (e.g. 6-10 Gbit/s) and/or dark fibre, these are delivered through a point-to-point connection.⁷⁴⁴ In addition, CityFibre has indicated that it will continue to consider provisioning point-to-point dark fibre services across its full-fibre network.^{745 746}
 - c) As VMO2 noted in its response, a provider delivering services over XGS-PON can have a clear upgrade path on their PON as bandwidth demand grows. By leveraging the existing fibre infrastructure, they could migrate to higher-speed PON technologies such as 25G-PON or 50G-PON. We expect the incentive to undertake this upgrade will grow as demand for higher bandwidths grows.^{747 748 749}

5.61 In line with the above evidence, one provider ([redacted]) also highlighted the potential competitive threat to its existing leased line business from other providers deploying XGS-PON and noted [redacted].⁷⁵⁰

5.62 For the reasons discussed in this section, while we expect that LL-equivalent services will not be a substitute for point-to-point leased line services for all leased line customers, we consider that they are a suitable substitute for many business customers who require a lower bandwidth leased line service.

Conclusion

5.63 We disagree with TechUK, Vorboss and VodafoneThree that services delivered over XGS-PON should be excluded from the LLA market. We also disagree with views expressed by AllPoints Fibre, PXC, TechUK, VodafoneThree and Vorboss that point-to-point leased lines

⁷⁴³ See Volume 2, Section 2.

⁷⁴⁴ See ITS Technology Group Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, questions 1a and 1d.

⁷⁴⁵ See CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 3.

⁷⁴⁶ We also understand that nexfibre intends to offer point-to-point leased lines and dark fibre during the review period. Nexfibre Networks Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 2.

⁷⁴⁷ PON technologies capable of supporting these higher bandwidths (such as 25G-PON or 50G-PON) are still at a relatively early stage of development and adoption. These technologies will need to undergo further testing and deployment at scale.

⁷⁴⁸ For example, we believe a provider is likely to be able to offer 10 Gbit/s services with uncontended capacity over a 25G-PON or 50G-PON. Some providers may update their PON technologies in this market review. Ofcom. September 2023. [Evolution of fixed access networks](#). Figure 5: PON standards evolution.

⁷⁴⁹ Telecoms.com, 2025. [Openreach tests out Nokia's 50G PON tech](#). Accessed 1 Dec 2025.

⁷⁵⁰ See [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

and Ethernet services over symmetric PONs (such as XGS-PON) are not competitive constraints on each other.

- 5.64 For the LL-equivalent products to be a competitive constraint on Openreach it does not need to be a substitute for all customers. It needs to be a substitute for enough customers that a SSNIP is unprofitable. As most current and forecast leased line connections are for 1 Gbit/s or less we consider that LL-equivalent products will impose a sufficient constraint and should be included in the LLA market.
- 5.65 We also expect that over the review period, existing LL-equivalent providers will sell more of these services and other service providers may launch their planned LL-equivalent services. This may also include upgrades to higher-speed PON technologies such as 25G-PON or 50G-PON which would allow providers to offer LL-equivalent services of higher bandwidths to customers.
- 5.66 We consider this will allow the technology to be tested further. It also has the potential to increase the commercial appeal and adoption of these services, further strengthening the constraint XGS-PON based services provide on point-to-point leased line services.
- 5.67 In light of this, we consider that a SSNIP in point-to-point leased lines (of equivalent capacity) would be unprofitable. We expect that – over the review period – a sufficiently large number of leased line customers are likely to consider LL-equivalent services as reasonable substitutes to traditional leased lines and so would switch to these services in response.
- 5.68 We therefore conclude that services with features such as uncontended capacity, symmetric download and upload speeds, and quality of service parameters similar to point-to-point leased line services (e.g. fast repair times compared to WLA services) delivered over symmetric PON (such as XGS-PON) should be included within the product market.⁷⁵¹
⁷⁵²
- 5.69 We disagree with Openreach that we should go further and include GPON based services in our product market definition.⁷⁵³ While we recognise that it may be technically possible to provide a symmetric service over GPON, its suitability to deliver material volumes of LL-equivalent services in the 100 Mbit/s to 1 Gbit/s range is limited, given its lower capacity than XGS-PON. Therefore, its practical use as a LL-equivalent substitute for point-to-point leased lines is likely to remain limited over the review period.
- 5.70 Notwithstanding this view, below we assess the extent to which business-specific broadband services – including those delivered over GPON – are likely to constrain a hypothetical monopolist of all leased line services. We do so to assess whether the product market should be widened to include services provided by WLA networks.

⁷⁵¹ We consider that where an XGS-PON based connectivity service does not offer a service level agreement equivalent to what leased line market customers typically require, we would expect these services to be out of our defined LLA product market. Services provided over XGS-PON which do not meet these requirements are part of the WLA market (see Volume 2, Section 4).

⁷⁵² INCA and WightFibre suggested that point-to-points network should be included in our LL-equivalent description. We do not consider this is necessary as point-to-point networks are by definition already included in the LLA product market definition.

⁷⁵³ GPON has a downstream capacity of 2.5 Gbit/s and upstream capacity of 1.25 Gbit/s. See Volume 2, Section 2). By way of comparison, symmetric PONs e.g. XGS-PON have 10 Gbit/s capacity in both the downstream and upstream direction.

Services provided by WLA networks

Ability of WLA networks to provide LLA services

- 5.71 From a supply-side perspective, we have considered whether providers of broadband access services, including those provided over XGS-PON, are able to enter the LLA market at the speed required to constrain a hypothetical monopolist. We have identified a number of reasons why this is unlikely, including because of the high barriers to entry and expansion in the LLA market.⁷⁵⁴
- 5.72 First, these providers would need to invest in their network and operational capability to configure the network so that it can offer features which are needed to compete in the LLA market (discussed above and in Section 2 of this volume) such as uncontended (guaranteed) capacity and quality of service parameters such as fast repair times.⁷⁵⁵ These investments would all be fixed costs which a provider would have to incur before they are able to switch from providing business broadband services to providing any leased lines or LL-equivalent services. Such a configuration will also likely take significant time to complete.
- 5.73 Second, although in the long-run more providers may be willing to incur these costs to enter or develop their services in the LLA market, the evidence indicates⁷⁵⁶ that they are unlikely to be willing and able do so with such speed as to constrain a hypothetical monopolist of all leased line services from being able to undertake a profitable SSNIP.
- a) The majority of broadband access providers who we contacted or obtained information from do not yet offer LLA services and according to the business plans that we have reviewed, have no specific plans to in the review period.
 - b) From the evidence that we have seen, FTTP networks have not been built specifically with LLA demand in mind. That evidence further illustrates that competing in LLA has not been a focus for these networks which may make it more challenging to do so over this review period (if existing networks are less close to demand sites).
 - c) There are high barriers to entry and expansion in the LLA market, which will limit the speed with which an FTTP network could enter the market in response to a SSNIP.
- 5.74 We note that stakeholders, other than Openreach, who commented on whether business broadband should be excluded from the LLA product market definition supported our analysis.

⁷⁵⁴ As discussed above, for convenience and to avoid unnecessary repetition, we set out this evidence in more detail in the SMP assessment section. See footnote 726.

⁷⁵⁵ For example, to offer uncontended capacity (including through backhaul) the provider will need to invest in systems to carry out network configuration and management to keep traffic separate. Additionally, to offer fast repair times, the provider will need to invest in diagnostics and fault management. This requires different repair teams with better tools to locate/fix faults, and may mean a dedicated second line support for business customer service agents.

⁷⁵⁶ We set out this evidence in more detail as part of geographic market definition and SMP assessment. As noted above, some of the analysis and evidence underlying our product market definition assessment may also underpin our geographic market definition and SMP assessment. This is because, albeit with a different purpose, all these assessments will need to examine competitive conditions. Product market definition with a view to conduct the hypothetical monopolist test, geographic market definition with a view to determining geographic areas where competitive conditions are sufficiently similar and the SMP assessment with the aim to assess whether, within each of these geographical areas, competitive conditions are indicative of SMP such that ex ante regulation is necessary over the review period.

Business broadband as a substitute for LLA

- 5.75 We recognise that business-specific broadband services could be an alternative to leased line services for some users. We also understand that looking forward, quality improvements to full-fibre asymmetric broadband services over time could mean that these services become better able to meet the needs of some leased line customers.
- 5.76 However, the evidence we received from stakeholders ahead of the March 2025 Consultation was mixed, suggesting that, at the time, there was relatively limited switching from leased line services to FTTP broadband services.⁷⁵⁷
- 5.77 In addition, even if we were to see leased line customers replacing their leased lines with business FTTP, this would not necessarily be evidence of a single product market. This is because the upgrade to FTTP means business broadband is now able to deliver some features which previously could only be achieved with a leased line. As a result, we could be seeing a period of adjustment as some leased line customers, for whom a FTTP-based product would now meet their needs in a way which business broadband was not previously able to, migrate to FTTP-based broadband products. However, this is not informative of substitutability for those who still need and value the distinct features of leased line products, who continue to purchase these services.
- 5.78 Consistent with this, the evidence⁷⁵⁸ and examples submitted by Openreach⁷⁵⁹ seem to suggest some customers might be replacing their leased lines with business FTTP as it now meets their need, rather than because it is a substitute for those who need and value the specific characteristics of leased lines.⁷⁶⁰
- 5.79 Beyond this, we have not received evidence to suggest that switching from leased lines to FTTP broadband services is occurring currently to the extent that would support us concluding that these two uses are substitutable with each other. It also does not suggest that there would be sufficient switching in response to a SSNIP to justify widening our product market definition.
- 5.80 Over this review period, we expect broadband and leased line services to continue to have distinct features. In particular, broadband services (including those offered over GPON) cannot offer many of the characteristics of leased lines. This is because broadband services are asymmetric (meaning the upload speed is much lower than the download speed) and contended (and so capacity is not guaranteed). Leased line services also tend to be

⁷⁵⁷ For example, BT/EE provided evidence that [redacted] have switched from leased lines to FTTP in each of the three years from March 2022 to March 2024, accounting for [redacted]% of the total leased line connection ends. BT/EE response dated 16 August 2024 to s135 notice dated 8 July 2024, question A8. Sky said it had [redacted] moving from a leased line connection to an FTTP connection in the years stated. Sky response dated 19 August 2024 to s135 notice dated 8 July 2024, question A4. ITS said that it had observed [redacted] switching from Openreach-delivered leased lines to ITS contended business products at bandwidths up to 1Gb. ITS response dated 5 August 2024 to s135 notice dated 8 July 2024, question B3c.

⁷⁵⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 47-49.

⁷⁵⁹ Openreach's examples included: firstly, [redacted]. Secondly, Fibrus winning the Full Fibre Northern Ireland contract to connect approximately 1,000 public sector sites exclusively over FTTP networks. The Glide Group ISP expanding their FTTP network primarily to service SMEs. Thirdly, the Glide Group ISP announcing an expansion of their FTTP network primarily to serve SMEs in addition to their current focus on high-density residential premises. Openreach confidential response to TAR26 March 2025 Consultation. [redacted].

⁷⁶⁰ We also note that the evidence submitted by Openreach has limitations. For example, its evidence suggesting that business FTTP is consistently cheaper than leased lines may in fact indicate that these two categories of services fall within different markets.

significantly more expensive than broadband services (as the costs are not shared across many users).⁷⁶¹

- 5.81 Therefore, although we recognise there may be some switching from leased lines to FTTP business broadband services, we consider that the evidence available does not suggest that there is a sufficient amount of switching for business broadband to be considered a substitute. Customers who buy leased lines continue to need and value the distinct features of leased lines which are expected to persist in the review period (discussed above and in Section 2 of this volume). In particular, those business customers who are willing and continue to pay the high prices for a leased line are likely to be doing so due to its non-price characteristics, meaning they are unlikely to consider the cheaper broadband services as a close substitute.
- 5.82 Therefore, from a demand-side perspective, broadband services are not a sufficiently close substitute to leased line services to warrant inclusion in the same product market.
- 5.83 Having considered the feedback from stakeholders and all evidence we have, we conclude that connectivity services provided by WLA networks are not part of the relevant product market. However, as part of the SMP assessment we consider the extent to which connectivity services provided by WLA networks can act as an out-of-market constraint to BT's market power.

Wireless technologies

- 5.84 Some business customers may use wireless alternatives to fixed connections for some of their services. However, we consider that this is likely to be for a limited set of use cases, and mainly where fixed connections are not available. Overall, we consider that wireless services, including fixed wireless access (FWA) services, satellite connectivity and point-to-point wireless links (including microwave links) used to provide mobile backhaul, should not be included in the product market, for the reasons set out below.

FWA services

- 5.85 Some business customers may use FWA services instead of leased lines, especially in rural areas. However, in general, leased line customers tend to demand higher bandwidths, uncontended capacity, and higher quality of service parameters than broadband customers.⁷⁶² Although 5G FWA services may be capable of providing services with higher bandwidths and, in some cases, uncontended capacity during the review period, we expect that leased line customers are unlikely to be willing to switch to FWA services where leased lines are available, as leased lines provide a greater guarantee of bandwidth and service quality (including guarantees on high availability, continuous monitoring and support, and fast repair and installation times).
- 5.86 Further, we expect that some leased line customers may use these services as backups (i.e. complements) to their fixed connectivity, rather than as substitutes. As discussed in Section 4, there may also be capacity constraints which would prevent FWA operators from being able to supply a service of sufficient quality to a sufficiently large number of customers in response to a SSNIP for all LLA services to make such a SSNIP by a hypothetical monopolist unprofitable.

⁷⁶¹ For example, see Volume 2, Section 2.

⁷⁶² We note for completeness that in Section 4 of this volume, we find that FWA is unlikely to be a substitute for fixed broadband for a sufficiently large number of broadband customers in response to a SSNIP of fixed broadband services.

Satellite connectivity

5.87 Some MNOs and large business customers may use satellite connectivity services instead of leased lines.⁷⁶³ It is possible that over time, as technology advances, the capability of these satellite-based solutions will improve. However, as with other wireless services, satellite-based solutions will also have limitations such as lower capacity and higher latency compared to fibre-based leased line services or even to point-to-point fixed wireless links.⁷⁶⁴ These services appear to be used either as temporary solutions,⁷⁶⁵ or where fibre is too expensive.⁷⁶⁶ Further, we expect that some leased line customers may use these services as backups (i.e. complements) to their fixed connectivity, rather than as substitutes. We therefore do not expect that a sufficiently large number of leased line customers would switch to satellite-based services in response to a SSNIP for all LLA services to make such a SSNIP by a hypothetical monopolist unprofitable.

Point-to-point wireless links (including microwave links)

5.88 MNOs use point-to-point wireless links (including microwave links) for backhaul.⁷⁶⁷ However, as we explain in Annex 2, compared to a leased line, these wireless links have some limitations, such as lower capacity compared to fibre based backhaul, and requirement for Line of Sight (LoS) connectivity. Further, MNOs have indicated that they have fibre first strategies, and that they only used point-to-point wireless links where fibre was unavailable, impractical or uneconomic.⁷⁶⁸ Looking forward, we expect demand for higher capacity mobile services to increase (especially with the continuing deployment of 5G). Given the lower capacity of point-to-point wireless links (including microwave links) compared to fibre-based backhaul, this is likely to further reduce the effectiveness of these links for mobile backhaul. We therefore expect point-to-point wireless links (including microwave links) would only be used to fill gaps where demand for capacity is lower and it is not cost-effective or practical to use fibre. As such, we would not expect sufficient switching in response to a SSNIP to justify widening our product market definition to include point-to-point wireless links (including microwave links).

5.89 We therefore conclude that wireless services should not be included in the LLA product market. We note that VMO2 agreed with this position. In response to a comment from the Welsh Government, we recognise that in many areas fixed connections in rural areas are not available and that wireless remains, in some cases, the only available broadband service. While, as discussed above, wireless technologies are unlikely to provide an effective constraint on leased lines in a sufficient number of cases, they are likely to play an important role in addressing the needs of the hardest-to-reach areas.

⁷⁶³ Avanti. [Extending EE's 4G network - Avanti Communications](#). Accessed 4 March 2025. Virgin Media O2. 16 April 2024. [Mobile coverage that's out of this world: Virgin Media O2 looks to Space to boost signal in rural areas - Virgin Media O2](#). Accessed 6 March 2026. Analysys Mason. 26 April 2024. [Satellite is a cost-effective means for MNOs to reach remote customers](#). Accessed 6 March 2026. OneWeb offers business-to-business (B2B) services using NGSO-based satellite broadband. Ofcom. 5 December 2024. [Connected Nations 2024](#).

⁷⁶⁴ See Annex 2, Overview of telecoms networks.

⁷⁶⁵ [3<] uses [3<] for temporary backhaul for remote mobile cell sites. [3<] response dated [3<] to s135 notice dated [3<], question [3<].

⁷⁶⁶ Virgin Media O2. 16 April 2024. [Mobile coverage that's out of this world: Virgin Media O2 looks to Space to boost signal in rural areas - Virgin Media O2](#). Accessed 11 March 2026.

⁷⁶⁷ See Volume 2, Section 2.

⁷⁶⁸ Ofcom. September 2024. [Review of the use of fixed wireless links and spectrum implications](#). Paragraphs 2.10 and 2.18.

IEC services

- 5.90 IEC services typically use similar products to those in the LLA market (i.e. leased lines and dark fibre), but they are not used for access services. Instead, IEC circuits carry aggregated end-user traffic between specific points of aggregation (BT exchanges) located in geographically separate access areas and do so over larger distances.
- 5.91 As set out in Section 6 of this volume, we consider that this different purpose of IEC services, compared to LLA services, leads to a difference in competitive conditions. We did not receive any evidence from stakeholders in response to our March 2025 Consultation that contradicted our consultation position. We therefore conclude that IEC services are in a separate market to LLA services.

Mobile backhaul

- 5.92 As detailed above, in its response to the March 2025 Consultation, Openreach suggested that mobile backhaul should be treated as a separate market due to differences in supply and demand side conditions.
- 5.93 As discussed in the March 2025 Consultation and in the WFTMR 2021 Statement, we recognise that there may be differences between MNOs and other customers in their demand for leased line access services.^{769 770} For example, the evidence suggests that MNOs are more likely to use higher bandwidth services compared to leased line users generally. They also require nationwide and multi-site coverage (although we note that these specific demand characteristics may not be unique to MNOs).^{771 772}
- 5.94 However, we note that MNOs are not the only type of customer with a requirement for nationwide and multi-site coverage or higher security standards and resilience, as other large corporations may also particularly value these aspects.
- 5.95 Moreover, we continue to believe that potential demand-side differences between MNOs and other customers are not sufficient to indicate a separate product market. This is because:
- a) While MNOs may have a preference for higher bandwidth services (including dark fibre), these products are technically equivalent to a standard leased line. As set out above, we consider them to be part of the LLA product market as providers can supply any bandwidth. Furthermore, the majority of circuits used by MNOs remain at 1 Gbit/s or below.⁷⁷³
 - b) Moreover, even where customers may need to purchase LLA circuits across a wide geographic area (e.g. in the case of MNOs, nationwide), this may not all need to be purchased from a single supplier. In fact, the evidence suggests that many of the MNOs procure their leased line access services from more than one provider, including VMO2, CityFibre and Colt.⁷⁷⁴ This suggests that MNOs' nationwide coverage requirement would not necessarily preclude sub-national providers from competing for MNOs contracts.

⁷⁶⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Page 29. Paragraph 2.88.

⁷⁷⁰ Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Page 36. Paragraph 2.105.

⁷⁷¹ For example, other customers also have demand for higher bandwidths and multiple circuits.

⁷⁷² See Volume 2, Section 2.

⁷⁷³ See Volume 2, Section 2.

⁷⁷⁴ For example, we understand that Vodafone and Three use more than one provider for mobile backhaul. Three told us it uses multiple providers for mobile backhaul, while Vodafone told us it uses a small number of

- c) In addition, the evidence obtained for the March 2025 Consultation indicates that some LLA providers who are currently not provisioning any / many lines to MNOs would be able to and / or may consider bidding for these contracts in the future.⁷⁷⁵

5.96 Therefore, while we recognise there are variations between customers from a demand-side perspective, these are not sufficient to indicate a separate product market. In particular, we consider that supply side considerations mean there would be sufficient supply-side substitutability to make a SSNIP unprofitable. As such we include mobile backhaul in the LLA product market.

Our conclusions on product market definition

5.97 We conclude that there is a single product market for LLA services which includes:

- a) all wholesale fibre-based Ethernet and WDM services, at all bandwidths;
- b) LL-equivalent services delivered over symmetric PON (e.g. XGS-PON);⁷⁷⁶ and
- c) dark fibre used to supply or self-supply leased line services.

5.98 We conclude that the product market for LLA services excludes⁷⁷⁷:

- a) broadband services;
- b) wireless technologies (including FWA, satellite and point-to-point wireless links (such as microwave links) used to provide mobile backhaul); and
- c) IEC services between BT exchanges.

Geographic market definition

5.99 In this section we set out the evidence, analysis and reasoning for our approach to defining the geographic markets within the leased line access (LLA) market, as well as the results of our modelling of the boundaries of those markets. In Annex 5 we discuss in more detail our methodology for assessing LLA network coverage.

5.100 This section includes:

- a) A summary of the proposals we set out in the March 2025 Consultation and November 2025 Further Consultation;
- b) Stakeholder responses to our proposals;

providers for mobile backhaul outside of its own capabilities. See Hutchison 3G UK Limited response dated 9 August 2024 to s135 notice dated 8 July 2024, questions A1 and A3 and Vodafone Limited response dated 15 August 2024 to s135 notice dated 8 July 2024, questions J1 and J3.

⁷⁷⁵ For example, in response our formal information requests some of the existing network operators indicated that they could or considered offering mobile backhaul. For example, [redacted] provided a report it had commissioned that recommended it provides dark fibre for mobile backhaul in Area 2. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] indicated that it had been in talks with [redacted] to provide dark fibre connectivity [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁷⁷⁶ By 'leased line equivalent' we mean services with features such as uncontended capacity, symmetric download and upload speeds, and quality of service parameters similar to point-to-point leased line services (e.g. fast repair times compared to WLA services).

⁷⁷⁷ As detailed in Annex 5, consistent with our position from past reviews, in the March 2025 Consultation we proposed to exclude legacy products, products not used to connect end-customers and leased lines used for specialist applications such as Broadcast, Street Access and EAD rugged from the LLA product market. We have not received any additional evidence or comments in relation to these services. Therefore, we remain of the view that they should be excluded from the LLA product market.

- c) The evidence and reasoning we have used to support our decisions for the LLA geographic market definition; and
- d) The application of the three criteria test.

Our proposals

March 2025 Consultation

- 5.101 In the March 2025 Consultation, we proposed to define three geographic markets for the LLA market:
- the High Network Reach (HNR) Area: postcode sectors where, due to presence of at least two current material and sustainable competitors, there is sufficiently well-established competition to BT in the commercial deployment of competing networks;
 - LLA Area 2: postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks; and
 - LLA Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.⁷⁷⁸
- 5.102 We considered that not all providers of LLA would have the ability or the potential to exert a material and sustainable constraint on BT in this review period. We provisionally considered that:
- a) All leased-line only providers exert a material and sustainable constraint in LLA;
 - b) VMO2 exerts a material and sustainable constraint; and
 - c) CityFibre has the potential to exert a material and sustainable constraint.⁷⁷⁹
- 5.103 We proposed to define markets primarily by reference to the presence of these current or potential material and sustainable competitors in particular areas, as we considered that this would lead to geographic differences in competitive conditions.⁷⁸⁰ In the March 2025 Consultation, we provisionally found that, as a proportion of all UK postcode sectors (excluding the Hull Area), the HNR area accounted for 9%, Area 2 for 42%, and Area 3 for 46%.⁷⁸¹
- 5.104 We also noted that we had previously found the Central London Area (CLA) to be effectively competitive and it did not form part of our review.⁷⁸²

⁷⁷⁸ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 5.50.

⁷⁷⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 5.95-5.97.

⁷⁸⁰ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 5.51 and 5.70-5.72.

⁷⁸¹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Table 5.1.

⁷⁸² Ofcom. March 2025. Volume 2. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 5.49.

November 2025 Further Consultation

- 5.105 Based on new information and responses we received to our March 2025 Consultation, in November 2025, we published a further consultation on leased lines market analysis and various pricing issues.⁷⁸³
- 5.106 In our November 2025 Further Consultation, we consulted on revised proposals in relation to the buffer distance. This is used to determine whether a provider is ‘within reach’ of a demand site and can compete to supply a leased line, thereby informing our assessment of competitive conditions and the boundaries of our geographic markets. We proposed that:
- a) A buffer distance longer than 50m and up to 100m would be more appropriate as a proxy for network presence when determining the boundaries between LLA Areas 2 and 3. In practice, we considered this would mean setting the buffer distance at 75m or 100m.
 - b) A 50m buffer distance remained an appropriate proxy for network presence when determining the boundaries of the HNR Area.⁷⁸⁴
- 5.107 This reflected new evidence that PIA could have a greater potential impact on providers’ ability to build customer-specific network extensions than we had previously assumed in our modelling.⁷⁸⁵
- 5.108 In response to stakeholder comments on the March 2025 Consultation, in our November 2025 Further Consultation we also clarified our view on the potential impact of altnet consolidation on LLA competitive conditions in this review period. We said that only a subset of possible mergers and acquisitions between players in the WLA market are likely to affect our geographic assessment of competitive conditions in the LLA market. We considered that only transactions involving at least one current or potential material and sustainable competitor in the LLA market would result in an entity likely to have the ability or potential to exert a material and sustainable constraint on BT in the LLA market in this review period.⁷⁸⁶
- 5.109 Additionally, we said that it was uncertain, at that point in time, whether one of these relevant transactions would occur and, if it did, who the merging parties would be such that we could reflect it in our assessment of competitive conditions in the LLA market (as appropriate). Therefore, at the time, these transactions were not expected or foreseeable developments that we could take into account for our LLA geographic market definition.⁷⁸⁷

⁷⁸³ Ofcom. November 2025. [Consultation: Further consultation on leased lines market analysis and various pricing issues - Telecoms Access Review 2026-31](#).

⁷⁸⁴ Ofcom. November 2025. [Consultation: Further consultation on leased lines market analysis and various pricing issues](#). Paragraph 3.47.

⁷⁸⁵ Ofcom. November 2025. [Consultation: Further consultation on leased lines market analysis and various pricing issues](#). Paragraphs 3.49-3.54.

⁷⁸⁶ Ofcom. November 2025. [Consultation: Further consultation on leased lines market analysis and various pricing issues](#). Paragraphs 3.11-3.15.

⁷⁸⁷ Ofcom. November 2025. [Consultation: Further consultation on leased lines market analysis and various pricing issues](#). Paragraphs 3.16-3.17.

Stakeholder responses

Our approach to defining geographic markets in LLA

- 5.110 FCS expressed broad agreement with the markets as provisionally defined in the March 2025 Consultation.⁷⁸⁸ TechUK expressed support for Ofcom’s overall direction on the LLA geographic market definition.⁷⁸⁹
- 5.111 Several stakeholders commented on the alignment between the WLA and the LLA markets. On the one hand, UKCTA and PXC agreed that the WLA and LLA markets should remain separate due to different competitive conditions.⁷⁹⁰ VodafoneThree considered that the updated geographic markets align with market realities.⁷⁹¹ VMO2 agreed with our framework which takes into account the degree to which LLA providers are, or likely to have the potential to be, material and sustainable competitors (but did not agree with its application).⁷⁹²
- 5.112 In contrast, Community Fibre, INCA, Netomnia / Brsk and Openreach considered that the WLA and LLA geographic market boundaries should be aligned. These stakeholders suggested variously that this would improve the opportunity for competition, reduce regulatory complexity, promote regulatory stability, encourage growth and recognise the ability of new full fibre networks to serve both WLA and LLA markets.⁷⁹³
- 5.113 More specifically, Openreach said that our approach does not sufficiently recognise the existing convergence between WLA and LLA market and how this convergence will continue over the next review period. It highlighted the following points:
- a) WLA networks can be used to supply leased lines and leased line equivalent services, and altnets are already providing these services.⁷⁹⁴ Openreach submitted examples of such providers, including Netomnia / Brsk, Hyperoptic, Zzoom, AllPoints Fibre, Community Fibre, Fibrus and Ogi.⁷⁹⁵
 - b) The hurdles WLA networks face in supplying leased lines that Ofcom identified are not significant barriers to expansion. In fact, Openreach submitted that barriers to entry and expansion in the LLA market are not insurmountable for WLA networks, as demonstrated by the WLA providers that also compete in the LLA market.⁷⁹⁶
 - c) Actual take-up of rival offers is likely to be affected by timing, which may explain why leased line sales may take time to filter through. Openreach said that altnets may increase leased line volumes in the next review period when long-term contracts end.

⁷⁸⁸ [FCS](#) response to TAR26 March 2025 Consultation. Page 2.

⁷⁸⁹ [TechUK](#) response to TAR26 March 2025 Consultation. Page 5. Question 2.10.

⁷⁹⁰ [UKCTA](#) response to TAR26 March 2025 Consultation. Page 2. Paragraphs 2-4. [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.3.

⁷⁹¹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 40. Paragraph 58.

⁷⁹² [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraphs 104-114.

⁷⁹³ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [INCA](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 24. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Pages 6-7. [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 32. Paragraph 93. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 48-49. Paragraphs 131-133. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 39-49.

⁷⁹⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 20. Paragraph 36. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 49. Paragraph 134.

⁷⁹⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 58-59. Paragraphs 172-176. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 15-16. Paragraph 25.

⁷⁹⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 38.

Additionally, Openreach has seen an increase in cease rates, which it says may be partly linked to competition from altnets.⁷⁹⁷

- d) Relatedly, Openreach submitted that we have not been sufficiently forward-looking in our approach to smaller altnets who supply leased lines, for example as a result of looking at evidence on historic volumes. Openreach said that this is inconsistent with the approach taken in WLA.⁷⁹⁸
- e) Business FTTP offers a partial substitute for leased lines.⁷⁹⁹

5.114 Openreach said that to correctly capture this convergence we should consider all altnets as relevant LLA competitors - irrespective of consolidation - and therefore maintain our WFTMR21 approach of aligning the boundaries of WLA and LLA geographic markets. In practice, to align market boundaries, Openreach said we should continue to use the WLA model to draw the boundaries between LLA Area 2 and LLA Area 3 thereby ensuring regulatory stability. It also said that, if we must use the Network Reach Model (NRM),⁸⁰⁰ we should improve it to achieve similar results.⁸⁰¹

Identifying actual or potential material and sustainable competitors

5.115 Some stakeholders commented on how we identified actual or potential material and sustainable competitors amongst the providers that specialise in leased lines only, which we refer to as LL-only providers, and those that sell both leased lines and broadband services, which we refer to as multi service networks (MSNs).

Leased line-only providers

5.116 Vorboss disagreed with our proposal that all LL-only providers are material and sustainable competitors given the existence of high barriers to entry and expansion. Vorboss further noted that if we maintain this position, we should set out detailed analysis and evidence as to why this is the case and specify the barriers to entry and expansion in the LLA market that these providers have overcome.⁸⁰²

MSNs

5.117 UKCTA, VodafoneThree and PXC suggested that altnets are unlikely to have the potential to become material and sustainable competitors in LLA in the next review period.⁸⁰³

5.118 Some stakeholders argued that we should include additional MSNs as material and sustainable competitors:

- a) Community Fibre, INCA, and VMO2 submitted that many altnets are planning to enter and expand in LLA in the next review period, and if altnets have not done so yet, then this just reflects a staggered market entry approach.⁸⁰⁴

⁷⁹⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 45-47.

⁷⁹⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Pages 20-21. Paragraph 56.

[Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 28. Paragraph 80. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 45.

⁷⁹⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 49.

⁸⁰⁰ We describe the network reach modelling below.

⁸⁰¹ Openreach made a number of criticisms to the use of the NRM. These are summarised below.

⁸⁰² [Vorboss](#) response to TAR26 March 2025 Consultation. Page 7.

⁸⁰³ [UKCTA](#) response to TAR26 March 2025 Consultation. Page 3. Paragraph 5. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 47. Paragraph 98. [PXC](#) response to TAR26 March 2025 Consultation. Page 14. Paragraph 3.8. [PXC](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 2.6.

⁸⁰⁴ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 2. [INCA](#) response to TAR26 March 2025 Consultation. Pages 68-69. Paragraphs 266-270. [INCA](#) response to TAR26 November 2025 Consultation.

- b) Openreach considered that Netomnia, Brsk, Community Fibre and Ogi are examples of providers that should be included in our LLA geographic market definition.⁸⁰⁵
- c) Ogi also submitted that it plans to have a greater focus on B2B over the next 4 years.⁸⁰⁶ ITS explained that Community Fibre and Netomnia offer the prospect of material and sustainable competition in LLA.⁸⁰⁷ Openreach also noted that Netomnia has further expanded its business offerings by launching a B2B wholesale platform.⁸⁰⁸ Netomnia also explained that it will be making more intensive use of its MSN over the next review period.⁸⁰⁹
- d) In addition, Netomnia argued that it is both economically plausible and probable that in the next five-year review period, competition will intensify in business connectivity markets in a way not currently evidenced.⁸¹⁰
- e) INCA and Wightfibre submitted that the Isle of Wight should be in Area 2, because WightFibre is a material and sustainable competitor in this area.⁸¹¹

5.119 Openreach suggested that we have not been sufficiently forward looking when considering whether some MSNs are likely to have the potential to be material and sustainable competitors.⁸¹²

5.120 Finally, Openreach said that CityFibre should be considered a current (rather than potential) material and sustainable competitor due to its expanded presence in the Ethernet market and its widely expected role as a major consolidator.⁸¹³

Consolidation

5.121 The responses to the November 2025 Further Consultation indicate general acceptance that some form of altnet consolidation will occur. More specifically, Gigaclear, Openreach and VMO2 agree that some form of consolidation is likely to occur during the review period.⁸¹⁴ GoFibre and some TechUK members agreed that consolidation could influence market dynamics.⁸¹⁵

5.122 On the contrary, VodafoneThree and other TechUK members submitted that FTTP consolidation does not impact the leased lines market.⁸¹⁶

Paragraphs 20-22, 24 and 29. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 30. Paragraph 108.

⁸⁰⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 58-59. Paragraphs 172-176. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 15-16. Paragraph 25.

⁸⁰⁶ [Ogi](#) response to TAR26 March 2025 Consultation. Leased Line Access. Page 5.

⁸⁰⁷ [ITS](#) response to TAR26 November 2025 Consultation. Pages 3-4. Paragraph 12.

⁸⁰⁸ [Openreach](#) response to TAR26 November 2025 Consultation. Page 15. Paragraph 25.

⁸⁰⁹ [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 3.

⁸¹⁰ [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 3.

⁸¹¹ [WightFibre](#) response to TAR26 March 2025 Consultation. Page 6. Paragraph 18. [INCA](#) response to TAR26 November 2025 Consultation. Page 6. Paragraph 21.

⁸¹² [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 6-8.

⁸¹³ [Openreach](#) response to TAR26 November 2025 Consultation. Paragraphs 13-16 and 25.

⁸¹⁴ [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 1. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 171. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 11. Question 3.1.

⁸¹⁵ [GoFibre](#) response to TAR26 November 2025 Consultation. Page 6. [TechUK](#) response to TAR26 November 2025 Consultation. Page 2.

⁸¹⁶ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraphs 16-21. [TechUK](#) response to TAR26 November 2025 Consultation. Page 2.

- 5.123 Some stakeholders agreed with our view that certain consolidation scenarios involving current or potential material and sustainable competitors would have a more material impact on competition:
- a) VMO2 agreed that an acquisition of an altnet by a material and sustainable competitor would have a greater impact on competition than a merger between two small altnets.⁸¹⁷
 - b) Gigaclear said that our proposal that we should only include consolidation involving current or potential material and sustainable competitors in the LLA geographic market definition is appropriate.⁸¹⁸
 - c) [redacted] agreed that consolidation among altnets does not automatically guarantee a material and sustainable competitive constraint.⁸¹⁹
- 5.124 Otherwise, many of the responses to the March 2025 Consultation and November 2025 Further Consultation indicated that we should account for the potential for consolidation in our LLA geographic market definition by including more MSNs as potential material and sustainable competitors:
- a) CityFibre, INCA, Openreach and VMO2 submitted that we should consider MSNs to be material and sustainable competitors in LLA due to consolidation, as we do in WLA.⁸²⁰ Openreach explained that since full fibre networks that offer leased lines are likely to be consolidated, the relevant constraint is the presence of fibre in the ground, not the identity of the company currently controlling the network.⁸²¹
 - b) ITS submitted that consolidation by Community Fibre, Netomnia or other large to mid-sized altnets would create entities that are material and sustainable competitors, because these providers themselves offer the prospect of material and sustainable competition.⁸²²
 - c) Some TechUK members considered that, in certain cases, consolidation between WLA players could accelerate the ability for them to compete in LLA.⁸²³ INCA submitted that larger entities created through consolidation could enter and expand in the LLA market.⁸²⁴
 - d) VMO2 submitted that it is possible that transactions could occur between altnets that are currently not material players in the LLA market and the LL-only providers that we have identified.⁸²⁵

⁸¹⁷ [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Pages 4-5. Paragraph 9.

⁸¹⁸ [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 2.

⁸¹⁹ [redacted] confidential response to TAR26 November 2025 Consultation. Page [redacted].

⁸²⁰ [CityFibre](#) response to TAR26 March 2025 Consultation. Paragraphs 3.41-3.43. [INCA](#) response to TAR26 March 2025 Consultation. Page 74. Paragraph 288. [INCA](#) response to TAR26 November 2025 Consultation, Paragraphs 31-33. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 170. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 31. Paragraphs 110-114.

⁸²¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 57-58. Paragraph 170-171.

[Openreach](#) response to TAR26 November 2025 Consultation. Pages 17-18. Paragraph 34.

⁸²² [ITS](#) response to TAR26 November 2025 Consultation. Pages 3-4. Paragraph 12.

⁸²³ [TechUK](#) response to TAR26 November 2025 Consultation. Page 2.

⁸²⁴ [INCA](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 27.

⁸²⁵ [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Paragraph 12.

- e) Community Fibre and VMO2 submitted that smaller altnets might become more likely to be acquired by material and sustainable competitors due to sequential transactions over the review period.⁸²⁶

5.125 Some stakeholders disagreed with our treatment of uncertainty with respect to consolidation in LLA:

- a) VMO2 considered that we have set the bar for reasonable foresight too high, and that – since both CityFibre and VMO2 have publicly expressed their intent to participate in altnet consolidation - the possibility of consolidation is entirely foreseeable.⁸²⁷ CityFibre submitted that Ofcom fails to recognise the evidence that CityFibre is most likely to be a major consolidator.⁸²⁸ Openreach suggested that the industry trend towards consolidation is strong enough evidence to include MSNs in our geographic market definition.⁸²⁹
- b) Openreach said that by waiting for details of specific transactions before reflecting them in the LLA geographic market definition, Ofcom is not taking a sufficiently forward-looking approach.⁸³⁰
- c) Openreach and VMO2 submitted that our treatment of uncertainty with respect to consolidation in LLA is inconsistent with our approach in WLA.⁸³¹ In addition, in response to our November 2025 Further Consultation, CityFibre and VMO2 said that our approach to consolidation in LLA remains inconsistent with WLA.⁸³²

5.126 Some stakeholders expressed concern that our approach may impact competition or consolidation prospects over the review period:

- a) INCA and ITS considered that by not acknowledging the impact of consolidation we may influence the consolidation process itself, as altnets located in the LLA Area 3 market will become less attractive consolidatory targets.⁸³³
- b) VMO2 and some TechUK members said that taking too narrow a view on the potential impact of consolidation could embed current competitive outcomes, and create a risk that areas which are prospectively competitive never become actually competitive during the TAR period.⁸³⁴ INCA also suggested that our approach to consolidation does not provide a competition-friendly regulatory environment.⁸³⁵
- c) CityFibre, Community Fibre, INCA, ITS, Openreach, and VMO2 submitted that this effect could be compounded by the SMP remedies in LLA Area 3.⁸³⁶

⁸²⁶ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 2. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 12.

⁸²⁷ [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 11.

⁸²⁸ [CityFibre](#) response to TAR26 November 2025 Consultation. Paragraph 1.9.

⁸²⁹ [Openreach](#) response to TAR26 November 2025 Consultation. Page 17. Paragraph 32.

⁸³⁰ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 16-17. Paragraphs 28-32.

⁸³¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 30. Paragraph 86. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 31. Paragraph 112.

⁸³² [CityFibre](#) response to TAR26 November 2025 Consultation. Paragraphs 1.5-1.6. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 14. Paragraph 14.

⁸³³ [INCA](#) response to TAR26 November 2025 Consultation. Page 8. Paragraph 30. [ITS](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 15.

⁸³⁴ [TechUK](#) response to TAR26 November 2025 Consultation. Page 2. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 7.

⁸³⁵ [INCA](#) response to TAR26 November 2025 Consultation. Paragraphs 32-33.

⁸³⁶ [CityFibre](#) response to TAR26 November 2025 Consultation. Paragraphs 1.2-1.4. [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 2. [INCA](#) response to TAR26 November 2025 Consultation. Pages 6-7. Paragraph 23. [ITS](#) response to TAR26 November 2025 Consultation. Page 4. Paragraphs 13-14. [Openreach](#)

- 5.127 Gigaclear submitted that Ofcom should adopt a framework that allows for mid-period adjustments if significant mergers occur during the review period.⁸³⁷ Some TechUK members also suggested that the framework should allow for sufficient flexibility to reflect the activities of newly established or merged entities.⁸³⁸
- 5.128 Openreach also suggested that the logic of our proposal on consolidation would lead to overly complex outcomes if CityFibre were to acquire a network, since we did not propose to use CityFibre’s footprint in the HNR boundary calculation.⁸³⁹

Modelling the HNR, LLA Area 2 and LLA Area 3 market boundaries

Use of the network reach model (NRM) across all LLA geographic markets

- 5.129 As discussed above, Openreach suggested that we should align the Area 2 and Area 3 geographic boundaries across WLA and LLA due to the continuing convergence between the two markets. It argued that to do so in practice we should continue to use the WLA model (as we did in WFTMR21) to draw the boundaries between LLA Area 2 and LLA Area 3. However, it said that if Ofcom must use the NRM, we should improve it to achieve a similar outcome.⁸⁴⁰
- 5.130 In this context, Openreach argued in its responses to both the March 2025 Consultation and the November 2025 Further Consultation that the NRM has several limitations, and that these weaknesses mean we should instead use the WLA geographic market boundaries to define the LLA geographic markets. Openreach made the following points:
- a) Both the WLA and NRM metrics are approximative and we have not explained why the latter is likely to represent a substantial improvement.⁸⁴¹
 - b) The NRM is not robust to minor changes in its key assumptions, which lead to large changes in the results.⁸⁴² Openreach suggested that the NRM is sensitive to the 50m dig distance, the 65% coverage threshold and the networks included in the model. Openreach submitted that we should therefore, for transparency, present model sensitivities as we did in the 2019 BCMR.⁸⁴³
 - c) Limitations of the NRM have been identified by Ofcom in previous reviews. This includes the increased limitations of the NRM in approximating competitive conditions in rural areas as well as the potential measurement inaccuracies relating to the buffer distance.⁸⁴⁴ Reflecting these limitations, the NRM specifications have been changed multiple times across reviews, undermining confidence in the model.⁸⁴⁵

response to TAR26 November 2025 Consultation. Page 11. Paragraph 5. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Pages 5-6. Paragraph 15.

⁸³⁷ [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 2.

⁸³⁸ [TechUK](#) response to TAR26 November 2025 Consultation. Page 2.

⁸³⁹ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 18. Paragraph 36.

⁸⁴⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 55. Paragraphs 156-157.

⁸⁴¹ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 50-51.

⁸⁴² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 43-48 and 56-57. Paragraphs 110-130 and 164-165. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 58-60.

[Openreach](#) response to TAR26 November 2025 Consultation. Annex 1.

⁸⁴³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 44 and 48. Paragraphs 112-116 and 127-128.

⁸⁴⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 56-57.

⁸⁴⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 57-58.

- d) Ofcom did not view the NRM as being appropriate for a forward-looking assessment in WFTMR21 and has not sufficiently justified why the NRM model is now appropriate to define the boundaries of LLA Areas 2 and 3.⁸⁴⁶

Geographic unit

- 5.131 VodafoneThree suggested that using postcode sectors as the geographic unit can mask pockets where competition is weaker, meaning that competitive conditions within the markets we define may not be fully homogenous.⁸⁴⁷

Buffer distance

- 5.132 In response to the March 2025 Consultation and the November 2025 Further Consultation, Openreach said the buffer distance parameter in the NRM is conceptually flawed, since PIA makes the proximity analysis irrelevant and the only relevant distance is that required to connect to Openreach's physical infrastructure.⁸⁴⁸ It also expressed concerns with the analysis in the November 2025 Further Consultation, stating that the analysis was based on a very small sample of providers, and that 75m to 100m buffer distance proposal was set arbitrarily.⁸⁴⁹
- 5.133 Notwithstanding these general comments, as detailed below, Openreach said that if we must use a buffer distance parameter it should be longer across all geographic areas.
- 5.134 INCA considered that a 100m buffer distance is a safe assumption for Ofcom to adopt.⁸⁵⁰
- 5.135 Some altnets and Openreach said the buffer distance should be increased to more than 100m, for a number of reasons:
- a) CityFibre, Openreach and VMO2 submitted that the evidence presented in the November 2025 Further Consultation shows that operators are willing to build beyond 100m.⁸⁵¹ Openreach and Community Fibre noted that Community Fibre currently uses a buffer distance greater than 100m.⁸⁵²
 - b) Openreach also considered that observed build distances are likely to represent the length that providers need to cover, rather than what they are willing to cover to reach a customer. Therefore, we should give more weight to the upper quartiles and maximum build distances.⁸⁵³
 - c) CityFibre, Openreach and VMO2 suggested that there is likely to be a trend of increasing extension distances using PIA over time, justifying an increased buffer distance.⁸⁵⁴

⁸⁴⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 48-49. Paragraphs 131-133.

⁸⁴⁷ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 43. Paragraph 86.

⁸⁴⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 50-51. Paragraphs 138-142. [Openreach](#) response to TAR26 November 2025 Consultation. Page 20. Paragraphs 44-46.

⁸⁴⁹ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 25-26 and 45. Paragraphs 77 and 161.

⁸⁵⁰ [INCA](#) response to TAR26 November 2025 Consultation. Page 9. Paragraph 36.

⁸⁵¹ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [CityFibre](#) response to TAR26 November 2025 Consultation. Pages 3-4. Paragraphs 1.12-1.14. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 19 and 21. Paragraphs 39 and 49-54. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 19.

⁸⁵² [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 21-22. Paragraph 55.

⁸⁵³ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 19, 22-23 and 24. Paragraphs 42, 61-62 and 68.

⁸⁵⁴ [CityFibre](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 1.15. [Openreach](#) response to TAR26 November 2025 Consultation. Page 23. Paragraph 64. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Pages 6-7. Paragraphs 17-21.

- d) Openreach stated that the buffer distance is too low as we wrongly assume that a network is extended to serve only a single end customer.⁸⁵⁵ It noted that once a network builds an extension to connect a customer, the network could then become within reach of more customers. It said our model fails to capture this dynamic expansion.⁸⁵⁶ Openreach submitted that we have not considered the incremental, dynamic expansion of networks, which indicate that the buffer distance should be increased even further.⁸⁵⁷
- e) CityFibre suggested that the buffer distance should be increased to 200m to allow for competition across the widest possible footprint, given the proposed regulation in LLA Area 3.⁸⁵⁸
- f) Finally, some TechUK members said that the buffer distance value should be increased to reflect the evolving capabilities of leased line equivalent service providers, rather than relying on evidence of historic behaviours.⁸⁵⁹

5.136 In addition to the above, Openreach noted that we should also increase the buffer distance in the HNR Area as build behaviour is likely to be the same across all areas.⁸⁶⁰

5.137 On the contrary, VodafoneThree disagreed with our revised proposals in the November 2025 Further Consultation. VodafoneThree said that the buffer distance should remain at 50m (as set in the WFTMR21 and proposed in the March 2025 consultation) for a number of reasons:

- a) The analysis presented in the November 2025 Further Consultation is misleading because it includes data from the CLA which is an unregulated geography [X].⁸⁶¹
- b) It is the wrong time to alter market assessment metrics, since competitor network extensions are in sustained decline.⁸⁶² Some TechUK members and UKCTA also made this point.⁸⁶³
- c) The evidence in the November 2025 Further Consultation shows that rival success in winning competition is modest and declines after 50m.⁸⁶⁴

5.138 Similarly, PXC stated that the buffer distance should remain at 50m or increase to 75m at most.⁸⁶⁵ This is because a longer buffer distance would disincentivise investment in Area 3.⁸⁶⁶ It also said that a 100m buffer distance would be too long because the evidence shows that, at 100m, competitors only win 10% of connections.⁸⁶⁷

⁸⁵⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 54. Paragraphs 153-154.

⁸⁵⁶ [Openreach](#) response to TAR26 November 2025 Consultation. Page 26. Paragraphs 79-81.

⁸⁵⁷ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 19 and 23. Paragraphs 41 and 66.

⁸⁵⁸ [CityFibre](#) response to TAR26 November 2025 Consultation. Page 2. Paragraphs 1.2-1.4.

⁸⁵⁹ [TechUK](#) response to TAR26 November 2025 Consultation. Page 3.

⁸⁶⁰ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 27-28. Paragraphs 82-88.

⁸⁶¹ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Paragraph 24. [X]

⁸⁶² [VodafoneThree](#) response to TAR26 November 2025 Consultation. Pages 6-7. Paragraphs 25-27.

⁸⁶³ [TechUK](#) response to TAR26 November 2025 Consultation. Page 3. [UKCTA](#) response to TAR26 November 2025 Consultation. Paragraphs 4-6.

⁸⁶⁴ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 8. Paragraphs 34-35.

⁸⁶⁵ [PXC](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 2.1.

⁸⁶⁶ [PXC](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 2.1.

⁸⁶⁷ [PXC](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 2.5.

- 5.139 Hyperoptic, some TechUK members and UKCTA also noted that physical proximity does not guarantee that a provider will be able to serve a demand site due to constraints such as wayleaves.⁸⁶⁸
- 5.140 PXC, UKCTA, Hyperoptic and TechUK noted that, while a moderate increase to the buffer distance may be appropriate, there are other factors that we should also consider to assess competition.⁸⁶⁹
- 5.141 Openreach disagreed with our assessment of PIA in the November 2025 Further Consultation on the basis that:
- a) Openreach does not gain a competitive advantage due to the limitations of PIA, as these same limitations apply to Openreach. Openreach also submitted that we do not assess the scale of these limitations, nor do we acknowledge the mitigations offered by Openreach to address these.⁸⁷⁰
- 5.142 The assumption of Ofcom’s analysis is that (i) PIA is always the preferred option and (ii) any example of a provider not using PIA is necessarily a negative outcome and indicative of Openreach securing a competitive advantage. Openreach contends that this assumption is inaccurate.⁸⁷¹
- 5.143 Some stakeholders noted some potential limitations of using a single buffer distance:
- a) Some TechUK members submitted that a single value of the buffer distance cannot reliably capture real-world drivers of build behaviour, and risks overstating competition in some locations while understating it in others.⁸⁷²
 - b) Gigaclear submitted that Ofcom should retain a 50m buffer distance in rural areas to avoid weakening SMP remedies in rural regions.⁸⁷³
 - c) PXC submitted that XGS-PON providers should have a shorter buffer distance as these providers face significant cost disadvantages compared to Openreach.⁸⁷⁴
 - d) Openreach suggested that part of the reason why the LLA Area 2 boundaries proposed in the March 2025 Consultation were smaller than those indicated by the WLA market may be because altnet networks are closer to business sites than to mobile base stations, especially in less densely populated areas.⁸⁷⁵ Openreach also suggested that the large composition shift towards mobile cell sites in the data may be exacerbating the possible impact that including mobile has on the NRM results.⁸⁷⁶ [X].^{877 878}

⁸⁶⁸ [Hyperoptic](#) response to TAR26 November 2025 Consultation. Page 4. [TechUK](#) response to TAR26 November 2025 Consultation. Page 3. [UKCTA](#) response to TAR26 November 2025 Consultation. Page 3. Paragraph 8.

⁸⁶⁹ [PXC](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 2.4. [UKCTA](#) response to TAR26 November 2025 Consultation. Paragraphs 4-6 and 8. [Hyperoptic](#) response to TAR26 November 2025 Consultation. Page 4. [TechUK](#) response to TAR26 November 2025 Consultation. Page 3.

⁸⁷⁰ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 24-25. Paragraphs 71-74.

⁸⁷¹ [Openreach](#) response to TAR26 November 2025 Consultation. Page 25. Paragraphs 75-76.

⁸⁷² [TechUK](#) response to TAR26 November 2025 Consultation. Page 3.

⁸⁷³ [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 3.

⁸⁷⁴ [PXC](#) response to TAR26 November 2025 Consultation. Page 4.

⁸⁷⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 60. Section 3.3.7.

⁸⁷⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 62-63.

⁸⁷⁷ [X].

⁸⁷⁸ [X].

65% threshold

- 5.144 Openreach considered that the 65% threshold for assessing ‘presence’ of a LLA provider is arbitrary and has simply been carried over from previous reviews.⁸⁷⁹
- 5.145 Openreach also submitted that the 65% threshold is too high compared to the 50% threshold we use in to define the WLA geographic markets, and that it is not clear why we use a different threshold in the LLA geographic market compared to the WLA geographic market.⁸⁸⁰

Further modelling information

Existing networks and build plans

- 5.146 VodafoneThree suggested that we should not include planned build in the NRM. This is because altnets are focused on consolidation rather than network expansion and the level of network reach by 2031 is therefore likely to be lower than forecast.⁸⁸¹

Demand sites

- 5.147 Openreach said that there are some issues with the way that Ofcom approximates demand site locations. Openreach stated that business sites should not be restricted to 250 employees, mobile base stations should be considered separately from business leased lines, and approximating exact demand site locations with a postcode centroid might not work well in rural locations.⁸⁸²

Other modelling issues

- 5.148 Openreach suggested that the classifications of some postcode sectors are counter-intuitive and anomalous, both before and after our proposal to extend the buffer distance.⁸⁸³ Openreach submitted that Ofcom has a duty to examine competitive conditions at a more granular level, rather than just adhering to the outputs of the NRM.⁸⁸⁴
- 5.149 INCA expressed concern that some postcode sectors have moved from the HNR Area in the WFTMR21 to LLA Area 3 in the TAR, despite the NRM approach being used to define the HNR Area in the WFTMR21.⁸⁸⁵
- 5.150 CityFibre and ITS expressed concern that some of their footprint is in LLA Area 3, despite the fact that they are potential and current material and sustainable competitors respectively.⁸⁸⁶ Openreach also noted that even if providers are labelled as material and sustainable competitors, their footprint may fall into Area 3.⁸⁸⁷ CityFibre submitted that the

⁸⁷⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 56. Paragraph 163. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 55.

⁸⁸⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 56 and 57. Paragraphs 162 and 166. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 55.

⁸⁸¹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 40. Paragraphs 65-66.

⁸⁸² [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 55-57 and 60-63.

⁸⁸³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 31-43. Paragraphs 85-109. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 56 and Appendix 3.2. [Openreach](#) response to TAR26 November 2025 Consultation. Page 12-13. Paragraphs 9-11.

⁸⁸⁴ [Openreach](#) response to TAR26 November 2025 Consultation. Page 11. Paragraphs 6-7.

⁸⁸⁵ [INCA](#) response to TAR26 March 2025 Consultation. Page 75. Paragraph 292.

⁸⁸⁶ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 33. Paragraphs 3.31-3.32. [ITS](#) response to TAR26 March 2025 Consultation. Pages 6-7. Paragraphs 24-30. [ITS](#) response to TAR26 November 2025 Consultation. Page 5. Paragraphs 18-19.

⁸⁸⁷ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 46-47. Paragraphs 165-166.

reason that some of its footprint is in LLA Area 3 is likely because data on its full fibre network [38] was not used, and because the 50m buffer distance is too low.⁸⁸⁸

Modelling results: the LLA geographic market boundaries

The HNR Area

- 5.151 VodafoneThree and Consumer Scotland commented specifically that they agreed with our definition of the HNR Area.⁸⁸⁹
- 5.152 AllPoints Fibre and Vorboss expressed concerns about the expansion of the HNR Area.⁸⁹⁰ AllPoints Fibre stated that Ofcom should be cautious about expanding the HNR Area, as it believes that deregulation has not worked in the CLA.⁸⁹¹ In addition, AllPoints Fibre and Vorboss stated that we have taken too simplistic an approach in defining the HNR Areas, and that we should take into account other factors than the presence of two competitors.⁸⁹²
- 5.153 Openreach noted that we no longer include CityFibre's footprint in the HNR boundary calculation.⁸⁹³ Openreach considered that CityFibre should be regarded as a current material and sustainable competitor, and as such its footprint should be included in the HNR boundary calculation.⁸⁹⁴ On this, Openreach also noted that it would be inconsistent not to use CityFibre footprint to draw the boundaries of the HNR Areas since CityFibre footprint is considered for the SMP assessment of the HNR Areas, which is intrinsically linked with market definition.⁸⁹⁵

LLA Area 2 and LLA Area 3

- 5.154 VodafoneThree considered that the geographic market boundaries that we proposed in the March 2025 Consultation, particularly the proposed LLA Area 3, align with market realities.⁸⁹⁶
- 5.155 INCA and Openreach submitted that the proposed LLA Area 3 boundary being bigger than the WFTMR LLA Area 3 boundary is counterintuitive and illogical, given Ofcom's recognition that LL-only and FTTP providers have expanded their networks since 2021, and that altnets have started to offer leased lines.⁸⁹⁷ Openreach also submitted that the significant reduction in the size of the LLA Area 2 boundary undermines Ofcom's stated ambition of providing stability and clarity for the market.⁸⁹⁸

⁸⁸⁸ [CityFibre](#) response to TAR26 March 2025 Consultation. Annex 4. [CityFibre](#) response to TAR26 March 2025 Consultation. Paragraphs 3.33-3.34. [CityFibre](#) response to TAR26 November 2025 Consultation. Paragraphs 1.18-1.20.

⁸⁸⁹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 42. Paragraph 84. [Consumer Scotland](#) response to TAR26 March 2025 Consultation. Page 6.

⁸⁹⁰ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraphs 40-42. [Vorboss](#) response to TAR26 March 2025 Consultation. Page 7-8.

⁸⁹¹ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 40.

⁸⁹² [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraphs 40-42. [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 7-8.

⁸⁹³ [Openreach](#) response to TAR26 November 2025 Consultation. Page 12. Paragraph 10.

⁸⁹⁴ [Openreach](#) response to TAR26 November 2025 Consultation. Page 12. Paragraph 10.

⁸⁹⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 57. Footnote 77.

⁸⁹⁶ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 39. Paragraphs 58-62.

⁸⁹⁷ [INCA](#) response to TAR26 March 2025 Consultation. Page 72. Paragraph 279. [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 30. Paragraph 86-88. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 80-84.

⁸⁹⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 12. Paragraph 25.

5.156 ITS submitted that it does not make sense for Ofcom to expand the LLA Area 3 market given that ITS has entered and expanded its footprint in LLA Area 3.⁸⁹⁹ CityFibre also questioned that there has been an increase in the size of the LLA Area 3 market despite significant network rollout by CityFibre and others since 2021.⁹⁰⁰

The CLA

5.157 INCA submitted that we should offer more insight into why the CLA is not regulated, since competitive conditions in the CLA may have changed over time.⁹⁰¹

5.158 AllPoints Fibre and some TechUK members submitted that Ofcom is too reliant on the presence of competing networks without considering other factors, such as whether competition is established and sustainable, in defining the CLA.⁹⁰²

5.159 We also received responses suggesting that deregulation has not worked in the CLA . AllPoints Fibre submitted that Openreach retains a 50-60% market share in the CLA that has not fallen significantly since deregulation.⁹⁰³ Vorboss submitted deregulation in the CLA is undermining competition and further innovation in the market.⁹⁰⁴

Our reasoning and decisions on geographic market definition

5.160 For the reasons set out below, we confirm our proposals to define three LLA geographic markets: HNR area, LLA Area 2, and LLA Area 3, which comprise approximately 9%, 54% and 34% of UK postcode sectors respectively.

5.161 We first provide some contextual background. We then set out our reasoning and decisions, while also addressing responses to the March 2025 Consultation and November 2025 Further Consultation.

Background to our reasoning on geographic market definition

Our definition of LLA geographic markets in the WFTMR21

5.162 In the March 2021 WFTMR Statement, we defined four geographic areas for LLA:

- the Central London Area;
- the High Network Reach area: other postcode sectors where there are two or more rival networks to BT in the provision of leased lines;
- LLA Area 2: postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks; and
- LLA Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.

5.163 We defined the CLA and HNR Area with reference to the presence of LL-only operators, VMO2 and CityFibre. We used the network reach model to assess how many networks were within reach of a sufficiently high proportion of business sites in each postcode sector.

⁸⁹⁹ ITS response to TAR26 March 2025 Consultation. Pages 4-5. Paragraphs 17-23.

⁹⁰⁰ CityFibre response to TAR26 March 2025 Consultation. Page 33. Paragraph 3.31.

⁹⁰¹ INCA response to TAR26 March 2025 Consultation. Page 75. Paragraph 291.

⁹⁰² TechUK response to TAR26 March 2025 Consultation. Page 5. AllPoints Fibre response to TAR26 March 2025 Consultation. Page 7. Paragraph 40.

⁹⁰³ AllPoints Fibre response to TAR26 March 2025 Consultation. Page 7. Paragraph 42.

⁹⁰⁴ Vorboss response to TAR26 March 2025 Consultation. Page 7.

- 5.164 We defined Area 2 to be those postcode sectors (outside of the CLA and HNR Area) in which at least either VMO2 or CityFibre were present or planning to be present.⁹⁰⁵ We used the same boundary between Area 2 and Area 3 for LLA services as for WLA services. We considered that there was likely to be potential for material and sustainable competition in areas covered by the VMO2 and/or CityFibre networks in both WLA and LLA. As the footprints of these networks would be the same for both WLA services and LLA services, we considered the use of common geographic boundaries for these markets to be both reasonable and practical.
- 5.165 We defined Area 3 as those postcode sectors that were neither the CLA, HNR, or Area 2, as we considered that outside these areas there were no plans for material commercial deployment and therefore it was not likely that there was the potential for material and sustainable competition to emerge.
- 5.166 Table 5.2 summarises how we allocated postcode sectors to different geographic markets in WFTMR21.

Table 5.2: WFTMR21 leased lines geographic market sizes

WFTMR 2021	CLA	HNR	Area 2	Area 3
Total postcode sectors	278	525	5,430	3,867
(% of UK total)	(3%)	(5%)	(54%)	(38%)
Demand sites	4,202	9,085	94,565	40,041
(% of UK total)	(3%)	(6%)	(64%)	(27%)

Source: Ofcom. March 2021. [Statement: Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26 - Ofcom](#), Volume 2. Table 7.7.

LLA market developments since 2021

- 5.167 There have been a number of market developments which influence how we think about leased lines competition and how we define the geographic markets for the 2026-31 review period.

Competition from LL-only operators

- 5.168 As set out in Annex 5, LL-only providers increased their aggregate share of on-net LLA circuit ends between 2020 and 2024. This indicates that they are providing increased competition across the LLA markets.
- 5.169 Since 2021, we have also seen additional LL-only providers entering the market. For example, ITS entered the market, growing to [X] leased line access circuits across the UK (excluding the CLA) as of September 2025.⁹⁰⁶ ITS has proven successful in winning contracts with telecoms providers, having won a contract with Sky to provide Ethernet services, and

⁹⁰⁵ We assessed this using the network presence modelling we had used for our WLA market definition.

⁹⁰⁶ ITS response dated 28 January 2026 to our clarificatory question dated 21 January 2026 concerning the s135 notice dated 23 June 2025, question D1.

with PXC also currently taking leased line circuits from ITS.^{907 908} [X] states that it is purchasing more circuits from ITS than [X].⁹⁰⁹

- 5.170 We reflect this growth by LL-only providers in our approach to defining the geographic markets, as discussed further below.

WLA providers competing in the LLA market

5.171 In the WFTMR21, we identified economies of scope between the provision of leased lines and residential broadband, and considered that gigabit-capable networks would typically provide both broadband and leased line services.^{910 911} Since 2021, as outlined in Volume 1, we have seen substantial FTTP network build by altnets, while CityFibre and VMO2 have continued to operate in both the WLA and LLA markets.

5.172 Many of the altnets that have entered the WLA market have chosen not to provide leased lines to date. Some altnets – such as [X] – that initially focussed on serving residential premises have started to offer leased lines, but the volume of circuits supplied have so far been limited.⁹¹²

Our approach to defining geographic markets in LLA

5.173 The key consideration in defining geographic markets is to identify areas within which competitive conditions are sufficiently similar for them to be grouped together as one geographic market.⁹¹³

5.174 As outlined in Section 1, our market reviews are forward-looking. We therefore need to sufficiently capture not only the existing competitive conditions, but also the expected or foreseeable developments that may affect competition over the review period.

5.175 There is inherent uncertainty in defining forward-looking geographic markets, particularly during a dynamic period in which network competition is still developing. We consider the evidence available, including the evidence gathered using our information gathering powers⁹¹⁴ as well as the responses to the March 2025 Consultation and November 2025 Further Consultation and use our regulatory judgment to take a view on likely developments over this review period. We discuss this in more detail in Section 1 of this volume as well as Annex 1.

5.176 We note that we received a number of responses commenting on our approach to market definition in terms of convergence between the LLA and the WLA markets. We respond to these comments in our conclusion on material and sustainable competitors and where we set out our modelling approach. This is because, while these comments have been put to us

⁹⁰⁷ ITS. September 2024. [Sky Business signs a new long-term agreement with dedicated B2B full fibre provider ITS](#). Accessed 6 March 2026.

⁹⁰⁸ TalkTalk Communications Ltd t/a PlatformX response dated 12 February 2025 to s135 notice dated 10 February 2025, question 1c.

⁹⁰⁹ [X] response dated [X] to s135 notice dated [X], question [X].

⁹¹⁰ For example, see: Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 3. Paragraph 6.38.

⁹¹¹ We refer to networks that provide both WLA and LLA services as multiservice networks (MSNs).

⁹¹² [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X].

⁹¹³ See also Section 1 of this Volume and Annex 1.

⁹¹⁴ Between May 2024 and October 2025, we issued information notices related to our analysis of the LLA market. This involved sending detailed questions to over 50 stakeholders. See Annex 21 for more detail on our sources of evidence.

as a matter of “approach”, we consider that to appropriately address them we need to draw from the evidence we discuss on how networks compete in the LLA market.

- 5.177 As discussed in Section 1, competitive conditions in different geographic areas are determined on a forward-looking basis by the materiality and sustainability of the competitive constraint that the networks present in those areas have the ability or the potential to exert.
- 5.178 To compete in the LLA market, competitors must have a network which is technically capable of providing LLA services. As set out in Section 2, since WFTMR21 the presence of networks has increased, and there is potential for this trend to continue over the review period.
- 5.179 However, the evidence available to us – as well as the information in many of the responses to the March 2025 Consultation and November 2025 Further Consultation – indicates that there are other high barriers to entry and expansion in the LLA market that affect suppliers’ ability to gain customers and become material and sustainable competitors.⁹¹⁵
- 5.180 These barriers go beyond the high costs of building a network which is technically capable of offering LLA services, and include high switching costs as well as the material time and investment required to gain the necessary business capabilities, credibility and reputation to attract business customers. We note that VodafoneThree, PXC, FCS, Netomnia / Brsk, Vorboss, Neos Networks and CityFibre agreed with our description of the barriers to entry and expansion in LLA or submitted evidence that aligns with our description of these barriers.⁹¹⁶
- 5.181 Therefore, we consider that network presence alone is not sufficient to exert a material and sustainable constraint.⁹¹⁷ Instead, competition in the LLA market relies on the presence of networks who have already, or have the potential to, sufficiently overcome these barriers to entry and expansion such that they currently are, or have the potential to become, material and sustainable competitors.^{918 919}

⁹¹⁵ We set out our conclusions on barriers to entry and expansion in LLA more fully in the SMP section below, but we consider these barriers are relevant to our approach to geographic market definition. This is because they represent evidence on entry to the market and on the challenges to competing in LLA, that has informed our view on competitive conditions in the LLA market, including the extent to which these are likely to converge with competitive conditions in the WLA market.

⁹¹⁶ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 35. [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2-3.3. [FCS](#) response to TAR26 March 2025 Consultation. Pages 4-5. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 7. Footnote 12. [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 2-3. CityFibre response dated 5 February 2026 to s135 notice dated 3 February 2026. Neos Networks response dated 10 February 2026 to s135 notice dated 3 February 2026.

⁹¹⁷ INCA and VMO2 also highlighted that network presence alone is not sufficient to form a view on the degree of competitive constraint exerted. [INCA](#) response to TAR26 March 2025 Consultation. Page 69. Paragraph 268. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 29. Paragraph 104.

⁹¹⁸ Note that we do not rule out the possibility that other providers may sufficiently overcome barriers to entry and expansion over the review period. However, where the evidence available to us does not indicate that this is likely, we consider that these providers are unlikely to have the potential to become material and sustainable competitors over the review period.

⁹¹⁹ For convenience and to avoid repetition, in the rest of this section, we may in some cases refer to these competing networks either as ‘networks who have already, or have the potential to, sufficiently overcome barriers to entry and expansion’ and / or as ‘networks who are, or have the potential to become, material and sustainable competitors’.

- 5.182 We expect competitive conditions to be appreciably different where these current or potential material and sustainable network providers are present or plan to be present, compared to where they are not.⁹²⁰
- 5.183 Given this, we do not agree with Openreach that we should consider all MSNs to be either current or potential material and sustainable competitors in this review period solely on the basis that MSNs have an FTTP network that is technically able to provide LLA services.⁹²¹ As discussed above, network presence alone is not necessarily enough to affect competitive conditions in a particular area.
- 5.184 The rest of this section is structured as follows:
- a) First, we set out the factors that indicate whether a provider has, or has the potential to, sufficiently overcome the barriers to entry and expansion either on their own or as a result of consolidation. On this basis, we identify the LLA providers that are, or have the potential to become, material and sustainable competitors in LLA over this review period, and therefore to affect competitive conditions.
 - b) Secondly, we define the geographic markets we have found in LLA and explain our reasoning.
 - c) Thirdly, we use the NRM to establish the area boundaries by allocating postcode sectors to the different LLA geographic markets.
 - d) Fourthly, we set out our modelling results.

Identifying actual or potential material and sustainable competitors

Assessing providers' ability or potential to overcome barriers to entry and expansion

- 5.185 We now set out which providers we consider have already, or have the potential to, sufficiently overcome barriers to entry and expansion such that they are, or are likely to become, material and sustainable competitors in LLA over this review period.
- 5.186 In reaching our decision, we exercise our regulatory judgment, taking into account the wide range of evidence that we have gathered in relation to the current market position of different providers and how this is likely to evolve. This includes the following factors:
- a) **Business model and business plans:** we have gathered a significant amount of evidence on providers' product offerings to assess whether they provide, or plan to provide, LLA services. This allows us to assess the extent to which a provider is already competing in the LLA market, or is likely to do so over the review period. Where this is the case, we have also examined whether LLA services constitute a core part of their business model, and the extent to which they have developed a plan to build the necessary business capabilities, credibility and reputation to attract business customers.
 - b) **Architecture and technical capabilities of the network:** as discussed in the PMD section we recognise that, in principle, leased line equivalent features can be offered on a comparable basis by Ethernet over symmetric PONs (such as XGS-PON). However, in practice, where a network is not already providing LLE services, some work would be required to configure the network so that it can offer features which are needed to compete in the LLA market (e.g. uncontended ringfenced capacity, 24/7 network monitoring, faster repair capabilities). Moreover, business-focused providers may need

⁹²⁰ As BT has a ubiquitous network, we assess competitive conditions for the purpose of geographic market analysis by assessing the presence of other networks that have the ability or potential to be material and sustainable competitors to BT.

⁹²¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 49. Paragraph 134.

to build their network with the intention of passing sufficiently close to the main business sites and actively compete for those customers. We have therefore considered the architecture and technical capabilities of networks. This evidence helps us understand whether a provider's network can support the service features that LLA customers require. That capability is relevant to overcoming barriers such as installation time and the credibility associated with delivering reliable, business-grade services. As such, looking at this evidence provides an additional indication of providers' ability or potential to sufficiently overcome barriers to entry and expansion in LLA.

- c) **Network scale:** all else being equal, a network with larger scale is likely to be a more efficient and more effective competitor (e.g. due to economies of scale, greater brand recognition). As detailed further below, network scale can also impact the ability of competing networks to win LLA business in certain circumstances. For example, a larger network scale may be an advantage for winning customers who require connections to a number of large, geographically dispersed sites networks, or when trying to secure wholesale deals with telecoms providers. We note business-focused networks may be able to efficiently and effectively meet demand at comparatively smaller scale due to their specialised business model and network architecture.
- d) **Sales volumes:** a greater level of historical sales can be an indicator that a provider has been successful in overcoming some of the barriers to entry and expansion. Forecast sales can also be an indicator that a provider has the potential to sufficiently overcome barriers to entry and expansion (such as credibility, reputation, and the challenges associated with winning and provisioning business-grade services). In considering the evidence on volumes, we recognise that they should be interpreted in context as, for example, providers that only target specific business areas may be able to compete and yet present comparatively low overall volumes.

5.187 In practice, as detailed below, to conduct this assessment we looked at these factors in the round across the two main categories of leased lines providers: LL-only providers and WLA players who provide, or have the capability of providing, leased line or leased line equivalent services (i.e. MSNs). We therefore disagree with Openreach and INCA that our approach to evidence gathering was not sufficiently accurate or forward-looking.⁹²²

5.188 As detailed in the following paragraphs, based on our assessment of their ability or potential to overcome barriers to entry and expansion, we consider that all LL-only providers are material and sustainable competitors in the provision of LLA services. In addition to LL-only providers, we also consider that VMO2 is, and CityFibre and Wightfibre are likely to have the potential to be, a material and sustainable LLA competitors.

LL-only providers

5.189 There are a number of LL-only providers that have a business focus and specialise in provisioning LLA services.^{923 924}

⁹²² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 59. Paragraphs 177. [INCA](#) response to TAR26 March 2025 Consultation. Page 73. Paragraphs 282.

⁹²³ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹²⁴ We note that three of these providers (ITS, KCOM and MS3) are also present in the WLA market. Given the specifics of their business models we consider that – similar to LL-only providers – they have been able to sufficiently overcome barriers to entry and expansion in the LLA market and as such consider them to be

- 5.190 Because of their business focus, the architecture and technical capabilities of the network have been designed to meet this demand.⁹²⁵ In particular, LL-only networks are typically built with the intention of passing sufficiently close to the main business sites in an area (e.g. industrial parks, business districts, mobile masts, etc.) to be able to provide connections to and compete for business premises, on demand.⁹²⁶ The technical and commercial specialisation of LL-only providers may also enhance their competitive positioning by enabling them to efficiently and effectively meet demand, and by providing them with a greater (actual or perceived) level of expertise in the provision of leased lines. As a result, these networks may be able to compete for customers at a smaller scale.
- 5.191 In line with this, as set out in Section 2, the evidence indicates that LL-only providers increased their aggregate share of on-net LLA circuit ends between 2020 and 2024. The evidence also indicates that additional LL-only providers have successfully entered the market and gained customers.⁹²⁷ Additionally, some LL only providers submitted evidence to us indicating that they expect their sales volumes will increase over the review period.⁹²⁸ Further, some LL-only providers (ITS and VodafoneThree) provided network expansion plans.⁹²⁹
- 5.192 We recognise that the exact competitive position of LL-only providers will differ across providers, depending on factors such as their reputation, footprint or volumes sold. However, taken together, the evidence indicates that all existing LL-only providers are generally able to sufficiently overcome the barriers to entry and expansion in the LLA market such that they can materially and sustainably affect competitive conditions.
- 5.193 This is because these providers have built and operate a network with the intention to serve businesses. Therefore, the architecture and capabilities of these networks as well as the service features offered are specifically designed to meet business demands (which also

current material and sustainable competitors in the LLA market. ITS has offered LLA services since its incorporation and they continue to focus on business connectivity services (albeit by also offering business FTTP). KCOM has sufficiently developed the technical and business capabilities required to supply leased lines and is able to easily supply different leased line bandwidths, as demonstrated by its persistently high share of leased line circuits provided in the Hull Area. MS3 focused on selling LLA services for ten years since its incorporation in 2012. It is now also offering WLA services, but estimates that LLA services will continue to represent a large portion of its overall B2B sales. We also note that [redacted]. See: ITS response dated 5 August 2024 to s135 notice dated 8 July 2024, question A1 and A2. KCOM response dated 5 August 2024 to s135 notice dated 8 July 2024, question A1. Ofcom. December 2025. [Consultation: Promoting competition and investment in fibre networks: Hull Area Review 2026-31](#). Page 31. Paragraphs 3.49-3.52. MS3 response dated 21 August 2024 to s135 notice dated 8 July 2024, questions A1 and B3.

⁹²⁵ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹²⁶ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹²⁷ See, for example: ITS response dated 28 January 2026 to our clarificatory question dated 21 January 2026 concerning the s135 notice dated 23 June 2025, question D1; and Vorboss response dated 5 August 2025 to s135 notice dated 23 June 2025, question D1.

⁹²⁸ For example, information previously submitted by: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted] and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹²⁹ The list of providers who provided network expansion plans is detailed further below.

means scale may be comparatively less important to compete for business customers). Therefore, we would expect them to be able to compete for business customers (a view supported by their increased share from 2020 to 2024), both now and over the review period (including in the absence of regulation).

- 5.194 As such, for the purpose of our geographic market assessment, we consider all existing LL-only providers to be material and sustainable competitors in the supply of LLA. The LL-only providers we include are Colt / Lumen, Commsworld, eircom, FibreSpeed, ITS, KCOM, MS3, National Grid Telecoms, Neos, Verizon, VodafoneThree, Vorboss and Zayo.^{930 931}
- 5.195 Given the discussion above, we disagree with Vorboss that we have not sufficiently evidenced our decision to treat LL-only providers as current material and sustainable competitors.⁹³² As detailed below, we also consider factors beyond their status as current material and sustainable competitors (such as where they have existing build or their distance from demand sites) to assess the extent to which these providers can affect competitive conditions and, on this basis, identify geographic markets.

MSNs

- 5.196 In addition to LL-only providers there are also some MSNs who sell both LLA and WLA services.
- 5.197 Although they may offer LLA services, we consider that the commercial and operational positions of these providers are not necessarily the same as those of LL-only providers. This is because, to date, some MSNs have prioritised building their networks for the purposes of selling WLA services, and in some cases have built their network primarily to reach residential premises.⁹³³
- 5.198 This means that, unlike LL-only operators, the extent to which MSNs have, or have the potential to, sufficiently overcome barriers to entry and expansion in the LLA market in the review period is likely to be more provider-specific. In particular, we consider this is likely to depend on how important LLA services are to their business models to facilitate growth of their LLA business, as well as whether these MSNs have gained, or have specific plans to gain, the necessary business capabilities, credibility and reputation to attract business customers.
- 5.199 As such, we have first identified which altnets offer, or plan to offer, leased lines or leased line equivalent services. For each of these MSNs, we have then conducted an in the round assessment of the available evidence to inform our view of whether they have sufficiently overcome barriers to entry and expansion in the LLA market or have the potential to do so

⁹³⁰ It should be noted that we are no longer including euNetworks or EXA Infrastructure. These two providers were erroneously included in the March 2025 Consultation as they do not provide relevant LLA services, and do not plan to do so in the future. See: euNetworks response dated 5 August 2024 to s135 notice dated 8 July 2024, question A1; and EXA Infrastructure response dated 5 August 2024 to s135 notice dated 8 July 2024, question A1.

⁹³¹ Commsworld is a provider predominantly offering LLA services that we identified in light of Openreach's response to the March 2025 Consultation.

⁹³² [Vorboss](#) response to TAR26 March 2025 Consultation. Page 7.

⁹³³ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

in the review period. We use this assessment to reach a view on which MSNs are or have the potential to be a material and sustainable competitor in the supply of LLA.

- 5.200 In addition, for completeness, we have also considered evidence on those altnets currently selling business FTTP to assess the extent to which they might nonetheless have the potential to enter the LLA market and become material and sustainable competitors over the review period.
- 5.201 To inform this assessment, we have gathered information to develop an evidence base on the competitive position of MSNs and altnets in the LLA market. We issued detailed statutory information requests to 19 MSNs and altnets, including CityFibre, Community Fibre, Netomnia and Ogi. For example, we requested information on: their historic, current and forecast volumes of leased lines, leased line equivalent and dark fibre services; their current and planned network coverage and capabilities; their LLA product offering; and their business models and network investment plans.

VMO2

- 5.202 VMO2 supplies a wide range of leased line products across its large scale network, including dark fibre as well as very high bandwidth (VHB) and lower bandwidth products.⁹³⁴ Across the UK (excluding the CLA), it is the largest supplier of LLA (after BT) with [X] connections as of March 2025.⁹³⁵
- 5.203 Overall, this evidence clearly indicates that VMO2 already has the necessary business capabilities, network architecture, scale and volumes to sufficiently overcome barriers to entry and expansion in the LLA market. As such, we consider that VMO2 is a current material and sustainable competitor in LLA.
- 5.204 As discussed in Section 2 of this volume, VMO2 and nexfibre have entered an agreement whereby nexfibre will carry out VMO2's new network build (in areas where VMO2 is not already present) with VMO2 operating as a build partner. In areas where nexfibre is - or plans to be - present, VMO2 will act as wholesale customer of nexfibre (as the anchor tenant) and use the nexfibre network to provide leased line services.
- 5.205 VMO2 and nexfibre are separate companies, but due to the arrangement between them we use the combined VMO2 and nexfibre data on coverage and active lines for the purpose of defining geographic markets. Accordingly, when we refer to the presence of VMO2, we mean VMO2 on the footprint that includes nexfibre, unless otherwise specified.
- 5.206 In February 2026, the owners of the VMO2 network (Liberty Global and Telefonica), and InfraVia, agreed to acquire Substantial Group (including the Netomnia network footprint and retail brands YouFibre and Brsk) through their existing joint venture, nexfibre. As the deal is not yet complete and subject to regulatory approval, we continue to consider the Netomnia network footprint as separate from VMO2/nexfibre.⁹³⁶

CityFibre

⁹³⁴ VMO2. [Dedicated Internet Access | Leased Lines | Virgin Media Business](#). Accessed 6 March 2026; VMO2. [Dark Fibre | Virgin Media Business](#). Accessed 6 March 2026.

⁹³⁵ [X] response dated [X] to s135 notice dated [X], question [X]. These markets refer to the WFTMR21 geographic markets.

⁹³⁶ VMO2. 18 February 2026. [InfraVia, Liberty Global and Telefónica acquire Substantial Group for £2 billion through their existing joint venture, nexfibre](#). Accessed 26 February 2026.

- 5.207 CityFibre is a wholesale-only network, offering WLA and LLA services.
- 5.208 Similar to our findings in the WLA market, the evidence relating to CityFibre’s business model, network architecture, network scale and volumes suggests that, while it has made progress towards overcoming the barriers to entry and expansion in the LLA market, it is still in the process of completing network build and gaining market traction. As such, we consider that CityFibre is a potential material and sustainable competitor in LLA.
- 5.209 CityFibre’s business model has changed over time. [redacted].⁹³⁷ [redacted]. Following a period of focusing on selling WLA services, in 2025 it re-launched its LLA offering, with its XGS-PON technology upgrade underpinning its ethernet investment.⁹³⁸ CityFibre submitted that its transition to providing leased lines using its XGS-PON based network architecture will enable it to provide leased lines at a lower cost and with a quicker installation time.⁹³⁹
- 5.210 As well as CityFibre’s network being technically capable of provisioning LLA services, the evidence suggests it has an existing degree of expertise and credibility in the business market. This is demonstrated by its agreements for the provision of mobile backhaul⁹⁴⁰ and the LLA volumes it has been able to sell so far. In particular, CityFibre’s LLA customer volumes have increased materially over the 2021-26 review period (and by [redacted] connections over the past year).⁹⁴¹ As of June 2025, CityFibre’s leased line business accounts for nearly [redacted] connections (excluding the CLA).⁹⁴²
- 5.211 Looking forward, CityFibre’s business plans indicate that it is aiming to strengthen its position in the LLA market,⁹⁴³ and increase its sales across the 2026-31 review period.⁹⁴⁴ Specifically, CityFibre expects both leased lines volumes and absolute revenues from leased lines to increase by 2031.⁹⁴⁵
- 5.212 However, CityFibre is still in the process of completing its network expansion,⁹⁴⁶ with a network that covers around 4.7m premises as of the end of 2025.⁹⁴⁷ As discussed above, network scale is important, and this is particularly the case for MSNs. Indeed, CityFibre considers that the largest barrier to competing in the LLA market is being able to cover

⁹³⁷ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹³⁸ CityFibre Infrastructure Holdings Limited response dated 28 July 2025 to s135 notice dated 23 June 2025, page 1. CityFibre Infrastructure Holdings Limited response dated 28 July 2025 to s135 notice dated 23 June 2025, question B2.

⁹³⁹ CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 1.f.

⁹⁴⁰ CityFibre Infrastructure Holdings Limited response dated 20 August 2024 to s135 notice dated 8 July 2024, question B5.

⁹⁴¹ CityFibre Infrastructure Holdings Limited response dated 28 July 2025 to s135 notice dated 23 June 2025, question D1.

⁹⁴² CityFibre Infrastructure Holdings Limited response dated 28 July 2025 to s135 notice dated 23 June 2025, question D1.

⁹⁴³ See, for example: CityFibre. [CityFibre triples business ethernet availability for its... | CityFibre](#). Accessed 5 February 2026.

⁹⁴⁴ CityFibre Infrastructure Holdings Limited response dated 8 November 2024 to s135 notice dated 24 October 2024, question A1.b.

⁹⁴⁵ CityFibre business plans forecast [redacted]. CityFibre Infrastructure Holdings Limited response dated 8 November 2024 to s135 notice dated 24 October 2024, question A1.b.

⁹⁴⁶ CityFibre. [CityFibre agrees £2.3bn in new financing round, in major... | CityFibre](#). Accessed 18 February 2026. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹⁴⁷ We note that CityFibre distinguish between 4.7m premises passed by its network, and 4.5m premises that are ‘ready for service.’ CityFibre. 22 January 2026. [CityFibre delivers record performance in 2025](#).

more footprint. More specifically, CityFibre considers that a significant sub-set of business customers may want multi-site contracts, and it is not always able to meet these customers' requirements in full with its current footprint.⁹⁴⁸ In addition – following a period where it was focusing on selling WLA services – it has only recently relaunched its LLA offering. As such, unlike VMO2, there is some uncertainty about the competitive constraint it can exert across its network and how this will evolve over the review period, particularly in the absence of LLA regulation.

- 5.213 Taken together we consider the evidence indicates that CityFibre is still developing as a MSN, and so it should be regarded as having the potential to become a material and sustainable competitor in the LLA market in this review period.
- 5.214 For these reasons we therefore disagree with Openreach that, due to its recent increased focus on LLA, CityFibre should be considered a current material and sustainable competitor.⁹⁴⁹
- 5.215 We also disagree with Openreach that CityFibre should be considered a current material and sustainable competitor due to CityFibre's widely expected role as a major consolidator.⁹⁵⁰ Whilst we recognise that CityFibre could play an important role in the consolidation process, it remains the case, as discussed above, that it is still developing its position in the market. In fact, one of the ways that CityFibre plans to expand its network is via acquisitions of other alternative networks.⁹⁵¹ Therefore, consolidation may be a way for CityFibre to strengthen its position in the market, rather than an indication that it is already a current material and sustainable competitor.

WightFibre

- 5.216 Despite its comparatively smaller scale, we also consider that Wightfibre has the potential to become a material and sustainable competitor due to its LLA focus as well as its technical and business capabilities.
- 5.217 In particular, in line with the responses to the March 2025 Consultation submitted by INCA and Wightfibre, the evidence indicates that:⁹⁵²
- a) WightFibre operates a fully Point-to-Point Ethernet network and is able to offer business-grade SLAs such as high availability, 24/7 monitoring and fast repair times to all their business customers;⁹⁵³
 - b) As of September 2025, WightFibre was provisioning this product to around [redacted] customers and expected to materially increase [redacted] its sales by 2031,⁹⁵⁴ and

⁹⁴⁸ [redacted] response dated [redacted] to s135 notice dated [redacted].

⁹⁴⁹ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 13 and 16. Paragraphs 13-16 and 25.

⁹⁵⁰ [Openreach](#) response to TAR26 November 2025 Consultation. Page 13. Paragraph 14.

⁹⁵¹ See, for example: CityFibre. [CityFibre agrees £2.3bn in new financing round, in major... | CityFibre](#) . Accessed 9 March 2026. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹⁵² [WightFibre](#) response to TAR26 March 2025 Consultation. Page 6. Paragraph 18. [INCA](#) response to TAR26 November 2025 Consultation. Paragraph 21.

⁹⁵³ [WightFibre](#) response to TAR26 March 2025 Consultation. Page 6. Paragraphs 12-15. [redacted] response dated [redacted] to s135 notice dated [redacted], Section [redacted]. [redacted] response dated [redacted] to the s135 notice dated [redacted].

⁹⁵⁴ [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], Question [redacted].

- c) Unlike many MSNs who focus their rollout on residential premises and for whom business customer demand has not impacted their build plans, WightFibre treat residential and commercial premises the same in planning and funding.^{955 956}

5.218 Similar to CityFibre, this evidence suggests that, while WightFibre is still in the process of gaining traction in the LLA market, it has the potential to sufficiently overcome barriers to entry and expansion and should therefore be regarded as a potential material and sustainable competitor.

Other providers

5.219 In addition to CityFibre and WightFibre, there are other MSNs who have started to offer leased lines in addition to their WLA business, as well as other altnets who do not offer leased lines but offer business FTTP and would be technically able to provide leased line equivalent services. We examine these providers in turn in the following paragraphs.

Other MSNs

5.220 The current and forward-looking evidence we have gathered on other MSNs suggests that these providers are unlikely to sufficiently overcome barriers to entry and expansion to exert a material and sustainable constraint in the LLA market in this review period.⁹⁵⁷ There are a variety of reasons for this, which vary between MSNs:

- a) Netomnia told us that its dominant priority (historical and current) is the pace of deployment to residential addresses.⁹⁵⁸ However, as Openreach pointed out, Netomnia has recently launched a wholesale platform.⁹⁵⁹ We understand from Netomnia that in practice, the launch of this platform means that its business wholesale services are now formally available.⁹⁶⁰ Nonetheless, it will still take considerable time and investment for Netomnia to gain traction in the LLA market. In this context, we note that Netomnia is currently selling limited volumes of LLA services [redacted].⁹⁶¹ Therefore based on the evidence available, we do not think it is sufficiently clear that Netomnia has already sufficiently overcome the barriers to competing in the LLA market, or that this has the potential to occur over the course of the review period.⁹⁶²

⁹⁵⁵ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹⁵⁶ [redacted] response dated [redacted] to s135 notice dated [redacted], Question [redacted].

⁹⁵⁷ We note that Openreach and ITS variously stated that Community Fibre, Netomnia and Ogi should be regarded as relevant competitors in the LLA market. [ITS](#) response to TAR26 November 2025 Consultation. Paragraph 12. [Openreach](#) response to TAR26 November 2025 Consultation. Page 15. Paragraph 25. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 58-59. Paragraphs 172-176.

⁹⁵⁸ Netomnia Limited response dated 16 September 2025 to s135 notice dated 28 July 2025, question E5.

⁹⁵⁹ [Openreach](#) response to TAR26 November 2025 Consultation. Page 15. Paragraph 25.

⁹⁶⁰ Netomnia Limited response dated 16 September 2025 to s135 notice dated 28 July 2025, question E5. Netomnia response dated 28 October 2025 to our clarificatory question dated 15 October 2025 concerning the s135 notice dated 28 July 2025, question E5. Netomnia response dated 29 October 2025 to our clarificatory question dated 15 October 2025 concerning the s135 notice dated 28 July 2025, question E5.

⁹⁶¹ Netomnia Limited response dated 16 September 2025 to s135 notice dated 28 July 2025, question D1. Netomnia Limited response dated 16 September 2025 to s135 notice dated 28 July 2025, question E5. Netomnia Limited response dated 24 October 2025 to our clarificatory question dated 15 October 2025 concerning the s135 notice dated 28 July 2025.

⁹⁶² As explained above, we continue to consider the Netomnia network footprint as separate from VMO2/nexfibre.

- b) Community Fibre’s network footprint was built primarily based on residential service demand.⁹⁶³ While Community Fibre is selling to businesses as well as residential customers, our assessment is that its business services are not in the LLA product market as its services are contended.⁹⁶⁴ In addition, [§].⁹⁶⁵ In line with this, we note that Community Fibre’s business plan forecasts that in 2031 residential broadband services will remain the main revenue driver of their business case, with [§] of revenue forecast to come from residential services and [§] from commercial B2B customers.⁹⁶⁶ Therefore we consider that Community Fibre is unlikely to have the potential to sufficiently overcome barriers to entry and expansion in LLA over the review period.
- c) Ogi submitted that it plans to focus on B2B over the next four years.⁹⁶⁷ However, Ogi has only sold limited volumes of LLA services so far [§].⁹⁶⁸ Given Ogi’s limited volumes of leased line and leased line equivalent services sold so far [§], it is not sufficiently clear that it has sufficiently overcome the barriers to competing in the LLA market, or that this has the potential to occur over the course of the review period.

5.221 The evidence we have gathered from other MSNs we engaged with that provide LLA services indicates that the ability to serve LLA has not influenced their network build.⁹⁶⁹ The evidence also indicates that their current volumes are low [§].⁹⁷⁰ Given the lack of historical evidence and the lack of forward-looking evidence indicating a focus on providing LLA services in this review period, we consider that these providers are also unlikely to have the potential to sufficiently overcome barriers to entry and expansion over the review period.

Other altnets

5.222 In addition to these providers, there are a number of altnets who currently only sell WLA services. We understand, as indicated by VMO2, Community Fibre and INCA, that some of these altnets may yet choose to enter the LLA market.⁹⁷¹ However, our evidence suggests that they are unlikely to have the potential to become material and sustainable competitors in this review period:

- a) First, as noted by INCA, for many of those altnets not already providing leased lines, an expansion into the LLA market may not be a priority until after they have become more established competitors in WLA.⁹⁷² This may take some time.

⁹⁶³ Community Fibre response dated 8 September 2025 to s135 notice dated 28 July 2025, question E3.

⁹⁶⁴ Community Fibre. [How to choose a business broadband provider](#). Accessed 17 February 2026. [§] response dated [§] to s135 notice dated [§], question [§].

⁹⁶⁵ [§] response dated [§] to s135 notice dated [§], question [§].

⁹⁶⁶ Community Fibre response dated 8 September 2025 to s135 notice dated 28 July 2025, question E5.

⁹⁶⁷ [Ogi](#) response to TAR26 March 2025 Consultation. Leased Line Access. Page 5.

⁹⁶⁸ Ogi response dated 29 September 2025 to s135 notice dated 28 July 2025, question D1. We note that [§]. See: [§] response dated [§] to our clarificatory question dated [§] concerning the s135 notice dated [§]; and [§] response dated [§] to s135 notice dated [§] concerning the s135 notice dated [§].

⁹⁶⁹ [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; and [§] response dated [§] to s135 notice dated [§], question [§].

⁹⁷⁰ [§]. [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; [§] response dated [§] to s135 notice dated [§], question [§]; and [§] response dated [§] to s135 notice dated [§], question [§].

⁹⁷¹ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 30. Paragraph 108. [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 2. [INCA](#) response to TAR26 March 2025 Consultation. Page 69. Paragraphs 269-270. [INCA](#) response to TAR26 November 2025 Consultation. Page 6. Paragraph 21.

⁹⁷² [INCA](#) response to TAR26 March 2025 Consultation. Page 69. Paragraph 269.

- b) Secondly, the evidence we have gathered on altnets who have not yet entered the LLA market does not indicate that they plan to provide LLA services, or that LLA services are important to their business case.⁹⁷³
- c) Thirdly, our evidence on barriers to entry and expansion suggests that once a decision is made to enter the market there are still significant barriers to overcome before an altnet can exert a material and sustainable constraint, further calling into question a potential impact from altnet entry on competitive conditions in this review period.

5.223 Therefore, we consider that these providers are also unlikely to have the potential to sufficiently overcome barriers to entry and expansion over the review period.

Conclusion on other providers

5.224 In light of the above discussion, we consider that other altnets or MSNs (beyond CityFibre, VMO2 and WightFibre) are unlikely to have the potential to become material and sustainable competitors in this review period.

5.225 In reaching this view, we have considered the likelihood of changes to competitive conditions over this review period, taking into account available evidence and exercising our regulatory judgment. As well as evidence on current volumes, we have considered evidence on business plans and, where available, projections of future volumes and revenues in providing LLA services. Therefore, we disagree with Openreach’s submission that we have not been sufficiently forward-looking in our assessment of whether other altnets are likely to have the potential to be material and sustainable competitors.⁹⁷⁴

5.226 We recognise the important contribution these providers have been making to full-fibre deployment across the UK, and we do not rule out the possibility that some may enter or expand in the LLA market in the future. However, as set out above, the aim of our market definition is to assess how competitive conditions are likely to evolve over the review period, based on the evidence currently available to us.

Assessing impact of consolidation on LLA competitive conditions

5.227 Market definition requires us to capture not only the existing competitive conditions, but also the expected or foreseeable developments that may affect competition over the 2026-31 review period.

5.228 Given this, while we agree with Gigaclear, Openreach and VMO2 that some form of altnet consolidation is likely to occur in the foreseeable future, we consider that what matters for the purpose of defining geographic markets is whether it is sufficiently foreseeable that consolidation which is likely to affect competitive conditions in the LLA market will occur over the review period.⁹⁷⁵

5.229 Therefore, in the following paragraphs we first discuss in what circumstances we consider consolidation is likely to impact LLA competitive conditions. We then set out why, in line with the preliminary position set out in the November 2025 Further Consultation, we think

⁹⁷³ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹⁷⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Pages 29-30. Paragraph 82.

[Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 7-8.

⁹⁷⁵ [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 1. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 57. Paragraph 170. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 11.

these circumstances are not sufficiently foreseeable for us to take them into account in our LLA geographic market definition.

Impact of consolidation on LLA competitive conditions

- 5.230 As discussed above, we consider some form of altnet consolidation is likely to occur over the review period. However, based on our assessment of the evidence, we believe that only a subset of the possible mergers and acquisitions that could occur between altnets would be likely to affect competitive conditions in the LLA market over the review period.
- 5.231 In particular, we consider that not all consolidation between altnets would result in a provider that would exert, or have the potential to exert, a material and sustainable constraint, and therefore to affect competitive conditions, in the LLA market over the review period. Rather, in line with responses from Gigaclear, [redacted] and VMO2, we believe this would depend on the identity of the acquirer.⁹⁷⁶
- 5.232 If one of the current or potential material and sustainable competitors in the LLA market were to acquire another network, the resulting entity would likely have the ability or the potential to exert a material and sustainable constraint across the footprint of the acquired network. This is because, once integrated, the acquirer would likely be able to leverage their business capabilities and reputation to offer LLA services and exert a similar level of constraint over the acquired footprint. On this basis, we disagree with some TechUK members and VodafoneThree who submitted that FTTP consolidation does not impact the leased lines market.⁹⁷⁷
- 5.233 Alternatively, if consolidation occurs between altnets that are neither current nor potential material and sustainable competitors in the LLA market, it is not sufficiently clear that the resulting entity would be likely to have the ability or the potential to exert a material and sustainable constraint over the 2026-31 review period.
- 5.234 We recognise that such consolidation would create a fibre network with greater scale than either of the merging parties alone and, in most cases, the technical capability to offer leased lines or LL-equivalent services across its footprint.⁹⁷⁸
- 5.235 However, the merged entity would need to decide to enter or expand in the LLA market, which is uncertain. Further, as set out above, beyond the high costs of building a scale network there are additional barriers to entry and expansion that affect suppliers' ability to gain customers in the LLA markets. These include the importance of a track record of service, reliability and the ability to provide continuity of service through low repair times and continuous support, which is costly. High switching costs and typically long contract lengths also mean that existing suppliers are likely to have a competitive advantage.⁹⁷⁹

⁹⁷⁶ [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 2. [redacted] confidential response to TAR26 November 2025 Consultation. [redacted]. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 9.

⁹⁷⁷ [TechUK](#) response to TAR26 November 2025 Consultation. Page 2. [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraphs 16-21.

⁹⁷⁸ As such, we agree with some TechUK members, INCA and VMO2 that the additional scale through consolidation may in some cases accelerate the ability of a network to compete in the LLA market (either on their own or by making them a more attractive target for further consolidation). See: [TechUK](#) response to TAR26 November 2025 Consultation. Page 2. [INCA](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 27. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 6. Paragraph 12.

⁹⁷⁹ Regarding switching costs, unlike in the WLA market there is no market-wide upgrade to a new technology in the LLA market which could create a particular opportunity for competing networks to win existing LLA business.

Given this, we would expect it to take considerable time and investment to gain sufficient traction to sufficiently overcome these barriers to entry and expansion.

- 5.236 Therefore, we consider that where the altnets involved are neither current nor potential material and sustainable competitors, the (i) additional scale gained through consolidation and the (ii) potential technical capability to offer LLA services alone are not sufficient to demonstrate that the consolidated network would exert, or have the potential to exert, a material and sustainable constraint over the 2026-31 review period.
- 5.237 On this basis, we disagree with Openreach that the identity of the merging parties is irrelevant when assessing the likely impact of consolidation on LLA competitive conditions.⁹⁸⁰

Reflecting the impact of consolidation in LLA market analysis

- 5.238 As explained above, we consider that most altnets are neither current nor potential material and sustainable competitors in the LLA market for the 2026-31 review period. Given this, out of all the possible altnet mergers and acquisitions that could occur, we consider that only a subset – those involving at least one current or potential material and sustainable competitor in the LLA market – could affect competitive conditions in LLA. Such transactions would create an entity which could (where there is limited network overlap pre-consolidation) have the ability or the potential to exert a material and sustainable constraint across a larger part of the LLA market in the 2026-31 review period.⁹⁸¹
- 5.239 In practice this means that – out of all potential mergers and acquisitions (M&A) transactions – only those involving CityFibre, VMO2 or WightFibre would likely create an entity which would have the ability or the potential to exert a material and sustainable constraint in the LLA market in the 2026-31 review period.^{982 983}
- 5.240 The evidence available to us suggests that the timing and form of consolidation is uncertain.⁹⁸⁴ In particular, while it is possible that CityFibre and/or VMO2 will consolidate with some altnets in the foreseeable future, there is uncertainty around the timing of this

⁹⁸⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 170-171. [Openreach](#) response to TAR26 November 2025 Consultation. Page 17. Paragraph 30.

⁹⁸¹ We note that the actual impact of any particular consolidation event on competitive conditions will depend on the specific details, including the market position and geographic location of the relevant parties.

⁹⁸² We note that ITS submitted that Community Fibre and Netomnia should be treated as potential material and sustainable competitors, and therefore that any consolidation driven by these operators (or other large to mid-sized altnets) with another altnet could also create entities that are material and sustainable competitors. As set out above, our assessment is that these providers are unlikely to have the potential to become material and sustainable competitors in the LLA market in this review period. As such, as explained in this section, we disagree that consolidation driven by them would create an entity with the ability or the potential to become a material and sustainable competitor in the review period. See: [ITS](#) response to TAR26 November 2025 Consultation. Pages 3-4. Paragraph 12.

⁹⁸³ VMO2 submitted that consolidation may occur between LL-only operators and altnets that are currently not material players in the LLA market. See: [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 12. However, we think that this is unlikely to change our reasoning. We note that [redacted]. See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹⁸⁴ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 4.75. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

(including completion and implementation of any transaction) and the identity of the target(s).⁹⁸⁵

- 5.241 We therefore consider that the impact of potential consolidation on LLA competitive conditions over the course of the review period is not sufficiently foreseeable, and as such we consider it is not appropriate for us to take it into account in our LLA geographic market definition.⁹⁸⁶
- 5.242 We disagree with CityFibre, Openreach and VMO2 that we have set the bar too high in evaluating what is a foreseeable development.⁹⁸⁷ We have considered the potential for a change in LLA competitive conditions to materialise during the review period as a result of consolidation. In doing so, we have exercised our regulatory judgment, taking into account indications from available evidence. Given the uncertainty around timing and form of consolidation (including the identity of the parties), we have reached the view that the potential impact on competitive conditions is not sufficiently foreseeable to be able to reflect in our geographic market definition.⁹⁸⁸
- 5.243 Finally, we disagree with CityFibre and VMO2 that our assessment of the uncertainty around consolidation is inconsistent across the LLA and WLA market.⁹⁸⁹ This is because, as set out in the WLA section, in contrast to the LLA market, in the WLA market the potential impact of most of the possible M&A transactions is less sensitive to the identity of the merging parties. This is because we consider a much wider range of operators have the potential to be material and sustainable competitors in the WLA market compared to those in the LLA

⁹⁸⁵ We note that in February 2026 the owners of the VMO2 network (Liberty Global and Telefonica) and Infravia agreed to acquire Substantial Group (including the Netomnia network footprint and retail brands YouFibre and Brsk) through their existing joint venture, nexfibre. However, the implementation and timing of this acquisition remain uncertain as the deal is not yet complete and it is subject to regulatory approval. As such, we continue to consider that – for the reasons discussed above – Netomnia is not, and is unlikely to have the potential to become, a material and sustainable LLA competitor and we continue to treat Netomnia network footprint as separate from VMO2/nexfibre. In any event, our analysis suggests that the inclusion of Netomnia as part of the VMO2 and nexfibre footprint would not materially change the LLA geographic boundaries. This is because Netomnia’s footprint largely overlaps with VMO2’s footprint, which we already account for when defining the boundaries of LLA geographic markets. See: ISPreview. [Netomnia Agree UK Broadband Merger Deal with Owners of Virgin Media O2 UPDATE2 - ISPreview UK](#). Accessed 27 February 2026.

⁹⁸⁶ We note that INCA and ITS said our proposed approach could materially devalue the attractiveness of altnets as target for consolidation and therefore undermine the consolidation process. This is not a relevant consideration for the purpose of defining geographic markets. [INCA](#) response to TAR26 November 2025 Consultation. Page 8. Paragraph 30. [ITS](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 15.

⁹⁸⁷ [CityFibre](#) response to TAR26 November 2025 Consultation. Pages 2-3. [Openreach](#) response to TAR26 November 2025 Consultation. Page 17. Paragraphs 30-32. Paragraphs 1.5-1.10. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 11.

⁹⁸⁸ In practice, most altnets are largely overlapped by VMO2’s network. Since we use VMO2’s current and planned build to draw the HNR and Area 2 boundaries, only a small proportion of an altnet’s footprint would fall in Area 3. Therefore, M&A transactions involving CityFibre, VMO2, or WightFibre would be unlikely to materially change our geographic boundaries. For example, if CityFibre were to acquire an altnet who is not a current or potential LLA material and sustainable competitor, a large part of the footprint of the acquired altnet would likely already fall in Area 2. As such, the additional footprint would be unlikely to materially increase the size of LLA Area 2. Moreover, since we are not using CityFibre footprint to draw the boundaries of the HNR area an acquisition by CityFibre would not change the boundaries of the HNR Area. As such, updating them post-statement, as suggested by Gigaclear, would be disproportionate. See: [Gigaclear](#) response to TAR26 November 2025 Consultation. Page 2.

⁹⁸⁹ [CityFibre](#) response to TAR26 November 2025 Consultation. Paragraphs 1.5-1.6. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 14. Paragraph 14.

market. This means most potential transactions would likely result in a merged entity that would have the ability or the potential to exert a material and sustainable constraint in WLA, and therefore affect competitive conditions in the WLA market.

5.244 Therefore, while form and timing of consolidation is similarly uncertain across the WLA and LLA markets, the likely impact on competitive conditions is different. Specifically, unlike in WLA, in the LLA market, the way in which consolidation might affect competition over the course of the review period is not sufficiently foreseeable and so we consider it is not appropriate for us to reflect it in our market analysis.

Conclusions on material and sustainable competitors

5.245 In summary, we consider that due to their business specialisation and their ability to win leased lines customers, all LL-only providers listed above are current material and sustainable competitors in the supply of LLA.

5.246 In addition to LL-only providers, we also consider that due to its mature position in the LLA market and significant volumes sold so far, VMO2 is a current material and sustainable competitor.

5.247 Therefore, the current material and sustainable competitors that we have identified are Colt / Lumen, Commsworld, eircom, FibreSpeed, ITS, KCOM, MS3, National Grid Telecoms, Neos, Verizon, VMO2, VodafoneThree, Vorboss and Zayo.

5.248 In addition, we consider that CityFibre and WightFibre are likely to have the potential to be a material and sustainable competitor.

5.249 As discussed above, we understand that some altnets may yet choose to enter the market, however it is unlikely that there is potential for this to affect competitive conditions in this review period.

5.250 Based on this evidence, we also consider that current and expected competitive conditions of the WLA and LLA markets are unlikely to converge in this review period. Specifically:

- a) While we understand that from a technological perspective WLA networks can potentially be used to provide LLA, it has not been the case that all WLA entrants offer LLA. In fact, the vast majority of WLA entrants do not yet offer LLA services. The business plans available to us from some of these providers do not indicate that they have specific plans to enter the LLA market.⁹⁹⁰
- b) From the evidence that we have seen, many FTTP networks have not been built specifically with LLA demand in mind, which further illustrates that competing in LLA has not been a focus for these networks and may make it more challenging for them to do so over this review period (e.g. if their existing networks are less close to LLA demand sites).⁹⁹¹
- c) We do not agree with Openreach that we should include all FTTP network build in our LLA geographic market definition, regardless of the identity of the company controlling

⁹⁹⁰ For example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

⁹⁹¹ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

it.⁹⁹² This is because, given the above discussion about the costs of entering and expanding in the LLA market, we think it would take a material amount of time and investment for an FTTP network to gain LLA market traction and therefore be likely to have the potential to become a material and sustainable competitor to Openreach within this review period.

- 5.251 Finally, while we recognise that some consolidation is likely over the review period, we consider the potential impact on competitive conditions is not sufficiently foreseeable to be able to reflect in our geographic market definition for the reasons explained above.
- 5.252 Stakeholders' views on whether all full-fibre networks are current or potential material and sustainable competitors in the LLA market also affected their views on a number of other issues. We note, for example, that Openreach's feedback on the appropriateness of our modelling of the geographic market boundaries rests in large part on a different view on the convergence in competitive conditions between WLA and LLA markets. Where relevant, we will refer back to our reasoning as set out here to explain why we have concluded that there are not the same competitive conditions in LLA and WLA markets.
- 5.253 In the following paragraphs we explain how we use our findings on who is or has the potential to be a material and sustainable competitor to group together areas with sufficiently similar competitive conditions.

Defining geographic markets for LLA

- 5.254 To identify LLA geographic markets:
- a) First, we identify candidate geographic areas with sufficiently similar competitive conditions. As part of this identification of candidate geographic areas we look at the number of competitors, their competitive position, the certainty of their presence and the distance of their network from demand sites.
 - b) Secondly, we assess whether competitive conditions within each of these candidate geographic areas are sufficiently homogeneous to form distinct geographic markets, or whether differences exist that lead us to identify additional separate markets. This step of the analysis is also informed by and draws on our analysis of network reach. Our analysis of network reach is described separately below.

Identifying geographic areas with similar competitive conditions

- 5.255 Competitive conditions in LLA are affected by a number of underlying factors:
- a) The number of current or potential material and sustainable competitors present:⁹⁹³ other things being equal, competition will be stronger where there are more providers who have – or have the potential to – overcome the barriers to entry and expansion in LLA and are able to compete for customers.
 - b) Current versus potential material and sustainable competitors: as discussed above, we consider that current material and sustainable competitors have already sufficiently overcome barriers to entry and expansion in the LLA market. Potential material and sustainable competitors have the potential to sufficiently overcome these barriers over the review period, but there is some uncertainty on whether and when this will happen.

⁹⁹² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 57-58. Pages 57-58. Paragraphs 167-171. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 49. Paragraph 134.

⁹⁹³ As detailed below we determine presence based on the number of demand sites that are within a certain 'buffer distance' of competing networks in a postcode sector.

As such, other things being equal, the competitive constraint exerted by potential material and sustainable competitors is likely to be more uncertain.

- c) Existing versus planned build: competitive conditions are likely to be less certain where competitors have planned – rather than existing – build. This reflects the uncertainty of prospective build plans, and the fact that it would take time to complete build.
- d) Distance from demand sites: as detailed below, we consider that competitive conditions are likely to vary depending on the distance of providers from demand sites. In particular, the evidence suggests that LLA providers can serve a meaningful share of customers located up to 100m from their networks, but the likelihood of winning customers is significantly stronger for customers that are within 50m and weaker beyond 100m.⁹⁹⁴

5.256 We believe it is appropriate to identify initial candidate geographic markets by reference to the above factors.

5.257 As a starting point, we consider we should carve out areas with no existing or planned presence from any of the current or potential material and sustainable competitors within a reasonable distance of demand sites. In these areas competition is likely to be currently limited and there is unlikely to be potential for material and sustainable competition to emerge over the review period.

5.258 The rest of the UK will comprise areas where there is existing or planned presence of at least one current or potential material and sustainable competitor within a reasonable distance of demand sites. We recognise that there are a range of competitive conditions within this area, including cases where multiple current material and sustainable competitors are present. Therefore, we consider it would be appropriate to further carve out candidate areas where competition is likely to be sufficiently well-established (i.e., stronger and more certain) to differentiate them from other areas.

5.259 In practice, we think a reasonable starting hypothesis to identify the latter category of areas would be to capture the set of postcode sectors where there are at least two current material and sustainable competitors with existing presence closer to the demand sites.⁹⁹⁵ We believe that the higher number of competitors who have sufficiently overcome barriers to entry and expansion, combined with the certainty of their presence and the short distance from the demand sites means that, in these areas, competition is likely to be sufficiently well-established to differentiate them from other areas.

5.260 Therefore, in light of the above, we have identified the following candidate areas:

- a) HNR Area: those postcode sectors where there are at least two current material and sustainable competitors with existing presence. In practice, this includes postcode sectors where at least two LL-only providers, or VMO2 and at least one LL-only provider, are currently present. We consider that this presence means that competition is likely to be sufficiently well-established to differentiate these postcode sectors from other areas.
- b) LLA Area 2: those non-HNR postcode sectors where there is, or there is the potential for, material and sustainable competition. In practice, this is made up of non-HNR

⁹⁹⁴ As detailed below, we use a 50m buffer distance to proxy network presence when determining the boundaries of the HNR area. This compares to a buffer distance of 100m to proxy network presence when determining the boundaries of between LLA Areas 2 and 3.

⁹⁹⁵ The HNR Area market in 2021 was also defined by reference to the presence of two or more rival networks to BT in the provision of leased lines.

postcode sectors where there is existing or planned presence of at least one current or potential material and sustainable competitor.

- c) LLA Area 3: those postcode sectors where there is not, and there is unlikely to be potential for, material and sustainable competition to emerge over the review period. In practice, this includes postcode sectors where none of the LL-only providers, VMO2, CityFibre or WightFibre are or plan to be present.

5.261 In the paragraphs that follow, we set out additional detail on our reasons for identifying these candidate areas. We also assess whether competitive conditions in each of these areas are sufficiently homogeneous to form distinct geographic markets, or whether differences exist that justify defining additional separate markets.

5.262 Overall, we conclude that competitive conditions are sufficiently homogeneous within the candidate areas we have identified above (and appreciably different from each other) such that each one forms a distinct LLA geographic market.

Assessing homogeneity of competitive conditions within each candidate geographic market

5.263 To facilitate our assessment of competitive conditions within and between each candidate geographic market, Table 5.3 below provides key metrics for all of these areas.

5.264 As outlined above, some of the criteria we use to determine presence of networks differ between HNR Area and Area 2 / Area 3. In particular, as further discussed below, we use more stringent criteria to determine network presence in HNR as we aim to capture a stronger and more certain level of competition.

5.265 As further detailed in the following paragraphs, the differences in the underlying criteria should be taken into account when comparing metrics across HNR and other areas.

Table 5.3: Presence of competing networks in HNR Area, Area 2 and Area 3

Area		HNR Area	Area 2	Area 3
Buffer distance		50m	100m	
Material and sustainable competitors		Current	Current and potential	
Build type		Existing	Existing and planned	
Average number of material and sustainable competitors within the relevant buffer distance		2.88	1.85	0.42
Proportion of demand sites with N competitors (cumulative)	N=0 or more	100.0%	100.0%	100.0%
	N=1 or more	95.7%	91.6%	29.5%
	N=2 or more	82.0%	54.3%	8.6%
	N=3 or more	53.6%	23.9%	2.6%
	N=4 or more	31.5%	9.6%	1.0%

Area		HNR Area	Area 2	Area 3
	N=5 or more	16.2%	3.7%	0.4%

Source: Ofcom analysis of provider data.

Notes: As outlined above and further explained below, for the purpose of defining the boundaries of the HNR area we only use i) current material and sustainable competitors, ii) existing build, and iii) a 50m buffer distance. To define the boundaries of Area 2 and Area 3 we use i) current and potential material and sustainable competitors, and ii) both existing and planned build, and iii) a 100m buffer distance.

High Network Reach Area

- 5.266 As set out above, as a starting point we examine homogeneity of competitive conditions in postcode sectors where there are at least two current material and sustainable competitors with existing presence. We refer to these areas collectively as the HNR Area.
- 5.267 In practice this means we consider the HNR Area to be postcode sectors where at least two LL-only providers, or VMO2 and at least one LL-only provider, have existing presence. We consider that, in those areas, competition is likely to be sufficiently well-established to be appreciably different from other areas. This is for a couple of reasons.
- 5.268 First, the number of competitors present affects competitive conditions. As such, competition is likely to be particularly strong, in areas where at least two current material and sustainable competitors are present. In particular, we note that:
- a) Demand sites in the HNR Area have access to an average of 2.88 current material and sustainable competitors with existing presence. Compared to this, as set out above, customers in LLA Area 2 and LLA Area 3 have access to fewer competitors (even including current or potential material and sustainable competitors with existing or planned presence, the average is 1.85 and 0.42 respectively).
 - b) The proportion of demand sites with a given number of current (and potential) material and sustainable competitors is consistently higher in the HNR Area compared to Area 2 and Area 3. For example, 82% of demand sites in the HNR Area have access to at least two current material and sustainable providers with existing presence. Compared to this, 54% of Area 2 demand sites and 9% of Area 3 demand sites have access to two or more current or potential material and sustainable competitors with existing or planned presence.
- 5.269 In addition, we note that looking at the number of competitors alone would understate the degree of competition in the HNR Area and how different this is from other areas. This is because, as discussed above, there are additional factors – besides the number of competitors – that render HNR competitive conditions stronger and more certain compared to other areas. These include:
- a) Rivals' competitive position. As set out above, the candidate HNR Area includes postcode sectors where there are at least two current material and sustainable competitors. These competitors have already sufficiently overcome the barriers to entry and expansion in the LLA market to have a more significant and sustainable impact on competitive conditions.
 - b) Certainty of competitors' presence. Rival networks will have existing (and not planned) presence in the HNR postcode sectors we have identified. We consider that competition is likely to be stronger and more certain where providers have existing presence. This

reflects the uncertainty of prospective build plans, and the fact that it would take time for this build to occur.

- c) Competitors' closeness to demand sites. As detailed below, we require competitors to be closer to demand sites for the purpose of defining the HNR Area. The evidence suggests that where competitors are closer to demand sites they are more likely to be able to win customers. As such, we consider closeness of competitors further contributes to making competition stronger and more certain in the HNR area.

5.270 This can be illustrated by looking at the presence of competitors on a like for like basis as shown in Table 5.12 and Table 5.15 of Annex 5. For example, if we assess the number of current material and sustainable competitors with existing presence within 50m only in Area 2 and 3 as well (as indicated by the figures in brackets in Table 5.12 and Table 5.15 of Annex 5), we note that the differences mentioned above would be even more pronounced.⁹⁹⁶

5.271 Therefore, we consider that competitive conditions in the HNR Area are appreciably different from other areas.

5.272 Openreach submitted that the presence of CityFibre creates competitive conditions that are sufficiently well-established to be considered part of the HNR.⁹⁹⁷ We disagree with this. As explained above, we consider that CityFibre is a potential material and sustainable competitor. As such, we consider that the presence of CityFibre (or any other potential material and sustainable competitor) alongside one current material and sustainable competitor would create competitive conditions that are likely to be appreciably more limited and less certain than those we find in the candidate HNR Area.

5.273 We also disagree with Openreach's suggestion that we should use CityFibre's footprint for the HNR Area boundary calculation. Openreach considered that it is inconsistent for us not to include CityFibre's footprint in the HNR Area boundary calculation, given that both current and potential competitors are considered as part of the SMP assessment in the HNR Area.⁹⁹⁸ We consider that areas with existing presence of at least two current material and sustainable competitors exhibit sufficiently well-established competitive conditions that we can distinguish them from other areas. However as part of the SMP assessment, it is appropriate that we then examine the strength of the competition BT faces in that market which involves an all-round assessment of the competitive constraints (which includes CityFibre).⁹⁹⁹

5.274 We also disagree with AllPoints Fibre and Vorboss, who suggested that we have taken too simplistic of an approach in defining the HNR Area in that we only assess whether two

⁹⁹⁶ For example, customers in LLA Area 2 and LLA Area 3 have access respectively to an average of 1.11 and 0.24 current material and sustainable competitors with existing presence. Similarly, 25% of Area 2 demand sites and 4% of Area 3 demand sites have access to two or more current material and sustainable competitors with existing presence.

⁹⁹⁷ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 13-14. Paragraphs 13-17.

⁹⁹⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 57. Footnote 77.

⁹⁹⁹ Openreach also submitted that CityFibre's footprint should be used in the HNR Area boundary calculation to avoid overly complex outcomes if CityFibre were to acquire another alntet or a LL-only provider.⁹⁹⁹ We consider it would not be appropriate to adjust our assessment of the competitive positioning of a provider to pre-empt hypothetical future scenarios. Instead, as set out above, we have conducted a more general assessment of the impact of consolidation on LLA competitive conditions and concluded that this is not sufficiently foreseeable to be reflected in our market analysis.

competitors to Openreach are present.¹⁰⁰⁰ As explained above, we are not simply looking at the number of competitors for the purpose of identifying the HNR Area. Instead, we have considered a number of additional factors relating to the competitive positioning of these providers, the certainty of their presence and the distance of their networks from demand sites.

Assessing whether there are any areas within the HNR where competition is appreciably different such as to constitute a separate geographic market

5.275 We have also looked at additional indicators to assess whether competitive conditions in the HNR Area are sufficiently homogeneous, or whether differences exist that justify defining additional separate markets.

5.276 Table 5.4 below provides key metrics on the presence¹⁰⁰¹ of competing networks in High Network Reach Area postcode sectors grouped by metropolitan area.

Table 5.4: Presence of competing networks in High Network Reach Area postcode sectors grouped by metropolitan area

Area	Average number of competing networks	Proportion of demand sites with N competing networks (cumulative)					
		N = 0 or more	N = 1 or more	N = 2 or more	N = 3 or more	N = 4 or more	N = 5 or more
Liverpool	3.06	100%	99%	89%	63%	32%	18%
Manchester	3.48	100%	95%	86%	70%	52%	31%
North London	2.94	100%	97%	84%	50%	32%	18%
Birmingham	3.21	100%	97%	86%	64%	44%	22%
South West London	2.69	100%	95%	81%	51%	26%	11%
North West London	3.1	100%	97%	83%	54%	36%	26%
South East London	3.32	100%	97%	82%	62%	44%	26%
Edinburgh	2.86	100%	94%	84%	53%	34%	15%
Glasgow	3.49	100%	97%	88%	66%	42%	30%
East London	3.25	100%	96%	80%	62%	44%	26%
All other areas	2.63	100%	95%	80%	48%	24%	11%
Total for HNR Area	3.09	100%	96%	82%	54%	31%	16%

Source: Ofcom analysis of provider data.

Note: Table uses current material and sustainable competitors.

¹⁰⁰⁰ AllPoints Fibre response to TAR26 March 2025 Consultation. Page 7. Paragraphs 40-42. Vorboss response to TAR26 March 2025 Consultation. Pages 7-8.

¹⁰⁰¹ We detail how we determine presence in the HNR area below.

- 5.277 The above results suggest that there is some variation in the degree of rival infrastructure present within the HNR Area. We have therefore considered whether there are some parts of the HNR Area where competitive conditions are appreciably different (in this case, stronger) such as to constitute a separate geographic market.
- 5.278 In practice, given the HNR Area already captures postcode sectors where competition is sufficiently well established that we can distinguish them from other areas, we think competition would need to be effective, including in the absence of regulation, for any parts of the HNR Area to constitute a separate geographic market.

Approach

- 5.279 To assess whether such a separate geographic market exists, we have firstly singled out postcode sectors where the average number of rival networks present is materially higher than in other HNR postcode sectors.
- 5.280 However, having a higher number of networks present than the rest of the HNR Area does not automatically mean competitive conditions are sufficiently different to identify a distinct market. We have therefore also considered additional factors to assess whether competition in these candidate postcode sectors is sufficiently different to the rest of the HNR Area to constitute a separate geographic market.
- 5.281 In particular, we have also considered the level of demand as measured by the number of relevant postcode sectors, the total number of new connections over the period 2020-2024 within these postcode sectors, as well as market shares for these new connections. This is because we consider that a few small clusters of postcode sectors accounting for a limited number of new connections are unlikely to be sufficient to create competitive conditions that are appreciably different and distinct from neighbouring areas.

Implementation and findings

- 5.282 As discussed above, in 2021 we identified the CLA as a distinct market from the HNR Area and found it to be effectively competitive.¹⁰⁰² Therefore, to practically implement the above approach, we have used the average number of rival networks present in the 2021 CLA market (5.1 networks) as well as BT's share in the 2021 CLA market (50%-60%) as reference points to test whether any potential new geographic areas might be considered effectively competitive.
- 5.283 Our analysis indicates that there are ten postcode sectors where the average number of competing networks is the same or higher than the average number of competing networks in the 2021 CLA market (which was 5.1 networks),¹⁰⁰³ of which one postcode sector had no new LLA connections in 2020-2024.
- 5.284 Of the nine postcode sectors with new LLA connections provisioned in 2020-2024, four postcode sectors are located in various parts of Greater London and between them account for 555 LLA circuit ends provisioned in 2020-2024 (representing less than 1% of all LLA circuit ends in the HNR area), two are in Manchester and between them account for 157 LLA circuit ends provisioned in the same period (this represents less than 1% of all LLA

¹⁰⁰² We had also defined the CLA as a distinct market and found it to be effectively competitive in BCMR 2019.

¹⁰⁰³ Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2, Table 7.6.

circuit ends in the HNR area), two are in Glasgow and between them account for 404 LLA circuit ends provisioned in the same period (this represents less than 1% of all LLA circuit ends in the HNR area) and one postcode sector is in Birmingham which accounts for 251 of the LLA circuit ends provisioned (this represents less than 1% of all LLA circuit ends in the HNR area).¹⁰⁰⁴

- 5.285 Between 2020 and 2024, BT provisioned 71-80% ([<]) of new leased line connections across the four postcode sectors located in Greater London, 51-60% ([<]) across the two postcode sectors in Manchester, 61-70% ([<]) across the two postcode sectors in Glasgow and 71-80% ([<]) for the one postcode sector in Birmingham.
- 5.286 We consider that the small size of these clusters of postcode sectors and the limited level of connections they account for, suggest that these are unlikely to constitute a separate geographic market where competitive conditions are appreciably different and distinct from neighbouring areas.
- 5.287 We also note that in these areas BT's shares remain high, and – in several cases – considerably higher than BT's share of connections in the 2021 CLA (i.e. 51%-60%). This finding further suggests that despite a high number of networks being present, the competitive conditions are not appreciably different from the rest of the HNR Area.

Conclusions on HNR Area

- 5.288 Given the evidence set out above, we consider that – despite some variability in the average number of networks present – competitive conditions are sufficiently similar across the entire HNR Area such that this should be regarded as a single geographic market. We also consider that competitive conditions in the HNR Area are appreciably different from other areas.
- 5.289 Therefore, we define a single HNR market where – due to existing presence of at least two current material and sustainable competitors – there is sufficiently well-established competition in the commercial deployment of competing networks that we can differentiate this market from other areas. We note that VodafoneThree and Consumer Scotland agree with our definition of the HNR Area.¹⁰⁰⁵

LLA Area 2 and Area 3

- 5.290 As set out above, in addition to the HNR we have identified two additional candidate geographic markets:
- a) LLA Area 2: those non-HNR postcode sectors in which there is, or there is the potential for, material and sustainable competition. In practice, this is made up of non-HNR postcode sectors where there is existing or planned presence of at least one current or potential material and sustainable competitor.
 - b) LLA Area 3: those post code sectors where there is not, and there is unlikely to be potential for, material and sustainable competition to emerge over the review period. In practice, this includes postcode sectors where none of the LL-only providers, VMO2, CityFibre or WightFibre are or plan to be present.

¹⁰⁰⁴ A list of these postcode sectors is provided in Annex 5, Table A5.13.

¹⁰⁰⁵ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 42. [Consumer Scotland](#) response to TAR26 March 2025 Consultation. Page 6.

5.291 We assess below whether competitive conditions are sufficiently homogenous within each of those areas, and appreciably different from the HNR Area and each other, to form distinct geographic markets.

LLA Area 2

5.292 As discussed above, our second candidate area includes non-HNR postcode sectors where there is at least one current or potential material and sustainable competitor who has existing or planned presence. We refer to these areas as LLA Area 2. We consider that competition is, or has the potential to become, material and sustainable across the whole area.

5.293 In fact, as shown in Table 5.3, the vast majority of demand sites in LLA A2 (over 90%) have existing or expected access to at least one current or potential material and sustainable competitor.¹⁰⁰⁶

5.294 We recognise that competitive conditions are not perfectly homogenous across LLA Area 2. For example, as illustrated in Table 5.3 above, the majority of customers have current or expected access to two or more current or potential material and sustainable competitors, and nearly a quarter of customers have current or expected access to three or more current or potential material and sustainable competitors.

5.295 However, there is some uncertainty about how strongly and where competition will develop over the review period within candidate Area 2. As explained above, this is due to the uncertainty of planned build,¹⁰⁰⁷ the competitive positioning of some competitors¹⁰⁰⁸ as well as the longer distance of competitors from demand sites¹⁰⁰⁹.

5.296 Overall, we consider competitive conditions to be sufficiently homogenous within candidate Area 2, in that there is – or there is the potential for – material and sustainable competition across the area, and we do not think any potential variations in competitive conditions are clearly identifiable or stable over the review period to justify defining an additional geographic market.¹⁰¹⁰

LLA Area 3

5.297 As discussed above, our third candidate area includes those postcode sectors where there is unlikely to be potential for material and sustainable competition to emerge over the review period. We refer to this as LLA Area 3.

¹⁰⁰⁶ We refer to a customer having ‘expected access’ to a competitor to capture situations where a provider has planned, rather than existing, build.

¹⁰⁰⁷ As discussed above, build plans are uncertain, and it takes time to complete any build, and so where presence is based on plans (rather than existing network) the impact on competitive conditions is also uncertain.

¹⁰⁰⁸ As discussed above, the position of the competing network will also affect any impact on competition. For example, the impact is likely to be greater where the network present is already a material and sustainable competitor, and (all else equal) lower where they are a potential material and sustainable competitor (particularly in the absence of regulation).

¹⁰⁰⁹ As discussed above, the evidence suggests that LLA providers can serve a meaningful share of customers located up to 100m from their networks, but the likelihood of winning customers is significantly stronger for customers that are within 50m and weaker beyond 100m.

¹⁰¹⁰ We note Vodafone’s submission that Openreach faces little to no competitive constraint in large parts of Area 2. However, the level of constraint on BT is not relevant for the purposes of geographic market definition. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 286.

- 5.298 In practice, LLA Area 3 includes postcode sectors where none of the LL-only providers, VMO2, CityFibre or WightFibre are, or plan to be, present.¹⁰¹¹ Therefore we consider that the competitive conditions across LLA Area 3 are sufficiently similar. We expect these to remain throughout the review period.
- 5.299 We recognise that there is some network in our defined Area 3. This is the result of our approach to establishing network presence in our modelling which, as we explain below, we consider to be reasonable and practical for the purposes of identifying geographic areas with sufficiently homogenous competitive conditions.
- 5.300 Our view remains that any differences in network coverage across Area 3 are not significant enough to justify defining separate geographic markets. Separating out areas with coverage from networks that are unlikely to have the potential to become material and sustainable competitors, or those where coverage does not meet our coverage threshold, would risk overstating the degree of competitive differentiation.
- 5.301 In line with this, Table 5.3 above shows that the vast majority of customers across LLA Area 3 are not, and are unlikely to become, within reach of a current or potential material and sustainable competitor.
- 5.302 Therefore, we consider that competitive conditions across candidate LLA Area 3 are sufficiently similar and appreciably weaker than LLA Area 2 (where competition is or has the potential to become material and sustainable) and from the HNR Area (where competition is sufficiently well-established).

We define three geographic markets for LLA

- 5.303 Based on the evidence discussed above, we define three geographic markets: the HNR Area, LLA Area 2 and LLA Area 3.
- 5.304 We recognise that competitive conditions are not completely homogeneous within each of the geographic markets. However, there is no requirement for competitive conditions to be perfectly homogeneous across a geographic market; rather, the requirement is that the competitive conditions are sufficiently similar.
- 5.305 Given the evidence set out above, we consider that – despite some variability in the average number of networks present – competitive conditions are sufficiently similar across the entire HNR Area such that this should be regarded as a single geographic market. Therefore, we define a single HNR market where – due to existing presence of at least two current material and sustainable competitors – there is sufficiently well-established competition in the commercial deployment of competing networks.
- 5.306 LLA Area 2 encompasses a continuum of competitive conditions. However, competitive conditions are sufficiently similar in that these are all postcode sectors where there is, or there is likely to be potential for, material and sustainable competition.
- 5.307 LLA Area 3 encompasses postcode sectors where competition is currently limited and there is unlikely to be potential for material and sustainable competition to emerge over the review period.
- 5.308 As such we are satisfied that the competitive conditions within each geographic area are sufficiently similar, and appreciably different between them, such that they represent separate geographic markets.

¹⁰¹¹ We describe further below how we have assessed presence in our modelling.

The CLA

5.309 We previously found the CLA to be effectively competitive in WFTMR21 and BCMR 2019. A number of providers suggested we should consider re-regulating this area.¹⁰¹² However, we note that the evidence provided to support these suggestions was limited and not necessarily indicative of competition no longer being effective.¹⁰¹³ As such, we remain of the view that it is not appropriate to consider making a market power determination in relation to the CLA, and it therefore does not form part of this review.^{1014 1015}

Establishing the HNR, LLA Area 2 and LLA Area 3 market boundaries

5.310 In this sub-section, we set out the modelling approach we use to determine the boundaries of the HNR Area, Area 2 and Area 3 geographic markets that we have identified. Our modelling approach and the analysis used to determine the buffer distance parameter value are explained in more detail in Annex 5.

5.311 The NRM determines the number of current (and, where applicable, potential) material and sustainable competitor networks located within the buffer distance of each demand site in a postcode sector.

5.312 To do this, we use existing and, where applicable, planned build of these operators.

5.313 We then classify each postcode sector based on whether at least 65% of its demand sites are located within the buffer distance of zero, one or two or more current (and, where applicable, potential) material and sustainable competitor networks. In practice, this means that we allocate postcode sectors to the different LLA geographic markets as follows:

- a) HNR area: postcode sectors where at least two LL-only providers, or VMO2 and at least one LL-only provider, are currently present within a given buffer distance of at least 65% of demand sites.
- b) LLA Area 2: non-HNR postcode sectors where at least one of the LL-only providers, VMO2, CityFibre or WightFibre are, or plan to be, present within a given buffer distance of at least 65% of demand sites.
- c) LLA Area 3: postcode sectors where none of the LL-only providers, VMO2, CityFibre or WightFibre are, or plan to be, present within a given buffer distance of at least 65% of demand sites.

¹⁰¹² [INCA](#) response to TAR26 March 2025 Consultation. Page 75. Paragraph 291. [TechUK](#) response to TAR26 March 2025 Consultation. Page 5. [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 40-42. [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 5-7.

¹⁰¹³ For example, evidence on BT's market share in the CLA not falling since deregulation doesn't necessarily indicate that competitive conditions have worsened. Similarly, evidence on the use of discounts by BT is not inconsistent with competition remaining effective and may in fact reflect a stronger competitive pressure on BT.

¹⁰¹⁴ Ofcom. 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 1. Paragraph 2.35.

¹⁰¹⁵ For ease of reference for stakeholders, postcode sectors previously classified as CLA are listed alongside the geographic markets we have defined in this review in Schedule 3. We have identified two postcode sectors that were not included in the WFTMR21 and are located inside the area of other postcode sectors previously classified as CLA; these new postcode sectors are treated as part of the CLA. See Annex 5 for more detail. We also note that our analysis excludes all postcodes in the Hull Area as these are subject to a separate market review.

- 5.314 In practice, to draw the boundaries between the above geographic markets, we make a number of modelling choices and approximations based on the evidence which are explained in more detail below:
- a) We first explain why, in contrast to our WFTMR21 approach, we are using the NRM across all LLA geographic markets.
 - b) We then provide further details about the model and its parameters, including the geographic units, presence threshold and buffer distance we use, as well as how we plan to use the evidence on demand sites and existing and planned build.

Why we use the NRM across all LLA geographic markets

- 5.315 In the WFTMR21, we used the NRM to determine the boundaries of the HNR Area geographic market. We defined the LLA Area 2 market by reference to the current or planned presence of CityFibre and/or VMO2, which we assessed using same the same modelling methodology that was used for our WLA market definition.
- 5.316 We are now using the NRM to identify all LLA geographic markets: the HNR Area, LLA Area 2 and LLA Area 3. We received submissions from Community Fibre, INCA, Netomnia / Brsk and Openreach that we should use the WLA market boundaries to define LLA Area 2 and LLA Area 3, as we did in the WFTMR21.¹⁰¹⁶
- 5.317 We think it is useful to distinguish between three themes raised in these responses:
- a) WLA-LLA convergence in competitive conditions: some of these responses suggest that most/all altnets will compete across WLA and LLA markets wherever they have current or planned presence. As such, these respondents suggest, it would be conceptually more appropriate to use the same boundaries to identify areas where there is potential for competition in WLA and LLA. That is, these submissions suggest that we include the same providers in LLA as in WLA, and also model their presence in the same way.¹⁰¹⁷
 - b) Limitations of the NRM: Openreach pointed to a number of aspects of the NRM which, in Openreach's view, indicate that this modelling approach would not capture LLA competitive conditions sufficiently well, unless they are addressed.¹⁰¹⁸
 - c) Impact on market outcomes: we received submissions that we should align the WLA and LLA boundaries to encourage growth, reduce regulatory complexity and improve the opportunity for competition.¹⁰¹⁹
- 5.318 On the first point regarding WLA-LLA convergence, as discussed above, our assessment of the evidence suggests that WLA and LLA markets are unlikely to converge in competitive

¹⁰¹⁶ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [INCA](#) response to TAR26 November 2025 Consultation. Paragraph 24. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Pages 6-7. [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Paragraphs 78-80 and 91. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 78 and 132-138. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 40-45, 47-51 and 56-58. [Openreach](#) response to TAR26 November 2025 Consultation. Page 8.

¹⁰¹⁷ [INCA](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 24. [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 32. Paragraph 93. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 42-45 and 47-49.

¹⁰¹⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 43-49 and 56-57. Paragraphs 110-133 and 164-165. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 50-51 and 56-50. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 4 and 8. [Openreach](#) response to TAR26 November 2025 Consultation. Annex 1.

¹⁰¹⁹ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Pages 6-7.

conditions over the review period. Further, the list of providers who are likely to have the potential to be material and sustainable competitors in LLA differs to those in WLA. Therefore, we do not think it is reasonable or appropriate to use the same boundaries to identify areas where there is potential for competition in WLA and LLA.^{1020 1021}

- 5.319 We are now also reflecting the presence of LL-only networks when identifying LLA Areas 2 and 3 using the NRM. Using the WLA Area 2 boundary would ignore the network footprint of LL-only providers who, as explained above, have expanded their networks and won increasing shares of leased line business since 2021.
- 5.320 On the second point regarding the limitations of the NRM, we recognise that the NRM is (like all models) an approximation of reality. However, we disagree with Openreach and consider that the NRM is the best modelling approach available to us to capture competitive conditions in the LLA market.¹⁰²² This is for a couple of reasons, which we expand on below. We also note that – aside from the convergence argument – Openreach has not provided evidence to explain why the WLA model would be a better way to approximate LLA competitive conditions.
- 5.321 The NRM approximates competitive conditions by looking at the number of LLA competitor networks located within a certain buffer distance of LLA demand sites in a postcode sector. The WLA model, as used in the WFTMR21 to define the LLA Area 2 market, instead measured presence of WLA networks in postcode sectors based on FTTP coverage of residential and commercial premises and used that as a proxy for capturing competitive conditions in the LLA market as it then was. Given that competitive conditions in the WLA and LLA markets are unlikely to converge in this review period, we consider the NRM would better capture the circumstances in which an LLA provider is able to compete for a leased line customer.¹⁰²³
- 5.322 Additionally, while we recognise that the NRM remains an approximation of reality, since the WFTMR21 we have made improvements to the NRM to more accurately reflect competitive conditions in the LLA market. This means that the NRM is a better

¹⁰²⁰ We note this is a change from the WFTMR21, where we considered that there was potential for material and sustainable competition in areas covered by the Virgin Media and/or CityFibre networks in both WLA services and LLA services. As the footprints of these networks were the same for both WLA services and LLA services, we believed that the use of common geographic boundaries for these markets was both reasonable and practical. However, this is no longer the case. See: Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Page 144. Paragraph 7.150.

¹⁰²¹ PXC supports our current view of the market and approach to defining geographic boundaries. UKCTA also supported our decision to maintain separate market definitions for WLA and LLA, given the distinct nature of business connectivity. [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.3. [UKCTA](#) response to TAR26 March 2025 Consultation. Page 2. Paragraph 2.

¹⁰²² [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 50-51.

¹⁰²³ As explained in more detail below and in Annex 5, the NRM uses a ‘buffer distance’ parameter. The purpose of the buffer distance is to capture the distance at which LLA providers can supply and compete for customers who require a leased line. Our evidence suggests that LLA providers can use PIA to connect customers but are less successful at winning business for customers that are a greater distance from their network footprint. Given this evidence, we consider that the buffer distance parameter is another specific example of how the NRM provides a more accurate approximation of LLA competitive conditions than the WLA model, as it reflects the importance of providers’ proximity to demand sites when supplying and competing for leased line customers.

approximation of reality for assessing competitive conditions in the LLA market compared to the WLA model. These improvements are summarised below:

- a) Different to the WFTMR21, we are now able to incorporate both existing and planned network deployment into the NRM, where plans are available. In particular, we are incorporating plans from CityFibre, VMO2, nexfibre, ITS, and VodafoneThree.¹⁰²⁴
- b) As with WLA, providers have included usage of PIA as part of their existing network footprints and network build plans. Moreover, as further detailed below and in Annex 5, we are now using a longer buffer distance to reflect usage of PIA for customer-specific network extensions. As such, we disagree with Openreach that the NRM does not reflect usage of PIA.¹⁰²⁵
- c) Compared to the WFTMR21 and to the March 2025 Consultation version of the NRM, we are now able to include fibre-connected LLA demand sites alongside the sites of large businesses. This means that we are now able to more accurately model LLA demand in the review period.
- d) As detailed below and in Annex 5, different from the WFTMR21 version of the NRM we are now able to use the exact locations (rather than postcode centroids) for all mobile cell sites and the majority of fibre-connected LLA demand sites.¹⁰²⁶ This helps reduce Openreach's concern about the reliability of the NRM in less densely populated areas, where postcode centroids may be a less accurate approximation of the actual locations of demand sites.¹⁰²⁷

5.323 We acknowledge that the NRM is sensitive to key parameters and assumptions which have changed over time.¹⁰²⁸ This is, however, unsurprising since these parameters were identified precisely due to their importance in capturing competitive conditions. As such, we disagree with Openreach that the NRM is unreliable due to its sensitivity to certain parameters which, according to Openreach, we have arbitrarily set and changed over time.¹⁰²⁹

5.324 On the third point, Community Fibre and Netomnia respectively submitted that we should align the WLA and LLA boundaries to encourage growth, reduce regulatory complexity and improve the opportunity for competition.¹⁰³⁰ However, the purpose of geographic market definition is to identify areas where competitive conditions are sufficiently similar as the basis for an assessment of market power. While wider policy objectives may be relevant at

¹⁰²⁴ Given that we are incorporating planned network deployment into the NRM (where available), we disagree with Openreach's submission that our use of the NRM reflects a shorter-term, less forward-looking approach. See: [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 49. Paragraphs 132-133.

¹⁰²⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 53-54.

¹⁰²⁶ Exact coordinate locations were reported by providers for 86% of the fibre-connected demand sites in our dataset.

¹⁰²⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 50. Paragraphs 135-137.

[Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 55-56.

¹⁰²⁸ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 46-48. Paragraphs 121-130.

[Openreach](#) response to TAR26 November 2025 Consultation. Annex 1. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 57-58.

¹⁰²⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 43-48. Paragraphs 110-130.

[Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 58-60. [Openreach](#) response to TAR26 November 2025 Consultation. Annex 1.

¹⁰³⁰ [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Pages 6-7.

the stage of designing remedies, they are not determinative of how we define the appropriate boundaries of the relevant market.

Geographic unit

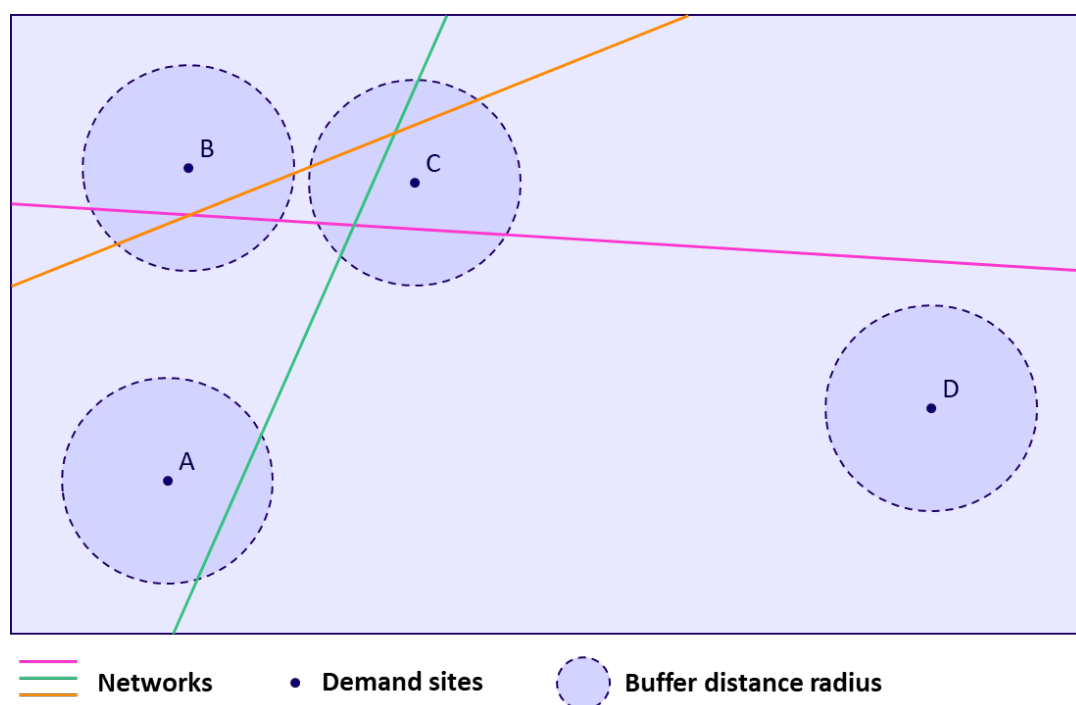
- 5.325 As we did in the WFTMR21, we break down the UK into smaller geographic units within which we can examine competitive conditions. This analysis needs to be at a level of granularity that gives a reasonable indication of the degree of competition in that geographic unit. Geographic units cannot be too large an area as there would likely be large differences in competitive conditions within such a unit (parts of the area may have significant competition but other parts none). On the other hand, more granular analysis may be less practical to apply.
- 5.326 For this review period, we use postcode sectors. This is in line with what we did for the WFTMR21, and with our WLA modelling approach. We consider that postcode sectors are well-established, relatively stable and strike a good balance between being granular enough to capture the competitive dynamic but not so granular that they are impracticable.
- 5.327 VodafoneThree suggested that using postcode sectors as the geographic unit can mask pockets where competition is weaker, meaning that competitive conditions within the markets we define may not be fully homogenous.¹⁰³¹ We recognise that there may be some variation in competitive conditions within a postcode sector. However, the purpose of geographic market definition is to identify areas where competitive conditions are sufficiently similar to form a separate geographic market, rather than perfectly homogenous, and we consider that postcode sectors provide a reasonable and practical level of granularity for assessing these differences.

Buffer distance

- 5.328 As set out above, competition in LLA services is affected by the presence of relevant competitors who can provision a LLA service to customers who require it. Where competitors are not already fibre-connected to customers, they will need to build a customer-specific network extension. The evidence indicates they can do this through building their own physical infrastructure and laying fibre within it (we refer to this as digging) and / or by laying their fibre into Openreach's physical infrastructure making use of regulated PIA.
- 5.329 As explained above and detailed in Annex 5, to reflect this competitive dynamic, the NRM evaluates the distance between each LLA demand site and each competing network and counts network presence by identifying a relevant material and sustainable competitor as 'within reach' if its network is measured to be within a certain distance of a demand site. We refer to this distance as the 'buffer distance'.

¹⁰³¹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 43. Paragraph 86.

Figure 1: Simplified illustration of how buffer distance is modelled within the NRM



Source: Ofcom

Note: the figure shows the case of a demand site within the buffer distance of: one network (site A), two networks (site B), three networks (site C) and zero networks (site D).

- 5.330 The purpose of the buffer distance is therefore to capture the distance at which LLA providers can supply and compete for customers who require a leased line, whether through digging or by using PIA.¹⁰³²
- 5.331 As noted in the November 2025 Further Consultation, the evidence indicates that by reducing the time and costs to build customer-specific network extensions, PIA has the potential to increase the distance over which a LLA provider can extend their network to compete for customers. However, as detailed in the annex, the same evidence indicates that:
- there is uncertainty as to when and where LLA providers will be able to use PIA to build customer-specific network extensions;
 - even with PIA, it is still costly to build customer-specific network extensions; and
 - LLA providers are less successful at winning business for customers that are at greater distance from their network footprint.
- 5.332 In light of this we disagree with Openreach that proximity of the network to the demand site is no longer relevant due to the availability of PIA.¹⁰³³
- 5.333 In practice, build distances with PIA will vary depending on a number of technical and commercial considerations, and in some cases PIA will not be viable at all. As such,

¹⁰³² In the NRM, each demand site is represented by a single point, whereas in reality it extends over a certain area. Therefore, networks connected to a site at its edge may appear some distance away from the point that represents the site. We need to account for a degree of ‘buffer distance’ to ensure we capture those networks as ‘within reach’ of that demand site.

¹⁰³³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 50-51. Paragraphs 138-142. [Openreach](#) response to TAR26 November 2025 Consultation. Page 20. Paragraphs 44-46.

determining the appropriate value for the buffer distance to reflect the impact of PIA requires a degree of regulatory judgement.

- 5.334 As explained below, we consider that a 100m buffer distance would be appropriate to define the boundaries between LLA Area 2 and LLA Area 3, whereas a 50m buffer distance would remain appropriate to define the boundaries of the HNR Area.

Approach to buffer distance in LLA Area 2 and LLA Area 3

- 5.335 The buffer distance we use to identify LLA Area 2 and LLA Area 3 should reflect the distance over which LLA providers can compete for enough customers such that they would provide, or have the potential to provide, material and sustainable constraint. To help inform this, we have analysed data on the share of connections won by competing networks at different distances from their respective network footprints.
- 5.336 We acknowledge that – as submitted by VodafoneThree, UKCTA and some TechUK members – propensity to build has decreased since the last review and that the share of new connections won by competing networks relative to Openreach declines significantly beyond 50m.¹⁰³⁴
- 5.337 On the other hand, we consider that the share of connections won by competing networks up to 100m is sufficiently meaningful to impact competitive conditions given the potential future impact of PIA. In particular – consistent with responses to the November 2025 Further Consultation from CityFibre, Openreach and VMO2 – the evidence suggests that usage of PIA by LLA providers may increase going forward, and this trend of increased PIA usage may make them more successful at winning customers over longer distances in the future.^{1035 1036}
- 5.338 Currently, the evidence suggests that beyond 100 metres, competition becomes increasingly weaker. We recognise that – as noted by CityFibre, VMO2 and Openreach – in some cases, LLA providers can use PIA to build customer-specific network extensions that are longer than 100 metres (in some cases, considerably so).^{1037 1038} However, the evidence indicates that PIA is not viable or desirable everywhere, and that – as Figure A5.3 in Annex 5 shows – LLA providers are generally increasingly less successful at competing for customers the further away they are from their networks. As such, we would expect the impact on competitive conditions is likely to be more limited (even if they are able to win some customers over this distance), and so going beyond 100m significantly increases the risk of overstating the potential for material and sustainable competition.

¹⁰³⁴ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Pages 6-7. Paragraphs 25-27. [TechUK](#) response to TAR26 November 2025 Consultation. Page 3. [UKCTA](#) response to TAR26 November 2025 Consultation. Paragraphs 4-6.

¹⁰³⁵ [CityFibre](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 1.15. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 19. [Openreach](#) response to TAR26 November 2025 Consultation. Page 23. Paragraphs 64-65.

¹⁰³⁶ For example, [X]. [X] response dated [X] to the s135 notice dated [X], question [X].

¹⁰³⁷ [CityFibre](#) response to TAR26 November 2025 Consultation. Pages 3-4. Paragraphs 1.12-1.14. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 19 and 21. Paragraphs 39 and 49-54. [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 19.

¹⁰³⁸ Openreach and Community Fibre also noted that Community Fibre currently uses a buffer distance greater than 100m. However, as explained above, our assessment is that Community Fibre’s business services are not in the LLA product market as its services are contended. [Community Fibre](#) response to TAR26 November 2025 Consultation. Page 3. [Openreach](#) response to TAR26 November 2025 Consultation. Pages 21-22. Paragraph 55.

5.339 On balance, having examined the evidence available to us and assessed that evidence in the round, we have decided that a buffer distance of 100 metres would be appropriate to identify areas where material and sustainable competition for the supply of LLA exists, or is likely to have the potential to develop (i.e. LLA Area 2).

Approach to buffer distance in the HNR area

5.340 As discussed in the annex, the evidence suggests that when LLA providers are within 50m of demand sites, build is less likely to be required, and when build is required, LLA providers will have more options to implement this. Moreover, where PIA is a viable option, building customer-specific network extensions is likely to be cheaper and quicker.

5.341 This is borne out by the evidence set out in Annex 5, which suggests that LLA providers are significantly more successful at competing for customers when they are within 50m of demand sites.

5.342 Therefore, we consider that using a 50m buffer distance remains appropriate to identify HNR Area postcode sectors since it would capture cases where there is more certainty that the current material and sustainable competitors will be able to serve – and compete for – customers who require a LLA service.

5.343 We agree with Openreach that a provider's willingness to extend its network depends on costs and revenues across all areas (including the HNR Area).¹⁰³⁹ However, we disagree that, because of this, we should set the same buffer distance across all geographic areas. Instead, we consider a different approach to buffer distance for the HNR Area compared to LLA Area 2 is appropriate, given the different competitive conditions captured in each Area (i.e. the HNR Area is capturing areas with sufficiently well-established competitive conditions to distinguish it from LLA Area 2).

Conclusion on buffer distance

5.344 In summary, having examined the evidence available to us and assessed that evidence in the round, we consider that:

- a) A distance of 100m would be more appropriate as a proxy for network presence when determining the boundaries between LLA Areas 2 and 3.
- b) A 50m buffer distance remains an appropriate proxy for network presence when determining the boundaries of the HNR Area.

5.345 We recognise that any single value for the buffer distance is only an approximation of what – in reality – will vary on a case by case basis depending a number of technical and commercial factors.

5.346 For example, [redacted] suggested providers may be willing to build longer extensions for mobile cell sites [redacted], while PXC suggested that customer extensions may be shorter where the costs of provisioning LLA services is higher.¹⁰⁴⁰

5.347 However, we consider that attempting to adjust the buffer distance to reflect specific technical or commercial considerations (and how these may vary, for example by customer type or even by individual circuit) is not practical and we have not seen compelling evidence that doing so would materially improve our assessment of competitive conditions for the purpose of defining geographic markets.

¹⁰³⁹ [Openreach](#) response to TAR26 November 2025 Consultation. Pages 26-28. Paragraphs 82-88.

¹⁰⁴⁰ [redacted]. [PXC](#) response to TAR26 November 2025 Consultation. Page 4. Paragraphs 2.6-2.7.

5.348 Overall, we are of the view that our approach to the buffer distance appropriately reflects the evidence available, and provides a practicable and proportionate way to reflect network presence for the purpose of assessing similarity of competitive conditions and defining geographic market boundaries.

Presence threshold

- 5.349 Having determined the buffer distance, we then go on to classify each postcode sector based on whether a certain proportion of its demand sites are located within the buffer distance of zero, one, or two or more relevant LLA competitors. We refer to this proportion as the presence threshold.
- 5.350 Given that our objective is to identify areas with sufficiently similar competitive conditions, we consider that a threshold that is too low would capture areas where competitive conditions are not sufficiently homogenous. In particular, a threshold that is too low would classify a greater number of postcode sectors as having, or being likely to have the potential for, material and sustainable competition. However, within these postcode sectors, there would be a greater number of demand sites without the choice of a network within the buffer distance over the review period. Therefore, such a threshold would risk significantly overstating competitive conditions in these postcode sectors relative to the rest of the postcode sectors where a greater proportion of demand sites have a choice of network.
- 5.351 Conversely, a threshold that is too high would classify a greater number of postcode sectors as being unlikely to have the potential for material and sustainable competition. Such a threshold would risk understating competitive conditions in these postcode sectors.
- 5.352 We recognise that a degree of regulatory judgement is required to determine an appropriate threshold for the purpose of defining geographic markets. In this instance, we believe that the use of a 65% threshold strikes a reasonable balance for the purpose of identifying areas with sufficiently similar competitive conditions. This is also consistent with the threshold we have used in previous market reviews.
- 5.353 On this basis, we disagree with Openreach's submission that the 65% threshold has arbitrarily been carried over from previous reviews without justification.¹⁰⁴¹ Moreover, we note that Openreach has not provided any evidence in support of its argument that the 65% threshold should be changed, beyond suggesting that the NRM results are sensitive to the choice of threshold (which we have responded to above).
- 5.354 As noted by Openreach, the threshold we use to identify network presence in the LLA model differs from the threshold used in the WLA model for the purpose of defining WLA geographic markets.¹⁰⁴² However, we observe that the WLA model and the NRM are different models which are designed to capture competitive conditions in different markets, and are informed by specific evidence gathered regarding those markets. As such, the 65% threshold is not directly comparable to the 50% used in the WLA model. We consider 65% is a reasonable threshold to use to reflect the nature of competitive conditions in the LLA market and the purpose and design of the NRM.

¹⁰⁴¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 56. Paragraph 163. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 55.

¹⁰⁴² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 56 and 57. Paragraphs 162 and 166. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 55.

Further modelling information

Existing networks and build plans

- 5.355 As further detailed in Annex 5, we asked LLA providers to supply details of their existing physical networks as well as their expansion plans. Five of these providers - CityFibre, VMO2, nexfibre, ITS, and VodafoneThree - were able to provide information on expansion plans.
- 5.356 Having identified the relevant geographic unit, buffer distance and coverage threshold, we need to process the existing and planned build data that we obtain from network operators to model their current and expected presence over the review period.
- 5.357 As set out above and in Annex 5, we only take into account the existing footprints of current material and sustainable competitors when identifying areas where competition is sufficiently certain and well-established to differentiate them from other areas (i.e. the HNR Area). However, we use existing footprint and, where available, expansion plans of all current and potential material and sustainable competitors, for the purpose of identifying LLA Area 2.¹⁰⁴³ In the latter case, we are using plans as a way to assess where build is most likely to be attractive and, as a result, where there is the potential for competition to be material and sustainable. As outlined above, CityFibre submitted that data on their full fibre network [§] was not used.¹⁰⁴⁴ We have now confirmed our use of CityFibre's data is correct and up to date.¹⁰⁴⁵
- 5.358 We do not agree with VodafoneThree, who suggested that plans are less likely to materialise since altnets are now focusing on consolidating with each other.¹⁰⁴⁶ The evidence available suggests that the build plans submitted by providers account for the possibility of consolidation. In particular, [§] has revised its build plans downwards to reflect the fact that some of its expansion will be driven by consolidation (as opposed to organic build).^{1047 1048}
- 5.359 The Frontier Report commissioned by Vodafone, Sky and TalkTalk suggested that we should put less weight on build plans in different areas.¹⁰⁴⁹ Given the above, we consider that our overall approach to incorporating existing and planned build into our modelling is appropriate for the purpose of identifying where there is the potential for competition to be material and sustainable and defining geographic boundaries. We also note that we do not use expansion plans for the purpose of identifying areas where competition is sufficiently certain and well-established to differentiate them from other areas (i.e. the HNR Area).

¹⁰⁴³ In practice this means using (i) current footprint from all LL-only operators, VMO2 (including through nexfibre's footprint) and CityFibre and Wightfibre; and (ii) expansion plans from CityFibre, ITS, Vodafone, and VMO2 (including through nexfibre's footprint). See Annex 5 for more detail on our modelling approach.

¹⁰⁴⁴ [CityFibre](#) response to TAR26 March 2025 Consultation. Annex 4. [CityFibre](#) response to TAR26 March 2025 Consultation. Pages 33-34. Paragraphs 3.33-3.34. [CityFibre](#) response to TAR26 November 2025 Consultation. Page 4. Paragraphs 1.18-1.20.

¹⁰⁴⁵ [§].

¹⁰⁴⁶ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Pages 40. Paragraphs 65-66.

¹⁰⁴⁷ [§] response dated [§] to the s135 notice dated [§], question [§].

¹⁰⁴⁸ As set out in our assessment of consolidation, the timing and identity of potential transactions remain insufficiently foreseeable for us to incorporate into the LLA geographic market definition. We therefore rely on the build plans as submitted, while treating any additional footprint that may arise through consolidation as too uncertain to reflect in our modelling.

¹⁰⁴⁹ [Frontier](#) pre-consultation submission (non-confidential version). Page 18.

5.360 Where appropriate, build plans are clearly relevant to our forward-looking market analysis. However, we recognise that evidence from providers' plans is necessarily prospective and can only ever provide an approximation of reality. Nonetheless, there is always a level of uncertainty in forward-looking assessments, and we believe this is the best information available to us.

Demand sites

5.361 As explained above, the NRM determines the number of relevant material and sustainable competitor networks located within the buffer distance of each demand site in a postcode sector. Therefore, amongst other things, we need to identify or approximate the location of relevant demand sites, including sites of businesses who may require a LLA service in the future, and mobile cell sites.

5.362 As noted above, Openreach made a number of criticisms of the NRM, including how we model LLA demand sites.¹⁰⁵⁰ We have made two key modelling improvements to better capture the demand for LLA services in the review period.

5.363 First, the March 2025 Consultation version of the NRM used CACI D&B Business Data dataset from July 2024 to identify the sites of businesses with 250 or more employees nationally. As this dataset contains the postal address of each site, we identified the postcode of each site and used the postcode centroid to approximate the site's location. A similar methodology, albeit with a different Business Data dataset, was used for the WFTMR21 version of the NRM.

5.364 We have now been able to process data on business sites that have been provisioned with an LLA service in the five years from 2020 to 2024 (fibre-connected LLA demand sites) such that we can now incorporate this data into the NRM alongside the sites of large businesses.¹⁰⁵¹ Where available, we use the exact location of fibre-connected LLA demand sites provided by the supplier.¹⁰⁵² For the remainder where the exact location was not available, we use the postcode centroid to approximate the fibre-connected sites' locations.

5.365 Second, we have been able to incorporate the exact location of mobile cell sites into our modelling. We note that this was already a feature of the NRM used for the March 2025 Consultation, but it is an improvement compared to the WFTMR21 version of the NRM where we were only able to approximate the location of mobile cell sites by their postcode centroid.

5.366 Overall, this means the updated version of the NRM can better approximate the geographic location of LLA demand in the review period compared to the previous version of the NRM (or the WLA model). This reduces the extent to which we need to approximate demand site locations with postcode centroids. Postcode centroids might be a less reliable proxy for the actual location in more rural areas.

5.367 We recognise that a degree of approximation and inherent uncertainty around the location of LLA demand in the review period still remains. However, we consider that our approach is reasonable and appropriate, and the improvements set out above would materially

¹⁰⁵⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 55-56.

¹⁰⁵¹ As a result of our updated approach to modelling LLA demand sites, we have increased the number of modelled LLA demand sites in the NRM by 244,149 compared to the March 2025 Consultation version of the NRM.

¹⁰⁵² Exact coordinate locations were reported by providers for 86% of the fibre-connected demand sites in our dataset.

mitigate the concerns raised by Openreach on the ability of our model to capture LLA demand, including in more rural and/or less densely populated postcode sectors.¹⁰⁵³

Modelling results

- 5.368 The results of our geographic market modelling for the HNR Area, LLA Area 2 and LLA Area 3 are summarised in Table 5.6 and then set out in more detail below. Our modelling results are also set out in detail in Annex 5.
- 5.369 Compared to the geographic markets we determined in 2021, there has been movement of postcode sectors between the geographic markets. The resulting changes in the sizes of the geographic markets reflect:
- a) our assessment of the changes in competitive conditions since 2021 and going forward, including our assessment of the competitors that we consider to be current or potential material and sustainable competitors; and
 - b) our updated modelling approach, including updates to current and expected build data, improvements in how we proxy the location of demand sites and choice of buffer distance.
- 5.370 Overall, compared to the geographic markets we determined in 2021, the HNR Area has increased by 4 ppts, and Area 3 has decreased by 4 ppts. We believe this is in line with evidence on how competitive conditions have evolved since 2021 and are likely to develop going forward. We therefore do not agree with INCA, Openreach, who considered the outcome of our modelling to be illogical or counterintuitive.^{1054 1055}
- 5.371 We also do not agree with Openreach that we should examine competitive conditions at a more granular level, rather than just adhering to the outputs of the NRM.¹⁰⁵⁶ As discussed above, we have carefully assessed a large amount of evidence and exercised our regulatory judgment to choose appropriate values of key modelling parameters. We have also made improvements to the quality of the underlying input data. All of this ensures that the NRM is now a better approximation of competitive conditions for the purpose of defining geographic markets than previous modelling approaches (for prior reviews). It is the best modelling approach available to us for the purpose of defining LLA geographic markets.
- 5.372 Relatedly, Openreach considered that the classification of some specific postcode sectors by the NRM is illogical.¹⁰⁵⁷ As set out above, the NRM necessarily involves a degree of approximation, and we consider this proportionate and reasonable for the purpose of identifying areas with sufficiently homogeneous competitive conditions. We also do not

¹⁰⁵³ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Pages 55-56.

¹⁰⁵⁴ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 279-280. [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 30. Paragraph 86-88. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 80-84.

¹⁰⁵⁵ We note that these stakeholders were responding to the March 2025 Consultation version of our modelling results, where LLA Area 3 had increased compared to the size of the geographic market that we determined in 2021. However, this situation is reversed for the modelling results presented in our TAR 2026 Statement, where LLA Area 3 is smaller than the size determined in 2021. We therefore also do not agree with Openreach that the increase in the size of the LLA Area 3 boundary in the March 2025 Consultation version of our modelling results undermines regulatory stability and clarity in the market. See: [Openreach](#) response to TAR26 March 2025 Consultation. Document 1. Page 12. Paragraph 25.

¹⁰⁵⁶ [Openreach](#) response to TAR26 November 2025 Consultation. Page 11. Paragraphs 6-7.

¹⁰⁵⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Pages 31-43. Paragraphs 85-109. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 56 and Appendix 3.2. [Openreach](#) response to TAR26 November 2025 Consultation. Page 12-13. Paragraphs 9-11.

think it appropriate to conduct a more localised assessment, possibly by individual demand site, as Openreach suggests.¹⁰⁵⁸

- 5.373 As noted in the WFTMR21 and previous BCMR reviews, we do not consider that this type of assessment of competitive market conditions would be practical or proportionate, nor – given the small scale of the instances identified – would it materially change our overall assessment of competitive conditions or justify departing from the NRM outputs.^{1059 1060}
- 5.374 Relatedly, we note CityFibre and ITS raised concerns that some of their footprints were present in LLA Area 3.¹⁰⁶¹ The objective of geographic market definition is to identify areas where competitive conditions are sufficiently similar, not to place all postcode sectors with any degree of network build into Area 2. We explain above why we consider our approach to this modelling is appropriate, and why a degree of approximation is reasonable. We also note that following the updates to the modelling since the March 2025 Consultation outlined above (and in Annex 5), only a small portion of their footprints are in LLA A3.
- 5.375 INCA and Openreach expressed concern that some postcode sectors have moved from the HNR market in the WFTMR21 to LLA Area 3 in the TAR26.¹⁰⁶² As explained above, movement of postcode sectors from and to each geographic market is due to our updated assessment of the changes in competitive conditions since 2021 and going forward, as well as the updates and improvements to our modelling approach. Additionally, for the modelling results presented in our TAR26 Statement, only one postcode sector that was classified as HNR in WFTMR21 is now classified as LLA Area 3.
- 5.376 Overall, we recognise that the NRM is only ever going to be an approximation of reality. However, we consider that it provides a reasonable, practicable and proportionate way to assess similarity of competitive conditions for the purpose of defining geographic markets in LLA. We consider the NRM to be the best modelling approach available to us for assessing forward-looking competitive conditions in LLA, based on the evidence available to us.

¹⁰⁵⁸ [Openreach](#) response to TAR26 November 2025 Consultation. Page 11. Paragraphs 6-7.

¹⁰⁵⁹ Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Page 147. Paragraphs 7.165-7.169.

¹⁰⁶⁰ We also note Openreach’s concerns relating to the ‘illogical classification’ of some postcode sectors may be less relevant now as postcode sectors have been reclassified since the March 2025 Consultation as part of our final assessment of geographic markets (e.g. reflecting improvements to our modelling). For example, 6 of the 18 postcode sectors identified by Openreach as being “illogically classified” are now classified in the same market as they were in WFTMR21, which Openreach considered to represent a logical classification.

¹⁰⁶¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 33. Paragraph 3.31. [ITS](#) response to TAR26 March 2025 Consultation. Pages 4-5. Paragraphs 17-23. [ITS](#) response to TAR26 November 2025 Consultation. Page 5. Paragraphs 18-19.

¹⁰⁶² [INCA](#) response to TAR26 March 2025 Consultation. Page 75. Paragraph 292. [Openreach](#) response to TAR26 November 2025 Consultation. Page 12. Paragraph 10.

Table 5.6: TAR26 LLA geographic market sizes

Geographic market	Postcode sectors		Demand sites		LLA circuit ends provisioned in 2020 to 2024	
	Number	Share of UK excl. the Hull Area	Number	Share of UK excl. the Hull Area	Number	Share of UK excl. the Hull Area
HNR	930	9%	52,892	13%	61,280	17%
Area 2	5,391	54%	218,728	55%	202,719	55%
Area 3	3,416	34%	102,392	26%	70,587	19%

Source: Ofcom analysis of provider data and CACI D&B Business Data.

Note: Table uses data from current and potential material and sustainable LLA competitors. Percentages do not sum to 100% as CLA figures are included in the total number of postcode sectors, demand sites and leased lines circuit ends provisioned in 2020 to 2024.

Application of the three criteria test

- 5.377 In this subsection, we consider whether the three criteria set out in section 79(2B) of the Act are met in relation to the LLA markets.
- 5.378 As set out in Annex 1, in determining whether to identify a market for the purpose of making a market power determination, we must consider whether the three criteria set out in subsection 79(2B) of the Act are met. Where we do not consider that the three criteria are met, we may not identify a market for this purpose.
- 5.379 As discussed above, we assess the three criteria at general level, taking into account overall characteristics and structure in the relevant product market. We consider competition at a sub-national level in our SMP assessment.

Our proposals

- 5.380 In the March 2025 Consultation, we proposed that the LLA markets which we proposed to define met the three criteria test.¹⁰⁶³

Stakeholder responses

- 5.381 CityFibre and Vodafone agreed with our provisional conclusions on the application of the three criteria test.¹⁰⁶⁴ Openreach, on the other hand, disagreed with our provisional conclusions on the application of the three criteria test.¹⁰⁶⁵

¹⁰⁶³ As we do not consider competition at a sub-national level as part of this assessment, we did not consider that the assessment would be impacted by our proposal in the November 2025 Consultation to increase the buffer distance used in the NRM to determine the LLA Area 2 and LLA Area 3 boundaries and the resulting changes to the boundaries of the geographic LLA markets (Ofcom, November 2025, [Consultation: Further consultation on leased lines market analysis and various pricing issues](#), Paragraphs 3.80-3.81).

¹⁰⁶⁴ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 41. Paragraph 73.

¹⁰⁶⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 62. Paragraph 196.

High and non-transitory barriers to entry

- 5.382 CityFibre and VodafoneThree agreed that barriers to entry are high and non-transitory, explaining that barriers to entry in the provision of leased line services remain significant and will take time and substantial investment to overcome.¹⁰⁶⁶
- 5.383 Openreach disagreed and submitted that barriers to entry and expansion are not high or non-transitory, highlighting examples of recent entry and expansion in LLA markets.¹⁰⁶⁷

Markets which do not tend towards effective competition

- 5.384 VodafoneThree agreed that LLA markets do not tend towards effective competition.¹⁰⁶⁸
- 5.385 Openreach disagreed and submitted that the market tends towards effective competition, as evidenced by substantial investment in the market.¹⁰⁶⁹

Insufficiency of competition law

- 5.386 VodafoneThree agreed that competition law alone is insufficient to address the issues present in the LLA market, explaining that the risks of excessive pricing, discriminatory behaviour and service degradation are real and ongoing.¹⁰⁷⁰ *Ex ante* regulation provides the necessary tools to ensure fair access, prevent abuse of market power, and support downstream competition. It also offers the regulatory certainty needed by both retailers and infrastructure investors to plan and deliver long-term services.

Our reasoning and decisions on the three criteria test

High and non-transitory barriers to entry

- 5.387 The LLA market is characterised by high barriers to entry and to expansion. This is because there are significant economies of scale in building an LLA network, and also because there are barriers to gaining customers once a network is built.
- 5.388 We also note that CityFibre and Vodafone agreed with our assessment that barriers to entry and expansion are high and non-transitory:
- a) CityFibre considered that barriers to entry in the provision of leased line services remain significant and will take time and substantial investment to overcome: BT continues to hold a position of SMP across all LLA markets, constraints on BT are limited and entry and expansion is unlikely to occur in the absence of regulation.¹⁰⁷¹
 - b) VodafoneThree explained that the leased lines market is characterised by significant structural barriers. These include the high sunk costs of deploying fibre infrastructure, the need for extensive duct access, and the operational complexity of delivering high-quality, symmetrical, uncontended services. In addition, the long contract durations, stringent service-level expectations, and the need for national scale and reputation make it extremely difficult for new entrants to compete effectively. Even where alternative networks exist, their coverage is often limited, and their ability to match BT/Openreach's service breadth and delivery capability is constrained.¹⁰⁷²

¹⁰⁶⁶ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 40. Paragraph 70.

¹⁰⁶⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 63. Paragraphs 196-198.

¹⁰⁶⁸ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 41. Paragraph 71.

¹⁰⁶⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 63. Paragraph 199.

¹⁰⁷⁰ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 41. Paragraph 72.

¹⁰⁷¹ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147.

¹⁰⁷² [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 40. Paragraph 70.

- 5.389 Openreach disagreed, and considers that barriers to entry are not high or non-transitory, and are not likely to persist in LLA markets.¹⁰⁷³ To support this view, Openreach pointed to ITS as an example of recent and successful entry, and the WLA providers who have begun to offer leased lines.
- 5.390 However, the examples of WLA providers who have begun to offer leased lines that Openreach gives (Zzoomm, Netomnia / Brsk and AllPoints Fibre) [X].^{1074 1075} We therefore disagree that these are examples of providers who have already sufficiently overcome barriers to entry and expansion.
- 5.391 Additionally, we recognise that ITS has entered and successfully grown in the market and we acknowledge that the barriers to entry and expansion in LLA are not insurmountable. However, the evidence consistently indicates that there are critical challenges to overcoming these barriers which are likely to take significant time, effort and investment to achieve. In line with this, ITS indicated that BT remains able to use its national ubiquity and incumbency advantage to retain a high market share. ITS stated that it is frequently faced with the multiple advantages of BT that a market entrant cannot replicate.¹⁰⁷⁶
- 5.392 In our view, this remains the case even with the PIA remedy in place. Openreach disagreed, stating a more comprehensive assessment of the use of PIA than that which we have undertaken would show that the remedy significantly reduces barriers to entry in practice as well as in theory. For example, Openreach's PIA statistics show that PIA ISPs are using the equivalent of [X] of Openreach's duct, covering [X] of their unique network objects. [X] altnets have taken a PIA lead-in to a business premise.¹⁰⁷⁷
- 5.393 While the PIA remedy reduces the high barriers to entry in the market to some extent, our review of LLA providers' internal provisioning policies – as further detailed in Annex 5 - suggests that PIA may not always be a viable option to build customer-specific network extensions. This evidence also suggests that different LLA providers may use PIA to varying degrees, and that PIA use is not always possible or preferable in some cases. For example, [X] is reluctant to use PIA for business customers due to delays,¹⁰⁷⁸ whereas [X] uses PIA for network infilling as well as customer connections and consider PIA fundamental for network build.¹⁰⁷⁹
- 5.394 Additionally, as noted by a number of stakeholders, outside of the high costs of building a network that PIA may help reduce, there are a number of additional barriers to entry and expansion that are specific to the LLA markets and are not expected to reduce significantly in this review period.¹⁰⁸⁰ These include high customer switching costs, and the importance of building credibility, reputation and a track record of service among LLA customers.

¹⁰⁷³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 63. Paragraphs 196-198.

¹⁰⁷⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 63. Paragraph 197.

¹⁰⁷⁵ [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; and [X] response dated [X] to s135 notice dated [X], question [X].

¹⁰⁷⁶ ITS. [ITS submission to Ofcom in relation to the review of the wholesale leased lines market as part of the Telecoms Access Review](#). Page 2.

¹⁰⁷⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 63. Paragraph 199.

¹⁰⁷⁸ [X] response dated [X] to s135 dated [X], question [X].

¹⁰⁷⁹ [X] response dated [X] to s135 dated [X], question [X].

¹⁰⁸⁰ See, for example: [FCS](#) response to TAR26 March 2025 Consultation. Pages 4-5. [PXC](#) response to TAR26 March 2025 Consultation. Paragraph 3.2. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 31.

5.395 Accordingly, we consider that high and non-transitory barriers to entry are likely to persist in LLA markets. Where barriers are likely to be lower in sub-national markets, we take this into account in our SMP assessment.

A market which does not tend towards effective competition

5.396 We assess competition in LLA markets below. In summary, BT generally retains a high market share across all parts of the UK. As set out in Section 2, the evidence we have suggests that there has been substantial investment in networks that can provide leased lines alongside broadband, plus some build by LL-only providers, since we last reviewed the LLA market in 2021 particularly in certain parts of the UK. We also expect further build in this review period. However, the longer-term impact of this investment on competition across the UK is still uncertain, and where there has been entry and expansion, it has been assisted by the existence of continued wholesale regulation. In other parts of the UK, we do not anticipate the emergence of material and sustainable competition to BT.

5.397 Openreach disagreed that the longer-term impact of investment is uncertain, and consider that the substantial investment that has already taken place will have a material impact on the competitiveness of the market. Openreach stated that the presence of new fibre networks will ensure that there is always a competitive pressure in the areas where they have been rolled-out.¹⁰⁸¹

5.398 We disagree with Openreach since, as discussed above, the majority of altnets with networks that are technically capable of provide leased lines alongside broadband currently focus on selling WLA services. We understand that some of these altnets may yet choose to enter the LLA market, but our evidence suggests that it is unlikely that this will materially affect competitive conditions in this review period.

5.399 Accordingly, we do not consider the market will tend towards effective competition at a national level. We take account of competition at a sub-national level in our SMP assessment.

5.400 We also note that VodafoneThree agreed with our assessment, explaining that despite years of regulatory intervention, BT continues to hold high market shares across all product types and geographic areas. In many locations, it remains the only viable supplier of leased line services. While some infrastructure-based competition exists, it is often limited to specific urban areas and does not exert sufficient pressure to constrain BT's pricing or service behaviour. The pace of market change is slow, with enterprise customers typically locked into multi-year contracts and migration programmes taking many months to complete. This inertia further entrenches BT's position.¹⁰⁸²

Insufficiency of competition law

5.401 We set out in more detail in Section 7 our competition concerns arising from BT's SMP in LLA markets. Absent regulation, BT's SMP would give it the incentive and ability to engage in forms of conduct that could distort competition and/or harm consumers. These forms of conduct fall into two broad categories:

- **Exclusionary behaviour** by BT to prevent potential competitors from competing in the LLA market(s) or prevent them from gaining market share.

¹⁰⁸¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 63. Paragraph 199.

¹⁰⁸² [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 41. Paragraph 71.

- **Exploitative behaviour** by BT at the expense of its wholesale access customers in the relevant market(s), ultimately harming end-users who purchase services from BT’s wholesale access customers in the downstream markets.
- 5.402 Although our concerns vary according to whether the behaviour is exclusionary or exploitative, both ultimately lead to poorer outcomes for end-users.
- 5.403 Competition law, in particular the rules prohibiting the abuse of a dominant position, is an important part of the legal framework with which BT needs to comply. Given its position of SMP (which equates to the competition law concept of dominance) BT has a special responsibility not to allow its actions on the market (where conditions of competition are weak) to distort or impair competition.
- 5.404 However, we consider that competition law remedies would be insufficient to address the identified competition concerns on their own in this context.
- a) First, competition law would focus on tackling the abuse of a dominant position and would not be as effective as ex ante regulation in promoting and protecting competition from rival networks in the LLA market and in downstream markets.
 - b) Second, regulation must remain effective for the review period, and ex ante regulation better enables us to do this as it can be tailored to the particular circumstances in the markets and services provided.
 - c) Third, competition law does not provide enough regulatory certainty, which itself can undermine competition – and regulatory certainty is important in encouraging long-term investment in competing networks. In contrast, a benefit of ex ante regulation is that all industry stakeholders are clear in advance on the regulation that will apply.
 - d) Fourth, ex ante regulation can facilitate more timely enforcement due to the greater certainty and specificity provided. Although significant fines can be levied for breaches of competition law, which do have some reputational and commercial implications, cases often take considerable time, by which point the damage to competition may be irreversible.
- 5.405 On that basis, while competition law enforcement may be used in appropriate circumstances, we do not consider that it would be sufficient to rely on it alone in LLA markets and so consider that ex ante regulation is required. We note that VodafoneThree agreed with this assessment.¹⁰⁸³

Our overall conclusion on geographic market definition and the three criteria test

- 5.406 We consider that the three-criteria test set out in section 79(2B) of the Act is met in relation to the LLA markets we set out above.
- 5.407 We therefore identify three geographic markets for LLA¹⁰⁸⁴ for the purposes of making a market power determination:
- a) the High Network Reach area: postcode sectors where, due to presence of at least two current material and sustainable competitors, there is sufficiently well-established competition to BT in the commercial deployment of competing networks;

¹⁰⁸³ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 41. Paragraph 72.

¹⁰⁸⁴ As discussed above this excludes postcode sectors in the Hull Area as well as postcode sectors in the CLA market.

- b) LLA Area 2: postcode sectors in which there is, or there is likely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks; and
- c) LLA Area 3: postcode sectors in which there is not, and there is unlikely to be potential for, material and sustainable competition to BT in the commercial deployment of competing networks.

5.408 Table 5.7 provides a summary of the leased line geographic markets. The postcode sectors making up those geographic markets that we have identified can be found in Schedule 3.

Table 5.7: Summary of the TAR26 LLA geographic markets

Geographic market	Postcode sectors		Demand sites		LLA circuit ends provisioned in 2020 to 2024	
	Number	Share of UK excl. the Hull Area	Number	Share of UK excl. the Hull Area	Number	Share of UK excl. the Hull Area
HNR	930	9%	52,892	13%	61,280	17%
Area 2	5,391	54%	218,728	55%	202,719	55%
Area 3	3,416	34%	102,392	26%	70,587	19%

Source: Ofcom analysis of provider data and CACI D&B Business Data.

Note: Table uses data from current and potential material and sustainable LLA competitors. Percentages do not sum to 100% as CLA figures are included in the total number of postcode sectors, demand sites and leased lines circuit ends provisioned in 2020 to 2024.

SMP assessment

5.409 The following sections set out our SMP assessment and are structured as follows:

- a) First, we set out the proposals we made in the March 2025 Consultation.
- b) Second, we summarise stakeholder responses to the Consultation.
- c) Third, we set out our SMP findings, and the underlying analysis and evidence for each market.

Our proposals

5.410 In the March 2025 Consultation, we provisionally concluded that BT has SMP in each of the following markets:

- a) the HNR Area;
- b) LLA Area 2; and
- c) LLA Area 3.^{1085 1086}

¹⁰⁸⁵ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 5.169.

¹⁰⁸⁶ In the November 2025 Consultation, we proposed to increase the buffer distance used in the NRM to determine the LLA Area 2 and LLA Area 3 boundaries. Our view was that these proposals and the resulting changes to the boundaries of the geographic LLA markets would not have a material impact on our provisional SMP assessment from the March 2025 Consultation. See: Ofcom. November 2025. [Consultation: Further consultation on leased lines market analysis and various pricing issues](#). Paragraphs 3.82-3.86.

Stakeholder responses

Our approach and evidence considered

Barriers to entry and expansion

- 5.411 Openreach considered all of the barriers identified by Ofcom to be surmountable, and that we have overweighted the role of barriers to entry in our SMP assessment given that there has been recent entry into the market.¹⁰⁸⁷
- 5.412 INCA agreed that there are barriers to market entry and expansion in LLA but considered that we have overestimated these barriers.¹⁰⁸⁸
- 5.413 Vorboss and CityFibre stated that barriers to entry and expansion in the LLA market are significant and take time and investment to overcome.¹⁰⁸⁹
- 5.414 VodafoneThree agreed with the barriers to entry as recognised in our provisional SMP assessment.¹⁰⁹⁰ VodafoneThree submitted that barriers to entry such as high sunk costs, long contract durations, complex migrations, high switching costs and the need for scale and service quality have slowed competitive entry in the LLA market.¹⁰⁹¹
- 5.415 PXC considered that, whilst the LLA market is mature, it takes time to change due to structural reasons including the high upfront costs, long contract periods and costly and complex migration processes.¹⁰⁹²

Network scale

- 5.416 Openreach disagreed that insufficient network scale can be a barrier to entry and did not consider this to be a barrier for either individual sites or multi-site contracts due to the availability of PIA.¹⁰⁹³

Customer installation times

- 5.417 Openreach disagreed that customer installation times are a barrier to entry in LLA.¹⁰⁹⁴ Openreach noted that fast customer installation times are likely to be a more important consideration for end customers with no existing circuit, and that such customers only constitute a minority of circuits. Also, the PIA remedy helps reduce differences in provisioning times between Openreach and competitors. Finally, Openreach's provisioning times are subject to the regulatory Quality of Service obligations, which should not be considered a barrier to entry.

High customer switching costs

- 5.418 Openreach submitted that high switching costs are not a barrier to entry since its contract lengths are 12 months, meaning that many end customers are out of term. Also, where end

¹⁰⁸⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 64. Paragraph 202. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 47.

¹⁰⁸⁸ [INCA](#) response to TAR26 November 2025 Consultation. Page 6. Paragraph 22.

¹⁰⁸⁹ [Vorboss](#) response to TAR26 March 2025 Consultation. Page 7. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147. Question 2.12.

¹⁰⁹⁰ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 35.

¹⁰⁹¹ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 9.

¹⁰⁹² [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2.

¹⁰⁹³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 67. Paragraph 202.

¹⁰⁹⁴ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 68. Paragraph 202.

customer switching in LLA takes time, MSNs can serve WLA end customers in the interim.¹⁰⁹⁵

- 5.419 FCS agreed that there are a number of barriers to switching in the LLA market that its members face, which mean that switching wholesalers or providers can be quite difficult.¹⁰⁹⁶
- 5.420 VodafoneThree submitted that there are typically long contract durations in the market.¹⁰⁹⁷ VodafoneThree also explained that enterprise customers that do not typically have very long contract terms still face disadvantages.¹⁰⁹⁸
- 5.421 Netomnia / Brsk submitted that there is inertia in the LLA market originating from a range of sources that serve to inhibit switching.¹⁰⁹⁹

Credibility and reputation

- 5.422 Openreach submitted that we have not evidenced our view that non-physical barriers, such as reputation, are material barriers to entry – especially given that there have been a number of examples of successful recent entrants to the LLA market.¹¹⁰⁰
- 5.423 Openreach agreed that LLA end customers require a reputable and credible supplier. However, Openreach disagreed that this is a barrier to entry, since ITS is a successful new entrant. Also, Openreach considered that the prospect of consolidation in the market renders this an immaterial barrier to entry, as consolidation is most likely to occur by suppliers with an existing reputation.¹¹⁰¹
- 5.424 Vorboss agreed with our assessment of the key features of leased lines valued by businesses, which include continuity of service and reliability, and security and resilience.¹¹⁰²

Openreach pricing

- 5.425 VodafoneThree suggested that the high barriers to entry in the market are evident in BT's pricing: BT maintains a national pricing strategy and only offers selective discounts in areas with established rivals.¹¹⁰³
- 5.426 VodafoneThree also considered that the lack of competition in LLA has enabled BT to earn persistently high returns.¹¹⁰⁴

¹⁰⁹⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 68. Paragraph 202.

¹⁰⁹⁶ [FCS](#) response to TAR26 March 2025 Consultation. Pages 4-5.

¹⁰⁹⁷ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 9.

¹⁰⁹⁸ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 12.

¹⁰⁹⁹ [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 7. Footnote 12.

¹¹⁰⁰ [Openreach](#) response to TAR26 November 2025 Consultation. Page 16. Paragraph 26.

¹¹⁰¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 68. Paragraph 202.

¹¹⁰² [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 2-3.

¹¹⁰³ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 36. Paragraph 32.

¹¹⁰⁴ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 36. Paragraphs 33-34.

SMP findings

- 5.427 AllPoints Fibre, CityFibre, Gamma, PIA Coalition, TechUK and VodafoneThree agreed that BT has SMP in the HNR Area, LLA Area 2 and LLA Area 3.¹¹⁰⁵ Vorboss submitted that it is right that we continue to find that BT has SMP in the provision of LLA circuits in the HNR Area.¹¹⁰⁶
- 5.428 Openreach submitted that the HNR Area is competitive and that there should not be an SMP finding for BT in this area during this review period.¹¹⁰⁷ Openreach disagreed with our finding of SMP in the HNR Area because:
- There are on average nearly three competitors to Openreach in the HNR Area, which is a significant level of competition that presents competitive pressure on Openreach;
 - Ofcom should deregulate postcode sectors where market shares are trending downward and will likely fall below 60% during the next review period;¹¹⁰⁸
 - In the first three quarters of FY25 Openreach's net demand in the HNR fell by 5-15% [\times];¹¹⁰⁹
 - The lower proportion of duct connections of competitors compared to Openreach is not relevant, as it reflects the historical provision of services by Openreach and is not indicative of the ability for competitors to connect sites in future, particularly with the availability of the PIA remedy; and
 - Analysis of the presence of the third closest competitor is not relevant, since two material and sustainable competitors are sufficient to be a significant competitive constraint.¹¹¹⁰

The CLA

- 5.429 We also received a number of submissions relating to the CLA. INCA suggested that we should present analysis on the CLA to provide stakeholders with confidence that there is no reason why regulation should be re-introduced into the CLA market.¹¹¹¹ AllPoints Fibre and Vorboss submitted that deregulating the CLA was a mistake. AllPoints Fibre explained that Openreach retains a 50%-60% market share which has not fallen significantly since deregulation.¹¹¹² Vorboss considered that Openreach's pricing is harming competition and innovation in the CLA.¹¹¹³

Our reasoning and decisions

Background

- 5.430 In the March 2021 Statement, we concluded that BT did not have SMP in the CLA, and that BT had SMP in the HNR Area, LLA Area 2 and LLA Area 3.¹¹¹⁴ More specifically:

¹¹⁰⁵ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 37. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147. [Gamma](#) response to TAR26 March 2025 Consultation. Page 3. [PIA Coalition](#) response to TAR26 March 2025 Consultation. Page 4. [TechUK](#) response to TAR26 March 2025 Consultation. Page 5. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 42. Paragraph 80.

¹¹⁰⁶ [Vorboss](#) response to TAR26 March 2025 Consultation. Page 8.

¹¹⁰⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 203-208.

¹¹⁰⁸ [Openreach](#) response to TAR26 November 2025 Consultation. Page 14. Paragraphs 18-21.

¹¹⁰⁹ Openreach confidential response to TAR26 March 2025 Consultation. [\times].

¹¹¹⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 203-208.

¹¹¹¹ [INCA](#) response to TAR26 March 2025 Consultation. Page 75. Paragraph 291.

¹¹¹² [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraphs 40-42.

¹¹¹³ [Vorboss](#) response to TAR26 March 2025 Consultation. Pages 5-6.

¹¹¹⁴ Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#).

- a) In the HNR Area, we found BT to have SMP, although we considered this finely balanced. We acknowledged that (i) the proximity of existing competing network infrastructure provided greater competitive pressure on BT, which we expected to increase over the 2021-26 review period, and (ii) BT's discounts likely reflected a greater level of competition in this market. However, taking into account BT's high market share coupled with limited duct connections from competing networks to demand sites, we concluded BT had SMP.
- b) In LLA Area 2, we concluded that BT had SMP. We found BT to have a high market share, and the share of its largest rival (VMO2) was found to be materially lower. We considered there to be limited competitive constraint from existing or potential competing network presence. We expected competition in LLA Area 2 to increase over the 2021-26 review period, however the likelihood and extent was not sufficiently certain to reach a no SMP finding.
- c) In LLA Area 3, we concluded that BT had SMP. We found BT to have a high market share, as well as limited potential constraint from any existing or potential competing network presence.

Our approach and the evidence considered

- 5.431 To assess whether BT has a position of SMP in any geographic market, we assess the strength of competition it faces in that market. We ultimately need to evaluate the extent to which over the review period – absent regulation – BT would have the power to behave to an appreciable extent independently of competitors, its own customers and ultimately consumers in each of the LLA geographic markets.
- 5.432 In practical terms, our SMP assessment takes account of a number of factors which we consider in the round, including: market shares, competition from existing infrastructure, barriers to entry and expansion, countervailing buyer power, Openreach's pricing and external constraints.
- 5.433 Our SMP assessment must be forward-looking, and in the absence of existing LLA regulation, our analysis reflects this. We take into account market dynamics and expected and foreseeable developments that may impact on competitive conditions, for example the potential future impact of PIA, development of barriers to entry and expansion and strength of external constraints over the next review period.¹¹¹⁵
- 5.434 To support this, we have gathered updated evidence from stakeholders, including existing and planned network deployment, usage of PIA as well as information on barriers to entry and expansion in LLA and how these are likely to change over the review period.
- 5.435 In the rest of this subsection, we discuss our analysis and evidence relating to each of these factors across the LLA markets we have identified. A more detailed explanation of the analysis undertaken can be found in Annex 5.

Market shares

- 5.436 Market shares provide a useful indicator of competitive conditions in a market. In our SMP assessment for the LLA market, we consider BT's share of new connections in each geographic market for the period 2020 to 2024.¹¹¹⁶ A greater number of competing networks that are managing to gain a material share of new business indicates a higher

¹¹¹⁵ See section 79(1A) of the Act.

¹¹¹⁶ We take this approach because this is the latest data we have.

intensity of competition. We have also estimated market shares based on each supplier’s share of all LLA circuit ends provisioned over a five-year period between 2020-2024.

- 5.437 In particular, we note that in calculating shares for each of the geographic markets, we use all LLA circuit ends provisioned over a five-year period between 2020-2024 by any of the current or potential material and sustainable competitors. This is with a view to estimate the overall level of constraint exerted by competing networks in each of the geographic markets.
- 5.438 Table 5.8 below presents our market share evidence for each of the LLA geographic markets.

Table 5.8: BT LLA market share evidence

	HNR Area	Area 2	Area 3
Leased line access ends provisioned in 2020 to 2024	61,280	202,719	70,587
BT market share (leased line access ends provisioned in 2020 to 2024)	61-70% ([>]%)	71-80% ([>]%)	91-100% ([>]%)

Source: Ofcom analysis of provider data.

Competition from existing and planned presence of network infrastructure

- 5.439 BT has by far the largest and the only nationwide network in the UK, which is not easily duplicated due to the high sunk costs involved. In the vast majority of cases, BT will have an existing duct which connects to the customer site (“duct connected”) and, where BT is duct connected, in many cases it will also have existing fibre connecting to the customer site (“fibre-connected”) (e.g. where it has previously supplied a leased line to the site and the fibre remains in place). Where BT is not already duct connected, it will need to dig to lay new duct and provision a fibre to create a customer-specific network extension to serve the customer. As a result, in most cases, BT will be able to quickly and economically service customers who require a LLA service.
- 5.440 Where a competing provider wishes to serve an LLA customer, it has several options:
- In some cases, the provider may already be duct connected or fibre-connected to the customer site. Where they are already fibre-connected to the customer, rival suppliers can offer the full suite of bandwidths relatively quickly and at little incremental cost.
 - If not, the provider can dig to lay its own new physical infrastructure (e.g. duct), and / or use existing third-party infrastructure (including regulated PIA).¹¹¹⁷ The provider can then provision a fibre in that infrastructure to create a customer-specific network extension (we refer to this as “on-net”). As discussed above, due to the costs and time to supply – via digging or using PIA – competing providers are better able to compete for LLA customers the closer they are to demand sites.¹¹¹⁸

¹¹¹⁷ An LLA provider may sometimes use a combination of building its own infrastructure and using PIA to reach a customer site.

¹¹¹⁸ This is supported by the evidence in Figure A5.3, Annex 5, which suggests that having to build over longer distances for an LLA customer-specific network extension makes competing networks relatively less likely to win business. As discussed above, we therefore disagree with Openreach that the existence of PIA means proximity to customer demand sites is no longer relevant. [Openreach](#) response to TAR26 March 2025

- c) Alternatively, instead of extending its network to reach the customer it can buy a wholesale leased line service from another provider, such as Openreach, and use this to provide a retail leased line service to the customer (we refer to this as “off-net”). Higher off-net activity is consistent with a weak competitive constraint on BT, as competing networks are less likely to use their own networks to supply customers.

5.441 A greater number of competing networks already connected to, or sufficiently close to, demand sites is likely to lead to a greater competitive constraint on BT. In light of this, Table 5.9 below presents several indicators of competitive intensity, based on existing or planned presence of network infrastructure.

- a) *Density of competing networks*: This estimates competitive pressure by looking at the number of networks that are sufficiently close to demand sites such that they are likely to be able to extend their network and compete for customers. In practice this includes (i) the average number of network present within the relevant buffer distance as well as (ii) the proportion of demand sites with N material and sustainable competitors present within the relevant buffer distance.
- b) *Distance to nearest competing network*: This estimates how close competing networks are to demand sites. We consider this to be a useful measure of competitive pressure since, as discussed above and detailed in Annex 5, competitive constraints from rival networks are likely to be stronger when LLA networks are closer to customers sites. In practice, the average distances that are measured in our metrics will be higher than actual distances.¹¹¹⁹
- c) *Off-net proportion*: We consider the extent to which competing networks bought a leased line service from another telecoms provider, such as Openreach, and then used it to provide leased line services to a business customer (as explained above, we refer to this “off-net”) as opposed to supplying customers by using their own fibre or equipment (this could be using their own physical infrastructure or a third party’s, and, as explained above, we refer to this as “on-net”). Limited on-net activity is consistent with a weak competitive constraint on BT.

5.442 For each of the indicators under points a) and b) above, Table 5.9 below presents two groups of figures – which for clarity we present without and in brackets respectively:

- a) Overall expected network presence over the review period. This allows us to capture the overall potential constraint from competing networks to inform our forward-looking view of competitive intensity and how it may develop. These figures have been calculated using data from current and potential material and sustainable competitors, including existing as well as planned build (where available) and a buffer distance of 100m.
- b) We have also set out a version of these metrics which allows us to reflect network presence which is likely to exert a stronger and more certain constraint on BT (those figures presented in brackets). These figures have been calculated using data from

Consultation. Document 2. Pages 50-51. Paragraphs 138-142. [Openreach](#) response to TAR26 November 2025 Consultation. Page 20. Paragraph 45.

¹¹¹⁹ In our model, each demand site is represented by a single point, whereas in reality it extends over a certain area. This may overestimate the distance as networks build to the edge, not centre, of sites. For more details see Annex 5; see also the 2019 BCMR Statement: Ofcom. 2019. [Promoting competition and investment in fibre networks: review of the physical infrastructure and business connectivity markets](#). Volume 2, Paragraph 5.79.

current material and sustainable competitors, including their existing build only and a buffer distance of 50m.

- 5.443 For our SMP assessment, we draw on this evidence in the round to identify the type and extent of competing network infrastructure in each of the LLA geographic markets and the resulting strength of the competitive constraint exerted on BT, drawing also on the evidence presented in our geographic market analysis on individual networks.
- 5.444 However, we note that even where competing networks have existing or planned presence they are still likely to face a number of barriers to entry and expansion which may impact the extent of their competitive constraint on BT, which we discuss below.

Table 5.9: Competition from existing or planned LLA network infrastructure

Geographic market		HNR Area	Area 2	Area 3
Average number of current and potential (current only) material and sustainable competitors present within the relevant buffer distance⁽¹⁾		4.06 (2.88)	1.85 (1.11)	0.42 (0.24)
Proportion of demand sites with N current and potential (current only) material and sustainable competitors within the relevant buffer distance⁽¹⁾	N = 0 or more	100% (100%)	100% (100%)	100% (100%)
	N = 1 or more	99% (96%)	92% (75%)	30% (19%)
	N = 2 or more	95% (82%)	54% (25%)	9% (4%)
	N = 3 or more	78% (54%)	24% (8%)	3% (1%)
	N = 4 or more	58% (31%)	10% (3%)	1% (0%)
	N = 5 or more	39% (16%)	4% (1%)	0% (0%)
Average modelled distance to the N-th nearest current and potential (current only) material and sustainable competitor⁽¹⁾	N = 1	15m (17m)	49m (89m)	2,213m (2,473m)
	N = 2	37m (41m)	400m (612m)	5,036m (5,432m)
	N = 3	94m (111m)	1,072m (1,390m)	8,884m (10,434m)
	N = 4	962m (1,017m)	2,753m (3,533m)	13,394m (15,506m)
Competing networks' off-net proportion of LLA circuit ends		30%	42%	78%

(1) The figures presented without brackets have been calculated using data from current and potential material and sustainable competitors, including existing as well as planned build (where available) and a buffer distance of 100m. The figures presented in brackets have been calculated using data from current material and sustainable competitors, including their existing build only and a buffer distance of 50m.

Source: Ofcom analysis of provider data.

Barriers to entry and expansion

- 5.445 There are a number of barriers to entry and expansion in the LLA market which impact the competitive constraint from rival networks to BT. As noted by a number of stakeholders, these are both barriers to building a network and to gaining customers once a network is built.¹¹²⁰ This includes the importance of a track record of service, reliability as well as various costs related to offering the continuity of service (through low repair times and continuous support) that is important to LLA customers (as explained further below). All of these additional barriers can affect the ability of suppliers to gain customers.
- 5.446 We recognise that, as noted by Openreach, recent entry and expansion in the LLA market from some providers (including CityFibre), indicate that these barriers can be overcome.¹¹²¹ Although they are not insurmountable – as detailed below – these barriers take time and significant investment to overcome, and so will affect the competitive constraints from rival networks in this review period. We note that CityFibre and Vorboss agree.¹¹²²
- 5.447 In line with this view, out of the five providers Openreach submitted as examples of providers who have successfully entered the market (ITS, Zzoomm, Netomnia/ Brsk, AllPoints Fibre and Ogi) [redacted].^{1123 1124} Moreover, ITS stated that it is frequently faced with the multiple advantages of BT that a market entrant cannot replicate.¹¹²⁵
- 5.448 Openreach also suggested that the barriers to entry and expansion that we have identified are not material since, if it does emerge that smaller networks struggle to expand due to these barriers, the expectation is that this will be an additional spur to consolidation into large groups that can better capitalise on the assets that have been built.¹¹²⁶
- 5.449 As discussed above, we recognise that consolidation scenarios involving VMO2 or CityFibre would likely create an entity which already has, or has the potential to, sufficiently overcome barriers to entry and expansion. Nonetheless, even where this is the case, expanding in the market still takes time and some barriers will persist.
- 5.450 More generally, we acknowledge that – even where consolidation does not involve CityFibre or VMO2 – the additional scale gained through consolidation may accelerate the ability of the entity to overcome certain (but not necessarily all) barriers.
- 5.451 However, as discussed above, we consider that where the altnets involved in consolidation are neither current nor potential material and sustainable competitors, the (i) additional scale gained through consolidation and the (ii) potential technical capability to offer LLA

¹¹²⁰ See, for example: [FCS](#) response to TAR26 March 2025 Consultation. Pages 4-5. [PXC](#) response to TAR26 March 2025 Consultation. Paragraph 3.2. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 31.

¹¹²¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 64. Paragraph 202. [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 47.

¹¹²² Vorboss entered the LLA market in the 2021-26 market review period. [Vorboss](#) response to TAR26 March 2025 Consultation. Page 7. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147.

¹¹²³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 64. Paragraph 202.

¹¹²⁴ [redacted] response dated [redacted] to our clarificatory question dated [redacted] concerning the s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; and [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹¹²⁵ In particular, ITS indicated that BT remains able to use its national ubiquity and incumbency advantage to retain a high market share and prices. ITS. [ITS submission to Ofcom in relation to the review of the wholesale leased lines market as part of the Telecoms Access Review](#). Page 2.

¹¹²⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 47.

services alone are not sufficient to demonstrate that the consolidated network would have the potential to sufficiently overcome barriers to entry and expansion over the review period.

- 5.452 This is because, even if the merged entity entered the LLA market (which may be uncertain), it would still take considerable time and effort to sufficiently overcome the barriers discussed below – such as building the track record of service and reliability as well as meeting various costs related to offering the continuity of service (through low repair times and continuous support) that is important to LLA customers. In line with this, we note that VodafoneThree told us that altnet consolidation will not resolve leased lines market economic barriers to network entry and expansion, such as supplier trust.¹¹²⁷
- 5.453 As such we disagree with Openreach and consider that – despite the potential for consolidation – barriers to entry and expansion in LLA are likely to remain material.
- 5.454 We also note that in accordance with the modified Greenfield approach, we assess SMP in the absence of regulation in the LLA market, meaning our assessment assumes BT is not regulated in LLA.¹¹²⁸ We therefore note that BT could have the incentive, and in the absence of regulation the ability, to foreclose the entry or expansion of competing network operators, to limit their competitive threat. This could result from actions such as offering certain types of geographic discounts to wholesale prices in areas where it faces potential competition, or other commercial terms including certain types of volume discounts.
- 5.455 In the following paragraphs, we discuss each of these barriers to entry and expansion and, as part of that, address responses from Openreach and INCA that we have overweighted the barriers to entry and expansion in this assessment and the more general suggestion from Openreach that each of the factors set out below are not barriers to entry and expansion.¹¹²⁹
- 5.456 As detailed below, although some of these barriers are similar to the barriers to entry and expansion that exist in WLA, others are specific to, or more pronounced in, the LLA market.¹¹³⁰

High costs of building a network

- 5.457 As set out in Section 4, building a network has very high fixed costs and takes time, which constitutes a barrier to entry to the market. We note that PXC and VodafoneThree agree that high up-front deployment costs are a barrier to entry in LLA.¹¹³¹
- 5.458 Once the network is built, in those cases where a provider has no physical connection to an LLA demand site, the provider may need to extend its network to connect a particular customer. In the case of these bespoke network extensions, BT will likely have a significant cost and time advantage, especially where it is already fibre-connected.

¹¹²⁷ VodafoneThree response dated 13 February 2026 to s135 notice dated 3 February 2026.

¹¹²⁸ See approach section for more details about the modified Greenfield approach.

¹¹²⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 64-65. Paragraph 202. [INCA](#) response to TAR26 November 2025 Consultation. Page 6. Paragraph 22.

¹¹³⁰ We note that PXC agreed that the LLA market takes time to change for structural reasons that are different to those of the WLA market. See: [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2.

¹¹³¹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 31. [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 9. [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2.

- 5.459 As outlined in Section 2, we have seen growth from some competing networks in the LLA market across the 2021-26 review period. We recognise that PIA mitigates to some extent the barriers arising from the high costs of building a network and, as detailed above and in Annex 5, can also reduce the costs of building customer-specific network extensions.^{1132 1133}
- 5.460 However, the evidence indicates that PIA is used to different degrees by different LLA providers, suggesting that it may not be suitable for every use case.¹¹³⁴ Additionally, our review of LLA providers' internal provisioning policies suggests that in some cases, PIA may not be a viable or preferable option to build customer-specific network extensions, for example when customers require diverse routing, do not accept the usage of a third-party infrastructure due to security concerns, or if services require specific network topologies or resilience standards.^{1135 1136}
- 5.461 In line with this, as set out in Annex 5, our analysis of the 2024 new provisioning data suggests that the three LLA providers for which we have information use PIA to varying degrees for customer-specific network extensions.¹¹³⁷ Our analysis also suggests that, in a significant number of cases, those three LLA providers would choose to provision a circuit either by buying a service off-net or digging instead of using PIA.
- 5.462 We recognise that – as stated by CityFibre, Openreach and VMO2 – the usage of PIA by LLA providers may increase going forward.¹¹³⁸ However, there is uncertainty as to the extent to which this might enable providers to overcome the high barriers to entry and expansion in the LLA market over the review period.

¹¹³² For example, some stakeholders, [redacted], indicated that PIA can reduce the costs to build customer-specific network extensions by 30%-80% [redacted]. See: [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. In addition, [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

¹¹³³ For example, evidence from provisioning policies indicates that with the benefit of PIA LLA providers might be willing to build customer-specific network extensions up to between 300 metres and 5km. See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹¹³⁴ For example, [redacted] is reluctant to use PIA for business customers due to delays whereas [redacted] uses PIA for network infilling as well as customer connections and consider PIA fundamental for network build. [redacted] stated that it generally does not use third party physical infrastructure – including PIA – for customer-specific network extensions. [redacted] response dated [redacted] to s135 dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹¹³⁵ See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] specified in its response dated [redacted] to s135 notice dated [redacted], questions [redacted].

¹¹³⁶ Some stakeholders also said that PIA use is not always possible or preferable to build customer-specific network extensions because of a damaged or blocked duct, lack of duct capacity or due to a risk of third-party damage to installations. See, for example: [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] specified in its response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted].

¹¹³⁷ We used data on circuit ends that were newly provisioned in 2024 to compare the proportion of instances LLA providers build customer-specific network extensions compared with using an off-net leased line circuit purchased from a third-party. Our analysis covered all LLA providers who were able to identify in their new provisions data LLA circuit ends that required digging and/or usage of PIA duct for a customer-specific network extension.

¹¹³⁸ [Virgin Media O2](#) response to TAR26 November 2025 Consultation. Page 7. Paragraph 19. [Openreach](#) response to TAR26 November 2025 Consultation. Page 23. Paragraphs 64-65. [CityFibre](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 1.15.

5.463 Overall, although it could increasingly help reduce these barriers, we do not consider that PIA will sufficiently reduce them in this review period to overcome BT's cost and time advantage in the LLA markets where it is already duct or fibre-connected.

Network scale

5.464 We consider insufficient network scale to be a barrier to entry and expansion in the LLA market in some cases.¹¹³⁹ In fact, CityFibre considers that the largest barrier to competing in the LLA market is being able to cover more footprint.¹¹⁴⁰

5.465 In line with this, the evidence we have gathered indicates that network scale is a key factor that customers consider when choosing their LLA service provider. Between 2021-26, network scale impacted the ability of networks to win LLA business in certain circumstances.¹¹⁴¹ For example the evidence suggests that:

- a) Larger network scale may be an advantage in circumstances where networks are trying to secure a wholesale deal with telecoms providers who supply LLA customers.^{1142 1143}
- b) Where LLA customers may require a large number of multi-site circuits, some prefer to deal with one provider rather than multiple providers across different sites.¹¹⁴⁴ A potential supplier would therefore need a large network to cover enough sites to be considered by these customers.¹¹⁴⁵

5.466 Given the above evidence, we do not agree with Openreach that network scale is irrelevant for individual sites and multi-site contracts.¹¹⁴⁶

5.467 We acknowledge that even where customers may need to purchase LLA circuits across a wide geographic area (e.g. in the case of MNOs, nationwide), this may not all need to be purchased from a single supplier. For example, some customers are able to purchase from

¹¹³⁹ We note that VodafoneThree and PXC agreed and stated that the requirement for scale is a barrier to entry and expansion in the LLA market. See: [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 31.

¹¹⁴⁰ CityFibre Infrastructure Holdings Limited response dated 5 February 2026 to s135 notice dated 3 February 2026.

¹¹⁴¹ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]; ITS pre-consultation submission (non-confidential version) dated 31 January 2025, page 1. [redacted] response dated [redacted] to s135 notice dated [redacted]. [redacted] response dated [redacted] to 135 notice dated [redacted].

¹¹⁴² For example, PXC explained that there are issues with the operational practicality of integrating with multiple smaller, geographically focused altnets. See: [PXC](#) response to TAR26 March 2025 Consultation. Page 14. Paragraph 3.8. [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted].

¹¹⁴³ In response to the March 2025 Consultation, VodafoneThree explained that retailers require wholesale services with a scalable geographic footprint to support national enterprise customers. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 34. Paragraph 27. VodafoneThree also explained to us that footprint is a key factor it considers when deciding on a new supplier of LLA services, and that any new supplier footprint needs to offer significant footprint advantage. VodafoneThree response dated 13 February 2026 to s135 notice dated 3 February 2026.

¹¹⁴⁴ [redacted] response dated [redacted] to s135 notice dated [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted].

¹¹⁴⁵ For example, CityFibre considered that a significant subset of business customers may want multi-site contracts, and it is not always able to meet these customers's requirements in full with its current footprint. CityFibre Infrastructure Holdings Limited response dated 5 February 2026 to s135 notice dated 3 February 2026.

¹¹⁴⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 64. Paragraph 202.

more than one provider to meet their needs.¹¹⁴⁷ These customers might therefore purchase from competing networks in areas that they do cover (although each provider would still need to cover a large enough geographic area, as customers are likely to want to limit the number of providers they source from).

- 5.468 We also acknowledge that the need for network scale may not be important for all customers in all cases. This is evidenced by the fact that some comparatively smaller scale LLA providers have successfully won LLA business, to some extent, across the 2021-26 review period (although some still have low volumes).¹¹⁴⁸
- 5.469 We recognise that PIA can reduce the costs of achieving network scale. However, these costs are still likely to be high. In particular, the evidence suggests that using PIA may not always be a viable or suitable option for network build. On this basis, we disagree with Openreach’s suggestion that the availability of PIA means that insufficient network scale is not a relevant barrier to entry.¹¹⁴⁹
- 5.470 Overall, we consider network scale is a barrier to entry and expansion that can impact the ability of competing networks to win LLA business in certain circumstances (for example, where customers require connections to a number of large, geographically dispersed sites). However, this barrier may be comparatively lower where such customers are willing to buy from multiple providers, and for those who don’t have geographically dispersed demand.

Customer installation times

- 5.471 The evidence from telecoms providers shows that LLA customers are sensitive to business continuity and installation times for new services, and quicker installation times can win LLA business.¹¹⁵⁰ For example:
- a) [X]’s LLA customers typically expect a short provisioning time.¹¹⁵¹
 - b) VodafoneThree also explained that service continuity and installation speed are critical to LLA customers, and therefore that quicker delivery times are a key factor in winning business for LLA service providers.¹¹⁵²
- 5.472 BT has an advantage in both winning and retaining LLA connections. This is because its network is likely to be already fibre-connected to many demand sites across the UK. This is apparent from the high share of BT’s new provisions (see Table 5.8 above).
- 5.473 By contrast, competing networks are less likely to be already fibre-connected to demand sites, meaning they will have to build a network extension to reach a site, which – depending on how far their network is from the demand site and whether PIA is a viable option – will increase lead times, raise costs both for the providers and the customer and

¹¹⁴⁷ For example, from evidence submitted for the March 2025 Consultation, we understand that [X] use more than one provider for mobile backhaul. [X] told us it uses multiple providers for mobile backhaul, while [X] told us it uses a small number of providers for mobile backhaul outside of its own capabilities. See [X] response dated [X] to s135 notice dated [X], questions [X] and [X] response dated [X] to s135 notice dated [X], questions [X].

¹¹⁴⁸ For example, as set out above we understand that some MNOs [X].

¹¹⁴⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 64. Paragraph 202.

¹¹⁵⁰ [X] response dated [X] to s135 notice dated [X], question [X]; [X] response dated [X] to s135 notice dated [X], question [X]; [X], in a meeting with Ofcom on [X], said that LLA delivery time is a crucial factor which informs an LLA customer’s choice between LLA providers; [X] response dated [X] to s135 notice dated [X]; and [X] response dated [X] to s135 notice dated [X].

¹¹⁵¹ [X] response dated [X] to s135 notice dated [X], question [X].

¹¹⁵² [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 43. Paragraph 86.

could ultimately deter switching.¹¹⁵³ Consistent with this, PXC considered that there is a difference in delivery and installation time between Openreach and competitors.¹¹⁵⁴

- 5.474 Installation lead times are also relevant for demand sites where BT is duct-connected but is not already fibre-connected (i.e. the customer has not yet purchased a line from BT or a competitor via PIA). As noted by Openreach, we recognise that, for this group of customers, access to regulated PIA will reduce BT's competitive advantage, since both BT and its competitors would be able to access BT's infrastructure to connect customers that are not fibre-connected.¹¹⁵⁵ However, as set out above, the evidence indicates there are circumstances where PIA may not be viable for competitors.
- 5.475 We therefore agree with Openreach that the PIA remedy helps to reduce differences in provisioning times between Openreach and other providers.¹¹⁵⁶ However, in light of the above discussion, we disagree with Openreach that the sensitivity of LLA end customers to business continuity and installation times for new services is not a barrier to entry or that it would only be a barrier for customers with no existing circuit.
- 5.476 We expect this barrier to persist, to some extent, for this review period. BT's incumbency advantage of being connected to the majority of demand sites will remain. This is in contrast to competitors who are more likely to need to extend their network to be connected to new demand sites, given the costs and time required.
- 5.477 We do however recognise that there is some variability between networks in how long installation takes (even where dig is required). For example, we understand from [X] that LLA providers offer varying install times, with [X] having a quicker average installation time of [X] days compared to [X] who have an average installation time of [X] days.¹¹⁵⁷
- 5.478 We also recognise that process and technology developments over this review period may reduce this barrier to some extent. For example, we have been told by CityFibre that leased line equivalent services provided over XGS-PON technology may have lower installation times than traditional point-to-point leased lines.¹¹⁵⁸
- 5.479 Finally, we note Openreach's submission that it is subject to regulatory quality of service obligations on its provisioning times.¹¹⁵⁹ However, our assessment still holds, even absent existing quality of service regulation in the LLA market, as BT would still have an advantage in installation lead times compared to competitors.¹¹⁶⁰ This is because, as set out above, BT is already fibre-connected to many demand sites, whereas it is more likely that competing networks will have to build a network extension to reach a site they are not already connected to (and PIA does not always remove this disadvantage).

¹¹⁵³ For example, longer provisioning times from alternative providers would extend the period of dual-running. This would increase the duration during which the customer must pay for both the incumbent circuit and the new service, thereby increasing the cost of provisioning a new circuit from a competing provider.

¹¹⁵⁴ PXC response dated 13 February 2026 to s135 notice dated 3 February 2026.

¹¹⁵⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 67. Paragraph 202.

¹¹⁵⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 67. Paragraph 202.

¹¹⁵⁷ [X] response dated [X] to s135 notice dated [X], question [X].

¹¹⁵⁸ CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 1f.

¹¹⁵⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 67. Paragraph 202.

¹¹⁶⁰ We also note that we do not set minimum quality of service standards for Openreach in the HNR Area. See Volume 5, Section 4 for more details.

High customer switching costs

- 5.480 An LLA customer of BT considering switching existing circuits to an alternative provider will likely face switching costs, which may act as a barrier to switching. That is, as noted by VodafoneThree and Netomnia / Brsk, there are switching costs in the market that may inhibit switching and slow competitive entry.¹¹⁶¹
- 5.481 These switching costs for LLA customers might include early termination fees, dual payment while circuits are switched, excess construction charges (ECCs) if the alternative provider must dig to the demand site, as well as new connection charges.
- 5.482 Additionally, PXC and VodafoneThree explain that customer migration processes can be long, costly and complex.¹¹⁶² For example, VodafoneThree stated that onboarding new wholesale providers and integrating product variants involves significant cost and operational complexity, where supplier changes require structured migrations that can take six months or more.¹¹⁶³
- 5.483 Similarly, FCS noted that switching wholesalers or provider can be particularly difficult for smaller telecoms service providers who are often at the end of a long supply chain with multiple systems, interfaces and contract terms. Some pricing schemes may also backend-load cease charges.¹¹⁶⁴
- 5.484 In addition, as PXC, VodafoneThree and Netomnia / Brsk explain, contract lengths in the LLA market tend to be long.¹¹⁶⁵ For example:
- We understand from [§] that typical LLA business customers are on three- or five-year contracts, while public sector can range anywhere up to 20 years.¹¹⁶⁶
 - VodafoneThree explained that although enterprise customers typically do not have very long contract terms, these customers still typically contract for three to five years.¹¹⁶⁷
 - Netomnia / Brsk explained that multi-site circuits can have long contract periods.¹¹⁶⁸
 - Additionally, while Openreach stated that its contract length is 12 months (meaning that many end customers are out of term), as discussed below Openreach offers certain discounts for LLA for 84 months minimum commitment.¹¹⁶⁹
 - We also note that the Nera report submitted by Openreach stated that customer switching is likely limited by contract duration, stating that standard contract lengths are typically three years for leased line connections, and can be up to five years.¹¹⁷⁰
- 5.485 We recognise that depending on the type of product, the contract term, and the length of time remaining on the contract, it may be possible for customers to terminate the contract

¹¹⁶¹ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 5. Paragraph 9. [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 7. Footnote 12.

¹¹⁶² [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 31. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 45. Paragraph 86.

¹¹⁶³ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 27.

¹¹⁶⁴ [FCS](#) response to TAR26 March 2025 Consultation. Page 4.

¹¹⁶⁵ [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.2. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 35. Paragraph 31. Netomnia Limited response dated 13 February 2026 to s135 notice dated 3 February 2026.

¹¹⁶⁶ [§] response dated [§] to s135 notice dated [§], question [§].

¹¹⁶⁷ [VodafoneThree](#) response to TAR26 November 2025 Consultation. Page 4. Paragraph 12.

¹¹⁶⁸ [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 7. Footnote 12.

¹¹⁶⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 67. Paragraph 202.

¹¹⁷⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Annex 1. Page 46.

early at a relatively low cost. Moreover, early termination charges only apply while the customer is mid-contract meaning that this barrier is temporary. However, in cases where there are more significant costs associated with early termination of a contract, these long contract lengths can act as an additional barrier to competing networks being able to win existing customers from other networks (and do so quickly).

5.486 Openreach also submitted that, even where switching takes time, this is offset by ability of MSNs to serve WLA customers in the meantime.¹¹⁷¹ However, the ability of a provider to serve a customer in the WLA market is not evidence of the ability to overcome barriers to entry in the LLA market. In addition, we note that not all LLA providers are MSNs, so they lack the opportunity of an additional revenue stream from WLA customers.

5.487 As recognised by PXC and VodafoneThree in their response to the March 2025 Consultation, we note that, unlike in the WLA market, there is no market-wide upgrade to a new technology in the LLA market which could create a particular opportunity for competing networks to win existing LLA business.^{1172 1173} Although the general trend of migrating services to higher bandwidths over time may provide an opportunity over the longer term, switching costs mean the existing provider is still likely to have a competitive advantage.

Credibility and reputation are important for LLA customers

5.488 As outlined in Section 2, LLA customers are purchasing a high-end service with high quality of service parameters (such as low repair times), high security requirements and higher costs compared to WLA FTTP products.

5.489 Vorboss told us that one of the key features of leased lines valued by businesses includes continuity of service and reliability. This is because businesses increasingly rely on connectivity to operate, and therefore reliability of connection is critical.¹¹⁷⁴ [redacted].¹¹⁷⁵

5.490 Given the product characteristics and use cases, we consider that the reputation and credibility of the provider offering leased lines can be important for winning LLA business.¹¹⁷⁶ The evidence we have received supports this view. For example:

- a) [redacted] told us that business customers consider buying from a known brand to be important when buying business connectivity circuits.¹¹⁷⁷
- b) Neos Networks told us that the reputation of a provider's brand is a factor that customers take into account when selecting an LLA service provider.¹¹⁷⁸

5.491 Known, established brands will likely have more credibility compared to new, less established alternative providers. For a competitor to improve their credibility and reputation in the LLA market, it will take time as well as additional investment costs. Therefore, the importance of reputation and credibility of the provider offering leased lines

¹¹⁷¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 68. Paragraph 202.

¹¹⁷² [PXC](#) response to TAR26 March 2025 Consultation. Page 13. Paragraph 3.4. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 45. Paragraph 86.

¹¹⁷³ As explained in Section 4, in the WLA market, the deployment of FTTP creates a window of opportunity for altnets to win customers as they migrate to a new (FTTP) network.

¹¹⁷⁴ [Vorboss](#) response to TAR26 March 2025 Consultation. Page 2.

¹¹⁷⁵ [redacted] response dated [redacted] to s135 notice dated [redacted].

¹¹⁷⁶ PXC. December 2024. TAR26 pre-consultation submission – non-confidential version. Paragraphs 3.2, 3.10 and 3.15.

¹¹⁷⁷ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹¹⁷⁸ [redacted]. Neos Networks response dated 10 February 2026 to s135 notice dated 3 February 2026.

will likely impact new entrants' ability to win LLA business, including wholesale contracts with telecoms providers.

- 5.492 Evidence we have received from stakeholders indicates this. For example, Netomnia / Brsk told us that there are challenges in establishing trust and credibility as a new entrant in LLA, and considered this to be a source of inertia in the market.¹¹⁷⁹ Additionally, a large ISP submitted to us that LLA rivals often lack the track record and credibility that is essential in LLA.¹¹⁸⁰
- 5.493 Given this, we note that it may be particularly challenging for MSNs who have primarily focused on competing in the WLA market to demonstrate their credibility in LLA.
- 5.494 Finally, Openreach submitted that consolidation will most likely occur by suppliers with existing LLA reputations, meaning that credibility and reputation are immaterial barriers to entry.¹¹⁸¹ As set out above, we recognise that reputation may be a less relevant barrier for networks who are acquired by a provider with an existing LLA reputation (e.g., VMO2) or which are in the process of becoming a material and sustainable competitor (e.g., CityFibre).
- 5.495 However, as discussed above, it is unclear how many M&A transactions of this type might occur over the review period, and therefore we disagree that reputation is no longer a material barrier to entry. In line with this, we note that VodafoneThree told us that altnet consolidation will not resolve leased lines market economic barriers to network entry and expansion, such as supplier trust.¹¹⁸²
- 5.496 As discussed above, we acknowledge that – as also noted by Openreach – these barriers are not insurmountable.¹¹⁸³ However, the evidence set out above consistently indicates that these are critical challenges which are likely to take time and investment to overcome. As such, we disagree with Openreach that we have failed to provide evidence indicating that non-physical barriers such as reputation are material barriers to entry.¹¹⁸⁴

Countervailing buyer power

- 5.497 Whether a customer has countervailing buyer power depends on whether they can credibly switch to an alternative supplier, and whether the volumes they want to buy are large enough to act as a constraint.
- 5.498 The degree to which there are competing networks present from which customers can choose varies by geographic market, and is addressed below for each LLA market.

Openreach pricing

- 5.499 In the 2021-26 review period, Openreach was subject to a CPI-0% charge control on all LLA services in LLA Area 2 and LLA Area 3. Openreach is subject to a fair and reasonable pricing condition in the HNR Area (rather than a charge control), reflecting the greater degree of network competition found in 2021 compared to LLA Area 2 and LLA Area 3. As well as charge controls, Openreach was prohibited from introducing certain types of geographic discounts (except where Ofcom otherwise consents). This provision did not extend to

¹¹⁷⁹ [Substantial Group Limited](#) response to TAR26 March 2025 Consultation. Page 7. Footnote 12.

¹¹⁸⁰ [X] response to TAR26 March 2025 Consultation. Page [X]. Paragraph [X].

¹¹⁸¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 65. Paragraph 202.

¹¹⁸² VodafoneThree response dated 13 February 2026 to s135 notice dated 3 February 2026.

¹¹⁸³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 65. Paragraph 203. [Openreach](#) response to TAR26 November 2025 Consultation. Page 16. Paragraph 26.

¹¹⁸⁴ [Openreach](#) response to TAR26 November 2025 Consultation. Page 16. Paragraph 26.

geographic discounts on connection charges in LLA Area 2, or geographic discounts on either rental or connection charges in LLA Area 3 and the HNR Area.¹¹⁸⁵

- 5.500 Pricing can in principle be used as an indicator of market power. Pricing up to the cap, i.e. pricing up to the maximum level allowed under our regulations, may indicate that other constraints are insufficiently strong to hold prices below the level of the cap, which would be consistent with a finding of SMP. However, we recognise that BT's pricing may be driven by factors other than just SMP.
- 5.501 We discuss below the evidence on Openreach's pricing behaviour across the 2021-26 review period.

Openreach pricing in line with the cap in LLA Area 2 and LLA Area 3

- 5.502 Looking at overall price growth across the Ethernet basket (which covers LLA Areas 2 and 3),¹¹⁸⁶ we see that revenue-weighted price growth has been broadly aligned with (i.e. slightly below) CPI growth over 2021-25.¹¹⁸⁷ Similarly, the simple average price growth for WDM (Optical) price list items has been a little below (but still correlated with) CPI growth.¹¹⁸⁸
- 5.503 For dark fibre access (DFA) services in LLA Area 3, which are subject to cost-based charge controls, Openreach has increased prices by almost the maximum allowed growth rates since 2021/22.¹¹⁸⁹
- 5.504 Although Openreach charging below the price caps for some services may indicate some constraints from competing networks, we treat this evidence with caution as there may be other strategic decisions at play rather than competition exerting constraints on Openreach pricing. For example, internal documents from Openreach suggest that price increases for low bandwidth circuits may be driven by [redacted].¹¹⁹⁰

Openreach discounts

- 5.505 In the HNR Area, Openreach has offered some discounts since 2021. These discounts include rental charge term discounts and reductions for connection charges.^{1191 1192}
- 5.506 In LLA Area 2 and LLA Area 3, Openreach has introduced term discounts for EAD rental charges. For example, Openreach has launched the EAD 1000Mb LA alternative pricing special offer which applies to circuits taken on a 3 year term.¹¹⁹³

¹¹⁸⁵ Although the general prohibition on undue discrimination would apply in these circumstances.

¹¹⁸⁶ The current Ethernet basket includes combined Ethernet revenue from all LLA SMP markets and all IEC SMP markets, meaning that it also includes Ethernet IEC revenue from BT Only exchanges and BT+1 exchanges.

¹¹⁸⁷ This can be seen in tab '12E – Ethernet & WDM Outcome' of BT's published [WFTMR Compliance Model 2024-25](#). Accessed 6 March 2026.

¹¹⁸⁸ For example, in 2024/25 average WDM price growth across the LLA and IEC SMP markets was 1.2%, compared to 4.6% CPI growth. In 2023/24 average WDM price growth across the LLA and IEC SMP markets was 8.2%, compared to 11.1% CPI growth. This can be seen in tab 'Compl - Ethernet & WDM' of BT's published [WFTMR Compliance Model 2024-25](#). Accessed 6 March 2026.

¹¹⁸⁹ This can be seen in tab '12I - DFA Comp Outcome' of BT's published [WFTMR Compliance Model 2024-25](#). Accessed 6 March 2026.

¹¹⁹⁰ [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹¹⁹¹ For example, see Openreach Connection Special Offer for EAD 1Gb. [Price List](#). Accessed 27 February 2026.

¹¹⁹² For example, see Ethernet Access Direct (EAD) Re-sign offer for 36 or 60 month terms for 1000Mb and below for Local Access and Standard access. [Price List](#). Accessed 27 February 2026.

¹¹⁹³ Openreach. [Price List](#) Accessed 27 February 2026.

5.507 In LLA Area 3, where Openreach is obliged to provide cost-based dark fibre, Openreach does not offer any discounts (including term discounts) for the regulated dark fibre product.

Conclusion on pricing in LLA services

5.508 Openreach's pricing since 2021 is not inconsistent with a finding of SMP in the HNR Area, LLA Area 2 and LLA Area 3. Openreach has been increasing prices by close to the maximum allowed levels in LLA Area 2 and LLA Area 3, and although BT offers discounts for new connections (specifically in the HNR Area) and term discounts for rental charges in all regulated markets, these have been limited.¹¹⁹⁴

5.509 However, in light of the evidence and caveats set out above, we do not consider pricing to be a very informative indicator of SMP conditions. As such, we do not consider it further as part of our SMP assessment and instead place greater weight on the other indicators.

External constraint

5.510 We have also considered the extent to which external constraints may reduce BT's market power i.e. out-of-market products such as business-specific broadband services and wireless technologies, which may be a demand-side substitute for some end consumers.

5.511 As outlined above, while these technologies could be demand-side substitute for some customers and use cases, the degree of substitutability is likely to remain limited over the review period.

5.512 Moreover, as discussed above, we consider that some of the switching from leased lines to business-specific broadband services may reflect a period of adjustment in which some customers, for whom a FTTP-based product would meet their needs, migrate to FTTP-based broadband products, while those who need and value the distinct features leased line products continue to purchase these services.

5.513 Given this evidence, we do not consider that these services will exert a significant competitive constraint on BT within the review period.

Our findings

Finding that BT has SMP in LLA Area 3

5.514 As detailed above, LLA Area 3 is made up of postcode sectors in which there is not, and there is unlikely to be, potential for material and sustainable competition to BT in the commercial deployment of competing networks in this review period.

5.515 As detailed in Annex 5, LLA Area 3 accounts for 102,392 demand sites, 3,416 postcode sectors and 19% of connections. We recognise that some competing LLA providers may have existing or planned presence. However, in the vast majority of cases LLA customers in these postcode sectors do not have existing or expected access to a current or potential material and sustainable competitor as an alternative to Openreach.

5.516 Below, we consider whether BT has SMP in LLA Area 3.

Market shares

5.517 Our market share evidence indicates that BT is facing very limited competition in LLA Area 3 from existing or potential rival network presence, as detailed in Table 5.8. [X] BT retains a

¹¹⁹⁴ We note that Vodafone stated that BT pricing and discount strategy is indicative of SMP. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 36. Paragraph 32.

market share of 91-100% ([>=]%), and the share of BT's largest rival (VMO2) is materially lower, at 1-10% ([>=]%).¹¹⁹⁵

Competition from existing and planned presence of network infrastructure

- 5.518 The infrastructure indicators presented in Table 5.9 above show that there is very limited competing network infrastructure in LLA Area 3. In Area 3, most demand sites are expected to have no competing networks within 100m in the review period. The average number of competing networks with existing or planned presence within 100m of a demand site is 0.42. Moreover, a very small proportion (9%) of demand sites in Area 3 are expected to have access to two or more competing networks within 100m.
- 5.519 The market shares also suggest that BT is more likely to be fibre-connected than competitors by virtue of having previously supplied the vast majority of previous connections. Therefore, it is likely to have a competitive advantage in LLA Area 3 to serve these customers since in many cases competitors would need to extend their network – either via digging or through PIA – to connect customers.
- 5.520 While not in itself insurmountable, we also note that competing networks are typically further away from a demand site, with the nearest competing network on average being 2.2km away. As set out in Annex 5, even where PIA is viable, competing networks are unlikely to cover such long distances when building customer-specific network extension. The comparatively high proportion of off-net connections provided in Area 3 between 2020 and 2024 further supports this view.

Barriers to entry and expansion

- 5.521 The absence of potential competitors shows that the barriers to entry and expansion are particularly high in LLA Area 3. Those barriers to entry indicate that the market is unlikely to develop enough to materially affect the competitive constraint on BT in this review period.
- 5.522 As outlined above, we have identified network scale and the need for significant upfront investment to reduce installation times as barriers to entry in the LLA market. Given the average distance from a demand site to the first nearest competing network is substantially further in LLA Area 3 compared to other LLA markets, these barriers to entry and expansion will likely be more pronounced.

Absence of countervailing buyer power

- 5.523 We do not consider there to be sufficient countervailing buyer power to constrain BT's market position in Area 3. This is because most customers will have no alternative choice to BT across LLA Area 3 (the average number of competing networks present within 100m of a demand site is 0.42) and customers therefore cannot make credible threats to switch volumes to an alternative supplier.

Finding that BT has SMP in LLA Area 3

- 5.524 Overall, our evidence indicates that BT has SMP in the LLA Area 3 market.
- 5.525 BT has a persistently high market share in LLA Area 3 and faces limited infrastructure-based competition. The evidence on barriers to entry and expansion suggests that there are

¹¹⁹⁵ As outlined above in our approach to LLA geographic modelling, LLA Area 3 is made up of postcode sectors where less than 65% of demand sites have access to the planned or existing footprint of at least one current or potential material and sustainable competitor network. Therefore, networks such as VMO2 may still have presence in some postcode sectors, however the presence is insufficient to reach our threshold to consider the postcode sector LLA Area 2 or HNR Area.

limited prospects of networks which are, or have the potential to be, material and sustainable competitors entering this market for this review period, and there is limited countervailing buyer power due to a lack of alternative networks to switch to.

- 5.526 We therefore find that BT has SMP in the provision of LLA circuits in LLA Area 3. We note that AllPoints Fibre, CityFibre, Gamma, PIA Coalition, TechUK and VodafoneThree agree with this finding.¹¹⁹⁶

Finding that BT has SMP in LLA Area 2

- 5.527 As detailed above, LLA Area 2 is made up of postcode sectors in which there is, or is likely to be the potential for, material and sustainable competition to BT in the commercial deployment of competing networks.
- 5.528 As detailed in Annex 5, LLA Area 2 accounts for 218,728 demand sites, 5,391 postcode sectors and 55% of connections. Within each of these postcode sectors at least 65% of demand sites have access to an alternative leased line provider other than BT, or will potentially have access over this review period.
- 5.529 Below, we consider whether BT has SMP in LLA Area 2.

Market shares

- 5.530 Our evidence presented in Table 5.9 shows that BT has a high market share in LLA Area 2. We estimate BT's market share to be 71-80% ([<]%), and the share of BT's largest rival VMO2 is materially lower at 11-20% ([<]%).
- 5.531 As set out in Annex 5, BT's annual share of LLA circuit ends has declined from ([<]%) in 2020 to ([<]%) in 2024.

Competition from existing and planned presence of network infrastructure

- 5.532 The infrastructure indicators presented in Table 5.9 above show that there is expected to be limited competing network infrastructure in LLA Area 2 in the review period. On average, there is expected to be 1.85 competing networks within 100m of demand sites in LLA Area 2.
- 5.533 The above figures on market shares in LLA Area 2 suggest that, for a large proportion of users, BT is more likely to be fibre-connected whereas competing networks will likely need to extend their networks to connect to customers.
- 5.534 We note that 54% of demand sites in Area 2 are expected to have access to two or more competing networks within 100m over the review period. However, although on average the nearest rival network is reasonably close (on average, demand sites in Area 2 are expected to be 49m away from the nearest competing network), the second nearest is expected to be 400m away on average. As set out in Annex 5, competing networks which are further away from demand sites (particularly beyond 100m) are increasingly less likely to win customers. Consistent with these challenges, competitors chose to provision off-net for 42% of the new connections. This suggests the additional competitive constraint from the second network is likely to be more limited.

¹¹⁹⁶ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 37. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147. [Gamma](#) response to TAR26 March 2025 Consultation. Page 3. [PIA Coalition](#) response to TAR26 March 2025 Consultation. Page 4. [TechUK](#) response to TAR26 March 2025 Consultation. Page 5. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Page 42. Paragraph 80.

5.535 BT faces some competition from established material and sustainable competing networks with existing infrastructure (e.g. VMO2) in Area 2. Additionally, as outlined in our geographic market analysis above, we expect the overall footprint of competing networks, of both current and potential material and sustainable competitors, to grow across the 2026-31 review period. We recognise the constraint from existing networks in LLA Area 2 may therefore increase in the future, but we consider the likelihood and extent of this growth is currently uncertain (we discuss barriers to entry and expansion below).

Barriers to entry and expansion

5.536 There has been entry and expansion in the current WFTMR21 LLA Area 2, showing that entry and expansion by current as well as potential material and sustainable competitors (including LL-only providers, VMO2, CityFibre and WightFibre) can be viable for LLA Area 2. However, as discussed in Annex 5, the trends in LLA volumes sold and market shares suggest that expanding in the market takes time and that some barriers persist. Therefore, we consider that barriers to entry and expansion remain high in LLA Area 2 and will persist for this review period. Moreover, we consider that the extent and success of entry and expansion is uncertain in the absence of ex-ante regulation of this market, given BT's incentives and ability to undermine the development of competition.

5.537 In addition, as discussed above, while PIA has the potential to reduce barriers to entry and substantially increase competition, the use of PIA for LLA varies (to differing degrees by different providers), suggesting that it may not be suitable for every use case.¹¹⁹⁷ The impact of PIA for the barriers to entry and expansion in the LLA market over this review period therefore remains uncertain.

Absence of countervailing buyer power

5.538 We do not consider there to be sufficient countervailing buyer power to constrain BT's position in LLA Area 2.

5.539 Although most customers will have access to an alternative provider to BT over the review period, many will have more limited choice which reduces the credibility of any threat to switch away from BT to an alternative network. We also expect that for those individual customers who typically purchase relatively low volumes, their ability to exert buyer power will be more limited even where they have a choice.

5.540 We therefore do not expect countervailing buyer power to be a material constraint on BT in LLA Area 2.

Finding that BT has SMP in LLA Area 2

5.541 Overall, our evidence indicates that BT has SMP in LLA Area 2. As well as BT's high market share, there is limited competitive constraint on BT's market power from existing or potential competing network presence.

5.542 We have been encouraged by MSN and LL-only providers increased leased line volumes across the WFTMR21 period, and their plans for future growth across this review period. Additionally, BT's annual share of new LLA circuit ends has declined by -[<] percentage points between 2020 and 2024.¹¹⁹⁸

5.543 However, BT's market share remains high, and the decline has so far been limited. We recognise barriers to entry and expansion in the LLA market remain, which will take time to

¹¹⁹⁷ See Paragraph 5.155 for our evidence on the use of PIA for the provision of LLA.

¹¹⁹⁸ See Annex 5, Table A5.17.

overcome. This is likely to limit the extent to which the competitive constraint will increase during this review period. Additionally, there is limited countervailing buyer power to constrain BT's position.

- 5.544 We also note BT's incentive and ability to undermine the development of competition in the absence of regulation.
- 5.545 Therefore, the likelihood and extent to which MSNs and LL-only providers can sufficiently increase the competitive constraint they exert in LLA Area 2 in this review period is not sufficiently certain for us to reach a finding of no SMP on a prospective basis.
- 5.546 We therefore find that BT has SMP in the provision of LLA circuits in LLA Area 2. We note that AllPoints Fibre, CityFibre, Gamma, PIA Coalition, TechUK and VodafoneThree agree with this finding.¹¹⁹⁹

Finding that BT has SMP in the HNR Area

- 5.547 As detailed above, the HNR Area covers postcode sectors where, due to the presence of at least two current material and sustainable competitors, there is sufficiently well-established competition to BT in the commercial deployment of competing networks to distinguish these postcode sectors from LLA Area 2 and LLA Area 3.
- 5.548 As detailed in Annex 5, the HNR Area accounts for 52,892 demand sites, 930 postcode sectors and 17% of connections. Within each of these postcode sectors, at least 65% of demand sites have access to at least two alternative LLA providers other than BT. Below, we consider whether BT has SMP in the HNR Area.

Market shares

- 5.549 Our evidence presented in Table 5.8 indicates that BT maintains a high market share in the HNR Area. BT has a market share of new connections of 61-70% ([<]) in the period 2020 to 2024, and the share of BT's largest rival VMO2 is materially lower, at 11-20% ([<]). Despite there being multiple networks in the HNR Area, no other competitor has a share above [<].
- 5.550 Although BT's share of new connections remains high in the HNR Area, we note that – as detailed in Annex 5 – its share has declined from ([<]) in 2020 to ([<]) in 2024.
- 5.551 Openreach also submitted that in the first three quarters of FY25 its net demand in the HNR Area fell by 5-15% [<].¹²⁰⁰ [<].

Competition from existing and planned presence of network infrastructure

- 5.552 The HNR Area is made up of postcode sectors in which two or more current material and sustainable competitors to BT are present.
- 5.553 The evidence presented in Table 5.9 indicates that:¹²⁰¹

¹¹⁹⁹ AllPoints Fibre response to TAR26 March 2025 Consultation. Page 7. Paragraph 37. CityFibre response to TAR26 March 2025 Consultation. Page 147. Gamma response to TAR26 March 2025 Consultation. Page 3. PIA Coalition response to TAR26 March 2025 Consultation. Page 4. TechUK response to TAR26 March 2025 Consultation. Page 5. VodafoneThree response to TAR26 March 2025 Consultation. Page 42. Paragraph 80.

¹²⁰⁰ Openreach response to TAR26 March 2025 Consultation. Document 2. Paragraph 205.

¹²⁰¹ For the HNR SMP assessment, we rely on the indicators presented in Table 5.9 which are calculated based on evidence from current, as well as potential, material and sustainable competitors having existing, as well as planned, presence. This differs from our approach to defining the HNR geographic market, which is based on the number of current material and sustainable competitors with existing presence only. Our approach to

- a) On average, almost three (2.88) current material and sustainable competitors have existing network presence in the HNR Area. This figure increases to around four if we include current and potential material and sustainable competitors with existing or planned build within 100m of demand sites.
- b) 82% of businesses have access to at least two current material and sustainable competitors and 54% of businesses have at least three current material and sustainable competitors present. These figures increase to 95% and 78% respectively if we include current and potential material and sustainable competitors with existing or planned build within 100m of demand sites.
- c) The two closest current material and sustainable competing networks are within 50m (41m) of demand sites, and the third closest is over 100m (111m) away from demand sites.^{1202 1203}

5.554 In the March 2025 Consultation, we also noted that BT is generally duct-connected more frequently than its rivals, which we considered would give it a competitive advantage.¹²⁰⁴ Openreach suggested that having a lower proportion of duct connections is irrelevant since it reflects a historical provision of Openreach services, and because competitors will connect to more sites in future due to the PIA remedy.¹²⁰⁵ We acknowledge that a lower proportion of ducts connections is comparatively less relevant compared to past reviews since competitors can now access BT's ducts and serve customers through a more established regulated PIA product.

5.555 However, we consider that evidence on HNR Area market shares suggest that, for a large portion of users, BT is still more likely to be fibre-connected than its rivals by virtue of its historic success at winning the majority of new connection volumes. This would likely give BT a competitive advantage against its rivals who are more likely to need to extend their networks to connect to customers, even in the HNR Area.

Barriers to entry and expansion

5.556 As discussed above, we have seen an increase in competing networks providing LLA services since 2021, and this has contributed to the increase in the geographic scope of the HNR Area. We nonetheless consider the LLA market to have persistent barriers to entry and expansion.

5.557 The HNR Area has a higher presence of LL-only providers and VMO2, who, as discussed above, have been able to sufficiently overcome barriers to entry and expansion. However, the trends in volumes sold by existing and new LLA providers (as described in Section 2 of this volume) suggest that expanding in the market takes time and that some barriers persist. Accordingly, while we think that competition in the HNR Area may eliminate BT's SMP at some point in the future, barriers to entry and expansion mean the extent to which

assessing SMP in the HNR area aims to capture the overall level of constraint exerted by competing networks with existing or planned presence in the HNR area over the review period.

¹²⁰² Openreach did not consider the presence of the third closest competitor to be relevant, since two material and sustainable competitors are sufficient to be a significant competitive constraint and the availability of PIA makes the distance parameter irrelevant. We disagree with this. As discussed above, we consider number of competitors and competitors' distance from demand sites to be two of the factors affecting competition. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 207-208.

¹²⁰³ We note that these figures remain broadly similar even when including current and potential material and sustainable competitors with existing or planned build within 100m of demand sites.

¹²⁰⁴ This view was supported by [VodafoneThree](#) in response to TAR26 March 2025 Consultation. Page 45. Paragraph 86.

¹²⁰⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Page 66. Paragraphs 205-206.

it is able to sufficiently develop in this review period is not certain enough for us to find no SMP in the HNR Area on a prospective basis.

Absence of countervailing buyer power

- 5.558 Most businesses will have a choice of two or more alternative suppliers to BT in the HNR Area, which could be sufficient to make a credible threat to switch away from BT. However, some of these business customers will likely buy relatively low volumes, as individual customers, which are unlikely to be large enough to exert buyer power.
- 5.559 Therefore, while we recognise there could be the potential for customers to exert countervailing buyer power (and this could increase over the review period as competition continues to evolve), we do not consider it to be sufficiently strong to counteract the other indicators of BT's SMP in the HNR Area.

Finding that BT has SMP in the HNR Area

- 5.560 Overall, we consider that the evidence presented above is indicative of BT retaining SMP in the HNR Area.
- 5.561 The HNR Area has expanded since 2021, and BT's annual share of LLA circuit ends has been trending downwards (-[X] percentage points) between 2020 to 2024.¹²⁰⁶ In addition, the evidence on the increased share of LLA circuit ends provisioned by LL-only providers presented in Annex 5 demonstrates that competing networks are successfully winning LLA business, including wholesale contracts with large telecoms providers (e.g. Sky / ITS deal).
- 5.562 However, despite this, as well as our evidence suggesting that on average there are more networks present in the HNR Area than there were before, we have yet to see a material decline in BT's market share.
- 5.563 Therefore, we disagree with Openreach that we should deregulate the HNR Area since market shares are trending downward (and – in its view – mean it will likely fall below 60% during the TAR period).¹²⁰⁷ The downward trend to date cannot simply be extrapolated forward to infer what will happen in the review period, and so does not, on its own, demonstrate that competition will develop sufficiently in the review period to remove SMP. We have instead considered evidence from market shares in the round with the other evidence set out above to reach our SMP finding.
- 5.564 We consider BT's high market share of [X]% across the 2020-24 period reflects the persistent barriers to entry and expansion in the LLA market described above, which will take time for competing networks to overcome. This includes the fact that competing networks are much less frequently fibre-connected than BT, as well as the barriers to increasing take-up (particularly quickly) such as high switching costs and the importance of credibility and reputation within the LLA market for winning LLA business.
- 5.565 We therefore find that BT has SMP in the provision of LLA circuits in the HNR Area for this review period. We note that AllPoints Fibre, CityFibre, Gamma, PIA Coalition, TechUK, VodafoneThree and Vorboss agreed with this finding.¹²⁰⁸

¹²⁰⁶ See Table A5.17 in Annex 5 for more details.

¹²⁰⁷ [Openreach](#) response to TAR26 November 2025 Consultation. Page 14. Paragraphs 18-21.

¹²⁰⁸ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Page 7. Paragraph 37. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 147. [Gamma](#) response to TAR26 March 2025 Consultation. Page 3. [PIA Coalition](#) response to TAR26 March 2025 Consultation. Page 4. [TechUK](#) response to TAR26 March 2025

The CLA

5.566 We previously found the CLA to be effectively competitive. We therefore do not assess SMP in the CLA as it does not form part of this review.

6. Inter-exchange connectivity market

- 6.1 In this section we explain our market definition and SMP assessment for the inter-exchange connectivity (IEC) market.
- 6.2 Based on the evidence and having taken into account the responses from stakeholders, we have decided, in line with the March 2025 Consultation proposals:
- a) To define a single product market for IEC services which includes all active services and dark fibre provided between BT exchanges.
 - b) To define each BT exchange as a distinct geographic market for the purposes of making a market power determination. We have concluded that these markets meet the three criteria test.
 - c) To conclude that BT has SMP at each BT Only and at each BT+1 exchange, but not at each new BT+2 exchange.
- 6.3 The rest of this section covers the proposals we made in our March 2025 Consultation, stakeholder responses to that consultation and the reasoning behind our decisions for each of:
- a) Product market definition for IEC;
 - b) Geographic market definition for IEC; and
 - c) SMP assessment.

Product market definition

Our proposals

- 6.4 In the March 2025 Consultation, we provisionally concluded that there is a single product market for IEC services which includes:
- a) active services at all bandwidths provided between BT exchanges; and
 - b) dark fibre between BT exchanges.
- 6.5 We provisionally excluded:
- a) leased line access services; and
 - b) all trunk services that do not connect between BT exchanges.¹²⁰⁹

¹²⁰⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.2-6.19.

Stakeholder responses

6.6 The stakeholders who commented on the product market definition agreed with our proposals and provisional conclusions.^{1210 1211}

Leased line access and IEC as separate markets

6.7 Openreach agreed with our proposed product market definition. It noted, however, that in its view any network type could in principle provide an IEC service.¹²¹²

6.8 VMO2 agreed that the IEC market remains distinct from the LLA market. It said that while IEC and LLA services use similar products to support these services, the services have different purposes and set of potential suppliers. VMO2 also said that it would likely be complex for an LLA supplier that only provides end-user site connectivity to rapidly enter the IEC market to compete.¹²¹³

Our reasoning and decisions

6.9 For the reasons set out below, we define a single product market for IEC services which includes active services at all bandwidths and dark fibre between BT exchanges.

Background

6.10 IEC services carry aggregated traffic between BT exchanges located in different geographic areas. IEC services typically use similar products to those in the LLA market, such as leased lines at different bandwidths and dark fibre.

6.11 IEC services are a type of trunk segment. Trunk segments carry aggregated traffic between points of aggregation. We have previously concluded that a presumption of competitiveness was appropriate for other types of trunk connections.^{1214 1215} We have also previously found a number of exchanges to be effectively competitive.¹²¹⁶ Neither other types of trunk connections nor previously deregulated exchanges form part of this review.¹²¹⁷

¹²¹⁰ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 43. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 148. [INCA](#) response to TAR26 March 2025 Consultation. Paragraphs 337-339. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 209. [TechUK](#) response to TAR26 March 2025 Consultation. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 32 and 50. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 101-102.

¹²¹¹ We note that VodafoneThree recommended, along with its response to the product market definition, that we engage with industry stakeholders in advance of the next review period starting in 2031, to understand how retailers' networks will be impacted by Openreach's Exchange Exit, particularly in relation to the continuity of interexchange connectivity and the implications for backhaul resilience. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 102-106.

¹²¹² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 209.

¹²¹³ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 32 and 50.

¹²¹⁴ Such as connections to telecoms provider network nodes and connections to data centres that can both be used as points of aggregation.

¹²¹⁵ See Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Paragraph 6.130.

¹²¹⁶ See Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Paragraphs 8.304-8.306, 8.316-8.319.

¹²¹⁷ Any reference in this Statement to 'each BT exchange' or 'BT exchanges' should be taken to exclude BT exchanges that have already been deregulated. However, for completeness and ease of reference, Schedule 4 to our SMP conditions in Volume 7 includes a complete list of IEC exchanges, including those exchanges that have already been deregulated.

- 6.12 BT exchanges act as network nodes. They are used to aggregate traffic and can act as interconnection points between networks and other network nodes. Demand for IEC comes from telecoms providers that need to carry aggregated traffic between BT exchanges to reach their own networks.
- 6.13 Telecoms providers have historically been particularly reliant on access to BT exchanges to be able to use BT's wholesale access services and backhaul this traffic to their own networks. Some altnets are also reliant on connectivity to BT exchanges where they have built their own fixed access network in a BT exchange area and need to backhaul this access traffic to their own core and/or backhaul network.
- 6.14 Where other operators with nearby networks are connected to BT exchanges (either directly or indirectly), they may provide competition to Openreach as providers of IEC services. In some cases, these providers of IEC services use BT exchanges as a hub to connect to one or more buyers of IEC services rather than requiring buyers of IEC services to connect to their network outside the exchange.
- 6.15 We see that the market for IEC has been broadly stable since WFTMR21. We have seen limited entry and exit by different providers, and limited expansion by existing providers. As set out below, we expect this to continue over the review period.
- 6.16 As in the March 2025 Consultation, we note that future developments, such as greater competition from altnets in downstream access markets and Openreach's exchange closure programme, may affect competitive conditions in the future. However, the impact of these developments is uncertain, and we do not consider that they will happen soon enough to have a material impact on our assessment for this review period.^{1218 1219}

Our approach

- 6.17 As we explained in the March 2025 Consultation, as IEC services typically use similar products to those in the LLA market (i.e. leased lines and dark fibre), we consider a similar set of potential substitutes. Specifically, we first consider whether the product market should include all bandwidths of IEC services. We then consider whether LLA services should be considered as part of the IEC market.

All bandwidths and dark fibre for IEC are in the same product market

- 6.18 As we set out in the March 2025 Consultation, where a telecoms provider is already connected to a BT exchange, it can offer a full suite of bandwidths relatively quickly and at little incremental cost, constraining a hypothetical monopolist of a given bandwidth.
- 6.19 Similarly, an inter-exchange dark fibre provider already connected to a BT exchange would be able to start supplying active IEC services by purchasing and installing equipment at each end of the circuit, relatively quickly and at minimal cost.
- 6.20 Therefore, we conclude that all bandwidths used for IEC services, and dark fibre between BT exchanges, are in the same product market.

¹²¹⁸ We set out Openreach's current exchange exit plan, and its implications, in more detail in Volume 3, Section 3. Given that relatively few exchanges are expected to close during this review period, we do not anticipate there will be a material impact on competition in the IEC market more widely.

¹²¹⁹ We note that some stakeholders have views about these future developments and how they impact competition in the market. As these relate to the geographic market definition, we address them in that section.

Leased line access and IEC as separate markets

- 6.21 As IEC services typically use similar products to those in the LLA market (i.e. leased lines and dark fibre), we considered the potential for those services to be part of the same product market as IEC services.¹²²⁰
- 6.22 However, while IEC services typically use similar products to those in the LLA market, they are used for a different purpose. Specifically, IEC circuits carry aggregated end-user traffic over larger distances than access circuits which connect within, rather than between, geographic areas. We also understand that higher bandwidths account for a greater proportion of IEC circuits, reflecting the greater capacity generally needed to carry the traffic of multiple access circuits and/or backhaul circuits.^{1221 1222}
- 6.23 We disagree with Openreach's suggestion that networks are able to easily engage in supply side substitutability of any network type into an IEC service.¹²²³ A supplier of LLA services to a particular end-user site would not be able to easily switch to supplying inter-exchange connectivity services as it would need to build a sufficient backhaul network to do so.¹²²⁴ An access network topology connecting multiple end-users to a single aggregation point within a local geographic area is not set up to deliver IEC circuits - in fact it requires IEC circuits to provide an end-to-end service. Therefore, only LLA service providers with their own backhaul networks and backhaul-focused service providers are able to provide an inter-exchange connectivity service. VMO2 agreed that it would likely be complex for an LLA supplier that only provides end-user site connectivity to rapidly enter the IEC market to compete.¹²²⁵
- 6.24 Therefore, the different purpose of IEC services, compared to LLA services, leads to a difference in competitive conditions.
- 6.25 Accordingly, we conclude that there is a separate market for IEC services.

Our conclusions on product market definition

- 6.26 For the reasons set out above, we define a single product market for IEC services which includes active services at all bandwidths and dark fibre between BT exchanges.

¹²²⁰ As discussed in Section 5 of this volume, we have defined a leased line access product market which excludes IEC services.

¹²²¹ [3<].

¹²²² To clarify, when we describe IEC services as typically using similar products to those in the LLA market, we do not refer to leased line equivalent services. In any case, we do not consider leased lines equivalent services to be in the same product market as IEC services for similar reasons. We also note Openreach's comment that its view on the substitutability of leased line equivalent services and broadband services in the LLA market does not carry through to the IEC market because of, for example, the higher bandwidth needs for carrying aggregated traffic between exchanges. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 209. We agree that leased line equivalent services, defined in Section 5 of this volume, and which are delivered over XGS-PON networks currently, are not technically suited to provide IEC links due to these higher bandwidth requirements.

¹²²³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 209.

¹²²⁴ Similarly, we consider that a supplier of WLA services would not be able to easily switch to supplying inter-exchange connectivity services for the same reason.

¹²²⁵ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Page 32.

Geographic market definition

Our proposals

- 6.27 In the March 2025 Consultation, we proposed to define each BT exchange as a distinct market.¹²²⁶
- 6.28 We explained that competition is for the supply of backhaul connectivity between network nodes located at BT exchanges.¹²²⁷
- 6.29 We recognised that competitive conditions can vary on a route-by-route basis but provisionally ruled out a route-by-route analysis and instead, proposed a methodology based on the presence of rival networks at each BT exchange. We refer to these rival networks as Principal Core Operators ('PCOs').¹²²⁸

Stakeholder responses

- 6.30 Several stakeholders agreed with our proposals on the geographic market definition.¹²²⁹ Some stakeholders disagreed with our proposals. We set out the points that they raised below.

Each BT exchange as a geographic market

- 6.31 INCA, VMO2 and VodafoneThree agreed with our proposal to define each BT exchange as a geographic market.¹²³⁰
- 6.32 Openreach did not agree with the proposed geographic market definition. It said that because IEC services are a type of trunk service, it considers that IEC connectivity is part of the trunk market and is effectively competitive. Openreach said that by focusing on IEC between BT exchanges, the approach effectively defines a backhaul market, but only for BT.

¹²²⁶ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.20-6.25.

¹²²⁷ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.22.

¹²²⁸ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.26.

¹²²⁹ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 43. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 148. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 340. [TechUK](#) response to TAR26 March 2025 Consultation. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 32 and 50. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 107.

¹²³⁰ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 340. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 32 and 50. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 107.

Openreach said we did not assess backhaul routes of other providers, which Openreach said overlap materially with the potential routes between BT exchanges.^{1231 1232 1233}

Route-by-route approach

- 6.33 VMO2 and AllPoints Fibre supported our proposed methodology based on presence of rival networks at BT exchanges. VMO2 noted there is little practical or analytical benefit in seeking to adopt a more complex route-by-route approach.¹²³⁴ AllPoints Fibre agreed that categorising exchanges according to the number of Openreach connectivity competitors present is the simplest way to assess their competitiveness.¹²³⁵
- 6.34 In contrast, INCA and Ogi highlighted that the presence of PCOs at exchanges does not necessarily mean that there are commercial backhaul services available to the nearby exchanges which an altnet needs to connect to. Their concern is that this may mean that there is neither commercial nor regulated backhaul in some instances.¹²³⁶ INCA suggested that beyond counting PCO presence in an exchange, Ofcom should ascertain what connectivity the PCO can offer from that exchange. INCA further suggested that, in cases where neither of the two PCOs present at an exchange can offer the connectivity required by altnets, that exchange should be designated BT Only.¹²³⁷

Our reasoning and decisions

- 6.35 For the reasons set out below, we confirm our proposals to define each BT exchange as a distinct market and to maintain our methodology based on presence of rival networks at BT exchanges.

Each BT exchange as a geographic market

- 6.36 In the March 2025 Consultation, we explained that telecoms providers use IEC connections from a given BT exchange in order to backhaul aggregated access traffic from an access network (which could be either BT's or that of a third party) within that local access exchange area. This aggregated access traffic is then carried from the BT exchange to another BT exchange for connection to a wider core/backhaul network. Competition is for the supply of backhaul connectivity between network nodes located at BT exchanges.

¹²³¹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 210-214.

¹²³² In its consultation response, Openreach also added that an IEC geographic market definition based on individual exchanges is flawed because of the circularity between the presence of PCOs and the remedies, explaining that once a CP invests to take DFX at an exchange, the CP becomes present at that exchange, and the exchange may no longer be susceptible to remedies at a future market review. See [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 215. As a clarification, this is not the case – based on the modelling approach, a PCO is not counted as present at an exchange when it uses an Openreach DFX circuit to connect at an exchange. Rather, a PCO is present at an exchange if the PCO or a third-party CP indicates that it connects to the PCO's own network for core and/or backhaul purposes. See Annex 6 for further details on the modelling approach.

¹²³³ Openreach also said that a wider set of PCOs should have been considered in the analysis. See [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 216. In our SMP assessment below we set out the PCOs that we have considered in our analysis and the reasoning for considering those PCOs.

¹²³⁴ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 117.

¹²³⁵ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 43.

¹²³⁶ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 343. Ogi supplementary information provided in response to TAR26 March 2025 Consultation.

¹²³⁷ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 343.

- 6.37 BT has over 5,000 exchanges, many of which have no or limited choice of providers offering inter-exchange services to backhaul aggregated traffic. This remains critical for access-based competition. In particular, telecoms providers require connections between BT exchanges in order to make use of regulated products at those exchanges (notably, access to WLA and LL Access remedies where we find BT holds SMP in those markets).
- 6.38 In addition, connectivity between BT exchanges is also important for network-based competition. Some altnets are reliant on connectivity between BT exchanges, where they have built their own fixed access network in a BT exchange area and need to backhaul this access traffic via BT exchanges to their own core and/or backhaul network. For instance, INCA said that although some altnets may not be direct consumers of BT exchange services, they could still depend on providers offering services from BT exchanges. For example, they may receive backhaul services from CPs operating in BT exchanges.¹²³⁸ AllPoints Fibre noted that linking BT exchanges is critical to the development of competition in the WLA and LLA markets, but the costs of replicating Openreach's interconnectivity are vast, and, in most exchanges, IEC competitors to Openreach have not emerged.¹²³⁹
- 6.39 Therefore, in response to Openreach's view that IEC connectivity is part of the trunk market, we remain of the view that we should focus on connectivity between BT exchanges. We do not consider other trunk segments that do not provide connections between BT exchanges to be a substitute for IEC services, and expect that to be the case during the review period. We note that future developments, such as greater competition from altnets in downstream access markets and Openreach's exchange closure programme, may change this. For example, they may result in less reliance on BT exchanges (and therefore IEC circuits) for competition, such that there might be greater substitutability between connections between BT exchanges and other trunk connections. However, the impact of these developments is uncertain, and we do not consider that they will happen soon enough to have a material impact on our assessment for this review period.
- 6.40 Furthermore, in the March 2025 Consultation we considered whether IEC services from a particular BT exchange are likely to be substitutes for IEC services from another BT exchange. Given that IEC links are used for carrying aggregated traffic from a BT exchange, we considered that connections from one BT exchange are unlikely to be substituted by a connection from a BT exchange at a different geographic location.
- 6.41 As result of this, our analysis focused on competitive conditions at each exchange and the ability of providers other than BT to provide inter-exchange services from that BT exchange. We considered that competitive conditions could vary at each BT exchange, based on the number of rival networks which are present at each exchange.
- 6.42 We remain of the view that our analysis should focus on competitive conditions at each exchange and the ability of providers other than BT to provide inter-exchange services from that BT exchange. Therefore, in line with our proposal in the March 2025 Consultation, we have decided to define each BT exchange as a distinct geographic market.

¹²³⁸ INCA response to TAR26 March 2025 Consultation. Paragraph 352.

¹²³⁹ AllPoints Fibre response to TAR26 March 2025 Consultation. Paragraph 45.

Route-by-route approach

- 6.43 Following specific concerns raised by INCA and Ogi that our proposed approach could potentially result in overstating the level of competition at an exchange, we have given further consideration to the appropriateness of our proposed approach.
- 6.44 As noted above, our analysis focused on the ability of providers other than BT to provide inter-exchange services from that BT exchange. We recognise that competitive conditions can vary on a route-by-route basis. However, it is unclear that a route-by-route analysis would necessarily better reflect competitive conditions than a methodology based on presence of rival networks at BT exchanges. For example, an exchange-based approach is more easily able to account for the possibility that buyers may see different routes between BT exchanges, or combinations of routes, as substitutes to meet their backhaul needs than a route-by-route analysis.¹²⁴⁰
- 6.45 Further, it would be more onerous and impractical for both us and telecoms providers if we were to assess competitive conditions for each and every current and potential inter-exchange connectivity route.^{1241 1242}
- 6.46 In practice, we also note that no stakeholder indicated that it had issues procuring IEC services in the exchanges we provisionally identified as new BT+2 exchanges in the March 2025 Consultation.¹²⁴³
- 6.47 Other stakeholders supported our proposed methodology based on presence of rival networks at BT exchanges.¹²⁴⁴
- 6.48 For the reasons set out above, we consider the exchange-based approach that we proposed in the March 2025 Consultation to be appropriate.

Application of the three criteria test

Our proposals

- 6.49 In this subsection, we consider whether the three criteria set out in section 79(2B) of the Act are met in relation to the IEC markets.
- 6.50 As set out in Annex 1, in determining whether to identify a market for the purposes of making a market power determination, we must consider whether the three criteria set out in subsection 79(2B) of the Act are met. Where we do not consider that the three criteria are met, we may not identify a market for this purpose.

¹²⁴⁰ In addition, a route-by-route analysis based on existing routes may reduce buyers' and sellers' incentives to innovate in how they configure their networks. Using an exchange-by-exchange analysis is more likely to reduce this risk.

¹²⁴¹ For example, assessing competitive conditions on a route-by-route basis would materially increase the volume of data required from telecoms providers.

¹²⁴² This is consistent with our view when we have previously considered a route-by-route methodology, in the BCMR 2019, and again in WFTMR21. See Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#), Volume 2, Paragraph 8.298.

¹²⁴³ In addition, we consider that the risk that our exchange-based approach potentially overstates competitive conditions is low in practice, and therefore not sufficient to justify a route-by-route approach. This is because it would only be a risk for exchanges where we do not find SMP. As set out below, these account for less than 2% of exchanges assessed in this review, and among these exchanges, we also find that at least [\approx].

¹²⁴⁴ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 43. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 117.

- 6.51 As discussed above, we assess the three criteria at a general level, taking into account overall characteristics and structure in the relevant product market. We consider competition at a sub-national level in our SMP assessment.
- 6.52 In the March 2025 Consultation, we explained that the IEC markets which we proposed to define met the three criteria test.¹²⁴⁵

Stakeholder responses

- 6.53 CityFibre, VMO2, VodafoneThree and TechUK agreed with our provisional conclusion on the application of the three criteria test. Openreach disagreed.¹²⁴⁶

High and non-transitory barriers to entry

- 6.54 While Openreach disagreed that there are high and non-transitory barriers to entry in the IEC market, VodafoneThree and VMO2 supported our provisional conclusion.
- 6.55 Openreach considered that the ability to use PIA means there are no material barriers to entry in the provision of IEC.¹²⁴⁷ VodafoneThree, on the other hand, noted that the use of PIA for IEC services is limited, particularly where resilience and route diversity are critical. As such, VodafoneThree said that the operational complexity, long lead times, and capital intensity of IEC deployment constitute a substantial and enduring barrier to entry and expansion, particularly as dig distances are long relative to those for access connections.¹²⁴⁸
- 6.56 In addition, while Openreach indicated that there are a range of suppliers that offer aggregated services to suggest that there are no material barriers to entry,¹²⁴⁹ VodafoneThree explained that it has not observed material changes in competitive presence at most exchanges, nor does it anticipate significant build-out during the review period.¹²⁵⁰ VMO2 added that while altnet consolidation during the review period may stitch together networks in a way that allows these combinations to link exchanges, increasing IEC supply at certain exchanges, this would take time and would be dependent on the specific entities that might combine, such that it is not practicable to consider this potential prospectively.¹²⁵¹
- 6.57 VMO2 added that any pre-existing barriers will only be compounded by BT's forthcoming exchange closure programme.¹²⁵²

Markets which do not tend towards effective competition

- 6.58 Openreach considered that we have not carried out a sufficiently forward-looking assessment of infrastructure-based competition to assess whether the market structure tends towards effective competition during the review period.¹²⁵³

¹²⁴⁵ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.27-6.38.

¹²⁴⁶ [CityFibre](#) response to TAR26 March 2025 Consultation. Page 148. [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 217-220. [TechUK](#) response to TAR26 March 2025 Consultation. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Pages 32 and 50. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 108-111.

¹²⁴⁷ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 218.

¹²⁴⁸ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 108-110.

¹²⁴⁹ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 218.

¹²⁵⁰ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 110.

¹²⁵¹ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 119.

¹²⁵² [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 118.

¹²⁵³ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 219.

6.59 VodafoneThree and VMO2 said that the market does not tend towards effective competition. VMO2 noted that this is particularly the case due to the imminent exchange closure programme.¹²⁵⁴ As noted above, VodafoneThree explained that it has not observed material changes in competitive presence at most exchanges, nor does it anticipate significant build-out during the review period.¹²⁵⁵

Insufficiency of competition law

6.60 Openreach considered that competition law should be sufficient to address any remaining competition concerns, when starting from market definitions that recognise a wider scope than solely routes between BT exchanges.^{1256 1257} In contrast, VodafoneThree and VMO2 agreed that competition law is not sufficient given the importance of IEC services in supporting downstream markets.¹²⁵⁸

Our reasoning and decisions

High and non-transitory barriers to entry

- 6.61 As set out below, and as supported by VodafoneThree,¹²⁵⁹ the sunk costs of constructing an inter-exchange network of significant scale (e.g. long dig distances compared with access connections) act as barrier to entry and expansion in IEC markets.
- 6.62 As Openreach noted in its consultation response,¹²⁶⁰ we recognise that in principle, a provider could use PIA to connect to a BT exchange and/or to build an IEC circuit, and this can reduce the time and cost of network build. However, for IEC connections, we expect PIA usage to be limited, given the large distances involved in providing IEC services (meaning they would be more likely to incur excess construction charges and be more difficult to repair). We note that with Openreach's Exchange Exit programme, these distances may increase over time. VodafoneThree also noted the limited applicability of PIA particularly where resilience and route diversity are critical.¹²⁶¹
- 6.63 We cannot rule out the possibility that, in future, PIA may have a greater impact in reducing the time and cost for providers near to BT exchanges to connect to those exchanges. However, this is uncertain, and in general, as set out below, PIA does not appear to have had a material impact on providers' future plans for the IEC market. We also anticipate that providers may have reduced incentives to invest in further rollout to BT exchanges in the run-up to exchange closures.¹²⁶²
- 6.64 This is consistent with what we have seen in practice. As set out below, we have seen limited entry and exit by different providers, and limited expansion by existing providers, since 2021.¹²⁶³ We expect this to continue over the review period, based on the evidence we have received from providers on their plans for the market. Most providers told us that

¹²⁵⁴ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 120.

¹²⁵⁵ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 110.

¹²⁵⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 220.

¹²⁵⁷ As this comment overlaps with Openreach's comment on the geographic market definition, we address it above in our geographic market definition.

¹²⁵⁸ [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 120. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 110.

¹²⁵⁹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 108.

¹²⁶⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 218.

¹²⁶¹ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 109.

¹²⁶² This was noted by [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹²⁶³ Table A6.2 in Annex 6 sets out the number of exchanges where we find an increase in rival PCO presence since 2021. This is a very small proportion of the total number of BT exchanges.

they have no firm plans to roll out to additional exchanges during the review period.^{1264 1265} [X] indicated plans to expand backhaul and/or core presence to additional BT exchanges, including 50-70 ([X]) exchanges potentially using own infrastructure to connect to the exchanges ([X]).¹²⁶⁶ [X]. Where other providers ([X]) indicated plans to roll out to specific additional exchanges during the review period, [X], and so we do not consider that these plans will have a material impact of the IEC market during the review period.¹²⁶⁷

6.65 In addition, as VMO2 suggested, consolidation of networks could lead to entry and expansion in the market. However, this would take time and would be dependent on the specific entities that might combine, such that it is not practicable to consider this potential prospectively.

6.66 Therefore, high and non-transitory barriers to entry and expansion are likely to persist.

Markets which do not tend towards effective competition

6.67 Many BT exchanges have no competitors to BT, or only one competitor is present. This has not materially changed since the WFTMR21 and we do not expect there to be significant build out to these exchanges during the review period. As noted above, VodafoneThree also said that it has not observed material changes in competitive presence at most exchanges, nor does it anticipate significant build-out during the review period.¹²⁶⁸

6.68 We disagree with Openreach’s comment that our assessment is not sufficiently forward-looking. As set out above, we have considered PCO’s future plans and potential market developments, and in our view, these do not indicate that competition is likely to materially increase in these markets.

6.69 Accordingly, we do not consider that IEC markets will tend towards effective competition at a national level. We take account of sub-national competition in our SMP assessment.

Insufficiency of competition law

6.70 IEC services at these BT exchanges are important to the state of competition in WLA and LLA markets. Our main concerns are:¹²⁶⁹

¹²⁶⁴ [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], question [X]. and [X] response dated [X] to s135 notice dated [X], question [X].

¹²⁶⁵ One provider [X], noted that while it had no specific plans to connect to additional BT exchanges at this stage, it is likely to pass and connect to more BT exchanges during the period to 2031. [X]. See [X] response dated [X] to s135 notice dated [X], question [X].

¹²⁶⁶ See [X] response dated [X] to s135 notice dated [X], question [X].

¹²⁶⁷ See [X] response dated [X] to s135 notice dated [X], questions [X]. [X] response dated [X] to s135 notice dated [X], question [X]. [X] response dated [X] to s135 notice dated [X], questions [X]. and [X] response dated [X] to s135 notice dated [X], question [X].

¹²⁶⁸ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 110.

¹²⁶⁹ We set our competition concerns in relation to IEC services in more detail in Volume 2, Section 7.

- a) the risk of excessive pricing of IEC services which could result in high prices for end-users; and
- b) the risk that providers and altnets would be unable to backhaul traffic from their access networks to their core networks where they need inter-exchange connections.

6.71 We do not consider *ex post* competition law would be sufficient to address these concerns for the following reasons:

- a) given that it is unlikely that competitors will build to many of these exchanges, we consider that some form of *ex ante* network access obligation is required to ensure effective competition;
- b) there is a need for timely and efficient intervention to avoid adverse effects on those providing services in IEC, as well as WLA and LLA markets, and the end-users of those services;
- c) if BT engaged in the behaviour mentioned in the Paragraph 6.70 above, there is a risk of long-term, irreversible damage to competition in these markets;
- d) *ex ante* regulation provides clarity and certainty to BT and other providers of leased lines; and
- e) the response to anti-competitive behaviour may not be sufficient to prevent harm in certain circumstances.

6.72 For the reasons set out above, we consider that competition law would not be sufficient by itself to address concerns in IEC markets at a national level and therefore *ex ante* regulation is necessary to maintain effective competition.

Our conclusions on geographic market definition and the three criteria test

6.73 We conclude that the three criteria test is met.

6.74 We have decided to identify each BT exchange as a distinct market for the purposes of making a market power determination.¹²⁷⁰

SMP assessment

Our proposals

6.75 In the March 2025 Consultation, we conducted a significant market power (SMP) assessment for the markets we provisionally identified. Specifically, we examined whether any provider has SMP in the provision of IEC in the markets identified. We assessed SMP based on presence by PCOs at a BT exchange, as we considered this was the best available indicator of competitive conditions in IEC.¹²⁷¹

6.76 We provisionally concluded that BT has SMP in wholesale IEC services at each BT Only and at each BT+1 exchange.¹²⁷²

¹²⁷⁰ For the avoidance of doubt, we define each such BT exchange that is currently active at the date of publication of this document, including those which are scheduled to close during the review period.

¹²⁷¹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraphs 6.40-6.72.

¹²⁷² Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.68-6.70.

6.77 We provisionally concluded that BT does not have SMP in wholesale IEC services at each new BT+2 exchange.¹²⁷³

Stakeholder responses

6.78 Several stakeholders agreed with our provisional conclusions on the SMP assessment.¹²⁷⁴ Some stakeholders disagreed on particular issues, which we set out below.

Identification of PCOs

6.79 Openreach, INCA and PXC provided comments in relation to our proposed list of PCOs. Openreach and PXC disagreed with our proposals, whereas INCA supported our proposals.

6.80 Openreach suggested we should have considered a wider set of PCOs in the analysis, including competitors that do not have substantial coverage and are present at a more focused set of exchanges, given we define each exchange as its own geographic market. Openreach also indicated that PIA users could potentially provide IEC services, and are therefore competitors or potential competitors on IEC services.¹²⁷⁵

6.81 In addition to suppliers that may compete directly with Openreach in the provision of fibre between exchanges, Openreach said that it faces competitive constraint on its active pricing from suppliers that use Openreach fibre. Specifically, entities that purchase Openreach's DFX product and resell backhaul using that Openreach fibre (i.e. they resell optical wavelengths over an Openreach fibre). Openreach noted this includes [X].¹²⁷⁶

6.82 PXC considers none of our proposed PCOs apart from [X] to be material competitors to Openreach. PXC added that these other providers have small footprints and that the costs associated with using multiple providers are high compared to the potential benefits. PXC added that FTTP altnets will not be attractive suppliers of IEC circuits. It explained that even if an altnet has material coverage, because their footprint is geographically dispersed, they will be unable to provide many IEC routes.¹²⁷⁷

6.83 INCA said it agreed with the proposed list of PCOs. INCA adds it is important that only providers that are present in BT exchanges and that offer commercial backhaul services are considered.¹²⁷⁸

Exchange exit

6.84 INCA said that it is likely that PCOs will exit exchanges significantly in advance of some exchange closure dates, such that exchanges would need to be re-classified. It explained that if commercial backhaul providers exit exchanges, then they need to be replaced by regulated backhaul provision. Otherwise, it said it could result in some full-fibre

¹²⁷³ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Volume 2. Paragraph 6.71-6.72.

¹²⁷⁴ [AllPoints Fibre](#) response to TAR26 March 2025 Consultation. Paragraph 43. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 148. [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 345. [Virgin Media O2](#) response to TAR26 March 2025 Consultation. Paragraph 121. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 112-121.

¹²⁷⁵ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 216 and 225.

¹²⁷⁶ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 228.

¹²⁷⁷ [PXC](#) response to TAR26 March 2025 Consultation. Paragraphs 4.4-4.7.

¹²⁷⁸ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 342. We note that in INCA's consultation response, INCA said Ofcom proposed the PCOs to be Neos Networks (previously SSE), VMO2, Vodafone and Zayo. As a clarification, we also proposed Colt and Lumen (previously CenturyLink) to be a (single) PCO.

deployments becoming unviable due to the extremely high BT unregulated commercial inter-exchange backhaul prices. INCA asked that Ofcom reviews the classifications on an annual basis to ensure that there is continuous backhaul available for altnets.¹²⁷⁹

BT has SMP in BT Only and BT+1 exchanges, and no SMP in BT+2 exchanges

- 6.85 Openreach disagreed with our proposed SMP findings. Openreach added that competition from trunk services is relevant regardless of whether we view such services as within or outside the market.¹²⁸⁰
- 6.86 INCA and VodafoneThree agreed with our provisional conclusions.¹²⁸¹ VodafoneThree explained that at BT Only and BT+1 exchanges it continues to rely on BT/Openreach due to the absence of viable alternatives. It added that the lack of competitive infrastructure, combined with high barriers to entry and limited commercial incentives for new build, reinforces BT's ability to act independently of competitors and customers, including charging materially above cost for IEC services in these exchanges.
- 6.87 VodafoneThree agreed that there is sufficient presence of alternative providers at BT+2 exchanges to fall outside the SMP designation. VodafoneThree said [§<]. It said that the presence of at least two alternative providers introduces a degree of competitive constraint that can influence pricing and service terms. However, it noted that this competition is often limited to specific routes or configurations and may not be sufficient to support full substitutability across all use cases.
- 6.88 VodafoneThree added that the emergence of new FTTP networks is not increasing competition in the IEC market. VodafoneThree explained that these networks are not being built to replicate BT/Openreach's inter-exchange topology and are instead focused on access connectivity. As such, they do not provide a meaningful alternative for IEC services. VodafoneThree added that with the BT exchange exit programme, drivers of competition, such as co-location and route-based build, are being disrupted.¹²⁸²

Our reasoning and decisions

- 6.89 For the reasons set out below, we confirm our proposals in relation to the PCOs we identified, the approach we take to model competitive presence, and our SMP findings.

Approach and evidence considered

- 6.90 In the March 2025 Consultation, we considered that only a subset of telecoms providers are able to act as effective competitors in the market for wholesale IEC services. We called these providers PCOs, and explained the criteria and evidence used to determine which providers were PCOs.
- 6.91 We assessed SMP based on presence by PCOs at a BT exchange. We considered that this was the best available indicator of competitive conditions in IEC.¹²⁸³

¹²⁷⁹ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 344-347.

¹²⁸⁰ [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraphs 221-224.

¹²⁸¹ [INCA](#) response to TAR26 March 2025 Consultation. Paragraph 345. [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 112-121.

¹²⁸² [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraphs 112-121.

¹²⁸³ We often use market shares in assessing SMP. However, we considered that market shares are a less valuable indicator of market power in the case of markets for IEC services. Once equipment is installed a PCO can quickly increase sales by adding additional customers at minimal incremental cost. Therefore, where

Identification of PCOs

- 6.92 To be an effective constraint, we consider that a provider needs to:
- a) own their own infrastructure;
 - b) have a substantial IEC coverage footprint; and,
 - c) currently offer wholesale IEC services to other telecoms providers.
- 6.93 In our judgment these criteria are appropriate as they are indicative of an ability to supply backhaul services in competition with BT.
- 6.94 This means that we do not consider as PCOs providers that are not currently offering IEC services, irrespective of their network footprint. We also do not consider as PCOs providers whose network footprint is insufficient to be able to offer IEC services across a large number of exchanges.
- 6.95 As PXC also suggests,¹²⁸⁴ buyers of IEC services will prefer to buy from fewer backhaul providers to minimise the operational complexity and additional costs associated with purchasing backhaul from multiple providers. In addition, it allows buyers of IEC services to potentially benefit from more attractive commercial terms associated with large volume purchases. Therefore, a substantial network footprint is required in order to act as an effective competitor in the market for wholesale IEC services.¹²⁸⁵
- 6.96 We therefore disagree with Openreach's suggestion that we should consider providers with a smaller footprint that are present at a more focused set of exchanges as competitors. As explained above, what matters for competition in IEC is having a substantial network footprint, which means connections can be provided across a large number of exchanges. As such, we have included providers who have substantial footprint in our list of PCOs.
- 6.97 Similarly, we disagree with Openreach's comment that any PIA user provides an effective competitive constraint. As explained in our conclusions on the application of the three criteria test, we cannot rule out the possibility that PIA may in time have a greater impact in reducing the time and cost for providers near to BT exchanges to connect to those exchanges. However, this is uncertain, and in general, as set out below, PIA does not appear to have had a material impact on providers' future plans for the IEC market.
- 6.98 We also do not agree with Openreach's comment in relation to the competitive constraint it faces on its pricing of active products from suppliers that use Openreach fibre. We do not consider that we should account for this constraint in our competition assessment as in these instances there is no competing infrastructure present. In addition, any constraints from these services are reliant on regulation. Under the modified Greenfield approach, absent that regulation, Openreach would be able to set higher prices or even stop supplying such products that suppliers use to resell active backhaul. Therefore, we do not consider

present, a PCO provides a competitive constraint, even where it has a limited share of current sales. Conversely, this also means that a PCO with a high share of sales at any individual BT exchange would not necessarily be an indicator of BT not having SMP, especially given BT's other competitive advantages (in particular, its ubiquitous network). Further, there are a number of practical constraints which make the calculation of market shares challenging.

¹²⁸⁴ PXC response to TAR26 March 2025 Consultation. Paragraphs 4.6.

¹²⁸⁵ We recognise the importance of resilient backhaul solutions for some purchasers in some situations. However, we do not consider that we need to explicitly take this into account in our approach as we consider that IEC links for resilience (or IEC links with an optional resilient path) from Openreach are available to downstream purchasers.

that Openreach faces a competitive constraint on its active pricing from suppliers that use Openreach fibre under the modified Greenfield approach.

- 6.99 We have gathered evidence to assess which providers should be considered PCOs as part of this market review. We assess whether a provider meets the above criteria to be considered to be a PCO in the round.
- 6.100 In 2021, we identified eight PCOs – CenturyLink (now Lumen), CityFibre, Colt, eircom, SSE (now Neos Networks), VMO2, Vodafone (now VodafoneThree) and Zayo.
- 6.101 For the purposes of the March 2025 Consultation, we first considered whether these providers should continue to be considered as a PCO. We provisionally concluded that Neos Networks (previously SSE), VMO2, Vodafone (now VodafoneThree) and Zayo continued to meet the criteria for a PCO. We noted that Colt and Lumen (previously CenturyLink) had merged, and so no longer acted as separate constraints.¹²⁸⁶ We therefore considered them to be a single PCO for the purpose of our analysis. We provisionally concluded that this merged entity met our criteria for a PCO. Separately, we noted our understanding that CityFibre and eircom are not currently offering wholesale IEC services to third parties.¹²⁸⁷ We therefore provisionally concluded that CityFibre and eircom did not meet the criteria to be a PCO.
- 6.102 We then considered whether any additional providers now met the criteria to be considered a PCO. Based on information collected from additional providers which are not currently PCOs and our assessment of the market, we provisionally concluded that no other providers met our criteria for a PCO. In particular, we did not consider that there are any alternative providers of IEC services that have, or are likely to have, a large enough footprint in order to act as a material competitive constraint in the provision of IEC services during the review period.
- 6.103 We disagree with PXC’s suggestion that none of the providers apart from [redacted] are a strong alternative to Openreach and so provide no material constraint. Each of the providers that are considered as a PCO meets the criteria we consider necessary to be a competitor and acts as a constraint on Openreach to some material degree. INCA said it agreed with the proposed list of PCOs.
- 6.104 We therefore conclude that the following are classed as PCOs: Colt/Lumen, Neos Networks (formerly SSE), VMO2, VodafoneThree and Zayo.

¹²⁸⁶ Colt. 2 November 2023. [Colt completes \\$1.8bn acquisition of Lumen EMEA - Colt Technology Services](#). Accessed 6 March 2026.

¹²⁸⁷ Eircom confirmed that [redacted]. See Eircom (UK) Limited response dated 13 November 2024 to s135 notice dated 23 October 2024, question A6 and Eircom (UK) Limited response dated 20 November 2024 to s135 notice dated 23 October 2024, question A5 and Annex 3. CityFibre does not currently provide connections between BT exchanges to third parties [redacted]. See CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 4a. Instead, CityFibre is offering dark fibre connections between a BT exchange in one area, and a CityFibre fibre exchange in a separate geographic area, to allow its wholesale customers to backhaul access traffic from the CityFibre access network to the initial BT exchange where the wholesale customer has a point-of-presence. However, we consider this is a different type of trunk connection, not an inter-exchange service. See CityFibre Infrastructure Holdings Limited response dated 19 February 2025 to s135 notice dated 10 February 2025, question 4b.

Presence at BT exchanges is the key constraint, not nearby networks

- 6.105 We consider that to compete effectively with BT in the provision of IEC, a PCO needs to be present in the exchange.
- 6.106 BT has a number of competitive advantages over other telecoms providers, notably that it is present at all BT exchanges (and so can provide IEC quickly) and has a ubiquitous network (so can provide IEC at low incremental cost). Providers already present at the exchange have significant time and cost advantages in the provision of IEC from that exchange compared to a nearby network that would have to dig to install new duct to the exchange.
- 6.107 As discussed above, we recognise that PIA can reduce the cost and time of network build, and we cannot rule out the possibility that, in future, PIA may have a greater impact in reducing the time and cost for providers near to BT exchanges to connect to those exchanges. However, this is uncertain, and in general PIA does not appear to have had a material impact on providers' future plans for the IEC market.
- 6.108 As also set out above, our evidence suggests there is unlikely to be material rollout by providers to additional exchanges during the review period. We also anticipate that providers may have reduced incentives to invest in further rollout to BT exchanges in the run-up to exchange closures.
- 6.109 We therefore consider that, in order to effectively compete with BT, other providers need to be already connected to BT exchanges. We do not consider that the potential for nearby networks to connect to a BT exchange could exert an effective constraint during the review period, even taking into account the impact of PIA.
- 6.110 We determine whether each PCO is present at each BT exchange based on whether that PCO is connected at that exchange via an External Cablelink.¹²⁸⁸

Exchange exit

- 6.111 As set out in Annex 6, we understand that some providers are planning to exit exchanges during the review period. As INCA noted, this may mean that IEC services from alternative providers become unavailable during the review period if the providers exit significantly in advance of exchange closure dates. However, based on the evidence provided to us by stakeholders, we understand that these exits are largely related to the planned closure of these exchanges. Those providers plan to exit at or around the same time as the planned closures.¹²⁸⁹ As such, we do not expect a significant time period where the exchange remains operational but with fewer competitors.¹²⁹⁰ Therefore, we do not consider it appropriate or necessary to review these exchange classifications on an annual basis.

¹²⁸⁸ This may include legacy variants BT Cablelink-External and LLU Egress-External. The External Cablelink may be purchased by either the PCO or the customer to whom it is supplying IEC services. See Annex 6 for more detail.

¹²⁸⁹ [redacted] response dated [redacted] to s135 notice dated [redacted], questions [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted]. [redacted] response dated [redacted] to s135 notice dated [redacted], question [redacted].

¹²⁹⁰ Volume 3, Section 3 sets out the details and timing of Openreach's exchange closure programme.

Our findings

- 6.112 In this section, we set out our assessment of whether BT has SMP in any of the geographic markets we have identified. As set out above, we consider that each BT exchange is its own geographic market.
- 6.113 The main indicator of competitive presence at each BT exchange is the number of PCOs which are present at that exchange.¹²⁹¹ We also consider that, where present, all PCOs are able to offer an effective competitive constraint, such that the competitive conditions do not vary materially depending on the identity of the PCO present. We therefore consider that the competitive conditions may differ at each exchange based on whether there are no PCOs present, one PCO present, or two or more PCOs present.
- 6.114 We note Openreach’s comment that competition from trunk services is relevant regardless of whether we view such services as within or outside the market.¹²⁹² However, as explained above, we do not consider other trunk services will exert a sufficient competitive constraint on IEC services during the review period.
- 6.115 For practicality and brevity, we present our SMP assessment for the following groups of exchanges, based on the number of PCOs present at that exchange:
- BT Only exchanges;
 - BT+1 exchanges; and
 - BT+2 exchanges.¹²⁹³
- 6.116 We have found 4,204 BT Only exchanges, and 742 BT+1 exchanges. We have also found 78 new BT+2 exchanges.¹²⁹⁴ Table 6.1 summarises this alongside our SMP findings.¹²⁹⁵ A full list of the exchange classifications for the IEC services market can be found in Schedule 4.

Table 6.4: SMP findings in IEC services markets

	SMP finding	Number of exchanges
BT Only	SMP	4,204
BT+1	SMP	742

¹²⁹¹ As set out above, we do not consider that the potential for nearby networks to connect to a BT exchange could exert an effective constraint during the review period, even taking into account the impact of PIA. However, for completeness, we have repeated our analysis of PCO network proximity from WFTMR21 on the average and median distance to the nearest PCO networks. We present these results in Annex 6, finding similar results to those found in the WFTMR21, where we concluded that nearby networks do not pose a sufficiently strong constraint. (See Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#). Volume 2. Paragraphs 8.307-8.315.) This is consistent with our view that nearby networks are unlikely to exert an effective competitive constraint during the review period.

¹²⁹² [Openreach](#) response to TAR26 March 2025 Consultation. Document 2. Paragraph 222.

¹²⁹³ As noted above, our SMP assessment is limited to the new BT+2 exchanges (i.e. not those previously found to be effectively competitive).

¹²⁹⁴ Among the 78 new BT+2 exchanges, 76 exchanges were BT Only or BT+1 exchanges in the WFTMR21, and 2 exchanges are exchanges that, for reasons set out in Annex 6, are now listed in Schedule 4 but were not listed separately in the list of exchanges in the WFTMR21. See Annex 6.

¹²⁹⁵ At 16 of the exchanges where we have identified BT to have SMP, BT has deployed both backhaul and core nodes. We consider the implications of this on the appropriateness of remedies (specifically, on whether the EOI obligation in the IEC market should apply to connections to these exchanges) in Volume 3, Section 4.

	SMP finding	Number of exchanges
BT+2	No SMP	78

Source: Ofcom analysis of provider data.

BT has SMP at BT Only exchanges

- 6.117 BT is the only provider present at each of the 4,204 BT Only exchanges. This means there is no other choice of provider at these exchanges.
- 6.118 As set out above, we do not expect there to be significant additional rollout during the review period, and we do not consider that the potential for nearby networks to connect to a BT exchange could exert an effective constraint during the review period, even taking into account the impact of PIA.
- 6.119 We therefore conclude that BT has SMP for IEC services at BT Only exchanges.

BT has SMP at BT+1 exchanges

- 6.120 At each of 742 BT+1 exchanges, a PCO is present. This indicates there is a greater constraint on BT than on routes from BT Only exchanges. However, we do not consider that one competing PCO at an exchange is enough for effective competition in these markets for the following reasons:
- a) Providers are still likely to be reliant on BT to some extent for services at BT+1 exchanges. VodafoneThree agreed that it continues to rely on BT/Openreach at these exchanges due to the absence of viable alternatives.¹²⁹⁶
 - b) In a market in which one of the two suppliers publishes its prices, the other provider has the ability and incentive to either just match or slightly undercut its prices. This would lead to weak competitive pressure.
- 6.121 As set out above, we do not expect there to be significant additional rollout during the review period, and we do not consider that the potential for nearby networks to connect to a BT exchange could exert an effective constraint during the review period, even taking into account the impact of PIA.
- 6.122 We therefore conclude that BT has SMP for IEC services at BT+1 exchanges.

BT does not have SMP at BT+2 exchanges

- 6.123 At these 78 exchanges, there are at least two PCOs present. In these exchanges, we consider that BT does not have SMP, because:
- 6.124 BT's competitive advantages are likely to be less material where there are two or more PCOs present. Customers have a greater choice of supplier who can meet their specific needs in a timely and cost-effective way:
- a) The incentive to just match (or slightly undercut) prices due to one supplier publishing its prices is significantly weaker when there is a third competitor. This is because the winning bid does not only need to slightly undercut the BT price, but also must offer a better bid than the additional competitor.¹²⁹⁷

¹²⁹⁶ [VodafoneThree](#) response to TAR26 March 2025 Consultation. Section 3. Paragraph 116.

¹²⁹⁷ The 'lumpy' nature of demand and the many instances where telecoms providers sign long-term contracts for IEC services may also make co-ordination more difficult and less viable with three providers.

b) We have previously found evidence of purchasers of IEC services multi-sourcing at these exchanges.¹²⁹⁸

6.125 We therefore conclude that BT does not have SMP for IEC services at BT +2 exchanges.

¹²⁹⁸ See Ofcom. March 2021. [Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26](#), Volume 2, Paragraph 8.316.

7. Competition concerns

7.1 This section sets out the competition concerns arising from our conclusion that BT has SMP in each of the relevant markets.

Our proposals

7.2 In the March 2025 Consultation, we explained our proposed finding that absent regulation, BT's SMP would give it the ability and incentive to engage in forms of conduct in each of the relevant markets that could distort competition and/or harm consumers.¹²⁹⁹ We set our competition concerns and how we provisionally considered that they might apply in each of the markets we proposed to regulate.

Stakeholder responses

7.3 In response to the March 2025 Consultation, stakeholders generally set out concerns relating to Openreach's ability and incentive to engage in forms of conduct that could distort competition and/or harm consumers as part of their comments on our proposed findings and remedies, rather than specifically on this section.¹³⁰⁰ We have addressed these comments in the most suitable section of this document, either in the relevant sections of this volume, and/or as part of our reasoning in the relevant sections of Volumes 3 and 4.

Our reasoning and decisions

7.4 We remain of the view that, absent regulation, BT's SMP would give it the ability and incentive to engage in forms of conduct in each of the relevant markets that could distort competition and/or harm consumers. This includes the ability for BT to design its network, and make strategic investment decisions, which in the absence of regulatory measures designed to address its SMP, could lead to poor outcomes for consumers.

7.5 As set out in the March 2025 Consultation document, conduct that could distort competition and/or harm consumers fall broadly into two categories:

- **Exclusionary behaviour** by BT to prevent potential competitors from competing in the relevant market(s) or prevent them from gaining market share.
- **Exploitative behaviour** by BT at the expense of its wholesale access customers in the relevant market(s), ultimately harming end-users who purchase services from BT's wholesale access customers in the downstream markets.

7.6 Although our concerns vary according to whether the behaviour is exclusionary or exploitative, both ultimately lead to poorer outcomes for end-users.

¹²⁹⁹ Ofcom. March 2025. [Consultation: Promoting competition and investment in fibre networks: Telecoms Access Review 2026-31](#). Paragraph 7.2.

¹³⁰⁰ CityFibre specifically referenced the competition concerns section of the March 2025 Consultation document by noting Openreach's ability to engage in exclusionary behaviour. [CityFibre](#) response to TAR26 March 2025 Consultation. Page 8, paragraph 2.8.

- 7.7 In terms of **exclusionary behaviour**, our concerns include that BT may undermine competition from:
- competing networks in the relevant wholesale access markets, including by preventing them from gaining market share, thereby protecting BT's market position.
 - telecoms providers reliant on access to BT's network to provide products and services in competition with BT in the relevant downstream markets.
- 7.8 Such **exclusionary behaviour** could take a number of forms, including that BT could:
- refuse to supply access and thus restrict competition in the provision of products and services in the relevant downstream markets.
 - engage in price squeeze behaviour, whether between wholesale products at different levels of the value chain and/or between wholesale and retail services.
 - provide access to its services on less favourable terms than to its own business divisions (Openreach or divisions downstream of Openreach), to the detriment of its competitors in the relevant wholesale and retail markets, by both price and non-price discrimination.
 - (in some markets) target price reductions or adopt other commercial terms in relation to access to its network in order to undermine the development of material and sustainable network competition.
- 7.9 **Exploitative behaviour** we are concerned about includes that:
- BT could set excessively high prices.
 - BT may not have sufficient incentives to continuously deliver an adequate level of service quality in relation to network access.

Physical infrastructure market

- 7.10 Physical infrastructure is a key enabler of the provision of telecoms services, both in terms of the deployment of new telecoms networks as well as innovation in existing networks. This is because the civil engineering works associated with the deployment of physical infrastructure represent a sizeable proportion of the cost and time to deploy and are therefore a barrier to new network rollout on a large scale.
- 7.11 In practice, as discussed in Section 2, regulated access to Openreach's physical infrastructure through Physical Infrastructure Access (PIA) has supported significant FTTP deployment by altnets in the 2021-26 review period. Continued access to Openreach's physical infrastructure is an important enabler of this new competition. We also anticipate that access to Openreach's physical infrastructure will be an important enabler of further rollout of competing networks.
- 7.12 As a vertically integrated network operator, BT's access to its ubiquitous physical infrastructure provides it with a significant commercial advantage in the provision of downstream telecoms services in the UK. This includes the lowest cost delivery path for new network installation and network upgrade, and of doing so more rapidly than competitors (as the ubiquity of its network significantly reduces the need for the construction of new physical infrastructure). This means that in the absence of regulation, BT could sustain and, in some cases, reinforce, its SMP in downstream services.

- 7.13 In the absence of regulation, BT could engage in the general exclusionary or exploitative behaviour set out above. In particular:
- BT's refusal to supply, or restriction of supplying, access to its physical infrastructure would deter investment in competing networks and/or limit competition from existing altnets, restricting competition in the provision of products and services in downstream markets. For existing PIA users, absent the remedy, BT could restrict providers' ongoing access to BT's physical infrastructure. As a result, BT's SMP in downstream services could be reinforced, leading to poorer outcomes for consumers over time.
 - BT's provision of access on less favourable terms compared to those obtained by its own downstream businesses, or setting excessive wholesale charges for access to its physical infrastructure, or engaging in price squeeze behaviour, could have the same impact of deterring investment and limiting competition. In addition, BT could use less favourable terms to gain cost and speed advantages over altnets who are reliant on access to BT's physical infrastructure to rollout their networks. These types of conduct may eventually drive out competitors from the market.
- 7.14 We consider how to address our competition concerns for the physical infrastructure market in Volume 3, Section 5, and Volume 4, Section 4.

Wholesale local access and leased line access markets

- 7.15 While network competition develops, or in areas where it is unlikely to emerge, Openreach will remain a key provider of wholesale access services. Openreach's wholesale access services will continue to be essential to maintain retail competition over the review period, by enabling retail providers to offer services to end-users in the downstream markets.
- 7.16 In the absence of regulation, our general concerns about exclusionary and exploitative behaviour as set out above would apply across the WLA and LLA markets. For example, Openreach could refuse to supply its wholesale access services to providers in the downstream markets and/or offer those on unfavourable terms, including high prices, which would harm end-users throughout the UK.
- 7.17 Exclusionary behaviour in these markets could also undermine the development of network competition in the long term:
- Openreach could geographically target price reductions or retail inducements – which involves charging different prices or providing different inducements for the same wholesale access – in order to undermine altnets' ability to compete and therefore the development of competition in the long term.
 - Openreach could use commercial terms to disincentivise telecoms providers from buying wholesale services from rival networks, for example through terms which induce loyalty (such as volume-based discounts).
 - Openreach could set wholesale FTTP charges at a level which leaves insufficient margin for a reasonably efficient operator (which uses PIA) to compete.
- 7.18 We recognise that there are variations in competitive conditions between the geographic markets for WLA and for LLA, which may affect the risks of these concerns. For example, in the LLA HNR Area, there is a greater degree of network competition compared to LLA Area 2 and Area 3, and so we consider the risks from exploitative behaviour (such as excessive pricing) are lower, given that competing leased line networks are already present. Conversely, in areas where network competition is still developing, the risks of exploitative

behaviour (alongside exclusionary behaviour) are more material. We reflect variations in competition concerns where relevant in our assessment of potential remedies.

- 7.19 In Volume 3, Sections 6, 7 and 9, and Volume 4, Sections 1 and 2, we consider how to address our competition concerns in the wholesale and leased line access markets.

Inter-exchange connectivity market

- 7.20 Inter-exchange connectivity backhaul services are an essential part of the supply chain needed to deliver telecoms services. They are a necessary input to allow providers (including altnets) to carry traffic, delivered over the access networks they use, to their core network.
- 7.21 As with other markets, in the absence of regulation, our general concerns about exclusionary and exploitative behaviour set out above are applicable. In particular, if BT has SMP in certain links between BT exchanges, and these were to be unregulated, this could undermine our access remedies by leaving providers and altnets unable to backhaul traffic from their access to their core networks where they need inter-exchange connections. BT has the ability and incentive to engage in exclusionary or exploitative behaviour which could undermine our remedies in the PIA and downstream markets by preventing the carrying of aggregated traffic from one exchange to another.
- 7.22 In Volume 3, Section 8, and Volume 4, Section 3, we consider how to address our competition concerns in the inter-exchange connectivity market.