
Better Broadband Speed Information

2022 Voluntary Code of Practice (Residential)

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About this document

The Residential Voluntary Code of Practice on Better Broadband Speed Information aims to provide residential customers purchasing residential broadband services with clear, realistic speed information at point of sale and after-sale. It also sets out how signatories should manage customers' speed-related problems and enable their customers to exit the contract without penalty if speeds fall below a minimum threshold.

This document outlines the detailed commitments of the Internet Service Providers who have signed up to the Residential Code and contains an update to the definition of a bundle, as set out in our recent Statement, to be ***implemented within 3 months of the date of this statement i.e. from 21 December 2022.***

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1. Background

Objective of the Residential Code

- 1.1 Customers increasingly rely on their broadband services. Decent reliable broadband has become an essential service, as much a necessity as gas, water or electricity. Consumer expectations of the availability and performance of their broadband services has also risen. It is therefore important to help customers understand and compare broadband services and enable them to make an informed choice by providing accurate, realistic information on broadband speeds. This will help address the potential confusion and frustration sometimes arising from the gap in customers' expectations and experience of their service.
- 1.2 The advertised speed of a broadband service is one factor in how ISPs differentiate their products and customers identify the service they want to purchase. However, the ability of customers to consistently receive this speed in practice varies due to a number of factors, including the nature of the customer's line, the capacity of ISPs' networks, the number of subscribers sharing the network, and the number of people accessing a particular service at a particular time.
- 1.3 To address these issues, Ofcom and ISPs have worked together to develop a Voluntary Residential Broadband Speeds Code of Practice (the Residential Code). The Residential Code represents the voluntary commitment of ISPs to provide customers with transparent and realistic information on the speeds of their residential broadband services, to help customers manage speed-related problems after buying, and to provide a right to exit without penalty if their speed falls below a minimum guaranteed level.
- 1.4 Specifically, Ofcom has sought to capture the ISPs' commitments under five principles within the Residential Code. For the avoidance of doubt, those commitments are without prejudice to any applicable legislative obligations or any regulatory requirements imposed by Ofcom or otherwise, particularly the obligations set out in the EU Open Internet Access Regulation¹.
- 1.5 A list of the ISPs who are signatories to the Residential Code as at 21 September 2022 can be found on the Ofcom website. Ofcom will update the list as appropriate.² Scope of the Residential Code
- 1.6 The Residential Code applies to all fixed access broadband ISPs who sign up to the Residential Code (the "signatories"). The Residential Code does not apply to dedicated business products intended primarily for use by business customers, for which there is a

¹ Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 231/2012 on roaming on public mobile communications networks within the Union, OJ L310/1, 26.11.2015.

² Ofcom, 2022. [Updated Voluntary Codes of Practice on Better Broadband Speeds 2022 \(from 21 December 2022\)](#)

separate voluntary Business Code³. However, all residential products (which are used, in some cases, by small businesses) will be covered by the Residential Code.

- 1.7 The Residential Code requires ISPs to provide transparent, accurate information on estimated line speeds, inform customers about factors affecting speeds, and help them resolve problems relating to low speeds. This covers broadband using Asymmetric Digital Subscriber Line (ADSL), fibre-to-the-cabinet (FTTC) broadband services, G.fast, fibre-to-the-premises (FTTP) broadband services, cable services, and fixed broadband delivered via fixed wireless technology, including satellite services. Annex 1 (Definitions) has a fuller explanation of the technological terms used.
- 1.8 The principles in the Residential Code apply to all signatories, regardless of the technology used to deliver services. Where necessary, some of the principles may be applied differently depending on the technology in use.
- 1.9 The Residential Code ensures that all customers who purchase relevant broadband services from signatories receive the information required to be provided under the principles set out in the Residential Code.
- 1.10 The full requirements of the Residential Code apply in relation to new customers and to existing customers buying new services with a different advertised speed to their current service (including downgrading to a lower speed). Except for those in Principle 1, all requirements also apply to customers renewing an existing contract.⁴

History and development of the Residential Code

- 1.11 This is the 5th version of the Residential Code, since its original implementation in 2008, which has been updated to align with the revised General Conditions of Entitlement on bundling and right to exit. This replaces the previous version published on 1 March 2018 (implemented from 1 March 2019).
- 1.12 Since the Residential Code was first published, the broadband market has evolved significantly (for example, there has been a significant increase in the availability of fibre to the cabinet (FTTC) and Fibre to the premises (FTTP) products, which can deliver higher speeds to customers). Ofcom and the ISPs have worked together to ensure that customers obtain better information in relation to broadband services in this evolving environment. The Residential Code is intended to be technology neutral and capable of application to ISPs using any access technology whether ADSL, VDSL/FTTC, G.fast/FTTC, FTTRn, FTTP, DOCSIS/cable, satellite or fixed wireless access.
- 1.13 In addition, the EU Open Internet Access Regulation, sometimes referred to as the Telecoms Single Market or Net Neutrality Regulation, has introduced further requirements regarding the provision of information to end-users.

³ [2022 Voluntary Code of Practice \(Business\)](#)

⁴ This includes the automatic renewal of existing contracts.

2. Principles of the Residential Code

- 2.1 The structure of this section follows the journey for residential customers: receiving information on speeds at point of sale and after the sale, potentially experiencing a speed problem⁵ which is notified and managed by the ISP, and then, where relevant, having a right to exit the contract if the speed remains below a minimum threshold even after the ISP has tried to resolve the speed problem.
- 2.2 Overall the principles of the Residential Code are:
- 1: Realistic information on broadband speeds at point of sale;
 - 2: Detailed information provided after-sale;
 - 3: Detailed information on the website;
 - 4: Managing speed-related problems;
 - 5: Right to exit the contract without penalty where speed problems cannot be resolved; and
 - 6: Delivering the objectives of the Residential Code through appropriate processes.

Principle 1: Realistic information on broadband speeds at point of sale

Information must be provided at the point of sale and before the sale is agreed

- 2.3 ISPs must provide information on estimated speeds as detailed in paragraph 2.8 as early as practicable in the broadband sales process. The sales process commences as soon as customers are asked to input or provide any personal information (such as their address or landline number), regardless of the channel by which the customer chooses to contact the ISP, or the method of communication (e.g. webchats or emails). For existing customers changing their current broadband service, speed information must also be provided as early as practicable, and before they agree that their broadband speed will be upgraded or downgraded.
- 2.4 ISPs must provide the required speed information prior to the customer agreeing to purchase the service. This must be before ISPs ask for the customer's financial details, and ISPs must ensure that consumers will only be able to complete an order when they have been given their speed estimates. In the exceptional circumstance where the relevant line information is not available to ISPs, this condition will not apply for customers who expressly wish to proceed without a speed estimate. In such circumstances, the ISP must have clearly explained that an estimate is not available and obtained the customer's

⁵ i.e. where a customer receives a speed lower than they were expecting, which may occur for a variety of reasons, including in-premises factors

explicit permission to proceed, having clearly explained and given them an option not to continue with the process.

Information must be communicated in the most relevant way to the customer

- 2.5 ISPs must ensure that the information is provided regardless of the sales channel, so that the information can be provided at point of sale on the telephone, website, face-to-face, or other contact method used. Where a customer switches sales channels to progress the transaction (for instance, starts on the website and continues on the telephone), ISPs must ensure that customers receive speed information on at least one of those channels.
- 2.6 When giving information and advice, ISPs and their representatives must take reasonable steps to ensure that customers who may have difficulty understanding the products or services that are available (e.g. elderly customers or customers whose first language is not English) are adequately and appropriately informed about all available products and services.

Signatories must provide information on the normally available and minimum guaranteed download speeds at the point of sale

- 2.7 ISPs must give clear, realistic information on speeds at the point of sale.
- 2.8 ISPs must provide customers' estimated normally available download speed and minimum guaranteed download speed, in accordance with paragraphs 2.11 and 2.17, regardless of whether the sale is conducted over the phone, face-to-face, or online (e.g. through the ISP's website).
- 2.9 On website sales channels and when requested by the customer on other channels, the normally available upload speed must also be provided in accordance with paragraph 2.16.
- 2.10 For clarity, a table outlining what information must be provided to customers is included in Annex 2.

Normally available download speed

- 2.11 ISPs must ensure that the normally available download speed information provided within the sales process is provided in the form of a range equivalent to the peak time speeds achieved by the 20th to 80th percentiles of the ISP's customers who have similar lines⁶ (for services where speed degrades with distance, such as xDSL), and who are on the broadband packages being enquired about ("similar customers").

⁶ For xDSL services, similar lines are those that share the same degree of signal attenuation (the degree to which speed is degraded on the line – caused by line length, line quality/material, and surrounding environmental interference). Openreach provide VDSL access line estimates that already account for these factors

- 2.12 For xDSL services, this will be derived from the access line speeds⁷ of customers with similar line characteristics, adjusted to account for the impact of congestion on the line at peak time as described in paragraph 2.20.
- 2.13 For other technologies, including cable and FTTP, for which access line speed does not degrade with distance, this will be derived directly from the peak time actual speeds of customers, with the data drawn at the most relevant level of the network to represent congestion for the customer. The appropriate level for drawing the data is specified in the High-Level Testing Principles outlined at Annex 5 (provided separately).⁸
- 2.14 The normally available download speed must be provided as a range, except if the range of relevant download speed is less than 2Mbit/s. In that case, a single point estimate may be provided instead, in accordance with paragraph 2.23.
- 2.15 ISPs must also explain to the customer that the range of normally available download speeds provided is only an estimate and that if the customer receives a download speed which is below the minimum guaranteed speed stated, then they should contact the ISP, who will follow the process set out in Principle 5.

Normally available upload speed

- 2.16 Where required or requested (as set out at paragraph 2.9), normally available upload speeds should be provided in the form of a range as required for the normally available download speed estimate, but can be a single point estimate if consistent with paragraph 2.23.

Minimum guaranteed download speed

- 2.17 Within the sales process, ISPs must state the minimum guaranteed download speed. For services whose delivered speeds are affected by line length (such as xDSL), this is equivalent to the 10th percentile of the ISP's similar customers,⁹ adjusted to account for the impact of congestion at peak time. For services whose delivered speeds are unaffected by line length (including cable and FTTP), this will be at least 50% of the advertised speed¹⁰ for the package that is being enquired about.
- 2.18 ISPs may use their own wording to describe the minimum guaranteed download speed, but the wording chosen must make clear that this is the speed below which customers can exit the contract without penalty if the ISP cannot resolve the speed problem, and must not imply that this speed will definitely be achieved.
- 2.19 ISPs may choose to offer a higher minimum guaranteed download speed than that set out at paragraph 2.17, but not a lower one.

⁷ The 'access line speed' (also known as the 'sync speed'), is the speed at which the home modem establishes a stable connection with the exchange equipment— see Annex 1.

⁸ [Annex 5: High-level testing principles](#)

⁹ Those customers who have similar lines and are on the same broadband package that is being enquired about.

¹⁰ If the product does not have an advertised speed, this should be based on comparable data

Testing to reflect peak time performance in the speed estimates

- 2.20 As noted above, ISPs must ensure that normally available download, minimum guaranteed download and normally available upload speeds account for the congestion experienced at peak time, defined as 8pm-10pm every day. ISPs must test an appropriate and representative sample of their customers' actual speeds from the Customer-Premises Equipment (CPE) to the internet interconnect¹¹ in order to test speeds at peak time.
- ISPs delivering xDSL services must compare peak time speeds against access line speeds to derive a measure of congestion from their testing that can be used to calculate estimated speeds. The measure of congestion will be applied to the relevant percentiles of the access line speeds of similar lines to the customer, as outlined in paragraphs 2.11, 2.17 and 2.16;
 - ISPs using technologies such as cable or FTTP must use the actual speed data to derive the speed estimates outlined in paragraphs 2.11, 2.17 and 2.16 directly.
 - These tests must be carried out in accordance with the High-Level Testing Principles in Annex 5 of this Residential Code. These principles also provide examples of how the measure of congestion must be derived and how estimate speeds would be calculated from measured speed data.
- 2.21 ISPs (except those relying on testing carried out by their wholesaler in accordance with 2.22) must publish their testing methodology on their website. ISPs are encouraged to provide as much detail as they are able, but may keep the publication at a high-level. This should be reasonably easy for customers to find.
- 2.22 Where ISPs buy their services from wholesalers without implementing any policies that would affect the impact of congestion on their customers' speeds, they may rely on measures of congestion provided by the wholesaler (if based on the testing outlined in paragraph 2.20) instead of undertaking their own tests. Unless the wholesaler is a signatory (see paragraph 2.91), the ISP must provide details of the wholesaler's methodology to Ofcom for monitoring purposes (see paragraph 2.96).

ISPs may use alternative approaches in some circumstances

- 2.23 ISPs may:
- supplement the normally available speed range with an additional single-point estimate within that range, provided that it is no higher than the median access speed achieved by the ISP's similar customers;
 - adopt an alternative approach to calculating the range if the ISP is able to demonstrate that this approach provides a more accurate estimate of customers' access line speeds. This will apply in particular when the ISP is able to provide the customer with information on the actual speed received, or to provide the customer with an estimate based on the actual access line speed received (see paragraph 2.24);

¹¹ Internet interconnect refers to a primary location where an ISP connects to the wider internet, also known as an IXP (Internet Exchange Point)

- provide the customer with a single-point estimate instead of the range:
 - a) For services with a headline speed below 100Mbit/s: where the size of the calculated range is 2Mbit/s or less, regardless of the approach used to calculate the range.
 - b) For services with a headline speed of 100Mbit/s or above: where the size of the calculated range is equivalent to (or smaller than) the cube root of the highest value in the range, regardless of the approach used to calculate the range¹²
 - c) In either case, the single-point estimate must be the midpoint of the range.

Where available, ISPs must use the customer’s actual received access line speed as the basis for the estimates provided at point of sale

- 2.24 When network infrastructure providers or wholesalers make available the live access line speed that is actually received on the customer's specific line, ISPs must use this as the basis for speed estimates (rather than using an access line speed range for similar lines) in circumstances where they will be using the same infrastructure and access technology to provide service. This must incorporate the measures of congestion derived from the testing outlined in paragraph 2.20, and should still take the form of a range, where possible.
- 2.25 As this information is typically not currently available to ISPs, Ofcom will review and update requirements on how the estimates must be derived once network infrastructure providers and industry have developed an approach to make it available. We expect industry to make every effort to achieve this as soon as possible in the interest of providing customers with more accurate information.
- 2.26 When developed, instructions for how the estimates should be derived will be published as an Annex to the Residential Code.

Other speed information to be given during the sales process

- 2.27 ISPs must explain to the customer in a clear and meaningful way that the actual throughput speed experienced by a customer will be influenced by a number of factors and may be lower than the estimated normally available speed (where relevant).
- 2.28 In particular, ISPs are encouraged to explain to customers that the quality of their internet services may be affected when they are accessed over wifi.
- 2.29 ISPs must explain that customers should contact their ISP for advice if they have speed problems.
- 2.30 Where relevant, ISPs must specifically explain, where a traffic management policy applies, what this means for the customer and how their speeds may be affected. Similarly, where

¹² E.g. for the range 344-350Mbit/s, the size of the range is **6Mbit/s** and the cube of 350 is **7**. **As the size of the range is lower than the cube root**, the estimate may be given as the midpoint, i.e. 347Mbit/s.

For the range 112-120Mbit/s, the size of range is **8Mbit/s**, but the cube of 120 is **4.9** – the estimate must remain as a range.

a fair usage policy applies, the ISP must explain what this means for the customer, how their use of the service may be affected, and set out any specific usage limits.

- 2.31 ISPs must provide further explanation, when requested by the customer, of any speed issue at the point of sale. Where the transaction is online, all appropriate information must be available to customers during the sales process. The ISP must specify whether this information will be made available by letter, email and/or via an online account management tool.
- 2.32 During the online sales process only, ISPs must provide information relating to the speed required to undertake common internet activities, including browsing, email, downloading media files, and streaming music/films at standard and high definition quality. The information given must be broadly consistent with the speeds for these activities defined by Ofcom, located on pages 14-16 here:
https://www.ofcom.org.uk/_data/assets/pdf_file/0035/95957/Ofcom-Mobile-and-Broadband-Checker.pdf
- 2.33 ISPs must inform customers that further information on estimated speeds, how speeds may be affected by policies such as traffic management and fair usage and what the customer can do if they experience problems will be set out in more detail after the sale. ISPs must specify whether this information will be made available by letter, email and/or posted in “My Account” or in some other durable form.

Principle 2: Detailed information provided after-sale

ISPs must provide detailed information within 7 calendar days of the sale

- 2.34 Once the customer has purchased a service, ISPs must provide the customer with the information below in a written, durable format which the customer can refer to at a later stage, and in a way that is clear and transparent to the customer. This is most likely to be in an introduction/starter pack sent by letter, email and/or in “My Account” (in the latter case, notifying them when they have done so).
- 2.35 ISPs must provide the following information regardless of the sales channel used:
- a) for both upload and download:
- the normally available speed range (including, where provided by the ISP to the customer during the sales process, the single-point estimate);
 - the minimum speed (for download, this is the minimum guaranteed speed. Minimum upload speed is derived in the same way as download, accounting for congestion, but is not guaranteed, i.e. it does not give rise to a right to exit the contract under Principle 5);
 - the maximum speed, (equivalent to the 80th percentile of similar lines for xDSL and the 80th percentile of the customers at the tested network level for all other technologies, accounting for congestion experienced during the quietest period on the network (i.e. the hour in which the network is least-contended). As with normally available and minimum speeds, this must be

based on speed measurements from actual customers, in accordance with the approach outlined in paragraph 2.20); and

- the advertised speed of the package.
- b) an explanation of any factors that may affect the throughput speed experienced by a customer, including:
- the nature of the customer’s line (where relevant);
 - factors which may cause peak time congestion;
 - the ISP’s traffic shaping and management policy;
 - the number of subscribers online and accessing a particular website e.g. at any one time, or by time of day; and
 - in-home factors which can contribute to the customer experiencing a lower speed on their device, including the impact of wifi in particular.
- 2.36 ISPs must give the right to exit (see Principle 5) equal prominence (in relation both to position and to size or other appearance of the text) compared to the rest of the information to be provided. They must explain that this right applies, if the:
- customer receives an actual speed which is below the minimum guaranteed download speed; and
 - problem has not been resolved within 30 calendar days from when it was first reported.
- 2.37 This information must also include an explanation of the right to exit process, including the need for the customer to contact their ISP in the event of a speed problem.
- 2.38 This information must be located alongside the statement of the minimum guaranteed download speed and must clearly link the right to exit with the minimum guaranteed download speed. It must be set out in plain English and be straightforward for customers to understand. As outlined in paragraph 2.18, ISPs may use their own wording to describe the minimum guaranteed download speed, but the wording chosen must make clear that this is the speed below which customers can exit the contract without penalty if the ISP cannot resolve the speed problem, and must not imply that this speed will definitely be achieved.
- 2.39 Where applicable, ISPs must provide information on any fair usage policies – explaining what fair usage means, how this may affect the customer’s use of the service and setting out any specific usage limits which apply – and including, where appropriate, links to the information set out in paragraphs 2.48 to 2.50 below.
- 2.40 Where applicable, ISPs must provide information on traffic management policies – explaining what traffic management means and how the customer’s speeds may be affected – and including, where appropriate, links to the information set out in paragraphs 2.48 to 2.50 below.
- 2.41 ISPs must provide customers with information about the Residential Code. As a minimum, this must include information about membership of the Residential Code, what it means

for their customers, and the URL of Ofcom's customer guide to the Residential and Business Codes: [URL to be made available prior to implementation]

- 2.42 Customers who are renewing an existing contract must also be provided with the information in this section, including where their contract is renewed automatically.
- 2.43 The information set out in this section must be sent as soon as possible after the sale or re-contract has been concluded or taken effect, and, in any event, must be sent within 7 calendar days of the transaction or contract renewal date. CPs must ensure that the information in paragraphs 2.35a) and 2.36 to 2.40 is incorporated into the contract for the provision of the relevant services to the customer in a manner intended to be consistent with the requirements of Article 4 of the EU Open Internet Access Regulation.

Usage limits

- 2.44 Where ISPs apply usage limits, ISPs must:
- provide a means by which users can measure their usage over the relevant billing period, where it is reasonably possible to do so; and
 - provide advance notification to subscribers approaching a usage limit, where the ISP has a user's email address or mobile number.
- 2.45 ISPs must provide users with email and/or text notification when users exceed a usage limit or breach a fair usage policy, where the ISP has a user's email address or mobile number. This email or text must inform users about the precise consequences of doing so.

Ongoing correspondence

- 2.46 Where an ISP improves the technical characteristics of a customer's service outside of the original terms of the contract (e.g. 're-tiering' them from a 38Mbit/s product to a 52Mbit/s product) and informs the customer of this change, they should ensure that they manage the customer's expectations appropriately with regard to the effect this will have on the speed that they experience.
- 2.47 Where the correspondence states or otherwise implies that the customer will see an improvement in their speed, the ISP should provide new speed estimates in line with the Residential Code, based on the customer's new service. This is to ensure that customers do not expect an increase in speed that is unlikely to be experienced.

Principle 3: Detailed information on the website

ISPs must provide information on their website

- 2.48 ISPs must include clear information relating to their respective policies on fair usage, traffic management and traffic shaping in a prominent place on their websites. At a minimum, these must cover the information below.
- 2.49 In relation to fair usage policies, ISPs must publish:

- any criteria they use for determining breaches of its fair usage policy; and
 - the actions they intend to take if a user exceeds a usage limit or breaches a fair usage policy.
- 2.50 ISPs must publish information on their traffic management and traffic shaping policies. This must include the types of applications, services and protocols that are affected and specific information on peak traffic periods.
- 2.51 ISPs must also provide a link to the Residential Code.
- 2.52 ISPs must provide a facility (line/speed checker) on their website so that customers can easily find out what their normally available upload and download speeds and minimum guaranteed download speed will be if they choose to purchase the service. ISPs must ensure that normally available upload and download, and minimum guaranteed download speed information is given due prominence on the line/speed checker speed results webpage (i.e. the page on which a customer's speed estimates are generated following the input of a customer's address and/or landline number). For example, ISPs should underline or embolden the estimated figures.

Principle 4: Managing speed related problems

- 2.53 ISPs must be prepared to manage customers' problems when they report that they are experiencing speed related problems.
- 2.54 To achieve this principle, ISPs must:
- a) Have a robust process for logging the speed problem.
 - b) Have a robust process for identifying whether the cause of the problem is within the customer's premises or not and logging it accordingly.
 - c) Where the cause of the problem is within the control of the customer, the ISP must explain clearly to the customer the possible causes of the lower speeds, how such problems could be addressed, and provide assistance to alleviate the problem.
 - d) Where the cause of the problem is within the ISP's control (including via its arrangements with the network provider), take all reasonable steps to ensure the speed problem is corrected within 30 calendar days (with the exception of the circumstances noted in paragraph 2.67).
 - e) Monitor the problem through to resolution, or until reasonable remedial actions (including, where relevant, the right to exit described in Principle 5) are exhausted, or the customer is satisfied with the outcome. ISPs must log whether the right to exit is offered, and if so the date at which it is offered.
 - f) Keep the customer appropriately informed throughout the process.

Principle 5: Right to exit the contract without penalty where speed problems cannot be resolved

Right to exit the contract without penalty if actual download speed falls below the minimum guaranteed download speed given at point of sale

- 2.55 ISPs must allow customers to exit contracts without penalty, at any time during the contract, if:
- a) the customer's actual download speed¹³ falls below the minimum guaranteed download speed (as described in paragraph 2.17 and given at point of sale) on a daily basis for at least three successive days (whether continuously or intermittently) after reporting of a speed problem; and
 - b) the problem has not been resolved within a maximum period of 30 calendar days since the customer reported the speed problem.
- 2.56 The ISP can offer the right to exit earlier than 30 calendar days if it has taken all reasonable steps to resolve the speed issue, and the download speed remains below the minimum guaranteed.
- 2.57 This right does not affect the customer's contractual rights or any other rights that may apply. In this document, we refer to this right as "the right to exit".
- 2.58 In some cases, the right to exit also applies to other services provided by the same ISP. The circumstances in which a right to exit applies are described later in this Principle.
- 2.59 'Without penalty' means that ISPs must not levy any charges for leaving the service, including early termination fees, and must reimburse customers pro-rata for any outstanding fees paid upfront (such as advance line rental). As outlined in paragraph 2.80, ISPs may charge a reasonable amount for equipment that is not returned when requested.
- 2.60 ISPs must not charge customers for engineer visits that are needed to rectify a speed problem as part of the right to exit process. Where a customer misses an agreed engineer appointment or cancels on the day it is due to take place, or the engineer establishes that the cause of the speed problem was within the reasonable control of the customer, the ISP may pass reasonable costs on to the customer.

Process for exercising the right to exit

- 2.61 The ISP must have a robust system for identifying whether the customer's speed problem relates to a problem within the customer's home or a slower than expected download speed and logging it as such.

¹³ This is the speed measured at the CPE/router. ISPs are not responsible for in-premises factors, such as the effects of using WiFi or older devices.

- 2.62 The 30-day limit for resolving the matter starts from the point at which the customer reports a speed issue¹⁴. Some customer circumstances may hamper the ISP's ability to being diagnosis or resolution promptly; these are outlined further in paragraph 2.67. The customer does not need to provide a speed test result to report a concern about their speed. However, where a customer does provide speed checking test information to the ISP, it must be treated as a serious and credible indication of a potential speed problem.
- 2.63 The ISP must take all reasonable steps to ensure that the speed problem is resolved on the existing line. This includes running all appropriate diagnostics and, if appropriate, logging a fault with Openreach, as well as additional actions to correct any fault on the existing line (examples include, for instance, a broadband "boost" or engineer visit).
- 2.64 If the ISP wishes to verify the customer's reported actual speed, they must take all reasonable steps to establish whether the customer's actual download speed at the CPE is below the minimum guaranteed, including at peak time. This could include providing or lending equipment to measure the speed at the router. An ISP can only dispute whether a customer's speed is below the minimum guaranteed speed or not if the ISP verifies the speed using line-specific testing that accounts for the effect of congestion and other degrading factors on that specific line (ISPs may rely on their own performance checker,¹⁵ or Ofcom's¹⁶). However, this process must not unduly delay diagnosis of the fault or, where relevant, moving through the process outlined in this section.
- 2.65 If the access line speed is below the minimum guaranteed speed, then the ISP does not necessarily need to carry out further testing because in this scenario the customer's received speed could not be above this level. However, an access line speed above the minimum guaranteed download speed does not demonstrate that the actual speed at the CPE is also above the minimum (e.g. due to effects of congestion).
- 2.66 When the problem is diagnosed, if the actual download speed is below the minimum guaranteed speed (see 2.55a)) the ISP must log the problem in a manner enabling them to report on the number of such cases received.
- 2.67 The customer must be offered the right to exit within 30 calendar days from the point at which they reported the speed problem, unless the following exceptional circumstances apply:
- a) If the customer cancels engineer visits, the ISP may extend the deadline by a reasonable period. If a customer is unable to take steps for diagnosis/resolution at the time of reporting the problem because they have (for instance) reported it while not at the affected premises, the deadline may also be reasonably extended.

¹⁴ The customer may express this as, for instance, difficulty with streaming services, but if it is identifiable as a speed issue it should be reported as such. Report of problems such as noise on a phone line (the cause of which might also result in a slower speed for DSL) would not trigger this process if the customer does not mention difficulties with their broadband service.

¹⁵ The methodology for which should align with the testing principles at Annex 5

¹⁶ <https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/advice/ofcom-checker>

- b) Where a customer repeatedly misses engineer appointments or otherwise does not take reasonable steps as requested by the ISP to the point that the diagnosis or solution process cannot continue, the ISP may cease the right to exit process. In such cases, the customer should be informed that this has happened, and an explanation should be given.
 - c) If there are other exceptional circumstances beyond the ISP's control, which lead to a technical inability to resolve the speed problem, the ISP may request further time from the customer to remedy the problem. These may include a missed or delayed Openreach appointment or the need to obtain street-works permissions.
- 2.68 When such exceptional circumstances occur, the ISP must explain the reasons for the delay to the customer, and keep the customer informed of progress. Ofcom expects ISPs to work within the spirit of this Residential Code, and make progress as speedily as possible.
- 2.69 ISPs must log instances of the right to exit being offered, any exceptional circumstances that delayed offering the right to exit, and whether the customer has chosen to exercise it or has accepted another remedy, in a manner that allows them to report on how many offers are made and how many are accepted.
- 2.70 A list of the data that must be collected is included in Annex 3, and a flowchart of the right to exit process is included in Annex 4.

The process for exercising the right to exit must be clear and easy for the customer

- 2.71 As soon as possible after the speed problem has been identified as a network issue, the ISP must tell the customer their minimum guaranteed download speed and explain that, if it cannot be resolved within 30 calendar days of the initial report, the customer has a right to exit the contract without penalty.
- 2.72 The customer must be informed of the timescale for resolving problems and be kept informed of progress. If the speed problem has not been remedied within 30 calendar days of the speed problem being reported, or if the ISP otherwise determines that the problem cannot be addressed, the ISP must formally offer the customer the opportunity to leave their contract immediately and without penalty.
- 2.73 The right to exit may be offered during a telephone call, but an appropriate record must be made of any such offers, in line with paragraph 2.69. If the customer accepts the offer, this must be confirmed to them in writing (including by email or other durable format).
- 2.74 Where the ISP is not able to resolve the problem within 30 calendar days because of factors caused by the customer (see paragraph 2.67a) above), the ISP must keep the customer informed of any changes to the deadline and the progress in attempting to resolve their speed problem.
- 2.75 In exceptional circumstances beyond the ISP's control (see paragraph 2.67a)), the ISP may request further time from the customer to remedy the problem, but must set out clearly

how long the extension is expected to be, and make clear that the customer has the option of leaving the contract immediately and without penalty at that point.

- 2.76 ISPs must facilitate customers exercising the right to exit through the gaining-provider led switching process where available. To do so, ISPs must have a process to record on the customer's account that no early termination fees or the like should apply, once they have confirmed their intention to accept the offer to leave without penalty.¹⁷
- 2.77 ISPs may impose a time limit of no less than 30 calendar days for the customer to accept the offer of the right to exit, and must ensure that this is clearly explained to the customer. They may also require the customer to confirm their acceptance explicitly in order to ensure that the requirements in paragraph 2.76 can be met. However, ISPs must not require the customer to confirm their acceptance in a manner that would be likely to disincentivise take-up of the right to exit, such as by incurring additional costs (e.g. a reply by post that requires the customer to pay for postage) or significant time or effort.

The ISP can offer other remedies alongside the right to exit

- 2.78 ISPs can also offer customers other alternative remedies, in particular upgrades or discounts alongside the right to exit. The customer is under no obligation to accept these other remedies instead of the right to exit.
- 2.79 ISPs are encouraged to consider providing discounts or upgrades alongside the right to exit, particularly for those customers whose lower speeds are due to their line falling within the bottom 10th percentile of similar lines (for xDSL technologies).

The ISP can choose to ask for equipment to be returned

- 2.80 Where the right to exit applies, ISPs may require the customer to return the internal equipment provided by the ISPs (e.g. modem), providing they do not require the customer to pay the delivery cost of returning the equipment. A customer's failure to return equipment within a reasonable time limit shall entitle the ISP to charge the customer a reasonable amount reflecting the cost of the equipment and taking account of the depreciation in the value of the equipment, considering the length of time for which it was used.
- 2.81 Where the customer has paid an upfront charge for the equipment, the ISP must reimburse the customer when it requires the return of the equipment. The ISP may withhold a reasonable amount reflecting the cost of the equipment and taking account of the depreciation in the value of the equipment, considering the length of time for which it was used. The ISP may set reasonable time limits for customers to make reimbursement claims provided that these are detailed to the customer in a timely manner.

¹⁷ This note is needed to ensure that no early termination or other such fees are applied if a gaining provider contacts the ISP.

The right to exit applies to standalone broadband services and some bundled services

- 2.82 The right to exit applies to standalone broadband services and some bundled services. The definition of what makes up a bundle, which is an update of the previous 2018 Codes and set out in more detail in the 2022 statement,¹⁸ is set out below.
- 2.83 Where the speed of the broadband service remains below the minimum guaranteed speed, the right to exit enables the customer to terminate their contract for the broadband service either on a standalone basis or also to terminate any contract(s) forming part of a bundle with that contract.
- 2.84 Here 'bundle' means a contract, or two or more closely related or linked contracts between the service provider and the customer, which:
- a) relates to the provision of an Internet Access Service and;
 - b) also relates, or together also relate, to the provision of at least one of the following:
 - i) another service falling within paragraph (a)
 - ii) a Number-based Interpersonal Communications Service;
 - iii) any other Public Electronic Communications Service;
 - iv) an Information Society Service;
 - v) a Content Service; and/or
 - vi) Terminal Equipment.
- 2.85 Definitions of the services listed in (a) and (b)(i) to (b)(vi) can be found in Annex A1.
- 2.86 We consider technical, contractual and financial dependencies to be examples of the most common types of links between services and / or terminal equipment currently in existence. Definitions for each dependency can be found in Annex A1.
- 2.87 In assessing whether a contract or combination of contracts, falls within the definition of a bundle, providers should also consider the nature of any links between the services and / or terminal equipment.
- 2.88 Where a customer has the right to exit a bundle of services, they should have the choice to exit the whole bundle, retain the whole bundle, or exit the contract for the broadband service with the speed problem (and other parts of the bundle if they wish) while retaining the elements that are not dependent on a broadband connection from the same provider, e.g. they may wish to terminate their phone and broadband services but retain mobile phone services (where those elements are already offered by the provider separately to the broadband service with the speed problem).

¹⁸ [Ofcom, 2022. Broadband Speeds Code of Practice: 2020 Revision to the Residential and Business Voluntary Code of Practice on Broadband Speeds](#)

- 2.89 Where a customer has purchased multiple broadband lines at the same premises, the right to exit only relates to the specific line with the speed problem and bundled services associated with that line.

Principle 6: Delivery of the objectives of the Residential Code

Speed information must be as accurate as possible

- 2.90 While Ofcom recognises that some ISPs who contract with an end-user are dependent on the wholesale service provider for speed information, the ISP must take all reasonable steps to ensure that the information initially provided to customers at point of sale is as accurate as possible. This includes ensuring that estimated speeds at point of sale are updated to the latest available information. Ofcom would also expect ISPs to continue looking for possible ways to improve speed estimates.

Provision of speed information by wholesalers

- 2.91 ISPs contracting with the end-user are responsible for providing the speed information described in the Residential Code.
- 2.92 Where these ISPs also provide wholesale services and products to other ISPs, they must provide accurate access line speed information to the purchasing ISP. Where available and relevant (such as when selling services for direct re-selling, as described at 2.21 and 2.22) they must provide congestion information as well, to enable their re-sellers to comply with the Residential Code.
- 2.93 Where a business service wholesaler provides services to re-sellers, who in turn may sell these services as residential broadband products, the wholesaler may sign up to the Residential Code for the purpose of having their residential testing methodologies monitored by Ofcom, even where they do not themselves directly sell residential services.

ISPs must have appropriate supporting processes

- 2.94 ISPs must have processes in place to ensure that their agents understand the objectives and spirit of the Residential Code and that they receive appropriate training to ensure they are able to give the information on speed and right to exit required by the Residential Code.
- 2.95 ISPs must also have their own internal processes to check their compliance with the Residential Code.

ISPs must support the spirit of the Residential Code

- 2.96 The expectation is that all signatories fully endorse the objectives of the Residential Code and its principles. Compliance with the Residential Code requires signatories to work within the spirit of the Residential Code and to make every reasonable effort to comply with it. This includes agreeing to co-operate fully with Ofcom in its operation of the Residential

Code, including, for example, by agreeing to all reasonable requests to provide Ofcom with information about how they comply with the Residential Code.

- 2.97 Ofcom also intends to monitor compliance with the Residential Code through appropriate methods, e.g. mystery shopping, audits of ISPs' internal processes, and data about take-up of the right to exit. The results of any review, research or audits undertaken to monitor compliance may, where appropriate, be published on a provider-specific basis.
- 2.98 In relation to the accuracy of speed estimates, Ofcom will periodically monitor the accuracy of estimates by assessing whether the measure of congestion applied to access line speeds is reasonable in light of data that it holds on customers' actual speeds. To achieve this, Ofcom will request ISPs' current and/or historic congestion measures¹⁹ and may request further information from ISPs relating, for example, to the speed estimates given to customers to assess their methodology and outcomes. For other technologies, Ofcom will request data on the measured speeds on which new customer estimates are based. Ofcom may also monitor other measures to satisfy itself that ISPs provide accurate speed information, including customer complaints.
- 2.99 ISPs who sign up to the Residential Code but fail to apply the principles it sets out may be removed as signatories.
- 2.100 Ofcom will examine matters of possible non-compliance on a case-by-case basis and discuss these with the relevant ISP. In cases where Ofcom considers removal to be an appropriate action to take in respect of non-compliance, Ofcom will notify the ISP before it takes a final decision, explaining the reasons why it considers removal to be appropriate and providing the ISP with an opportunity to comment. If, having been removed as a signatory, an ISP subsequently resumes compliance with the Residential Code, Ofcom may agree to reinstate it as a signatory.
- 2.101 Ofcom may also issue statements about the conduct of specific ISPs where that ISP's conduct has gone against the spirit of the Residential Code.

Implementation

- 2.102 ISPs must have implemented the Residential Code by 21 December 2022. ISPs must inform Ofcom when they have implemented the Residential Code.
- 2.103 ISPs which have indicated to Ofcom that they wish to become signatories after the Residential Code has been published must implement the Residential Code before they can be confirmed as signatories

¹⁹ i.e the effects of congestion on each broadband product during peak and quiet hours, calculated on the basis of customer testing as required in paragraph 2.20.

A1. Definitions

Speed Related

- a) **access line speed** or **sync speed** – This refers to the speed of the data connection between the broadband modem and the local exchange or cable head end. This constitutes the maximum speed a customer will be able to experience on his/her individual line.
- b) **actual speed** – This is the actual speed that a customer experiences at a particular time when they are connected to the internet. This figure is often dependent on factors such as the ISP's network, its traffic shaping and management policy, the number of subscribers sharing the network and the number of people accessing a particular website at a particular time.
- c) **advertised** or **headline speed** – This is the speed that ISPs use to describe the speed of the broadband packages that they offer to customers. This speed will usually be calculated in a manner recommended by the Committees of Advertising Practice (CAP), whose guidance is available here: [LINK](#)
- d) **congestion** – This is the sharing of bandwidth (the amount of data that can be transmitted in a fixed amount of time) within a network by multiple users where the bandwidth available is less than the aggregate demand i.e., where there is higher demand for the service than it is able to provide, leading to less available bandwidth per user and, therefore, slower speeds. This is most commonly experienced during the evening peak time.
- e) **download speed** – Also downlink or downstream speed. Rate of data transmission to a customer's connection from a network operator's access node, typically measured in Mbits/s
- f) **normally available speed** – the speed estimate given at point of sale indicating a customer's likely speeds during peak time. This will usually be given as a range and is calculated by taking the 20th and 80th percentiles of customers who are on the same package. For xDSL technologies, this will be the access line speed of similar lines adjusted for peak time congestion; for other technologies (including cable and FTTP) this will be the actual speeds received by other customers at peak time.
- g) **realistic speed estimate** – speed estimates given to customers at point of sale and after sale, which take into account the impact of congestion to bring the estimated speed closer to the customer's likely experience. This speed estimate relates to the connection between the CPE and the internet and does not account for in-home factors (such as device or the use of wifi).
- h) **Throughput** – a measure of the useable data speed; a communication link's performance, expressing the effective amount of data or information being transferred over the link within a specified time period. Typically measured in "bits per second" or "bps"
- i) **upload speed** - Also uplink or upstream speed. Rate of data transmission from a customer's connection to a network operator's access node, typically measured in Megabits per second (Mbit/s).

Technology Related

- j) **Cable** – Sometimes referred to as Hybrid Fibre Coaxial (HFC) networks, cable networks combine optical fibre and coaxial cable (a cable made up of a conductor and a tubular insulating layer) to carry TV and broadband signals to end-users.
- k) **Customer Premises Equipment (CPE)** – Also known as customer equipment or customer apparatus. Equipment on customers' premises, which is not part of the public telecommunications network and which is directly or indirectly attached to it.
- l) **DSL (or Digital Subscriber Line)** – A family of technologies generically referred to as DSL, or xDSL, used to add a broadband service to an existing phone line provided using a pair of copper wires (known as a twisted copper pair).
- m) **Fixed wireless access (FWA)** - An access service where the connection between the network and the equipment located at the customer premises is provided over the radio access medium
- n) **FTTC (or Fibre to the Cabinet)** – An access network structure in which the optical fibre extends from the exchange to a street cabinet. The street cabinet is usually located only a few hundred metres from the subscriber's premises. The remaining part of the access network from the cabinet to the customer is usually copper wire but could use another technology, such as wireless.
- o) **FTTP (or Fibre to the Premises)** – An access network structure in which the optical fibre network runs from the local exchange to the customer's house or business premises. The optical fibre may be point-to-point – there is one dedicated fibre connection for each home – or may use a shared infrastructure such as a GPON. Sometimes also referred to as Fibre to the home (FTTH), or full-fibre.
- p) **G.fast** – A broadband transmission standard that increases the speeds possible over short distances on copper lines, compared to ADSL and VDSL technologies.
- q) **Satellite** – Satellite broadband is a data service where satellites are used to provide the wireless data connectivity. A satellite dish at the customer's premises connects to a geostationary satellite and transmits signals through the air.
- r) **VDSL (or Very high data rate digital subscriber line)** – DSL technologies offering superfast broadband speeds. On Openreach's FTTC network which uses VDSL technology, services of up to 80Mb/s downstream and 20Mb/s upstream are currently offered. VDSL, in this Consultation, refers to all generations of the technology.
- s) **Wifi** – A short range wireless access technology that allows devices to connect to the internet. These technologies allow an over-the-air connection between a wireless client and a base station or between two wireless clients.

Other

- t) **Content Service** - so much of any service as consists in one or both of the following: (a) the provision of material with a view to its being comprised in Signals conveyed by means of an

Electronic Communications Network; (b) the exercise of editorial control over the content of Signals conveyed by means of such a network.

- i) **Contractual dependency** - where there are links between the rights or obligations for the provision of different elements of the bundle. For example, a customer might purchase both airtime and a mobile device at the same time from the same provider under two different contracts but with contractual terms that link the contracts.
- u) **Dependent services** - We consider technical, contractual and financial dependencies to be examples of the most common types of links between services and / or terminal equipment currently in existence. Definitions for each dependency are set out as follows:
- v) **Electronic Communications Services** has the meaning given to it in section 32(2) of the Communications Act 2003.
- i) **Financial dependency** - where any prices, tariffs or charges for the provision of one element of the bundle are contingent on taking another element, e.g., a monthly discount or extra data for mobile customers who also take fixed broadband from the same provider, which is then removed if the broadband contract is cancelled.
- w) **Information Society Service** – To be read in accordance with Article 1(1)(b) of Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification)”. This is consistent with the definition of ‘information society service’ included at section 51(9) of the Act.
- x) **Internet Access Service** - A service made available to the public which provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used.
- y) **Interpersonal Communications Service** - A service which enables direct interpersonal and interactive exchange of information by means of Electronic Communications Networks between a finite number of persons, where the persons initiating or participating in the communication determine its recipient.
- z) **Number-based Interpersonal Communications Service** - An Interpersonal Communications Service made available to the public which: (a) connects with publicly assigned numbering resources, namely, a number or numbers in a national or international numbering plan; or (b) enables communication with a number or numbers in a national or international numbering plan.
- aa) **Small business customer** – for this document, small business customers are comprised of ‘Microenterprise or small enterprise customers’ and ‘Not-for-profit customers’.
‘Microenterprise or small enterprise customers’ means customers acting in the course of a business carried on by that customer and for which no more than 10 individuals work, whether as employees or volunteers or otherwise; ‘Not for profit customers’ means customers which are a body for which no more than 10 individuals work, whether as employees or otherwise but excluding volunteers, and which, by virtue of its constitute or any enactment: (a) is required (after payment of outgoings) to apply the whole of its income, and

any capital which it expends, for charitable or public purposes; and (b) is prohibited from directly or indirectly distributing among its members any part of its assets (otherwise than for charitable or public purposes).”

- i) **Technical dependency** - where a customer would lose, or be impaired in using, one element of the bundle if they terminated the contract for another element of the bundle. For example, if a customer has a broadband service which only works if they also take a landline service from the same provider, and the customer cancelled their landline service, they would no longer be able to use the broadband service.
- bb) **Terminal Equipment** – This refers to (a) equipment directly or indirectly connected to the interface of a Public Electronic Communications Network to send, process or receive information, with the direct or indirect connection being made by a wire or optical fibre or electromagnetically; or (b) equipment which is capable of being used for the transmission or reception, or both, of radio communication signals by means of satellites or other space-based systems.

A2. Table of information to be provided

Information	Provided at point-of-sale 	Provided after-sale 	Provided in contract† 	
Speeds	Normally available download speed	Yes	Yes	Yes
	Normally available upload speed	<i>Website only</i>	Yes	Yes
	Minimum download speed	Yes	Yes	Yes
	Minimum upload speed	No	Yes	Yes
	Maximum upload/download speed	No	Yes	Yes
	Advertised (headline) upload/download speed	No	Yes	Yes
Traffic	Explained that actual speed may be lower than estimate and can vary	Yes	Yes	No
	Factors affecting speed performance e.g. Wi-Fi	Yes	Yes	No
	Traffic management policy (where relevant)	Yes	Yes	Yes
	Fair use policy (where relevant)	Yes	Yes	Yes
	Speed required for common uses	<i>Website only</i>	No	No
Further information	More information about the service is available on the ISP's website	Yes	No	No
	More information about speed and the Residential Code is available on the ISP's website	Yes	No	No
	Speed information will be provided in a durable format after sale	Yes	No	No
	How the right to exit is triggered	Yes**	Yes**	Yes
Codes	A link to Ofcom's customer guide to the Residential and Business Codes	No	Yes**	No
	Information about the Residential Code	No	Yes	No
	Link to the Residential Code	<i>Website only</i>	No	No

Although some information is only required in after-sale correspondence, it must be provided at point of sale if requested by the customer, in accordance with paragraph 2.31

** Details about the right to exit and the customer guide to the Residential and Business Codes must be given alongside the minimum guaranteed download speed

† This information needs to be incorporated into the contract in a manner consistent with Article 4 of the Regulation, but can be done through (e.g.) cross-referencing rather than quoting in the contract itself

A3. Table of data to be collected

Data		When to collect
Date speed problem ²⁰ was first raised by customer		At point of customer contact about the speed problem (e.g. initial call/email)
Problem in customer premises? Y/N		After diagnostics have established the cause of the speed problem
Date RTE was offered to customer, if applicable		When RTE is formally offered
If relevant, note the exceptional circumstances that led to the RTE being offered more than 30 calendar days after the speed problem was first reported.		When RTE is formally offered
Date RTE accepted – put note on customer’s file to facilitate GPL switching, where applicable	OR	RTE turned down (and other remedy accepted, if relevant)
		At point that customer confirms their decision (for accepting RTE, this may be when they initiate the GPL process, where relevant)

²⁰ i.e. where a customer receives a speed lower than they were expecting, which may occur for a variety of reasons, including in-premises factors

A4. Diagram of right to exit (RTE) process

