
Quality of Service for Ethernet and Dark Fibre

Proposed modifications to Quality of Service Directions and related Key Performance Indicators for Ethernet and Dark Fibre repairs

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1. Overview

What we are proposing – in brief

In the Wholesale Fixed Telecoms Market Review (WFTMR) 2021-2026 we set out our overall approach to Quality of Service ('QoS') for the relevant fixed telecoms markets, including a decision to impose an SMP condition on BT requiring it to comply with any QoS standards and transparency requirements we may direct in relation to network access, under which we set various QoS standards and reporting requirements. These obligations are discharged by Openreach, the legally separate wholly owned subsidiary of BT.

We are proposing to amend the QoS standard we imposed in the WFTMR covering repair for Ethernet and Dark Fibre products in certain leased lines (LL) access and inter-exchange connectivity (IEC) markets; and related key performance indicators (the 'KPIs').

Specifically, we are proposing that the current QoS standard, which is an 'on-time repair' measure, is removed and replaced with a new QoS standard that is based on a mean time to repair ('MTTR') measure, with a recalculated target for that new measure based on a revised assessment of appropriate faults for inclusion in the standard reflecting a change in mix in faults since the standard was originally set.

The consultation includes an assessment as to the appropriateness of MTTR, the appropriate mix of faults to include in the standard and the level of the standard.

1.1 In the WFTMR we found that BT has Significant Market Power (SMP)) in various markets, including the markets for the supply of LL access in LL Access Area 2¹, LL Access Area 3,² LLA HNR³ and the market for the supply of IEC in BT Only and BT+1 exchanges.⁴ This means that in those markets, without regulation, Openreach may not receive market signals from customers switching to competitors and that it lacks incentives to innovate and deliver the QoS customers require. The negative effects on customers of inadequate QoS delivered by Openreach could include a greater number of faults, slow resolution of those faults and frustration resulting from long delays to the installation of fixed and voice services.

1.2 We, therefore, considered that regulation was needed to deliver the QoS customers require and ensure that the network access remedies facilitate effective downstream competition.

¹ Paragraph 2.35 of [2021 WFTMR Volume 1: Overview](#) described this geographic market as 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.

² Paragraph 2.35 of [2021 WFTMR Volume 1: Overview](#) described this geographic market as 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.

³ Paragraph 2.35 of [2021 WFTMR Volume 1: Overview](#) described this geographic market as postcode sectors other than the Central London Area where there are two or more rival networks to BT in the provision of leased lines.

⁴ BT Only and BT+1 exchanges refer to the number of rival Principal Core Operators (PCOs) present at a particular exchange. A PCO is a telecoms provider with its own network infrastructure, which has a substantial footprint, and offers a wholesale inter-exchange connectivity service to other telecoms providers.

Modification to QoS Directions for Ethernet and Dark Fibre

Consequently, we imposed an SMP condition on BT requiring it to comply with any QoS standards and transparency requirements we may direct in relation to network access, under which we set various QoS standards and transparency requirements.

1.3 For the reasons set out in this consultation, we are proposing to modify the QoS standard in respect of repair for Ethernet and Dark Fibre products and associated transparency requirements. These proposed changes are intended to ensure that the relevant standards and associated reporting remain appropriate given the changes in the mix of faults since the QoS standards were originally imposed in the WFTMR.

2. Proposals

2.1 Ofcom has received a proposal from Openreach to change the current standard for repair for Ethernet and Dark fibre products on the basis that a change in the fault mix means, in Openreach's view, the current standard is no longer fit for purpose. In its proposal Openreach suggested a change to the underlying metric in the standard from being based the percentage of orders meeting the contractual on-time repair (OTR) period to a mean time to repair (MTTR) measure. Openreach also proposed excluding force majeure (or 'matters beyond our reasonable control (MBORC)') events and customer faults from the standard. Further, it proposed it should be required to track performance against MBORC faults through a new key performance indicator (KPI), alongside continuing to report against all existing KPIs.

2.2 In this consultation document we set out our consideration of:

- the change in fault mix, and whether this has a material impact on the current standard;
- whether to change the underlying metric for the standard from OTR to MTTR, or simply amend the standard based on the current metric;
- whether to include or exclude "Matters Beyond Our Reasonable Control" (MBORC) in the relevant metric;
- whether to include or exclude customer faults in the relevant metric;
- what standard for MTTR should be used if we decide to move to the new metric;
- how the new standard should operate in its first year; and
- whether to introduce any new KPIs.

Fault mix and impact on repair standard

2.3 The current standard is an on-time repair (OTR) standard that requires 94% of all faults on relevant Ethernet and Dark Fibre products to be repaired within the time stipulated by the Service Level Agreement (SLA), calculated annually. This standard applies in the markets for the supply of LL access in LL Access Area 2 (for relevant Ethernet Services only) and LL Access Area 3, and the market for the supply of IEC in BT Only and BT+1 (Relevant Ethernet Services only) exchanges.⁵

2.4 Openreach argues that this current standard is no longer appropriate as there has been a change in the underlying fault mix; there has been a decrease in easier to fix faults which means that more complex faults make up a greater proportion of overall faults.

2.5 Openreach has set out evidence that process improvements have led to a reduction in faults, including using improved diagnostic tools to determine where the fault is and the

⁵ The OTR standard applied as a transitional remedy to the supply of IEC in BT+2 exchanges for the period 1 April 2021 to 31 March 2022.

implementation of more software fixes to deal with recurring electrical remote faults. As a result, many faults that otherwise would have arisen have been avoided.

2.6 Each category of fault has a different propensity to be fixed within the SLA time-period (which is 5 hours for most products). Openreach argues that there has been a decrease in those faults which are easier to repair and in respect of which it is possible to meet the current OTR target in almost all cases, such as customer faults and electronic faults that can be fixed remotely. By contrast, incidents in the field, which are inherently complex and variable, are on the increase, and in respect of which Openreach fail to meet the target in around half of cases. Therefore, Openreach argues, whereas the customer repair experience overall has improved, the QoS standard is increasingly difficult to meet.

2.7 In its submission (in Annex 1), Openreach illustrates the fault trend and argues that this demonstrates that easier to resolve faults are decreasing as a proportion of overall faults.

Table 1 – LL/IEC fault types⁶

Fault type	On-time performance % (average in 2021/22)	% of overall volumes (average in 2021/22, rounded to nearest 5%)	Movement in volumes since 2019/20	Movement in relative volumes since 2019
Customer	99-100	50	Overall decrease but variable	Decreasing but variable
Electronic (remote) (NOC)	98-99	10	Decreasing	Flat but variable
Electronic (field)	90-94	10	Decreasing	Flat but variable
Fibre (field)	85-89	25	Flat/Increasing	Increasing
Incident (field) (MBORC)	50-60	5	Increasing but highly variable by nature	Increasing

2.8 We accept that the data would appear to support the rationale that there have been improvements to the customer repair experience, and because these improvements have lowered the number and weighting of easier to fix faults, this will make the current metric more difficult to meet. Consequently, our provisional view is that it would be appropriate to make a change to the OTR minimum standard in relevant markets to address this. However, we would welcome

⁶ Source – Openreach submission, Annex 1 of this document. Page 21

stakeholder views on whether they agree that the change in mix is sufficient to justify a change to the minimum standard.

Question 1: Do you agree that the fault mix on relevant Ethernet and Dark Fibre products has changed significantly enough to justify a change to the OTR minimum standard in the markets for the supply of LL access in LL Access Area 2 and LL Access Area 3, and the market for the supply of IEC in BT only and BT+1 exchanges? Please provide evidence to support your views.

Change to the underlying metric for the standard from OTR to MTTR, or simply amend the standard based on the current metric

2.9 Given our provisional view that it would be appropriate to make a change to the OTR minimum standard in relevant markets, we have considered two potential responses to the change in fault mix, and improvement in the customer repair experience:

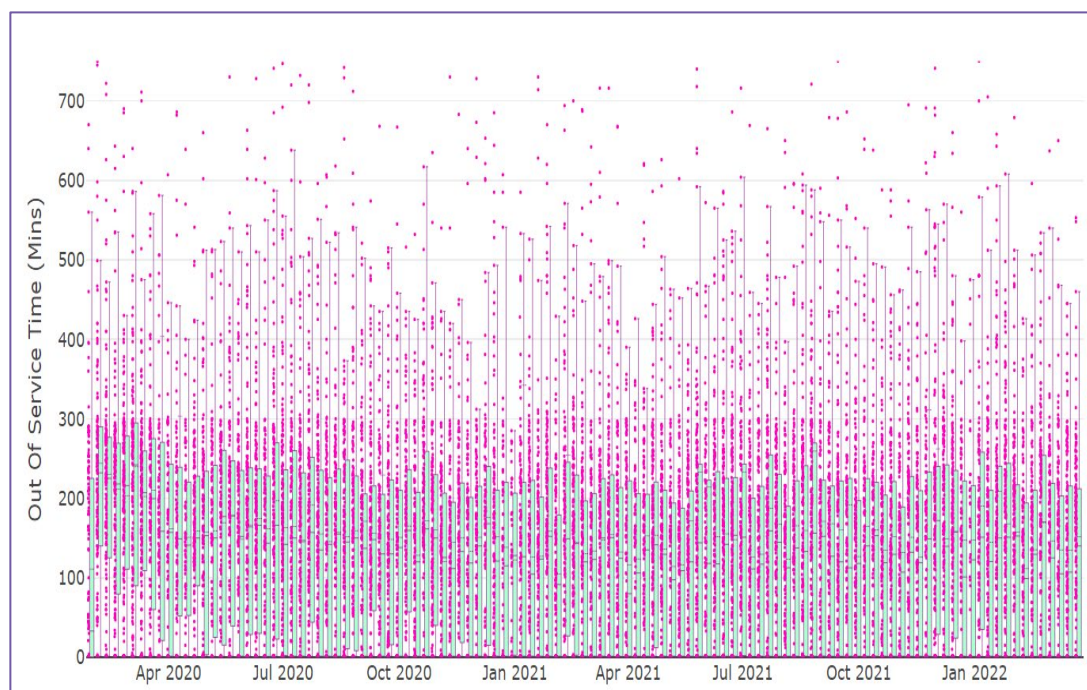
- to simply change the standard for the existing metric, by reducing the OTR standard to a more achievable level, in order to take account of the change in fault mix. Maintaining the current measure but adjusting the threshold would allow for better comparison over time.

Or

- as proposed by Openreach, changing both the metric and the standard to mean time to repair. Openreach argues this would provide incentives to repair all faults as quickly as possible.

2.10 We observe that based on data supplied by Openreach (see figure 1) showing repair times over the past two years, there is a clear 'cluster' of repair times around the 5 hour mark (300 minutes), which is the SLA for most products covered by the LL/IEC QoS Standard. Above this, repair times start to become more variable. Under the current standard, once the SLA has been missed, that fault is marked as a compliance failure regardless of its repair. We think this is evidence that the current standard does not incentivize Openreach to reduce repair times above the 5-hour threshold. As a result, our proposal is to change the metric from OTR to MTTR.

Figure 1 – Trend analysis for on-time repair⁷



Inclusion or exclusion of MBORC

2.11 In the 2016 Business Connectivity Market Review (2016 BCMR) Ofcom found, among other things, that BT had SMP in the wholesale CI services market in the London Periphery and in the Rest of the UK (excluding the Hull Area and Central London Area). Ofcom imposed Quality of Service standards and chose to include delays due to events covered by MBORC in the ethernet repair standard for leased lines and inter-exchange.⁸ The rationale for including MBORC was that, by including delays due to events covered by MBORCs, we would avoid the risk of incentivising Openreach to use MBORC declarations as a means of addressing potential minor non-compliance issues with our minimum standards or to apply less rigor in its criteria for declaring MBORC. In the BCMR 2019 Statement, we proposed broadly the same form of remedies for Quality of Service as those in the 2016 BCMR.⁹

2.12 In the 2021 WTFMR we also decided not to introduce an allowance for MBORC events in the QoS standards. We consider that the QoS standards we set were achievable under ‘business as usual’ years and noted that Openreach’s failure to achieve this standard in the past has been due to it facing significant unexpected challenges in that year. Further, we had not seen any evidence to suggest that MBORC events for Ethernet would increase and hence, considered that there was no substantive basis for a “cautionary” MBORC allowance.

⁷ Source - Openreach submission, Annex 1 of this document. Page 22

⁸ Para 13.222 of the [BCMR 2016 Statement](#)

⁹ This is explained in paragraph 4.6 of [2021 WTFMR Volume 5: Quality of Service \(ofcom.org.uk\)](#)

2.13 Openreach argues that since 2021 the volume of MBORC faults has increased well above the “business as usual level” envisaged by Ofcom in the 2021 WTFMR and their proportion in the fault mix has doubled.

2.14 Further, Openreach argues that the removal MBORC faults would create a simpler and more precise measure that focuses on underlying Openreach performance (the key purpose of the QoS measure) and would remove most of the instability in changing product mix, thereby helping create a more resilient and stable measure. Openreach says it will continue to action customer and MBORC (field) faults – but because these faults are not within Openreach’s control, it believes they should no longer be part of the QoS Standard compliance assessment.

2.15 Ofcom is not aware of any concerns since that time that Openreach has been incentivised to declare faults as MBORC. We also accept that excluding MBORC faults for Ethernet repairs would only have a minor impact, given that other standards (such as for installations) would continue to include it.

2.16 However, we do not consider that there is currently sufficient evidence that there will be a significant increase in the volume of MBORC faults in future, such that MBORC should be excluded from the various QoS standards. However, we will review this position in the next market review.

2.17 Notwithstanding Openreach arguments on simplicity and while accepting that removal of MBORC from one of the Openreach standards should not have a major impact on incentives, we are not convinced that a single standard direction change is the appropriate time to institute a change in policy with respect to MBORC in QoS ethernet and dark fibre standards. We consider that such a change would be more appropriately considered in the round when the QoS standards are reviewed in detail at the next round of market reviews. Accordingly, our provisional decision is to continue to include MBORC in the new standard and reassess this at the next market review. We have, however, presented below on the standard with and without MBORC and we welcome stakeholder views on this aspect of the proposal.

Question 2: Do you agree with the proposal to continue to include MBORC in the QoS measure?
Please provide evidence to support your views.

Inclusion or exclusion of customer faults

2.18 Openreach has also requested to exclude customer faults from the proposed new metrics on the basis that these are outside of Openreach’s control. It argues that this will create a simpler and more accurate measure that focuses on underlying Openreach performance and will remove most of the instability in the fault mix, which currently has a distorting effect on the measure.

2.19 Openreach also argues that the exclusion would more closely align the measure with their own internal measures of performance.

2.20 Openreach argues the changes it has instituted in its processes have improved customer fault self-identification and hence speed of response both by reducing the potential for misallocation and also further decreasing the proportion of customer faults in the mix. While these changes were first introduced in 2019, prior to the conclusion of the last market review in 2021, we accept that it

would have taken some time for the full impact of them to manifest and the impact was not visible at the time of the original decision on the fault repair standard.

2.21 On the basis of the subsequent improvement in customer fault transparency, clear improvement in customer fault outcomes since 2019 and the introduction of the new processes, we consider that previous concerns around Openreach misassigning fault causes appear to no longer be warranted, and hence the inclusion of customer faults in the overall standard no longer seems necessary.

2.22 Accordingly, our provisional decision is to accept Openreach’s proposal and exclude customer faults from the new measure, but to continue to monitor the impact of this decision. We propose that this could be done through a KPI assessing customer faults. We welcome stakeholder views on this aspect of the proposal.

Question 3: Do you agree with the proposal to exclude customer faults from the new measure? Please provide evidence to support your views.

Options for new mean time to repair standard

2.23 In determining what a new mean time to repair standard should be, we consider that a reasonable starting point should be to approximate the existing standard at the time that standard was imposed, while mitigating the issues identified by Openreach arising out of a change in the fault mix. Openreach proposes a new standard of 5 hours mean time to repair. However, we assess this to be inappropriate as it is considerably more lenient than the current standard.

2.24 Openreach has provided the current distribution of repair times and we can use this to estimate the relationship between OTR and mean time to repair.

Table 2 Year to date performance

Year-to-date estimates - 01/04/2022 - 08/03/2023		
MTTR (all faults)	MTTR (excluding customer and MBORC)	MTTR (including MBORC but excluding customer faults)
01:48:23	02:27:47	03:33:00

2.25 Openreach argues that while its current performance is well ahead of its proposed QoS Standard, its proposal takes into account some predicted future trends between now and the end of the WFTMR period which will narrow the gap between its current performance and the proposed QoS Standard. Openreach says those trends are the growth of dark fibre volumes (which has a much longer 18 hour repair SLA) as well as expected further changes in the fault mix between electronic and fibre faults with electronic faults typically having a shorter repair time. The volume of electronic faults has been decreasing whereas the volume of fibre faults is broadly flat, which may increase the mean time to repair measure.

2.26 Our current view is there is not a compelling argument that these trends would shift the current performance range significantly within the next 3 years, although we accept that basing the new QoS standard simply on the current performance might not be appropriate given the risk of adverse events. Therefore, as we are not convinced that the standard should be as high as Openreach propose, we propose that the standard should reflect current performance plus 10% namely: 3 hours 50 minutes (this assumes that MBORC is included but customer faults are excluded as per our provisional view).

2.27 However, if we were to change our provisional position and accept Openreach's view that MBORC and customer faults should be excluded, current performance plus 10% would be represented by a standard of 2 hours 40 minutes.

2.28 We welcome stakeholder comments and evidence on this aspect of our proposals.

Question 4: Do you have any views on the appropriate period for the mean time to repair standard? Please provide evidence to support your views.

Applying the new metric

2.29 If we maintain our provisional view to change to a new QoS standard, there are a number of options as to how we might apply this standard in its first year.

2.30 As part of our analysis, we asked Openreach for data showing the volume of faults. From this we see no evidence that there is significant variation of demand for repairs across the year, and volumes tend to be relatively low. This might allow us to set a standard for the first year applying only the remaining period from any decision until the end of the financial year.

2.31 However, we would be concerned if too short a period would expose Openreach to too great a risk of unanticipated events, causing high mean time to repair outcomes but without sufficient time to improve the average outcome.

2.32 We, therefore, propose to apply a longer assessment period initially for the first year of more than 12 months, beginning from the publication of any decision until the end of the following financial year.

Question 5: Do you have any views on applying a longer assessment period initially of more than 12 months, beginning from the publication of any decision? Please provide evidence to support your views.

KPIs

2.33 Following on from our proposals set out above, we consider that it is necessary to impose additional KPIs to monitor the performance of Openreach against the mean time to repair standard, and to increase the level of transparency around the customer experience; if we exclude customer faults from the MTTR standard as proposed, it will also enable Ofcom and stakeholders to monitor

whether this exclusion is creating a negative incentive. These new KPIs are in addition to the existing KPI relating to the original OTR standard.

2.34 Consequently, we propose to add the following new KPIs to those already required in the markets for the supply of LL access in LL Access Area 2, LL Access Area 3 and LLA HNR, and the market for the supply of IEC in BT only and BT+1 exchanges:

- KPI(t) Mean Time to Repair with the accompanying description “In relation to all Faults that achieved a Restored Service in the relevant month, the Mean Time to Repair.” Restored Service in this context means the point at which any Relevant Ethernet Service or Dark Fibre Access, which has been subject to a Fault, is available for use by a Third Party without the relevant degradation or problem with network access.
- KPI(u) Mean Time to Repair customer faults with the accompanying description “In relation to all Customer Faults that achieved a Restored Service in the relevant month, the Mean Time to Repair.” Restored Service in this context means the point at which any Relevant Ethernet Service or Dark Fibre Access, which has been subject to a Fault, is available for use by a Third Party without the relevant degradation or problem with network access.

2.35 We welcome stakeholder views on this aspect of the proposals. For the avoidance of doubt, we are not proposing to amend any of the existing KPIs.

Question 6: Do you agree with the proposal to make a direction adding the two new KPIs to those already required in the markets for the supply of LL access in LL Access Area 2, LL Access Area 3 and LLA HNR, and the market for the supply of IEC in BT only and BT+1 exchanges? Please provide evidence to support your views.

Legal tests

2.36 We consider that our proposal to give a direction modifying the existing QoS and transparency directions satisfies the tests set out in section 49(2) of the Act, namely that in each case the direction is:

- 2.36.1 objectively justifiable in relation to the networks, services or facilities to which it relates;
- 2.36.2 not such as to discriminate unduly against particular persons or against a particular description of persons;
- 2.36.3 proportionate to what it is intended to achieve; and
- 2.36.4 transparent in relation to what it is intended to achieve.

2.37 In particular, we are satisfied that our proposal to give a direction is:

- 2.37.1 objectively justifiable because improvements to the customer repair experience have lowered the number and weighting of easier to fix faults. This will continue to make the current metric difficult to meet. Consequently, our provisional view is that it is appropriate and justified to make a change to the minimum standard to

address this. We also consider that it is important to impose additional KPIs to provide transparency around BT's performance on quality of service.

- 2.37.2 Not unduly discriminatory, in that the directions apply only to BT, which is the only operator to have SMP in the markets (leased lines and interexchange connectivity) in which the directions will apply.
- 2.37.3 Proportionate, in that the proposals are intended to continue to deliver the quality of service customers require and ensure that the network access remedies facilitate effective downstream competition while ensuring that the QoS standard reflects improvements in customer experience. We consider that our changes are no more than is necessary.
- 2.37.4 Transparent, in that the proposals are clear as to what is required from Openreach, and there will be an improved level of transparency because of the increase in the number of KPIs that Openreach reports against.
- 2.37.5 As required by section 2B(2)(a) of the Act, in formulating our proposals, we have also had regard to the UK Government's Statement of Strategic Priorities for telecommunications, management of radio spectrum and postal services.

Impact Assessments

2.38 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Communications Act 2003 (the "Act"), which means that generally we have to carry out impact assessments where there is likely to be a significant effect on businesses or the general public, or when there is a major change in our activities.

2.39 This document, taken as a whole, comprises an impact assessment as defined in section 7 of the Act.

Equality Impact assessment

2.40 Section 149 of the Equality Act 2010 (the "2010 Act") imposes a duty on Ofcom, when carrying out its functions, to have due regard to the need to eliminate discrimination, harassment, victimisation and other prohibited conduct related to the following protected characteristics: age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex and sexual orientation. The 2010 Act also requires Ofcom to have due regard to the need to advance equality of opportunity and foster good relations between persons who share specified protected characteristics and persons who do not.

2.41 Section 75 of the Northern Ireland Act 1998 (the "1998 Act") also imposes a duty on Ofcom, when carrying out its functions relating to Northern Ireland, to have due regard to the need to promote equality of opportunity and have regard to the desirability of promoting good relations across a range of categories outlined in the 1998 Act. Ofcom's Revised Northern Ireland Equality Scheme explains how we comply with our statutory duties under the 1998 Act.

2.42 To help us comply with our duties under the 2010 Act and the 1998 Act, we assess the impact of our proposals on persons sharing protected characteristics and in particular whether they may discriminate against such persons or impact on equality of opportunity or good relations.

2.43 We do not consider that our proposals have equality implications under the 2010 Act or the 1998 Act.

Welsh language impact assessment

2.44 The Welsh Language (Wales) Measure 2011 (“the Measure”) established a legal framework to impose duties on certain organisations to comply with standards in relation to the Welsh language. We consider that the proposed changes to the quality of service standards will not have any impacts on opportunities for persons to use the Welsh language, or on treating the Welsh language no less favourably than the English Language. This is because our proposals relate solely to quality of service standards and have no impact on the use of any language (including Welsh).

A1. Openreach formal request – published separately

- A1.1 Openreach’s request for amendment to the quality of service directions has been published as a separate annex.

A2. Responding to this consultation

How to respond

- A2.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 24 August 2023.
- A2.2 You can download a response form from the [consultation page](#) on our website. You can return this by email or post to the address provided in the response form.
- A2.3 If your response is a large file, or has supporting charts, tables or other data, please email it to ethernetrepairstandardchange@ofcom.org.uk, as an attachment in Microsoft Word format, together with the [cover sheet](#). This email address is for this consultation only and will not be valid after 30 September 2023.
- A2.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:
- Ethernet Standard Modification Team
- Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- A2.5 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:
- send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, WMV or QuickTime files; or
 - upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.
- A2.6 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)
- A2.7 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt of a response submitted to us by email.
- A2.8 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.
- A2.9 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex 5. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.
- A2.10 If you want to discuss the issues and questions raised in this consultation, please contact Markham Sivak on 020 77834659, or by email to markham.sivak@ofcom.org.uk.

Confidentiality

- A2.11 Consultations are more effective if we publish the responses before the consultation period closes. In particular, this can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish responses on [the Ofcom website](#) at regular intervals during and after the consultation period.
- A2.12 If you think your response should be kept confidential, please specify which part(s) this applies to, and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.
- A2.13 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A2.14 To fulfil our pre-disclosure duty, we may share a copy of your response with the relevant government department before we publish it on our website. This is the Department for Business, Energy and Industrial Strategy (BEIS) for postal matters, and the Department for Culture, Media and Sport (DCMS) for all other matters.
- A2.15 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further in our [Terms of Use](#).

Next steps

- A2.16 Following this consultation period, Ofcom plans to publish a statement in late 2023.
- A2.17 If you wish, you can [register to receive mail updates](#) alerting you to new Ofcom publications.

Ofcom's consultation processes

- A2.18 Ofcom aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex 3.
- A2.19 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.
- A2.20 If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact the corporation secretary:

Corporation Secretary
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA
Email: corporationsecretary@ofcom.org.uk

A3. Ofcom's consultation principles

Ofcom has seven principles that it follows for every public written consultation:

Before the consultation

- A3.1 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

- A3.2 We will be clear about whom we are consulting, why, on what questions and for how long.
- A3.3 We will make the consultation document as short and simple as possible, with an overview of no more than two pages. We will try to make it as easy as possible for people to give us a written response.
- A3.4 We will consult for up to ten weeks, depending on the potential impact of our proposals.
- A3.5 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.
- A3.6 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

- A3.7 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish the responses on our website at regular intervals during and after the consultation period. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A4. Consultation coversheet

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing

Name/contact details/job title

Whole response

Organisation

Part of the response

If there is no separate annex, which parts? _____

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom aims to publish responses at regular intervals during and after the consultation period. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

A5. Consultation questions

A5.1 Set out below are the questions contained within this consultation to which we are seeking stakeholder responses:

Question 1: Do you agree that the fault mix on relevant Ethernet and Dark Fibre products has changed significantly enough to justify a change to the OTR minimum standard in the markets for the supply of LL access in LL Access Area 2 and LL Access Area 3, and the market for the supply of IEC in BT only and BT+1 exchanges? Please provide evidence to support your views.

Question 2: Do you agree with the proposal to continue to include MBORC in the measure? Please provide evidence to support your views.

Question 3: Do you agree with the proposal to exclude customer faults from the new measure? Please provide evidence to support your views.

Question 4: Do you have any views on the appropriate period for the mean time to repair standard? Please provide evidence to support your views.

Question 5: Do you have any views on applying a longer assessment period initially of more than 12 months, beginning from the publication of any decision? Please provide evidence to support your views.

Question 6: Do you agree with the proposal to make a direction adding the two new KPIs to those already required in the markets for the supply of LL access in LL Access Area 2, LL Access Area 3 and LLA HNR, and the market for the supply of IEC in BT only and BT+1 exchanges? Please provide evidence to support your views.

A6. Notification of proposals under section 49a of the Communications Act 2003

Proposals for modifying directions to BT under section 49 of the Communications Act 2003 and SMP Condition 10 (Quality of Service Directions)

Background

1. On 18 March 2021 Ofcom published a statement entitled “Promoting competition and investment in fibre networks: Wholesale Fixed Telecoms Market Review 2021-26”, concluding the review of fixed telecoms markets including of the physical infrastructure, wholesale local access, leased lines access and inter-exchange connectivity markets. This statement identified the markets, made the market power determinations and set the SMP conditions set out in Schedule 1 to the 2021 SMP Conditions Notification.
2. The SMP conditions that were set included SMP Condition 10 which was set in relation to all markets in which Ofcom has found BT to have significant market power and for the period until 17 May 2022, the market for the supply of interexchange connectivity in BT+2 exchanges to ensure a sustainable transition in that market. SMP Condition 10 requires BT to comply with all such quality of service requirements as Ofcom may from time to time direct and publish all such information as to the quality of service as Ofcom may from time to time direct
3. On 18 March 2021, Ofcom decided, in accordance with section 49 of the Act, to give among others two directions pursuant to SMP condition 10, requiring BT:
 - a. to comply with quality of service standards in respect of the provision of network access in the following markets:
 - (i) supply of leased line access in LL Area 2;
 - (ii) supply of leased line access in LL Area 3;
 - (iii) supply of interexchange connectivity in BT Only exchanges;
 - (iv) supply of interexchange connectivity in BT+1 exchanges; and
 - (v) supply of interexchange connectivity in BT+2 exchanges

- of which Ofcom found BT as having SMP in the markets set out in (i) to (iv) and imposed requirements to ensure a sustainable transition in the market set out in (v), as set out in the notification and accompanying statement (“**Direction 1**”);
- b. to comply with transparency and publication requirements in respect of the provision of network access in the markets set out at a. above and the market for the supply of leased lines in High Network Reach Areas as applicable (“**Direction 2**”);
4. Directions 1 and 2 were set out at Schedules 1 to 2 respectively of the 2021 SMP Conditions Notification, and took effect from 1 April 2021.
5. Ofcom is now proposing to modify Direction 1 under section 49 of the Communications Act 2003 and SMP Condition 10 to alter the quality of service standards that apply to BT’s repair of faults in relation to the following markets:
- a. supply of leased line access in LL Area 2;
 - b. supply of leased lines access in LL Area 3;
 - c. supply of interexchange connectivity in BT Only exchanges; and
 - d. supply of interexchange connectivity in BT+1 exchanges.
6. Ofcom is also now proposing to modify Direction 2 under section 49 of the Communications Act 2003 and SMP Condition 10 to alter the transparency and publication requirements that apply to BT’s repair of faults in relation to the following markets:
- a. supply of leased line access in LL Area 2;
 - b. supply of leased line access in LL Area 3;
 - c. supply of leased line access in High Network Reach Areas;
 - d. supply of interexchange connectivity in BT Only exchanges; and
 - e. supply of interexchange connectivity in BT+1 exchanges.
7. Proposed revisions to Directions 1 and 2 are set out as follows:
- a. Proposed revisions to Direction 1 are set out in Schedule 2 to this notification (the full text of Direction 1 is reproduced with the proposed additions and deletions underlined and struck out respectively); and
 - b. proposed revisions to Direction 2 are set out in Schedule 3 to this notification (the full text of Direction 2 is reproduced with the proposed additions and deletions underlined and struck out respectively).

8. It is proposed that Directions 1 and 2 as amended will take effect from the date of any notification under section 49 of the Act adopting the proposals set out in this notification.

Ofcom's duties and legal tests

9. The effect of these Directions, and the reasons for giving them, are set out in the Consultation and, for the reasons therein, Ofcom considers that the Directions comply with the requirements of section 49(2) of the Act. Ofcom has considered and acted in accordance with its general duties set out in section 3 of the Act, the six requirements in section 4 of the Act, and has had regard to the Statement of Strategic Priorities.

Making representations

10. Representations may be made to Ofcom about any of the proposals set out in this notification and the Consultation by no later than 24 August 2023.
11. Copies of this notification and the Consultation have been sent to the Secretary of State in accordance with sections 49C(1) of the Act.

Interpretation

12. For the purposes of interpreting this notification (which, for the avoidance of doubt includes the Schedules):
 - a. except in so far as the context otherwise requires, words or expressions shall have the meaning assigned to them in paragraph 13 below, and otherwise any word or expression shall have the same meaning as it has in the Act;
 - b. headings and titles shall be disregarded;
 - c. expressions cognate with those referred to in this notification shall be construed accordingly; and
 - d. the Interpretation Act 1978 (c. 30) shall apply as if this notification were an Act of Parliament.
13. In this notification—
 - (a) **"2021 SMP Conditions Notification"** means the notification under sections 48 and 79 of the Act, which is contained in this Volume 7 of the document entitled "Promoting competition and investment in fibre networks: Wholesale Fixed Telecoms Market Review 2021-26", published by Ofcom on 18 March 2021;

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- (b) “**Act**” means the Communications Act 2003 (c. 21);
- (c) “**BT**” means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 1159 of the Companies Act 2006;
- (d) “**Statement of Strategic Priorities**” means the Statement of Strategic Priorities for telecommunications, the management of radio spectrum, and postal services designated by the Secretary of State for Digital, Culture, Media and Sport for the purposes of section 2A of the Communications Act 2003 on 29 October 2019;
- (e) “**Ofcom**” means the Office of Communications as established pursuant to section 1(1) of the Office of Communications Act 2002.

Signed



Brian Potterill

Director of Mobile Network Strategy

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

14 July 2023

Schedule 1

Direction 1: Quality of Service Standards

Direction

- A. This Direction is made under section 49 of the Act and SMP Condition 10, and requires the Dominant Provider to comply with quality of service standards in relation to the provision of network access to Relevant Ethernet Services and Dark Fibre Access in the markets for (i) LLA Area 2 (Relevant Ethernet Services only); (ii) LLA Area 3; (iii) interexchange connectivity in BT Only exchanges; (iv) interexchange connectivity in BT+1 exchanges (Relevant Ethernet Services only); and (v) interexchange connectivity in BT +2 exchanges in relation to Relevant Ethernet Services in the First Relevant Year only; and where applicable to (iii) and (iv) including the exchanges identified as IEC DF Transition in relation to Dark Fibre Access in the First Relevant Year only.
- B. Ofcom hereby directs that the Dominant Provider comply with this Direction with effect from 1 April 2021.

Quality of Service Standards

Application

1. The Dominant Provider must comply with the following quality of service standards in respect of the provision of Orders for:
 - a. Relevant Ethernet Services; and
 - b. Dark Fibre Access.
2. The obligation referred to in paragraph 1 above shall apply in the Relevant Year to Orders that became Accepted Orders on or after the first day of the Relevant Year or that were Accepted Orders before such date but were not Completed Orders on or before such date, and that relate to:
 - a. Supply of Leased Line access in LLA Area 2 (“LLA Area 2”) for Relevant Ethernet Services only;
 - b. Supply of Leased Line access in LLA Area 3 (“LLA Area 3”) for Relevant Ethernet Services only;

- c. Interexchange connectivity in BT Only exchanges (“IEC”); or
 - d. Interexchange connectivity in BT +1 exchanges (“IEC BT+1”) for Relevant Ethernet Services only; or
 - e. IEC DF Transition for Dark Fibre Access in the First Relevant Year only; or
 - f. Interexchange connectivity in BT+2 exchanges (“IEC BT+2”) for Relevant Ethernet Services in the First Relevant Year only.
3. In relation to Dark Fibre Access for LLA Area 3, the obligation referred to in paragraph 1 shall come into effect during the Second Relevant Year and shall apply to Orders that became Accepted Orders on or after the 1 June 2022 or that were Accepted Orders before such date but were not Completed Orders on such date, and in each subsequent Relevant Year shall apply to Orders that became Accepted Orders on or after the first day of the Relevant Year or that were Accepted Orders before such date but were not Completed Orders on such date.

Quality of Service Standard 1 - Mean Time to Provide

4. The Dominant Provider must ensure that the mean Time to Provide of Completed Orders is no more than 38 Working Days in each Relevant Year.

Quality of Service Standard 2 - Upper Percentile Limit

5. The Dominant Provider must ensure that the mean Monthly Upper Percentile Open Orders is no more than 4.5% in each Relevant Year.

Quality of Service Standard 3 - Certainty (including certainty cross-link)

6. The Dominant Provider must ensure that Time to Provide is less than or equal to the applicable Initial Contractual Delivery Period for at least 86% of Completed Orders in each Relevant Year.
7. The Dominant Provider must ensure that the mean Initial Contractual Delivery Period of Completed Orders is no more than 53 Working Days in each Relevant Year.

Quality of Service Standard 4 – Repairs

8. The Dominant Provider must ensure that ~~at least 94% of Faults~~ the mean time to achieve a Restored Service for all Faults excluding Customer Faults is no more than 230 minutes ~~within the period specified in the applicable service level agreement set out in the Dominant Provider's Reference Offer~~ in each Relevant Year.

Interpretation

9. For the purposes of interpreting this Direction 1:
- a) the following definitions shall apply:
- (i) **Accepted Order'** means an Order that has been validated and accepted by the Dominant Provider;
 - (ii) **'Completed Order'** means an Accepted Order that has been provisioned and for which all related work has been carried out;
 - (iii) **'Contractual Delivery Date'** means a date provided by the Dominant Provider to a Third Party Customer on which the Dominant Provider contracts for an Order to become a Completed Order;
 - (iv) **'Customer Caused Delay'** means a delay between the date on which an Order becomes an Accepted Order and the date on which (i) it becomes a Completed Order; (ii) it is treated as a becoming a Completed Order for the purposes of calculating the Time to Provide for Monthly Upper Percentile Open Orders; or (iii) an Initial Contractual Delivery Date is issued (as applicable) which the Dominant Provider can reasonably attribute to being caused either by a Third Party Customer or a customer of that Third Party Customer (including an end user);
 - (v) **"Customer Fault"** means a fault that the Dominant Provider has reasonably attributed to a Third Party Customer or a customer of that Third Party;
 - (vi) **'Dark Fibre Access'** means (i) for LLA Area 3, a service offered by the Dominant Provider to a Third Party providing network access to one or more optical fibres suitable for the transmission of electromagnetic energy to convey signals including the product known as Cablelink; and (ii) for interexchange connectivity, a service offered by the Dominant Provider to a Third Party providing network

access to one or more optical fibres suitable for the transmission of electromagnetic energy to convey signals including the products known as Dark Fibre X (DFX) and Cablelink, including in relation to (i) and (ii) of this subparagraph:

- A. all product variants except where Ofcom agrees otherwise; and
 - B. the introduction by the Dominant Provider of a new product and/or service wholly or substantially in substitution for that existing product and/or service;
- (vii) **'Fault'** means a degradation or problem with network access that is identified by the Dominant Provider or a Third Party Customer and which is registered on the Dominant Provider's operational support system;
- (viii) **'First Relevant Year'** means the period starting on 1 April 2021 and ending on 31 March 2022;
- (ix) **'Initial Contractual Delivery Date'** means the first date provided by the Dominant Provider to a Third Party Customer on which the Dominant Provider contracts for an Order to become a Completed Order;
- (x) **'Initial Contractual Delivery Period'** means the total number of Working Days from the date on which an Order becomes an Accepted Order to the Initial Contractual Delivery Date, but excluding Working Days attributable to Customer Caused Delay which occurred before the Initial Contractual Delivery Date was issued;
- (xi) **'Monthly Upper Percentile Open Orders'** means in relation to all Orders that were Accepted Orders but not Completed Orders by the end of the relevant month, the percentage of orders that had they become Completed Orders on the last day of the relevant month, would have had a Time to Provide of more than 133 Working Days;
- (xii) **'Order'** means a request submitted to the Dominant Provider by a Third Party for a Relevant Ethernet Service or Dark Fibre Access (as applicable), including (i) a request for an upgrade on bandwidth of an existing Relevant Ethernet Service; or (ii) a request for a change to the product variant of an existing Relevant Ethernet Service or Dark Fibre Access;

- (xiii) **‘Relevant Ethernet Services’** means those Ethernet Services offered by the Dominant Provider to a Third Party under the product or service names of (i) Ethernet Access Direct, (ii) Ethernet Backhaul Direct or (iii) Cablelink including, in relation to:
 - A. all product variants except where Ofcom agrees otherwise, and
 - B. the introduction by the Dominant Provider of a new product and/or service wholly or substantially in substitution for that existing product and/or service;
- (xiv) **‘Relevant Year’** means the period that started on 1 April 2021 and ended on 31 March 2022, and following 31 March 2022, every 12 month period beginning on 1 April and ending on 31 March;
- (xv) **‘Restored Service’** means the point at which any Relevant Ethernet Service or Dark Fibre Access, which has been subject to a Fault, is available for use by the Third Party without the relevant degradation or problem with network access;
- (xvi) **‘Second Relevant Year’** means the period starting on 1 April 2022 and ending on 31 March 2023;
- (xvii) **‘Third Party’** means a person providing a public electronic communications network or a person providing a public electronic communications service;
- (xviii) **‘Third Party Customer’** means a Third Party purchasing a Relevant Ethernet Service or Dark Fibre Access (as applicable) from the Dominant Provider;
- (xix) **‘Time to Provide’** means the total number of Working Days from the date on which an Order becomes an Accepted Order to the date when that Accepted Order becomes a Completed Order, excluding only Working Days attributable to Customer Caused Delay;
- (xx) **‘Wholesale Fixed Telecoms Market Review SMP Conditions’** means the SMP conditions in Schedule 1 of the 2021 SMP Conditions Notification; and
- (xxi) **‘Working Day’** means any day other than Saturdays, Sundays, public holidays or bank holidays in England and Wales, Scotland or Northern Ireland (as applicable).

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- b) Except as otherwise defined, words or expressions used shall have the same meaning as they have been ascribed in the Wholesale Fixed Telecoms Market Review SMP Conditions, and otherwise any word or expression as it has in the Act.
- c) Headings and titles shall be disregarded.
- d) Expressions cognate with those referred to in the Direction shall be construed accordingly.
- e) The Interpretation Act 1978 (c. 30) shall apply as if the Direction were an Act of Parliament.

Schedule 2

Direction 2: Transparency and publication of KPIs

Direction

- A. This Direction is made under section 49 of the Act and SMP Condition 10, and requires transparency and the publication of KPIs by the Dominant Provider in relation to the provision of network access in the markets for: (i) LLA Area 2; (ii) LLA Area 3; (iii) LLA HNR; (iv) interexchange connectivity in BT Only exchanges (“IEC”); (v) interexchange connectivity in BT +1 exchanges (“IEC BT+1”); and (vi) interexchange connectivity in BT+2 exchanges (“IEC BT+2”) in relation to Relevant Ethernet Services in respect of the First Relevant Year only; and where applicable to (iv) and (v) including the exchanges identified as IEC DF Transition in relation to Dark Fibre Access in respect of the First Relevant Year only.
- B. Ofcom hereby directs that the Dominant Provider comply with this Direction with effect from 1 April 2021. The publication requirements in relation to exchanges identified as (i) IEC DF Transition regarding Dark Fibre Access and (ii) IEC BT+2, in respect of the First Relevant Year shall end on 17 May 2022.

Transparency and publication of KPIs

1. Except insofar as Ofcom may from time to time otherwise consent in writing, the Dominant Provider must comply with the following transparency and publication requirements in respect of the provision of Relevant Ethernet Services, Relevant WDM Services, and Dark Fibre Access.

Publication of information

2. For each Quarter, the Dominant Provider must publish an average of the three months in that Quarter of the information required in each of KPIs (a) to (c) and (h)(i), for the geographic areas to which the market relates as a whole and, for each of KPIs (a) to (c) and (h)(i), split by reference to each Relevant Region in the Relevant Year.
3. Publication referred to in paragraph 2 above must be effected by the Dominant Provider placing the information on a publicly available website operated or controlled by the Dominant Provider within 15 Working Days after the end of the Quarter to which it relates.

Provision of information to Ofcom

4. For Orders or Faults which relate to products and services to which Direction 2 applies, excluding products and services provided in High Network Reach Areas, the figures required for the Dominant Provider to calculate each KPI (a) – ~~(s)~~(u) in this Direction, shall be calculated using the total number of relevant Orders or Faults in LLA Area 2, LLA Area 3, IEC, IEC BT+1 and IEC BT+2 in aggregate for the relevant KPI.
5. For all Orders to which this Direction 2 relates, the Dominant Provider must provide to Ofcom each month the information specified in KPIs (a) to ~~(s)~~(u) for the geographic areas to which the market relates as a whole, and in relation to KPIs (a) to (c), (f), (h) and (k) splits by reference to:
 - a. each Relevant Region; and
 - b. Orders for (i) EAD (including EAD LA); (ii) EBD; (iii) Cablelink; (iv) WDM; and (v) Dark Fibre Access; and
 - c. Orders (excluding WDM Orders) that related to the High Network Reach Areas identified in Schedule 3 of the SMP conditions;
6. For Orders which relate to products and services to which Direction 1 (Quality of Service Standards) applies in the Relevant Year, the Dominant Provider must also provide to Ofcom each month the information specified in KPIs (a) to ~~(s)~~(u) as a whole, and splits according to each of the following:
 - a. KPIs (a), (c), (f), (h) and (k), by reference to each Provision Category; and
 - b. KPIs (a) to ~~(s)~~(u) by reference to (i) Orders for the Dominant Provider; and (ii) Orders for Third Party Customers.
7. In relation to each of the requirements set out in paragraphs 5 and 6 above, for all KPIs

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except (r), the Dominant Provider must include in information provided to Ofcom:

- a. the denominator representing the volume of the applicable Relevant Ethernet Services over which the average or the percentage (as applicable) is calculated; and
 - b. the numerator representing the value corresponding to the denominator from which the average or the percentage (as applicable) is calculated.
8. The Dominant Provider shall provide to Ofcom narrative reports including statistical evidence summarising the causes of delay in respect of Orders (as specified in a. and b. below) which relate to products and services to which Direction 1 (Quality of Service Standards) applies in a Relevant Year. The first such narrative report shall be provided in respect of the period 1 April 2021 to 30 September 2021. Thereafter narrative reports shall be provided to Ofcom in respect of each Six Month Period.

Each narrative report shall include details of those Orders that either:

- a. became Closed Orders in the period covered by the report that had a Time to Provide of more than 133 Working Days in the Relevant Years; or
 - b. were Accepted Orders but not Closed Orders at the end of the period covered by the report and that would have had a Time To Provide of more than 133 Working Days in the Relevant Years, had they become Completed Orders on the last day of the period covered by the report being provided.
9. Provision of information to Ofcom referred to under paragraphs 5 to 7 above must be effected by the Dominant Provider by sending an email to a person designated by Ofcom, in the form notified by Ofcom from time to time (which may include requirements as to who within the Dominant Provider must confirm accuracy of contents), within 15 Working Days after the end of the relevant month to which it relates.
10. Provision of information to Ofcom referred to under paragraph 8 above must be effected by

the Dominant Provider by sending an email to a person designated by Ofcom, in the form notified by Ofcom from time to time (which may include requirements as to who within the Dominant Provider must confirm accuracy of contents), within 30 Working Days after the end of the relevant Six Month Period to which it relates.

Interpretation

11. For the purposes of interpreting this Direction 2:

- f) the following definitions shall apply:
 - i. **“Accepted Order”** means an Order that has been validated and accepted by the Dominant Provider;
 - ii. **“Completed Order”** means an Accepted Order that has been provisioned and for which all related work has been carried out;
 - iii. **“Contractual Delivery Date”** means a date provided by the Dominant Provider to a Third Party Customer on which the Dominant Provider contracts for an Order to become a Completed Order;
 - iv. **“Customer Caused Delay”** means a delay between the date on which an Order becomes an Accepted Order and the date on which (i) it becomes a Completed Order; (ii) it is treated as a becoming a Completed Order for the purposes of calculating the Time to Provide in KPI(h); or (iii) an Initial Contractual Delivery Date is issued (as applicable) which the Dominant Provider can reasonably attribute to being caused either by a Third Party Customer or a customer of that Third Party Customer (including an end user);
 - v. **“Customer Fault”** means a Fault that the Dominant Provider has reasonably attributed to a Third Party Customer or a customer of that Third Party;
 - vi. **“Dark Fibre Access”** means (i) for LLA Area 3, a service offered by the Dominant Provider to a Third Party providing network access to one or more optical fibres suitable for the transmission of electromagnetic energy to convey signals including the product known as Cablelink; and (ii) for interexchange connectivity, a service offered by the Dominant Provider to a Third Party providing network access to one or more optical fibres suitable for the transmission of electromagnetic energy to convey

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signals including the products known as Dark Fibre X (DFX) and Cablelink, including in relation to (i) and (ii) of this subparagraph:

- a. all product variants except where Ofcom agrees otherwise; and
 - b. the introduction by the Dominant Provider of a new product and/or service wholly or substantially in substitution for that existing product and/or service;
- vii. **“Delay Code”** means a code applied by the Dominant Provider that categorises the reason for a change in Contractual Delivery Date and notifies a Third Party Customer of that change, or for a cause of delay to the Accepted Order becoming a Completed Order.
- viii. **“Fault”** means a degradation or problem with network access that is identified by the Dominant Provider or a Third Party Customer and which is registered on the Dominant Provider’s operational support system;
- ix. **“Final Contractual Delivery Date”** means the last Contractual Delivery Date after which, in respect of the relevant Order, no other Contractual Delivery Dates were provided;
- x. **“Initial Contractual Delivery Date”** means the first date provided by the Dominant Provider to a Third Party Customer on which the Dominant Provider contracts for an Order to become a Completed Order;
- xi. **“Initial Contractual Delivery Period”** means the total number of Working Days from the date on which an Order becomes an Accepted Order to the Initial Contractual Delivery Date, but excluding Working Days attributable to Customer Caused Delay which occurred before the Initial Contractual Delivery Date was issued;
- xii. **“KPI”** means a key performance indicator;
- xiii. **“Order”** means a request submitted to the Dominant Provider by a Third Party for a Relevant Ethernet Service, Relevant WDM Service or Dark Fibre Access (as applicable), including (i) a request for an upgrade on bandwidth of an existing Relevant Ethernet Service or Relevant WDM Service; or (ii) a request for a change to the product variant of an existing Relevant Ethernet Service, Relevant WDM Service, or Dark Fibre Access;

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- xiv. **“Provision Category”** means such categories, as may be specified from time to time in the Dominant Provider’s Reference Offer in relation to its ordering and provisioning procedures, which identify an Order by reference to one or more of the following:
 - a. a specified level of provisioning work; and
 - b. a specified lead time.
- xv. **“Quarter”** means in respect of Relevant Years, each of the following periods as applicable:
 - a. 1 April to 30 June;
 - b. 1 July to 30 September;
 - c. 1 October to 31 December;
 - d. 1 January to 31 March;
- xvi. **“Relevant Ethernet Services”** means those Ethernet Services offered by the Dominant Provider to a Third Party under the product or service names of (i) Ethernet Access Direct, (ii) Ethernet Backhaul Direct or (iii) Cablelink including, in relation to:
 - a. all product variants except where Ofcom agrees otherwise, and
 - b. the introduction by the Dominant Provider of a new product and/or service wholly or substantially in substitution for that existing product and/or service;
- xvii. **“Relevant Region”** means any of the following six nations and regions, as defined by the Dominant Provider:
 - a. Northern Ireland;
 - b. Scotland;
 - c. Wales;
 - d. England – North;
 - e. England – East; and
 - f. England – West;

or other such regions as Ofcom may agree with the Dominant Provider or direct from time to time;

- xviii. **“Relevant WDM Services”** means those WDM Services offered by the Dominant Provider to a Third Party under the product or service names of (i) Optical Spectrum Access; (ii) Optical Spectrum Extended Access; or (iii) Optical Filter Connect including, in relation to each:
- a. all product or service variants except where Ofcom agrees otherwise; and
 - b. the introduction by the Dominant Provider of a new product and/or service wholly or substantially in substitution for that existing product and/or service;
- xix. **“Relevant Year”** means every 12 month period beginning on 1 April and ending on 31 March;
- xx. **“Restored Service”** means the point at which any Relevant Ethernet Service, Relevant WDM Service, or Dark Fibre Access, which has been subject to a Fault, is available for use by the Third Party without the relevant degradation or problem with network access;
- xxi. **“Six Month Period”** means in respect of the Relevant Year:
- (i) 1 April to 30 September;
 - (ii) 1 October to 31 March;
- xxii. **“Third Party”** means a person providing a public electronic communications network or a person providing a public electronic communications service;
- xxiii. **“Third Party Customer”** means a Third Party purchasing a Relevant Ethernet Service, Relevant WDM Service, or Dark Fibre Access (as applicable) from the Dominant Provider;
- xxiv. **“Time to Provide”** means the total number of Working Days from the date on which an Order becomes an Accepted Order to the date when that Accepted Order becomes a Completed Order, excluding only Working Days attributable to Customer Caused Delay;
- xxv. **“Time to Repair”** means the total number of minutes from the time the Fault was accepted by the Dominant Provider to the time when a Restored Service is

achieved, excluding only time attributable to a Third Party Customer or a customer of that Third Party Customer (including an end user);

- xxvi. **“WDM Services”** means services provided using wavelength division multiplexing equipment located at the customer’s premises and which is capable of supporting multiple leased line services over a single fibre or pair of fibres;
- xxvii. **“Wholesale Fixed Telecoms Market Review SMP Conditions”** means the SMP conditions in Schedule 1 of the 2021 SMP Conditions Notification; and
- xxviii. **“Working Day”** means any day other than Saturdays, Sundays, public holidays or bank holidays in England and Wales, Scotland or Northern Ireland (as applicable).
- g) Except as otherwise defined, words or expressions used shall have the same meaning as they have been ascribed in the Wholesale Fixed Telecoms Market Review SMP Conditions, and otherwise any word or expression as it has in the Act.
- h) Headings and titles shall be disregarded.
- i) Expressions cognate with those referred to in the Direction shall be construed accordingly.
- j) The Interpretation Act 1978 (c. 30) shall apply as if the Direction were an Act of Parliament.

List of KPIs relating to quality of service

KPI (a) - Mean Time to Provide

In relation to all Orders that became Completed Orders in the relevant month, the mean Time to Provide.

KPI (b) - Fault repair performance

The percentage of Faults during the relevant month that achieved a Restored Service within the period specified in the applicable service level agreement set out in the Dominant Provider’s Reference Offer.

KPI (c) - Delivery date certainty

In relation to all Orders that became Completed Orders in the relevant month, the percentage of Completed Orders which were completed with a Time to Provide that is equal to or less than their Initial Contractual Delivery Period.

KPI (d) - Time to provide (lower percentile)

In relation to all Orders that became Completed Orders in the relevant month, the percentage of Completed Orders in respect of which the Time to Provide was 29 Working Days or less.

KPI (e) - Time to provide (upper percentile)

In relation to all Orders that became Completed Orders in the relevant month, the percentage of Completed Orders in respect of which the Time to Provide was more than 133 Working Days in each Relevant Year.

KPI (f) – Certainty Cross-Link (Mean initial contractual delivery period)

In relation to all Orders that became Completed Orders in the relevant month, the mean Initial Contractual Delivery Period.

KPI (g) - Monitoring the tail (closed work stack)

In relation to all Orders that became Completed Orders in the relevant month, the mean Time to Provide of those Completed Orders whose Time to Provide was more than 133 Working Days in each Relevant Year.

KPI (h) - Monitoring the tail (open work stack)

- (i) In relation to all Orders that were Accepted Orders but not Completed Orders by the end of the relevant month, the percentage of orders that had they become Completed Orders on the last day of the relevant month, would have had a Time to Provide of more than 133 Working Days in each Relevant Year; and
- (ii) for those orders only, the mean Time to Provide had they been completed on the last day of the relevant month.

KPI (i) - Time to provide of the tail extremities

In relation to all Orders that became Completed Orders in the relevant month, the Time to Provide of the Completed Order corresponding to the 97th percentile of Completed Orders (i.e. the Completed Order with a Time to Provide greater than 97% of Completed Orders).

KPI (j) - Order validation

In relation to all Orders that became Accepted Orders in the relevant month, the percentage that became Accepted Orders within the timescales set out in the applicable service level agreement set out in the Dominant Provider's Reference Offer.

KPI (k) – Mean time to issue initial contractual delivery dates

In relation to all Orders in respect of which an Initial Contractual Delivery Date was issued in the relevant month, the mean number of Working Days that elapsed between the Order becoming an Accepted Order and the issue of an Initial Contractual Delivery Date but excluding Working Days attributable to Customer Caused Delay which occurred after the Order becoming an Accepted Order but before the Initial Contractual Delivery Date was issued.

KPI (l) - Performance in issuing initial contractual delivery dates

In relation to all Orders in respect of which an Initial Contractual Delivery Date was issued in the relevant month, the percentage for which it was issued within the timescales set out in the applicable service level agreement set out in the Dominant Provider's Reference Offer.

KPI (m) - Changes to contractual delivery dates

In relation to all Orders that became Completed Orders in the relevant month, the percentage of Completed Orders subject to a change to the Contractual Delivery Date not attributable to Customer Caused Delay.

KPI (n) - Mean delay due to contractual delivery date changes

In relation to changes to the Contractual Delivery Date not attributable to Customer Caused Delay for each Completed Order in the relevant month, the average number of Working Days incurred for each Completed Order as a result of such changes.

KPI (o) - Mean customer caused delay

In relation to all Orders that became Completed Orders in the relevant month and which were subject to one or more changes in the Contractual Delivery Date that were attributable to Customer Caused Delay, the average number of Working Days incurred for each Completed Order as a result of such changes.

KPI (p) - Monitoring traffic management delay code applications

In relation to all Orders that became Completed Orders in the relevant month:

Modification to QoS Directions for Ethernet and Dark Fibre

- (i) the percentage that were subject to Delay Codes relating to traffic management; and
- (ii) for those Orders only, the mean number of Working Days associated with each Delay Code relating to traffic management.

KPI (q) - Monitoring wayleave delay code applications

In relation to all Orders that became Completed Orders in the relevant month:

- (i) the percentage that were subject to Delay Codes relating to wayleaves; and
- (ii) for those Orders only, the mean number of Working Days associated with each Delay Code relating to wayleaves.

KPI (r) - Size of the installed base

The total number of each of the following for which the Dominant Provider is charging Third Parties, at the end of the relevant month:

- (i) Relevant Ethernet Services;
- (ii) Relevant WDM Services;
- (iii) Dark Fibre Access.

KPI (s) Performance against final CDD

In relation to all Orders that became Completed Orders in the relevant month, the percentage of Completed Orders that were completed on or before the Final Contractual Delivery Date.

KPI(t) Mean time to repair

In relation to all Faults that achieved a Restored Service in the relevant month, the mean Time to Repair.

KPI (u) Mean time to repair customer faults

In relation to all Customer Faults that achieved a Restored Service in the relevant month, the mean Time to Repair.