openreach

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By email only

Date: 6 Feb 2023

Openreach request for amendments to the Quality of Service Directions and related Key Performance Indicators for Ethernet and Dark Fibre repairs in the leased lines access and inter-exchange connectivity markets.

Dear ✂,

Summary of Openreach request and proposal[1]

Following constructive discussions with Communications Providers (**CPs**) including at industry fora, this document sets out Openreach's request for changes to be made to:

1. The Quality of Service standard (**QoS Standard**) covering repair for Ethernet[2] and Dark Fibre[3] products in leased lines (**LL**) access and inter-exchange connectivity (**IEC**) markets; and

2. related key performance indicators (**KPIs**).

Please note there is no impact on current contractual Service Level Agreements (**SLAs**) and Service Level Guarantees (**SLGs**). These will continue to operate as they currently do.

Specifically, Openreach requests that the current QoS Standard, which is an 'on-time repair' (**OTR**) measure, is removed and replaced with a new QoS Standard that is based on a 'mean time to repair' (**MTTR**) measure. Openreach further proposes that the MTTR is based only on faults that are reasonably within its control, and therefore, that customer faults and Matters Beyond Our Reasonable Control (**MBORC**) faults are removed from the QoS measure. We will continue to track our performance against MBORC faults through a new KPI, alongside continuing to report all existing KPIs.

Openreach believes that the current OTR QoS Standard is no longer appropriate and proportionate.

This is because:

[1] Terms used in this letter (e.g. "fault", "restored service") are as defined in the Directions unless otherwise stated.
[2] "Relevant Ethernet Services", covering Ethernet Access Direct (**EAD**), Ethernet Backhaul Direct and Cablelink, as well as all variants and replacements for these.
[3] "Dark Fibre Access", covering Dark Fibre Access and Dark Fibre Inter Exchange products.

- There has been an underlying change in the fault mix for leased line (**LL**)/Interexchange Connectivity (**IEC**) products with an increase of the harder to fix faults and a reduction of the easier to fix faults.
    - Over the past two years, the volume of MBORC faults has increased well above the "business as usual" level envisaged by Ofcom in 2021[4] and their proportion in the fault mix has doubled (see Annex 1, Table 3).
    - In parallel, a number of initiatives actioned by Openreach in close collaboration with our customers, have reduced the instances of easier to fix faults.
- The current OTR standard does not adequately reflect these changes. The inclusion of MBORC faults and customer faults distorts the reported QoS Standard from Openreach's underlying service performance. In fact, these changes are making it harder for Openreach to meet the target.
- The current measure does not provide the correct incentive for Openreach to continue to improve service quality. Repairs count towards the measure in a binary way, rather than any reduction in repair time improving the measure. OTR does not incentivise Openreach to deal with faults as quickly as possible once the OTR target is reached or to further reduce repair times for faults that are fixable faster than the OTR target.
- Whilst our performance against the current OTR measure is worsening, customers' satisfaction is generally improving, for example, our Net Promoter Score (**NPS**) has increased over this financial year from +39 in April 2022 to +45 in December 2022 (12 month rolling averages).

The proposed measure will remain aligned to current active product contractual arrangements and the proposed increased reporting that will be available to CPs will aid transparency. We believe our proposal will work effectively until the end of the present WFTMR period[5] and that MTTR is likely to be a suitable measure moving into the next WFTMR period.

As set out below, Openreach has developed its proposals in discussion with CPs, especially at the Ethernet Service Forum, who have been supportive of our proposals, and with the Office of the Telecoms Adjudicator (**OTA2**).

Openreach suggests that Ofcom effects this change via a series of amendments to Ofcom's Quality of Service and KPI Directions dated 18 March 2021 (**Directions**) made under Section 49A of the

[4] In the WFTMR Statement, Ofcom decided "*not to introduce an allowance for MBORC events in LL Access markets. We consider that the QoS standards we have set are achievable under 'business as usual' years and note that Openreach's failure to achieve this standard in the past has been due to it facing significant unexpected challenges in that year. We have not seen any evidence to suggest that MBORC events for Ethernet will increase and hence, consider that there is no substantive basis of a "cautionary" MBORC allowance*". (Volume 5, paragraph 4.57).
[5] The current Wholesale Fixed Telecoms Market Review 2021-26 (WFTMR) ends on 31 March 2026.

Communications Act 2003 (**CA2003**).[6] A draft of the proposed amendments that would be required is set out in full in Annex 2 of this document

Openreach seeks Ofcom's confirmation that it supports this proposal, and that this proposal meets the criteria for Ofcom to consult and amend the current Direction accordingly.

For ease of reference, Table 1 below lists the current measures and KPIs and the proposed measures and KPIs.

Table 1 – Summary comparison of new proposed QoS Standard with existing QoS standard

	Status Quo	**Proposal**	**Change and Rationale**
Type	On-time: 94% of faults to be cleared by the repair time specified in the relevant SLA	MTTR: target of no more than 5 working hours	The proposal is to move from an on-time measure to a MTTR based measure, where the target is based on the average duration over the compliance period that it takes Openreach to fix a fault. This measure creates an 'every second counts' mentality when dealing with individual faults which will be of benefit to all parties.
Products covered	Relevant Ethernet Services and Dark Fibre Access (as defined in the QoS Directions)	No change	There is no change to the scope of products covered – the new standard will continue to cover EAD, EBD, Cablelink and Dark Fibre (both Access and Inter Exchange variants).
Faults covered	All faults registered on Openreach's system	All faults registered on Openreach's system except Customer Faults and MBORC Faults (which are outside Openreach's control)	The proposal is to exclude from the compliance measure customer and MBORC faults. Openreach considers that neither of these fault types are within Openreach's ability to control. The customer faults are not faults on the Openreach network and MBORC faults need to be subject to a valid contractual MBORC declaration meaning that the cause of the fault was outside of Openreach's ability to control.

[6] Appended to Volume 7 of the WFTMR.

	Status Quo	Proposal	Change and Rationale
			Openreach considers that it will be proportionate and reasonable to focus the compliance of the QoS measure more directly on the fault types that are associated with the Openreach network and that Openreach has agency to control (even though removing customer faults makes compliance with a target more difficult for Openreach). Removing these fault types from the compliance assessment is necessary to create a more resilient and stable measure.
Compliance period and duration	Annual and until the end of the 25/26.	No change[7]	There is no change to the standard compliance period, which will be 1 year. The proposed QoS should remain in place until the WFTMR QoS Directions expire. To note, if the modification is adopted during 2022/23, it will not be possible to have a 1 year compliance period. Therefore, if implemented, in 2022/23, the compliance period will be from the inception of the new Standard until 31 March 2023 inclusive.
KPIs / transparency	Per existing WFTMR arrangements	Per existing WFTMR arrangements plus new KPIs covering: - MTTR version of all the existing KPIs - Additional KPI showing on-time performance in relation to customer	The proposal is to increase the number of KPIs that Openreach shares with stakeholders. This will help give stakeholders confidence that the changes proposed will not give rise to any decline in underlying Openreach performance. Accordingly, Openreach is proposing to add the following KPIs to the existing suite of KPIs required under the Directions (which Openreach will continue to produce):

[7] Openreach notes that in the first period of operation, which would be in financial year 22/23, the compliance period could be shorter than 1 year.

	Status Quo	Proposal	Change and Rationale
		faults and MBORC	- We will replicate the entire suite of the existing OTR measures with MTTR equivalents; and - We will add an OTR measure for customer faults and MBORC faults to show ongoing performance against these classes of faults that are being removed from the QoS standard compliance assessment. For the same reason, we will also add an MTTR measure for MBORC faults (but we will not add an MTTR measure for customer faults). We are not proposing to remove any of the existing KPIs required under the Directions, and we are not proposing to make any changes to the public QoS KPIs. A full specification of the KPIs proposed are set out in Annex 3 to this document.
Contractual SLA/SLG arrangements	5 hours for Ethernet products (except EAD Sensitive) 18 hours for Dark Fibre and EAD Sensitive	No change	There is no proposed change to existing contractual SLA/SLG arrangements.

Our proposal is set out in more detail below.

Yours sincerely

Mark Shurmer
MD Regulatory Affairs
Openreach

Annex 1

Openreach request for amendments to the Quality of Service Directions and related Key Performance Indicators for Ethernet and Dark Fibre repairs in the leased lines access and inter-exchange connectivity markets.

Description of the current QoS Standard and KPIs for Ethernet and Dark Fibre Repair

Under SMP Condition 10 of the WFTMR, Openreach must comply with all such QoS requirements and publish all such QoS information as Ofcom may from time-to-time direct. This SMP Condition is currently implemented by the Directions.

Under Schedule 1 of the Directions, Openreach is required to ensure 94% of faults[8] achieve a restored service[9] within the period specified in the relevant SLA. For most Ethernet products, this requires restored service within 5 hours; for Dark Fibre and EAD Sensitive, it requires restored service within 18 hours.

Under Schedule 2 of the Directions, every quarter, Openreach must publish its performance against various KPIs. Under KPI (b), Openreach must report the percentage of faults that were repaired in line with the QoS standard above.

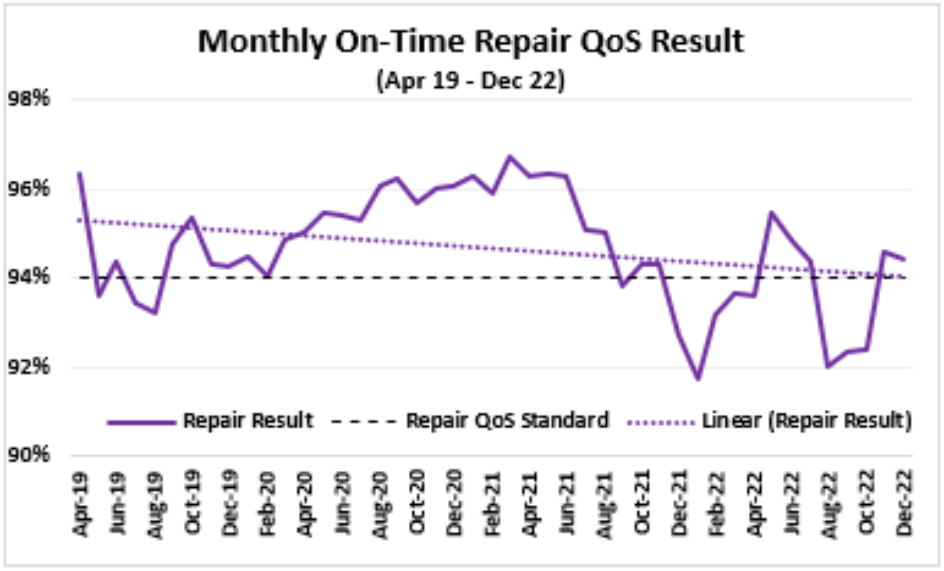
The Directions' definition of "Fault" includes any degradation or problem identified by Openreach or a CP and registered on Openreach's operational support system.[10] It therefore includes faults registered on Openreach's system that are outside of Openreach's control, including issues within the CPs' estates and issues where the root cause is subject to a contractual MBORC ('Matters Beyond Our Reasonable Control') declaration, for example damage caused to the network by a third party or extreme weather conditions. There is no allowance in the 94% target for MBORC faults.

The QoS Standard has substantively remained in this form since it was first introduced by Ofcom in 2016[11]. Compliance with the QoS Standard is measured annually.

[8] Defined in Schedule 1, paragraph 9(vi) as "*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*."
[9] Defined in Schedule 1, paragraph 9(xiv) as "*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*."
[10] Paragraph 9(a)(vi).
[11] As part of Ofcom's Business Connectivity Market Review 2016.

Openreach has met the repair QoS Standard in every year since its inception. Figure 1 below shows Openreach's performance between April 2019 and August 2022.

Figure 1: Monthly On-Time Repair



There has been significant focus on improvements to the repair processes in the last 3 years. The scope of these improvements has ranged from organisational changes within Openreach to designing and implementing processes to ITIL (Information Technology Infrastructure Library) standards. These initiatives have been discussed regularly at the Ethernet Service Forum and collaboration between Openreach and CPs has been particularly constructive. The result of everyone's efforts has been an improved customer experience and reduction in certain fault categories over the last few years.

The problem with the existing fault standard

The Openreach services are currently regulated using an OTR metric of 94% of all issues restored within the time stipulated by the SLA, calculated annually. Delivery of the average performance of 94% is a denominator driven achievement, that is dependent on the volume of faults generated i.e. if the denominator is bigger as there are more faults, it is easier to meet, whilst if the denominator is smaller (with fewer faults to fix) it is more volatile.

The proportion of 'hard to fix' faults has increased

This denominator is made up of several different types of faults, that can be generally categorised as customer issues, electronic remote fixes, electronic field fixes, fibre faults and incidents. Each category has a different propensity to be fixed within the SLA time period (which is 5 hours for most products).

- *Customer*: Faults within the CP estate rather than the Openreach network. The triage and interaction of customer issues can be complex, but they are primarily cleared within 5 hours.
- *Electronic remote*: Faults with the electronics aspects of the service can be dealt with by Openreach remotely. They are complex to resolve but again often achieved within a 5 hour window as they do not involve engineer travel.
- *Electronic field*: Faults with the electronics aspects of the service that require a field engineering visit. These often involve time-consuming engineering travel and complex onsite resolution that takes a longer duration which frequently exceed 5 hours.
- *Fibre faults*: Faults with the fibre element of the service, for example a fibre break. These always involve time-consuming engineering travel and complex onsite resolution that takes a longer duration and frequently exceed 5 hours.
- *Incidents (or MBORC faults)*: Faults where the root cause is subject to a contractual MBORC declaration. This can be, for example, damage caused to the network by a third party or faults caused by extreme weather conditions. These often involve time-consuming engineering travel and complex onsite resolution that takes a longer duration and frequently exceed 5 hours.

Improvement initiatives have led to a reduction in the proportion of customer and electronic faults (which are easier to fix).

During 2019 Openreach Network Operations and Management was formed to combine all of the teams in Openreach involved in managing the in-life fibre network and its components. The overall vision was to produce a single network operating centre (NOC) that employed ITIL principles to better manage the Openreach network for its customers. This vision involved the fast resolution of issues within our network, early identification of problems and their future prevention. The core functions developed to support this vision are (1) Service Assurance, (2) Network Problem Management and (3) Network Health and Change. These are explained further as follows:

(1) Service Assurance:
Service Assurance supports the business by providing insight and analytics into the performance of the NOC specifically focussed around the QoS metric. It aims at ensuring the business is aware of the position to date and where potential issues are arising and how they can be managed and supported. Service Assurance also provides in-depth analysis of the data to identify changes in the faults reported and the effect this has on the operation of the NOC and the processes that Openreach follows. It interfaces directly with customers, drives improvement initiatives and allows better interaction between the Openreach NOC and the CP NOCs.

(2) Network Problem Management:
The role of the Network Problem Management is to identify and record problems we encounter within the network and then carry out investigative works to determine the root cause and facilitate

the introduction of a solution by working with the relevant resolver groups. These problems are then collated on the 'Known Error Database' to maintain a permanent record of the problems we have faced and any workarounds or solutions which have been implemented. The aim is to minimise skill gaps within the team, proactively prevent the reoccurrence of incidents and ensure a timely resolution. The problems tackled within the role are a combination of those encountered and raised by individuals within the NOC and those proactively identified by monitoring network trends.

(3) Network Health and Change:
The core responsibility of the Network Health and Change team is to monitor the network to ensure it is maintained in the best way to provide a consistent and reliable service. With particular focus on management reachability, it ensures diagnostics and alarms are effective and that software improvements and fixes are developed by our vendors. The team also manages the delivery of any software upgrades into the network in a controlled and sustainable way, ensures customer service is maintained and ensures that the impact of these upgrades is monitored.

Some key outcomes of these improvement initiatives are:

- *Customer:* CPs are better able to use diagnostic tools to correctly assess whether a fault is on the Openreach network or on the customer network with the result there has been a reduction in the proportion of customer faults in the fault mix.
- *Electronic remote (NOC)*: a significant number of software fixes have been implemented to deal with recurring electronic remote faults and as a result many faults that otherwise would have arisen have been avoided.
- *Electronic field*: again, a significant number of software fixes have been implemented to deal with recurring electronic remote faults and as a result, many faults that otherwise would have arisen have been avoided.

The resulting change in the relative volumes of each fault category means that performance against the current QoS Standard does not reflect the improvement achieved by the above initiatives.

Table 2 below illustrates the fault trend and shows that easier to resolve faults are decreasing as a proportion of overall faults.

Table 2 – LL/IEC fault types

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

Table 3 below shows how the pattern of fault categories has changed since NOC was introduced. Harder to fix faults (fibre and incident faults) make up a higher proportion of faults.

Table 3 –Proportion of each fault type in the fault mix

[✂]

The QoS Standard has substantively remained unchanged since it was first introduced by Ofcom in 2016[12] even though there has been wholesale change in the way that faults are managed and as a result the fault mix. Further, the underlying LL/IEC fault mix has not only changed recently but we have a reasonable expectation that the proportion of hard to fix faults is likely to increase due to further service improvements and the unavoidable consequence [✂] is an increasing percentage of fibre intervention faults on the network.

The result is that even though repair customer experience has improved in recent years the performance to the OTR repair standard has worsened (see the trend line in Figure 1 above).

In other words, against a backdrop of strong Openreach performance working in collaboration with its customers in reducing the need to raise certain faults (which is a good thing for all), the QoS standard is becoming increasingly difficult to hit.

[12] As part of Ofcom's Business Connectivity Market Review 2016.

For these reasons, Openreach considers that the current QoS standard needs to change. It should be replaced with a new measure that better reflects the level of service being delivered by Openreach and has better incentives for Openreach to deliver good service and make service improvements.

Proposal

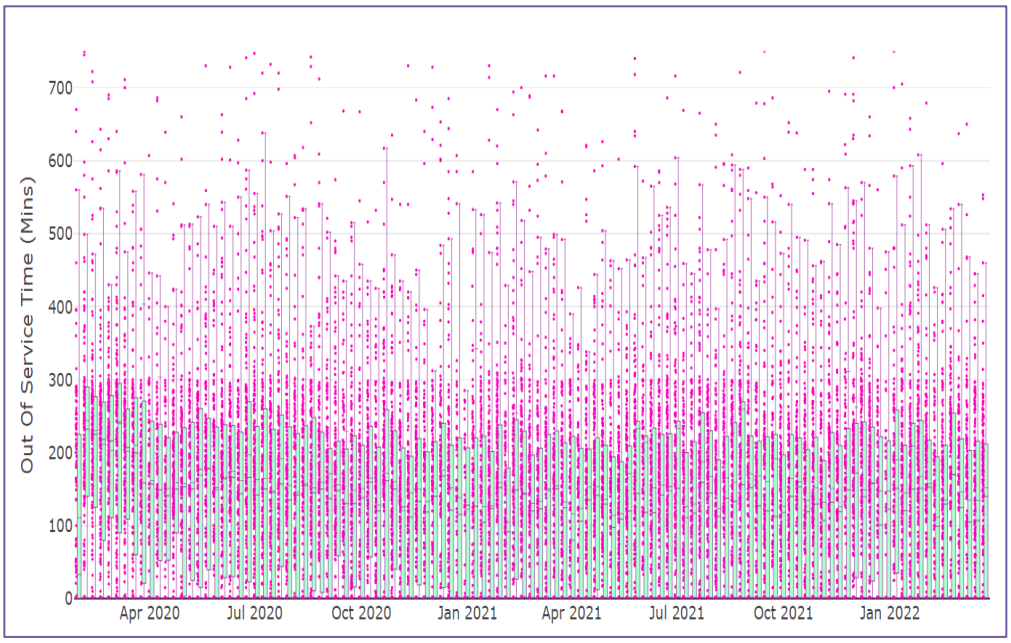
Principles for developing a new QoS Standard

In developing a new QoS standard to replace, and improve upon, the existing measure, Openreach has been mindful of the following principles:

1. **Providing incentives to minimise all repair times**
   An MTTR measure provides incentives to repair all faults as quickly as possible. Reductions in repair times count towards the measure regardless of whether an individual repair has already failed the SLA, or is over or above the target MTTR.

   These incentives do not apply under the current OTR QoS Standard. Figure 2 below plots the repair times of faults (represented as pink dots) actioned by Openreach over roughly 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 scattered. Under the OTR standard, once the SLA has been missed, that fault is marked as a compliance failure irrespective of how great the miss and this creates a lower incentive to reduce repair times above the 5 hour threshold.

   Figure 2 – Trend analysis for on-time repair



2. **Promote continuous service improvement**
   As noted, the construction of the current QoS Standard disincentivises improvement work that reduces the incidence of 'easier' to fix faults, even though that work is delivering benefits to Openreach, CPs and end customers. The new QoS Standard would incentivise continuous improvement of this kind, by removing the fault types with the shortest and longest repair times (Customer faults and MBORC faults), making meeting the target less dependent on a high volume of 'easy to fix' faults (see next principle).

3. **Uncontrollable variables removed**
   As explained above, there is a mixture of different fault types. Customer faults (which have very low repair times) and MBORC incidents (which tend to have long repair times) are outside of Openreach's control and should not be included in the QoS repair Standard.

   In 2016 BCMR, Ofcom recognised that MBORC faults were outside Openreach's control. [13] Nevertheless, it determined it was proportionate to include MBORC-related events in the QoS measure for both provisioning and repair.[14] The fault types that have made the current repair QoS Standard increasingly challenging are hard network faults. In 2021 WFTMR, Ofcom noted that 'Openreach's failure to achieve this standard in the past has been due to it facing significant unexpected challenges in that year'.[15] As can be seen from Table 3 above, incident faults have increased as a proportion of all faults (and also in absolute terms). As a result of avoiding and/or removing 'easy to fix' faults from the fault mix, the level of incident faults is a more substantial determinant of measured repair performance than in the past. If MBORC faults are not removed the measure will increasingly reflect changes in the number of incidents rather than changes in Openreach's underlying performance.

   The removal of customer and MBORC faults will create a simpler and more precise measure that focuses on underlying Openreach performance (the key purpose of the QoS measure) and will remove most of the instability in changing product mix, thereby helping create a more resilient and stable measure. To confirm, Openreach will continue to action customer and MBORC (field) faults – but because these faults are not within Openreach's control, they should no longer be part of the QoS Standard compliance assessment[16].

   Our understanding is that CPs do not find the inclusion of MBORC particularly meaningful for understanding the general performance of Openreach across its network. They are typically

[13] Paragraph 13.307, Ofcom BCMR Statement 2016
[14] Paragraph 13.309 and 13.310, Ofcom BCMR Statement 2016
[15] Paragraph 4.57, WFTMR 2021.
[16] For completeness, and whilst we are not asking for an MBORC allowance (but for the removal of MBORC faults entirely), we note that it is no longer the case MBORC faults do not have any impact on our ability to reach the QoS standard. As such Ofcom's conclusion at paragraph 4.57 of the WFTMR Statement Volume 5 no longer applies.

aware of MBORC events. To the extent that understanding MBORC is helpful for CPs, this can be addressed through reporting.

4. **An appropriate and stable level of QoS Standard**

The QoS Standard should recognise that repair performance continues at a good level whilst incentivising Openreach to continue delivering high levels of performance. Under the proposal, the 5 hour SLA repair time would become a mean average target, not a pass/fail target. In other words, Openreach's mean average repair time for active dedicated leased products would need to be no more than 5 hours (in line with Openreach's 5 hour repair SLA for most active leased line products). This MTTR would be achievable in light of the current and projected fault mix but would still require a high quality of service to be met.

Openreach's current MTTR performance for YTD 22/23 is c. 2h30mins.[17] We recognise that our current MTTR performance is ahead of the proposed QoS Standard. We consider this is needed to allow for a number of future trends that we expect will narrow the gap between our performance and the proposed QoS Standard between now and the end of the current WFTMR period. It will be good for all parties to create a QoS standard that will last at least until the end of the current WFTMR period, and ideally beyond, hence we consider that the level of the proposed Standard is appropriate and proportionate.

The trends we expect are:

- Growth of dark fibre volume – Dark fibre has an 18 hour repair SLA , hence as its volumes grow, and there are more associated dark fibre repairs, this will tend to increase the MTTR measure.
- Further changes in the fault mix between electronic and fibre faults – Electronic faults typically have a shorter repair time than fibre faults, but the volume of electronic faults has been decreasing whereas the volume of fibre faults is broadly flat, which will tend to increase the MTTR measure.

Further, we note that the OTR measure was introduced and maintained as a precautionary measure; improving the repair performance Openreach delivered has historically, in and of itself, not been Ofcom's or CPs' concern. When the OTR repair standard was introduced in 2016 Ofcom accepted repair performance was good and acceptable. *"… the quality of Openreach's repairs of these services was broadly acceptable"*[18] but were concerned that should a target not be introduced "*this [repair performance] too could easily decline if Openreach were to choose to divert resources to improve the quality of provision*".

[17] For YTD 22/23, MTTR excluding customer and MBORC faults is c2h30mins. MTTR excluding customer faults but including MBORC faults is c4h. MTTR including both customer and MBORC faults is c2h, but we do not consider it meaningful to include customer faults in the MTTR measure.

[18] Paragraph 13.32 Ofcom BCMR Statement 2016

The 'precautionary measure' rationale for an OTR repair quality standard did not subsequently change in 'carry over' decisions in the 2019 BCMR and 2021 WFTMR (i.e. the intention was to maintain the level of repair rather than drive an improvement). As stated above, a MTTR measure exhibits better incentives to fix all faults as quickly as possible and also increases service improvement incentives. As a result, we believe replacing the OTR measure with the MTTR measure will work equally well as a precautionary measure whilst promoting better repair service outcomes.

5. **A measure that is more relevant commercially and operationally**
   The discussions held with CPs indicate that a MTTR measure is likely to be more in line with their own approach to fault management with their customers as the proposed measure relates to the average time to repair which is commonly used in the telecommunications industry in the UK.[19] The provision of MTTR data coupled with fault volumes by CP positively allows a CP to calculate and report Network Availability which is often asked for in network RFIs.

   Further, we believe that changing to a MTTR measure will help Openreach management be clearer that trading off repair performance of 'good' faults (ones that haven't failed the SLA) against 'bad faults' (ones that have failed the SLA) doesn't help achieve good service quality and will help establish an 'every second counts' mentality to drive and maintain good service.

   Furthermore, by means of being a more recognisable and understood quality of service measure Openreach will be more easily benchmarked, which incentivises good service in an increasingly competitive market for leased line services.

6. **Ability to show performance transparently, including at a detailed level**
   In changing to a new type of QoS standard, it is important that Openreach is able to show to stakeholders such as CPs and Ofcom that underlying performance is at good levels. Accordingly, the proposal includes a larger set of performance KPIs than exist for the current QoS standard – including KPIs relating to sub-types of faults that will be excluded from the compliance assessment, but that Openreach will still repair; see Annex 3 for a full list of measures and KPIs.

Proposal for a new QoS standard

The proposal developed to replace the existing QoS Standard is summarised in Table 1 above.

CP and OTA2 engagement

Openreach has engaged closely with CPs in developing the new LL/IEC QoS standard proposals.

[19] The measure is based on a widely used ITIL standard measure. ITIL4, Axelos (UK Cabinet Office and Capita plc partnership).

Members of the Ethernet Service Forum are intimately familiar with the details of the QoS standards. Further, they have been the contributors and sponsors of the recent Ethernet repair service improvement initiatives. For that reason, more in-depth engagement was focused on this forum. CPs acknowledged the problem with the OTR measure and were supportive of the proposed change to an MTTR measure. No further feedback was received from CPs at the Service Forum (April 2022) or after the Service Forum.

Although the switch to an MTTR measure will not result in a change to any existing terms and conditions (the SLA and SLG regimes remain unchanged), the outcome of the discussion at the Ethernet Service Forum was presented to the industry commercial group (EPCG). Whilst there was no negative feedback regarding changing from an OTR to a MTTR measure, some feedback was received:

- There was a brief discussion about whether the 95th percentile MTTR performance should be the focus of the standard. Openreach said that it recognises that is reasonable to ask Openreach to report MTTR service at certain percentiles and that we would be happy to do that. For simplicity we propose that the QoS measure be changed to MTTR within 5 hours as it is in everyone's interest to have a single measure to focus on for repair QoS. The group appeared to accept this as a sensible approach.

There was no further feedback by CPs at the November EPCG or after the EPCG.

We have also offered bi-laterals to all CPs. [✂]

Openreach has also engaged closely with the OTA2 in relation to the proposed QoS Standard. In summary, the OTA2 acknowledged challenges and limitations of the very simple OTR measure which is easily skewed by large scale events which have limited geographical impact and has supported the development of an MTTR based approach. The OTA2 also considered that whilst in principle there might be alternatives, they thought that changing to an MTTR measure would be a progressive and better QoS measure which is more reflective of underlying network performance. Further, the feedback was that MTTR has the added advantage of being familiar and easy to understand so would enable CPs to use the reporting of these measures in sales discussions with their customers.

Openreach has taken account of this feedback in developing the proposal for the new QoS standard.

Technical changes and assessment against CA2003 criteria

To implement the above proposals, the QoS Directions will need to be amended. We have included suggested amendments at Annex 2 to this letter.

Section 49(2) of the CA2003 states that, to modify or withdraw the QoS Directions, Ofcom will need to satisfy itself that doing so meets four criteria, each of which Openreach considers are met by the proposals for the reasons in Table 3 below.

Table 3 – Assessment of proposals against CA2003 s.49(2) criteria

No	Criterion	Explanation
1	Reasonable and objectively justifiable	The proposals are reasonable and objectively justifiable because they will: 1. Propose an alternative measure that reflects the customer experience in light of the changing fault mix; 2. reserve Openreach's incentive to keep improving its LL/IEC repair service; 3. create new incentives to improve repair times in circumstances where this would not have affected compliance with an on-time measure; 4. leave compliance with the QoS standard more within Openreach's control, ensuring the incentive has a strong impact; 5. be easily understandable to CPs and Openreach's engineers; 6. enhance stability in the QoS standard by removing the strongest 'swing' factors, ensuring the QoS standard can remain in place until at least the next WFTMR; 7. improve the visibility of stakeholders into Openreach's repair performance by adding KPIs in addition to retaining existing KPIs.
2	Not discriminatory	1. These proposals will only apply to Openreach, with no other operator found to hold a position of SMP in the LL/IEC market. 2. They will not change any contractual SLA/SLG arrangements. Openreach will also continue to action all current fault types.
3	Proportionate	1. The proposal is proportionate as it ensures compliance is possible in a context where Openreach and CPs have taken positive steps to reduce the incidence of simpler faults. 2. The MTTR also respects the principle of proportionality: every improvement made to a repair time makes a proportionate impact on overall compliance with the QoS Standard, unlike under the current on-time metric where a repair time failed by 1 hour is treated exactly the same as a repair time failed by e.g., 5 hours.
4	Transparent	1. The proposals improve overall transparency by (i) increasing the number of KPIs against which Openreach must report

No	Criterion	Explanation
		performance; and (ii) include new MTTR KPIs with which CPs are more familiar. 2. The proposals are clear as to what is required from Openreach. 3. The new QoS Standard will be available to all CPs to view and the proposals will be consulted on.

Openreach also considers that:

- for the reasons outlined above, the proposals would further the interests of citizens in relation to communications matters and of consumers in relevant markets by promoting competition, in accordance with Ofcom's general duties set out in Section 3 of the CA2003.

- for the reasons outlined above, Ofcom would be acting in accordance with each of its six Community requirements in Section 4 of the CA2003 in implementing the proposals.

Openreach is content for this letter to be published by Ofcom as part of any public consultation process undertaken in connection with this matter.

Annex 2 – Proposed amendments to QoS and KPI Directions

Notification of Directions to BT under section 49 of the Communications Act 2003 and SMP Condition 10 (Quality of Service Directions)

Background

1. On 8 January 2020, OFCOM published the "Promoting Competition and investment in fibre networks: Wholesale Fixed Telecoms Market Review 2021-2026" (the "January 2020 Consultation"). The January 2020 Consultation set out Ofcom's proposals on its review of fixed telecoms markets including the wholesale local access, leased lines access and inter-exchange connectivity markets. At Volume 5 of that document, Ofcom published a notification under section 45 of the Act containing its proposals on market identification, market power determinations and the setting of SMP services conditions ("SMP conditions") and directions to be applied to BT.

2. The January 2020 Consultation proposed to impose SMP Condition 10 on BT in each of the physical infrastructure, wholesale local access, leased lines access and inter-exchange connectivity markets which requires it 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. Alongside the January 2020 Consultation, Ofcom consulted on what quality of service requirements should be imposed pursuant to SMP Condition 10 in each of the wholesale local access, leased lines access and inter-exchange connectivity markets.

4. On 22 October 2020 Ofcom published a further consultation entitled "Wholesale Fixed Telecoms Market Review - Openreach Quality of Service". This consultation proposed revisions to the directions for BT which were proposed to be set under the January 2020 Consultation under section 49 of the Act and proposed SMP Condition 10.

5. Ofcom published notifications to the proposed directions in each of the consultations referred to in paragraphs 1 and 4 above in accordance with section 49A(3) of the

Communications Act 2003 ("the Act"), and sent a copy of each to the Secretary of State under section 49C(1)(a) of the Act. Ofcom invited responses to the January 2020 Consultation by 22 May 2020 and to the further consultation by 3 December 2020. Ofcom received several responses in relation to the proposals set out in the consultations referred to above and it considered every such representation. The Secretary of State did not notify Ofcom of any international obligation on the United Kingdom for the purposes of section 49A(6)(b) of the Act.

6. 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 referred to in paragraph 1 above. 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.

7. The SMP conditions that are set include SMP Condition 10 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.

Direction

8. On 18 March 2021 Ofcom ~~has~~ decided, in accordance with section 49 of the Act, to give four 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 has 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**");

c. to comply with quality of service standards in respect of the provision of network access in the following markets:
(i) supply of wholesale local access at a fixed location in WLA Area 2; and
(ii) supply of wholesale local access at a fixed location in WLA Area 3.

in which Ofcom has found BT as having SMP as set out in the notification and accompanying statement ("**Direction 3**"); and

d. to comply with transparency and publication requirements in respect of the provision of network access in the markets set out at c. above as applicable ("**Direction 4**").

~~9. Directions 1 to 4 are set out respectively at Schedules 1 to 4 of this notification, and shall take effect from 1 April 2021.~~

9. Ofcom has now decided to make certain amendments to these Directions to alter the quality of service standards and transparency and publication requirements that apply to BT's repair of faults in relation to relevant ethernet access and dark fibre access.

Ofcom's duties and legal tests

10. The effect of these Directions, and the reasons for giving them, are set out in the statement accompanying this notification 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.

11. A copy of the Directions set out in the Schedules to this notification, has been sent to the Secretary of State in accordance with section 49C(1)(b) 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;

(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) "**January 2020 Consultation**" has the meaning given to it in paragraph 1; and

(e) "**Ofcom**" means the Office of Communications as established pursuant to section 1(1) of the Office of Communications Act 2002.

14. The Schedules to this notification shall form part of this notification.

Signed

~~David Clarkson~~

~~Telecoms Competition Director, Ofcom~~
[INSERT SIGNATURE]

[NAME]

[**ROLE**]

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

~~18 March 2021~~

[DATE]

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~~previously directed that the Dominant Provider comply with this Direction with effect from 1 April 2021.

C. The Quality of Service Standard 4 has been modified on [.]. Ofcom hereby directs that the Dominant Provider will comply with this Direction as modified with effect from [.].

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");

    d. Interexchange connectivity in BT +1 exchanges ("IEC BT+1") for Relevant Ethernet Services only;

    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 -~~ Mean Time To Repair

8. The Dominant Provider must ensure that ~~at least 94% of Faults~~ the mean time to achieve a Restored Service ~~within the period specified in the applicable service level agreement set out in the Dominant Provider's Reference Offer~~ for all Faults excluding Customer Faults and MBORC Faults is no more than 300 minutes 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.

~~(v)~~(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;

~~(vi)~~(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;

~~(vii)~~(viii) '**First Relevant Year'** means the period starting on 1 April 2021 and ending on 31 March 2022;

~~(viii)~~(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;

~~(ix)~~(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) ~~'~~'**MBORC**' means Matters Beyond Our Reasonable Control, a force majeure event under the relevant Access Agreement, the occurrence of which releases the Dominant Provider from the liability to make any payment under the corresponding Service Level Guarantee.

(xii) '**MBORC Related Fault'** means a Fault in respect of which the Dominant Provider has made a declaration that MBORC has occurred.

~~(x)~~(xiii) **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;

~~(xi)~~(xiv) '**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;

~~(xii)~~(xv) '**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;

~~(xiii)~~(xvi) '**Relevant Year**' means the period starting on 1 April 2021 and ending on 31 March 2022, and following 31 March 2022, every 12 month period beginning on 1 April and ending on 31 March;

~~(xiv)~~(xvii) '**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;

~~(xv)~~(xviii) '**Second Relevant Year**' means the period starting on 1 April 2022 and ending on 31 March 2023;

~~(xvi)~~(xix) '**Third Party**' means a person providing a public electronic communications network or a person providing a public electronic communications service;

~~(xvii)~~(xx) '**Third Party Customer**' means a Third Party purchasing a Relevant Ethernet Service or Dark Fibre Access (as applicable) from the Dominant Provider;

~~(xviii)~~(xxi) '**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;

(xxii) **'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);

~~(xix)~~(xxiii) '**Wholesale Fixed Telecoms Market Review SMP Conditions**' means the SMP conditions in Schedule 1 of the 2021 SMP Conditions Notification; and

~~(xx)~~(xxiv) '**Working Day**' means any day other than Saturdays, Sundays, public holidays or bank holidays in England and Wales, Scotland or Northern Ireland (as applicable).

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~~t) 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~~t) 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~~t) 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~~t) by reference to (i) Orders for the Dominant Provider; and (ii) Orders for Third Party Customers.

c. KPI (b) by reference to (i) all Faults and (ii) MBORC.

d. KPI (t), by reference to (i) all Faults, (ii) Customer Faults only and (iii) MBORC. Related Faults only.

7. In relation to each of the requirements set out in paragraphs 5 and 6 above, for all KPIs 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:

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 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.

~~v.~~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 proving 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;

~~vi.~~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.

~~vii.~~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;

~~viii.~~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;

~~ix.~~x. **"First Relevant Year"** means the period of 12 months beginning on 1 April 2021 and ending on 31 March 2022;

~~x.~~xi. "**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.~~xii. "**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.~~xiii. "**KPI**" means a key performance indicator;

xiv. "**MBORC**" means Matters Beyond Our Reasonable Control, a force majeure event under the relevant Access Agreement, the occurrence of which releases the Dominant Provider from the liability to make any payment under the corresponding Service Level Guarantee

xv. "**MBORC Related Fault**" means a Fault in respect of which the Dominant Provider has made a declaration that MBORC has occurred.

~~xiii.~~xvi. "**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;

~~xiv.~~xvii. "**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.~~xviii. "**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.~~xix. "**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.~~xx. "**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.~~xxi. "**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.~~xxii. **"Relevant Year"** means the period starting on 1 April 2021 and ending on 31 March 2022, and following 31 March 2022, every 12 month period beginning on 1 April and ending on 31 March;

~~xx.~~xxiii. "**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.~~xxiv. **"Six Month Period"** means in respect of the Relevant Year:

(i) 1 April to 30 September;

(ii) 1 October to 31 March;

~~xxii.~~xxv. "**Third Party**" means a person providing a public electronic communications network or a person providing a public electronic communications service;

~~xxiii.~~xxvi. "**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.~~xxvii. "**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;

xxviii. **'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);

~~xxv.~~xxix. "**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;

~~xxvi.~~xxx. "**Wholesale Fixed Telecoms Market Review SMP Conditions**" means the SMP conditions in Schedule 1 of the 2021 SMP Conditions Notification; and

~~xxvii.~~xxxi. "**Working Day**" means any day other than Saturdays, Sundays, public holidays or bank holidays in England and Wales, Scotland or Northern Ireland (as applicable).

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.

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~~

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.~~

– Mean Time to Repair

In relation to all Faults (excluding Customer Faults and MBORC Related Faults) that were completed in the relevant month, the Mean Time to Repair.

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:

(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) 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.

Annex 3 – Table summarising proposed KPIs

KPI Name	Product	Region/Market	Current / New
On-time repair	All Products	UK (exc. CLA & Hull)	Current
On-time repair	EAD	UK (exc. CLA & Hull)	
On-time repair	EBD	UK (exc. CLA & Hull)	
On-time repair	Cablelink	UK (exc. CLA & Hull)	
On-time repair	WDM	UK (exc. CLA & Hull)	
On-time repair	Dark Fibre Exchange	UK (exc. CLA & Hull)	
On-time repair	Dark Fibre Access	UK (exc. CLA & Hull)	
On-time repair	All Products	Northern Ireland	
On-time repair	All Products	Scotland	
On-time repair	All Products	Wales	
On-time repair	All Products	England - North	
On-time repair	All Products	England - West	
On-time repair	All Products	England - East	
On-time repair	All Products	Unknown	
On-time repair	Relevant Ethernet Service	HNR	
On-time repair	Relevant Ethernet Service	UK QoS	
On-time repair	Relevant Ethernet Service	BT	
On-time repair	Relevant Ethernet Service	Non BT	
On-time repair	Relevant Ethernet Service	MBORC faults only	New
On-time repair	Relevant Ethernet Service	Customer cleared faults only	
Mean time to repair	All Products	UK (exc. CLA & Hull)	
Mean time to repair	EAD	UK (exc. CLA & Hull)	
Mean time to repair	EBD	UK (exc. CLA & Hull)	
Mean time to repair	Cablelink	UK (exc. CLA & Hull)	
Mean time to repair	WDM	UK (exc. CLA & Hull)	

Mean time to repair	Dark Fibre Exchange	UK (exc. CLA & Hull)	
Mean time to repair	Dark Fibre Access	UK (exc. CLA & Hull)	
Mean time to repair	All Products	Northern Ireland	
Mean time to repair	All Products	Scotland	
Mean time to repair	All Products	Wales	
Mean time to repair	All Products	England - North	
Mean time to repair	All Products	England - West	
Mean time to repair	All Products	England - East	
Mean time to repair	All Products	Unknown	
Mean time to repair	Relevant Ethernet Service	HNR	
Mean time to repair	Relevant Ethernet Service	UK QoS	
Mean time to repair	Relevant Ethernet Service	BT	
Mean time to repair	Relevant Ethernet Service	Non BT	
Mean time to repair	Relevant Ethernet Service	MBORC faults only	