# Wholesale Local Access Market Review

**Response to Ofcom's Consultation on proposed market, market power determinations and remedies – Volume 1**

**Non-confidential version**

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# Foreword

On 31 March 2017, Ofcom published its consultation on proposals for regulation of the wholesale market – the Wholesale Local Access market - for services that use a fixed connection from the local telephone exchange to a home or business premises for broadband and fixed telephone services.

This submission is provided by Openreach, a functionally separate line of business within British Telecommunications plc ("BT"),[1] in response to proposals related to Openreach's business. This document should be read in conjunction with Openreach's other related responses, namely the Quality of Service for WLR, MPF and GEA, Duct and Pole Access and the Narrowband Market Review.

1 As part of BT's implementation of its formal notification dated 10 March 2017 under section 89C of the Communications Act 2003 (the Act) and subject to pre-conditions being met, the Openreach business will be operated by Openreach Limited, which was incorporated as a separate legal entity on 24 March 2017.

# 1. Executive Summary

**Overview**

1. At Openreach, we recognise that consumers and businesses throughout the UK have rising needs and expectations for higher broadband speeds and improved quality of service - and Ofcom's Wholesale Local Access (WLA) market review is critical in influencing how those needs are met.

2. The Government has stated its objectives to achieve universal broadband access and a larger 'full fibre' (Fibre to the Premises) deployment. The new regulatory framework will need to help create conditions that enable industry to meet these expectations.

3. Ofcom's regulatory approach and the Openreach model, underpinned by Openreach's investments in the access network, have driven strong UK outcomes over the past ten years. There are 25 million active broadband lines in the UK, and 26.5 million premises can order a fibre broadband service today. The UK has the largest digital economy in the G20 as a proportion of GDP and it leads the EU's five largest economies for superfast broadband availability and take up – as well as average speeds. 92% of UK premises can access superfast broadband of >30Mbps, compared with 77% for Germany and Spain, 44% for Italy and 41% for France.[2] It is important that the regulatory conditions allow the UK to build on this success going forward.

4. This review will shape the direction of the UK telecoms market for the next decade. It is vital that the resulting regulatory framework continues to support dynamic retail competition and provides the right incentives for the significant infrastructure investment needed to maintain the UK's thriving digital economy.

5. Openreach fully supports, and indeed shares, Ofcom's main objectives: to promote investment in wider broadband coverage and ultrafast networks including more 'full fibre', and achieving higher levels of service. Each element of our strategy - better service, broader coverage and faster speeds – aligns with Ofcom's and Government's objectives.

6. However as we show below, Ofcom's current proposals would depress returns on past and prospective WLA investments to well below their relevant cost of capital. This would present a very material deterrent to future investment in the UK's digital infrastructure, by Openreach and others, which we do not believe is Ofcom's intent.

7. Ofcom's pricing proposals are too low due to inappropriate assumptions and modelling issues. We look forward to working constructively with Ofcom to review and refine their modelling assumptions and methodologies to ensure that investments can earn a fair return and the charge control reflects the costs of improved service delivery.

**Ofcom's current proposals do not give investors a fair return**

8. Our analysis indicates that Ofcom's current proposals would drive returns below Openreach's cost of capital (whether based on Ofcom's view or our own). This would provide a very material deterrent to future investment. Figure 1 below shows the extent of the shortfall:

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[2] Ofcom, EU5 Broadband Scorecard, December 2016, Figure 1.5

*Figure 1: Openreach forecast returns after Ofcom price cuts*

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*Source: Openreach internal analysis*

**Prices must be adjusted to ensure investors earn acceptable returns and the fair bet is honoured**

9. Ofcom's current pricing proposals for the GEA 40/10 product are not consistent with honouring the fair bet principle which both Openreach and Ofcom agree is important to incentivise future fibre investment, and which underpinned BT's initial fibre investment in 2008. For efficient investment to take place, investors, at project inception, must *expect* to earn a return equal to the project-specific cost of capital. Regulation imposed after the investment has been made should not cap upside outcomes to take expected returns to below the project-specific cost of capital. Ofcom's proposed 40% reduction in the 40/10 GEA rental price by March 2021 would do exactly this, violating the fair bet principle.

10. Ofcom proposes these price cuts on the basis of a bottom up model of the costs of building and operating a FTTC network in commercial areas. Even if this modelling was correct, returns over 20 years would be reduced to 11.8% as a result of Ofcom's proposed action. But, as noted above, we believe Ofcom's model is wrong and significantly understates the costs Openreach has faced and will face in delivering fibre services. The latest update of our commercial NGA business case[3] shows that Ofcom's WLA proposals would take our 20-year Internal Rate of Return (IRR) down to ✂, below Ofcom's view of the relevant cost of capital, with payback not achieved on a discounted basis.[4]

[3] Supplied under separate cover to Ofcom.

[4] Ofcom has not carried out a proper competition impact assessment and proportionality review of its proposed price cap in respect of the VULA service for the 40/10 product by reference to the risk of adverse effects or unintended economic consequences in Broadband Development UK ("BDUK") areas. Ofcom's proposals to

11. We provide a report prepared by Oxera with support from Professor Julian Franks which sets out evidence and analysis to suggest that (i) Ofcom's approach would be inconsistent with the fair bet by constraining project returns below the project-specific cost of capital faced by Openreach ahead of investment; and (ii) that an intervention which caps returns below 15% would be likely to be inconsistent with the fair bet given the need to allow for a level of upside outcome where downside risks were faced. On this basis Oxera conclude that '*our analysis suggests that Ofcom's price control proposals are not consistent with the fair bet principle'*.

12. At a minimum, Ofcom should adjust its pricing proposals to ensure the fair bet is honoured. We believe that Ofcom should propose 40/10 prices higher than its consulted range.

**Regulation should encourage full fibre investment**

13. The commercial case for FTTP investment remains very challenging, with large up-front investments needed in the face of uncertain demand and limited willingness to pay. Ofcom suggests that such investments may be less relevant in this market review period. We do not agree: investment decisions in this period will shape the capabilities of UK infrastructure to meet customer needs over the next decade and Ofcom's proposed interventions in this review risk seriously undermining delivery of these objectives.

14. The proposed 40/10 price reduction significantly discourages full fibre investment by creating a low-price anchor product capable of speeds more than sufficient for most current consumer needs. This will limit demand for higher speed products and as a result, the investment case for any operator to build new ultrafast broadband networks becomes much more challenging.

15. We believe the UK needs a more open debate on the future of UK infrastructure and how to build and pay for this. To help facilitate that debate, Openreach has announced plans to consult with its customers and other key stakeholders on the appetite for large scale FTTP deployment and the associated challenges of making such an investment. Reducing the scale of the proposed 40/10 price cuts is essential but not sufficient to improve this investment case and we believe more creative solutions will be needed. For example, Openreach is actively exploring co-investment models. Such models will need the regulatory regime of strict equivalence to be modified. We welcome Ofcom's support and engagement on this process.

**We would like to work with Ofcom to align modelling and cost assumptions**

16. Our analysis of Ofcom's approach has been complicated by a lack of transparency in Ofcom's approach in a number of places as we have separately flagged to Ofcom. Ofcom has also adopted a different approach to charge control modelling in this review, using a top-down model to derive copper prices and a bottom-up model to derive fibre prices. We have been unable to fully reconcile the two approaches and Ofcom itself has not published a reconciliation. With these reservations, our initial analysis of the differences between us is as follows.

17. We estimate a revenue shortfall of c. ✂ in copper revenues over the charge control period. This is because Ofcom's top down model significantly understates the costs of delivering and improving service to our customers, as a result of the following items:

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introduce such a price cap could have significant adverse consequences for the rollout of SFBB in uneconomic "white spot" areas, where investment is supported by state subsidy under the BDUK schemes. We would like to engage further with Ofcom on this issue.

a) Efficiency assumptions (c. ✂) - Ofcom has overestimated achievable efficiency gains in both opex and capex and cost savings;

b) Quality of service uplift (c. ✂) - Ofcom has not allowed sufficient costs to enable us to meet the increased service targets, including the proposed Year 3 repair MSL of 93%;

c) Weighted Average Cost of Capital (WACC) (c. ✂) - Ofcom has underestimated the appropriate WACC for calculating returns (it uses 8.0% for copper rather than 8.5%);

d) Common cost recovery (c. ✂) - Ofcom reallocates certain fixed and common costs from its top down copper model to its fibre model, but there is a shortfall that it has not adequately explained; and

e) Pension costs (c. ✂) - Our most recent information shows that ongoing pension service costs per active scheme member will increase from current levels during the period under review.

This is depicted in Figure 2 below.

*Figure 2: Copper access revenue impact of Ofcom's proposals*

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*Source: Openreach internal analysis*

18. Additionally, we have identified a major gap between the bottom-up fibre model and our fibre commercial business case of over ✂ of opex and capex for the four year period until the end of the next controls as shown in Figure 3 below. This includes understating the expenditure needed on NGA capacity and incorrect assumptions on NGA volumes.

*Figure 3: Forecast fibre spend in commercial footprint, 2017/18 to 2020/21*

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*Source: Openreach internal analysis*

19. Ofcom should adjust its prices for copper and fibre services to reflect the correct assumptions and modelling issues to ensure that past and prospective WLA investments would earn acceptable returns above their cost of capital. We consider that this would require prices above the top end of Ofcom's proposed range.

**Ofcom's service targets should be achievable and fully funded**

20. Improving service is at the heart of Openreach's strategy and we have made significant progress over the last 18 months. By doubling our proactive fault volume reduction (FVR) investment we have halted a six-year rise in our network fault rate and we exceeded our Minimum Service Levels (MSLs) set by Ofcom on our repair activities nationally, for Service Management Level 1 (SML1) and SML2 by 8.1% and 3.7% respectively in 2016/17.

21. The future MSLs need to be achievable, good value for money and proportionate but most importantly, any uplift in service should come at a price customers are willing to accept. These are minimum standards, not targets, so they should be set at levels that an operator could be reasonably expected to achieve, not at any cost. We believe the proposed repair MSL of 93% in Year 3 of the controls is unachievable across all regions whilst operating within the current industry framework. We believe that the 93% target should be an aspirational one rather than a statutory minimum and that the MSL should be revised to glide to 90% in Year 3.

22. We further believe Ofcom has significantly under-estimated the cost uplift required to deliver the proposed MSLs (5.3% compared to our estimate of 24.9% for the 90% target). We are willing to step up to the new and more challenging targets but these need to be fully funded through the charge control.

**Working together to meet Ofcom's aims**

23. In summary, we support Ofcom's aims for more investment in the network and higher service standards. We are concerned, however, that Ofcom's current proposals would depress returns below their relevant cost and capital and so deter investment. We know that such an outcome is contrary to Ofcom's intentions, so we welcome the opportunity through this consultation to work with Ofcom to resolve the differences between us on costing and modelling assumptions.

24. In light of the significance of the new evidence now before Ofcom (as provided in this response and in response to information requests), we believe that reconsultation may be necessary. Revising the proposals to take account of the fair bet analysis and modelling issues identified will lead to more objectively justifiable and proportionate remedies more consistent with Ofcom's objectives and duties. In the meantime, we will continue our consideration of issues raised, including any subsequent information obtained from Ofcom, and will make further representations where appropriate.

25. We set out a summary of our key issues in more detail in the following section.

# 2. Our key issues

**Ofcom's current proposals take our returns below our cost of capital**

26. Our analysis indicates that Ofcom's current proposals would drive returns below Openreach's cost of capital. We estimate our return for the aggregate WLA market will fall to ✂ in 2020/21, the final year of the new controls. Our fibre return will fall to ✂ with copper at ✂, both significantly below Ofcom's proposed WACC for these services, 9.4% and 8.0% respectively. Such an outcome would not only provide a very material deterrent to future investment, with the fibre fair bet clearly not met, but also fail to provide the financial framework to support improvements to service delivery. We set out our key concerns in more detail in the section below and highlight the areas where we believe improvements to Ofcom's modelling and cost assumptions will deliver the right outcome for all of industry.

**Ofcom's fibre regulation proposals risk discouraging future investment**

27. Openreach operates in a highly dynamic market characterised by rapid changes in consumer demand and high levels of technical innovation. With an expanding Virgin Media (in terms of both geographic coverage and product capabilities) and potential expansion from other access providers, including through the use of Duct and Pole Access (DPA), as well as highly competitive and demanding industry customers, our strategic network ambitions and commercial choices are framed by customer requirements rather than regulatory obligations.

28. Openreach has spent around ✂ since 2008 on its commercial fibre broadband roll-out, making superfast broadband services available to over two thirds of UK premises and supplying over 5.4 million broadband lines mainly via VDSL FTTC, with some FTTP to new build sites. We have not yet achieved payback on these significant investments. Nevertheless, to ensure we can continue to meet growing demand based on the assets deployed to date, we expect that we would need to invest a further ✂ over the next four years as a result of: replacing cabinets and expanding capacity to ensure they are capable of supplying higher volumes; increasing vectoring capabilities to ensure we can meet customer speed requirements at higher overall volumes; and increasing the provision of FTTP to new build sites.

29. Our latest NGA commercial case shows that, at current prices and based on our demand forecasts, we do not expect to breakeven on a discounted basis on these investments until ✂ at the earliest *before* the impact of Ofcom's WLA proposals. In addition, we are considering plans to invest in universal broadband coverage, ultrafast capabilities via G.fast and FTTP and, as detailed below, are consulting stakeholders about further fibre investments. The decision to make future investments, with the support of shareholders, is crucially dependent on the returns we expect to make on the investments we have already made in fibre broadband networks.

30. Despite the fact that we are yet to reach payback on our original fibre investment, Ofcom is proposing to require us to make a dramatic 40% reduction in the rental price of our 40/10 GEA product by March 2021 (with a 25% reduction in year 1 of the control). Such a deep reduction will likely impact all other prices in our current GEA portfolio and the prices that we, and other potential network providers, can charge for higher bandwidth ultrafast access as well as services.

31. We believe Ofcom's WLA proposals will reduce future returns below the cost of capital and seriously reduce the returns we will achieve over a 20 year period, with the result that we will not achieve payback on a discounted basis – a key reference point for our initial investment decision.

As a result, we believe these proposals will reduce investment and 'chill' investment incentives across the whole market and, in particular, present challenges to investment in ultrafast broadband.

32. To a significant extent, Ofcom's proposals arise as a result of understating the expenditure we have incurred to date and our investment going forward. However, even on the basis of its own modelling, we believe Ofcom's proposals would undermine the fair bet principle and prevent Openreach earning returns on fibre investments sufficient to reward investors for the risks faced ahead of the 2008 investment decision. Ofcom has suggested, based on its modelling, that we would earn an internal rate of return (IRR) of 11.8% over 20 years on fibre investments. As set out in the report by Oxera, a fair bet requires that investors, at project inception, have the opportunity to earn at least the project-specific cost of capital, on an expected basis. This means that in the face of *ex ante* downside risks, upside outcomes should not be truncated to the point where the initial investment decision would not have been taken. However, Oxera estimate that the project-specific cost of capital was above 12%, meaning that Ofcom's approach would not even allow the expected return to be made. This problem is amplified once the necessary cost adjustments to Ofcom's modelling are made.

33. We would therefore urge Ofcom to revisit its fair bet assessment in light of the outputs of its adjusted model and the points raised in the Oxera report.

34. More generally, we note that Ofcom is trying to balance: (i) low consumer prices and retail competition for the supply of fibre services in the short to medium term, with (ii) encouraging long-term network investment. It is right to balance these objectives, but the heavy emphasis on the former is inappropriate given that market outcomes have been very good over the last few years. There is no evidence of suppressed demand for fibre; no evidence of distortion of competition at the retail level; and, as discussed above, returns are not excessive when seen in the context of earlier losses and risk. Linked to this, the need to protect customers against the risk of higher prices has been over-stated because Openreach is more constrained by copper based broadband services than Ofcom has suggested.

35. Ofcom's proposals will reduce investment and dampen the incentives to invest for all current and potential fibre network infrastructure investors, not just Openreach but also Virgin Media, CityFibre and others, and present a major challenge to Ofcom's objective of encouraging investment. Such a short term focus on low prices is particularly risky given that once extinguished, investment incentives are hard to re-kindle. Apart from the FTTP trial in York, there is little evidence that companies such as Sky or TalkTalk will use lower VULA prices as a step to building their own networks. On the contrary lower wholesale access prices disincentivise investment for others as well as Openreach. Ofcom is in effect betting on an implausible 'ladder of investment' effect, whilst disregarding those companies already investing.

**There needs to be a joined-up approach to fibre regulation**

36. Openreach will be responding in parallel to Ofcom's separate consultation on DPA and it is important that Ofcom takes a joined-up approach to its policy objectives. Access to our ducts and poles has been open since 2011 and we have taken considerable steps recently to encourage more companies to use our Physical Infrastructure Access (PIA) product. Openreach is committed to making PIA 'best in class'. However, Ofcom's objective of encouraging scale FTTP entry from other providers using DPA, as envisaged in the Digital Communications Review, will not succeed if already marginal business cases are further weakened by this 40/10 price regulation and its impact on all fibre broadband product prices.

37. In our response to this latest DPA consultation, we strongly support Ofcom's decision not to impose an 'any usage' rule for PIA. However we still have significant concerns with a 'mixed usage' rule given the regulatory framework relating to leased lines has already been addressed by the recent BCMR. We are pleased that Ofcom has acknowledged the significant progress we have already made on digital maps and agree that the industry working group is best placed to prioritise any further developments in line with future demand. We also welcome Ofcom's clarifications that network adjustments should primarily be to 'free up' existing capacity rather than create new infrastructure. Overall, however, Ofcom's proposals will rely heavily on further details being resolved with industry as part of the new reference offer process. We support that approach; but given the complexity expect those discussions to be extensive and time consuming and recommend that Ofcom considers extending the timescales for publication of the new offer to 18 months rather than the 12 months currently proposed.

38. Openreach is also consulting with industry on its plans to introduce Long Reach VDSL (LR-VDSL) as a key enabler to delivering the Government's broadband universal broadband commitment (UBC). We welcome Ofcom's proposed framework to deal with possible conflicts with LLU/ADSL services but Ofcom should actively support the required migration process and will also need to address how the costs of meeting the UBC can be recovered through the WLA charge control. This is particularly important given at least part of the UBC will need to be delivered through the roll-out of FTTP. We would expect any agreement reached on meeting the UBC will need to be reflected through an overlay to the WLA charge control through a separate consultation.

**We want to work with Ofcom on modelling and cost assumptions to ensure the right outcomes**

39. Ofcom has adopted a different approach to charge control modelling, compared to previous reviews, by using separate top-down and bottom-up models to address the copper and fibre products respectively and a variety of interlinked sub-models. We have no issue with this hybrid modelling approach in principle but have found Ofcom's approach difficult to follow in some respects, with insufficient transparency. It would have been helpful if Ofcom had consulted stakeholders on its proposed modelling approach ahead of this consultation or provided more detailed explanations of its modelling (with sufficient time to fully consider) as part of this consultation. On the basis of the information Ofcom has shared to date, we have identified a broad range of specific issues with Ofcom's modelling, which we cover in detail in this response.

40. In particular, we have some concerns about Ofcom's new approach to modelling fixed and common costs, carried out separately for copper and fibre services in the top-down and bottom-up models respectively. We are unclear whether Ofcom has correctly modelled these costs over the charge control period, both in total and between copper and fibre services.

41. We also have some serious concerns with the results of Ofcom's charge control modelling, including the assumptions made on some key parameters, these include:

- **Efficiency targets:** Ofcom's efficiency targets proposed are too high. Given Ofcom's efficiency targets of 5.5% on opex and 3% on capex are expected to be additive to savings modelled on specific cost items, we estimate the true efficiency target required by Ofcom as being 10.7% per annum. This suggests that in nominal terms Openreach needs to remove £250m of operational costs in 2018/19. Our evidence shows that these targets are impossible to meet, given that Openreach has not historically delivered more than 5% per annum and is currently only targeting ✂ per annum in its latest medium term plan. Ofcom struggles to provide any intellectual justification for this; indeed, an EY report, commissioned by BT for an entirely different purpose, is taken out of context and cited in support of Ofcom's targets; we attach to our response to Volume 2 of the Consultation EY's official rebuttal of Ofcom's use of their report.

- **Incorrect QoS uplift and efficiency assumptions**, which, as set out below significantly impact the charge control;
- **Weighted Average Cost of Capital (WACC**): Ofcom has lowered its estimate of BT's WACC for the WLA services since its last estimate in the Business Connectivity Market Review, concluded in 2016, This reduction has mainly been driven by a reduction in the cost of debt and a new adjustment to reflect the impact of BT's pension deficit on the level of systematic risk of the share price. These changes are not justified and result in the relevant rates for this control, the copper WACC of 8.0% (down from 8.8%) and the 'Other regulated telecoms' WACC of 9.4% (down from 9.8%) applied to fibre, being understated. The copper WACC itself appears to be the lowest ever rate allowed by a UK regulator despite the fact that telecoms has a higher level of risk than other regulated sectors, and is thus out of line with other estimates. The expert report from Oxera, attached to this response, supports our view that the WACCs for BT's regulated businesses are too low, and explains in particular why Ofcom should not place so much weight on the post-Brexit gilt yields, and that Ofcom has over-estimated the level of BT's gearing. In Oxera's view, the data supports a WACC for the Openreach copper business of 8.5% and for 'Other regulated telecoms' of 10.8%, with the latter increasing primary due to the higher level of the observed "beta" for the Group since Ofcom's last review.
- **Various excluded costs:** There are also a number of substantial cost exclusions which are unwarranted or overstated. In the case of Service Level Guarantee (SLG) payments, Ofcom has modelled these off-line and reduced them in line with fault rate volumes, an example of double – or treble – counting efficiency savings. There is also no basis for excluding a significant proportion of actual-incurred SLG payments from the base year. Ofcom admittedly allows for some additional growth in SLG payments to reflect changes likely as a result of the introduction of auto-compensation, but these are insufficient.
- **Other modelling issues:** There are a number of detailed areas where we believe Ofcom's modelling approach and/or data has introduced errors, including the treatment of capex and volume forecasts. We have carried out a forensic analysis of both Ofcom's top-down copper and bottom-up fibre models and have been engaging at a working level with Ofcom on this since the consultation was published and non-confidential copies of Ofcom's models became available. We have provided Ofcom with a detailed error log as well as a significant number of questions, and believe that, these in themselves, will require Ofcom to reconsult on the charge control.

42. In this charge control, Ofcom has also changed its approach to setting price control glidepaths. We disagree with Ofcom's approach to setting an adjusted and truncated glidepath to forecast unit costs by year 2; this non-linear glidepath approach effectively introduces start price adjustments and is not justified in any way. In the light of the discussion on the fair bet principle, with our NGA investment only reaching payback (pre-WLA proposals) ✂ , it is clearly wrong to 'front-load' the GEA price reductions as Ofcom proposes.

43. In light of Openreach's concerns on the nature of this consultation and the depth and breadth of the substantive issues we have identified to date, it will be necessary for Ofcom to reconsult. This is

especially so given that Ofcom's proposals are currently based on 2015/16 base year data. Ofcom has received (and is continuing to receive) from Openreach data from 2016/17 which will need to be taken into account as a more representative starting-point.

44. Finally, Openreach has responded separately to Ofcom's consultations regarding WLR pricing when purchased in conjunction with the GEA 40/10 product and on MPF Service Maintenance Level (SML) 1 pricing for 2017/18. We believe the proposed constraints on WLR pricing are unnecessary given the competitive market and we comment further on this within this response. We also believe Ofcom's proposed Direction in relation to MPF pricing for 2017/18 (which is subsequently proposed) was ultra vires and unnecessary for the reasons set out in our response to the consultation on that proposed Direction (which we maintain). Nonetheless, we volunteered to reduce our MPF SML1 price as a gesture of goodwill, notwithstanding our position that the current MPF SML1 price of £85.29 falls within the 'fair and reasonable' range and without prejudice to the points that we make during this review.

**Openreach is ready to step up to the challenge of significantly higher service targets as long as these are properly funded**

45. We are responding separately to Ofcom's parallel consultation on WLA Quality of Service (QoS) but also comment on QoS in this response, given the significant linkage between these proposals and the charge control. We fully support Ofcom's approach, first introduced in the 2014 Fixed Access Market Review (FAMR), of reviewing QoS as an intrinsic part of the market review process as a means of ensuring that service targets are explicitly recognised and funded in charge controls.

46. Our recent performance demonstrates the strength of our commitment to driving up the standard of service we offer to our customers: Openreach has exceeded all 160 Minimum Service Levels (MSLs) so far – proving that we regard MSLs as a *floor* for performance rather than a *ceiling*. For example, in 2016/17, our performance (at a national level) was as follows: (i) we exceeded our First Available Date (FAD) MSLs by more than 10%; (ii) we exceeded our provision on-time MSLs by more than 4% (both expressed at a national average); and (iii) we exceeded our national repair MSLs for SML1 and SML2 by 8.1% and 3.7% respectively.

47. Service is at the heart of the Openreach strategy and we believe that our FVR investments are clear evidence of this. We recently doubled our annual FVR investment (2016/17 spend was double the 2015/16 spend) and we are planning to continue to invest at this heightened level across the next 3 years. This focus on fault reduction is already starting to produce positive results: we have now halted the rise in the network fault rate (this compares favourably to the c. 5% to 6% year-on-year increase that provided the backdrop to the previous FAMR).

48. We are not complacent, however, and are continuing to take the actions that will drive further service improvements in the future. For example: (i) we continue to deliver 'big data' and 'test & diagnostic' capabilities that will enable the next generation of service improvements and (ii) we are expanding and upskilling our workforce to ensure that we have the scale and capability to maintain our continually rising levels of delivered service. Figure 4 below highlights our achievements in 2016/17, together with our committed 2017/18 plans:

*Figure 4: Service achievements in 2016/17 and committed plans for 2017/18*

| **We have already developed a set of service commitments for 2017/18 to underpin our ambition to improve the customer experience** | | |
|---|---|---|
| **For our Provision customers we will:** | 16/17 | 17/18 |
| Achieve 95% of ALL customer Provision orders on time by the end of 2017 | 93.8% | 95% |
| Halve the proportion of fibre (FTTC) orders that receive an Openreach fault clear in 28 days | 4.9% | 2.5% |
| Ensure customers moving into a new home will have their service ready on agreed date | 76% | 82% |
| Provide more fibre capacity for customers wanting FTTC | 97.7% | 98.5% |
| Improve the speed of delivery on FTTP orders –(% within industry standard of 18WD) | 70% | 80% |
| **For our Repair customers we will:** | | |
| Ensure that at least 83% of repair customers have service restored on time | 77.9% | 83% |
| Invest in our network health to reduce 183, 000 customers experiencing a loss of service | 173k | 183k |
| Halve the customers experiencing multiple faults (3+ repeats faults) and appointments | -20% | -50% |
| **For our customers with delays we will:** | | |
| Ensure customers will not wait longer than 30 days for service to be restored or 90 days an order to be completed | 48,550 | zero |
| Ensure we take care of our most vulnerable customers if we cannot resolve their service on time by providing a temporary solution | - | To be implemented in Q3 |
| **For our customers with appointments we will:** | | |
| Consistently deliver low level missed appointments (<2.5%) & ensure we never miss again. | 2.9% | 2.5% |

*Source: Openreach*

49. We believe that our recent actions are clear evidence that we share Ofcom's focus on driving up service standards. However, we do have concerns around the details of the MSL proposals in this consultation. We believe that any such proposals need to align with four key principles:

- **MSLs should be achievable**: MSLs are NOT targets – they are the *minimum* standards that have to be met in every region and for every product. This is an important distinction – MSLs cannot be set at an 'aspirational' level, rather they should be set at a level that a competent operator could be expected to achieve in every region for every Service Maintenance Level (SML) in every year of the Charge Control period.
- **Good value for money**: The insightful customer perspective provided by Ofcom in the consultation document is very clear: customers want better service but that this is not *at any cost*. The paramount importance of price (from the customers' perspective) means that it is essential that any investment in improved service should be seen as *good value for money*. We are concerned that some aspects of the proposed MSLs are not good value for money.

- **Fully funded**: If the service improvements that we deliver are to be sustainable, it is vital that we are fully funded to make the necessary investments in engineers, training, equipment etc. We are concerned that the proposed MSLs are not fully funded.
- **Proportionate and consistent**: Addressing the concerns we have identified above and ensuring consistency with the SLAs and SLGs will ensure that they are proportionate and impose the minimum necessary regulatory burdens, consistent with Ofcom's statutory duties.

50. Ofcom's proposed Minimum Service Levels (MSLs) have increased significantly, both in breadth of coverage (now including fibre products and tails measures) and depth (with repair targets rising from the current 80% to 93%). We welcome the fact that, as in the last FAMR, Ofcom acknowledges the need for a cost uplift to enable Openreach to meet these targets and engaged Analysys Mason (AM) to build a model to estimate this uplift. However, as we cover in detail in our QoS response, the AM model is a highly simplistic, top-down representation of our operations. Our bottom-up allocations model, developed in conjunction with EY, more accurately reflects the challenges faced and the resources required to comply with Ofcom's targets. Our modelling indicates a cost uplift of 24.9% is required to meet Ofcom's Year 2 MSL of 90%, significantly higher than the 5.3% estimated by AM.

51. Although we are willing to meet the challenge of Ofcom's proposed targets, achieving a repair MSL of 93% in Year 3 of the controls across all regions hits against our 'glass ceiling' and becomes unachievable within the current industry regime: we believe this MSL is set at the level of an 'aspirational target' rather than a realistic statutory minimum. We set out in detail our analysis in this respect and believe that the Year 3 repair MSL of 90% (pre-MBORC allowance) represents a more reasonable, yet still very challenging, minimum.

52. Ofcom's modelling assumptions about the improvements we can make in our engineering performance are crucial to the WLA charge control proposals and, as we set out in more detail in our QoS response, we believe Ofcom has both overstated and double-counted these. We are committed to an extensive programme of network health and engineering quality improvements to reduce the level of faults on our network and believe we can take our network fault rate to 93% of current levels by 2020/21. However, Ofcom have assumed a higher rate of fault rate reductions which we believe results in a cumulative funding gap of c. £101m over the life of the control period.

53. As well as reducing our service delivery costs by applying this higher rate of fault reductions, Ofcom has also proposed efficiency targets of 5.5% for opex and 3% for capex, which are unachievable. We have found over the past two years that delivering the service uplift required to meet our current MSLs, as well as the voluntary service improvements we have pursued in areas such as missed appointments and tails reduction, has come at a cost to the levels of efficiency we are able to deliver, with task times increasing. The reduction in engineering visits resulting from a reduced fault rate is the major driver of service delivery efficiency so it is not realistic to assume Ofcom's efficiency targets can be met on top of this.

**Concluding remarks: working together to get the incentives right**

54. As our response details, we share Ofcom's objectives for this review and are committed investing in ultrafast broadband and in improved service. As indicated, the current proposals in Ofcom's consultation are likely to result in Openreach failing to earn its cost of capital across access services over the medium term. The proposed approach fails to reward risk-taking and incentivise infrastructure investment (including ensuring legal certainty). We believe this is not Ofcom's

intention and we are keen to work with Ofcom to ensure our modelling assumptions are aligned and hence ensure that the regulatory remedies proposed create the right incentives. In the light of our arguments, Ofcom needs to revise its fair bet analysis and modelling in order to ensure that it imposes proportionate and objectively-justified remedies consistent with good regulatory practice and Ofcom's legal obligations and duties.

# 3. Introduction

55. In order to provide context for Openreach's considered comments, in this section we set out our introductory observations regarding:

- Openreach's mission;
- Openreach's ongoing transformation;
- Openreach's new governance model; and
- Ofcom's important role in the market and what this means for how this consultation should proceed.

## Openreach's mission

56. Openreach provides the vital infrastructure that is the foundation of the UK's vibrant internet economy. We run the UK's most extensive local access network – the fibres, wires and cables that connect tens of millions of homes and businesses to phone, broadband, data and TV services. We are a wholesaler, and we work on behalf of more than 500 Communications Providers (CPs), enabling them to supply services to their consumer and business customers across the UK.

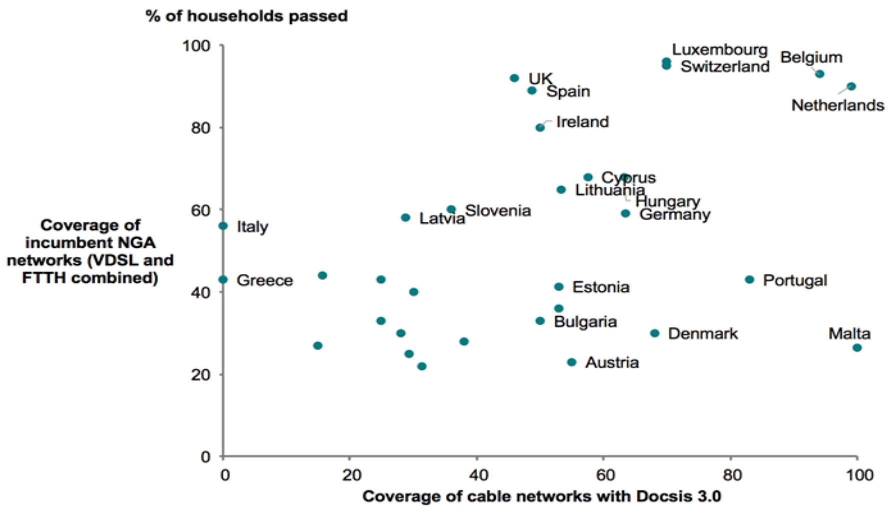
57. We have over 30,000 people installing, supporting and maintaining our network, which is more than 150 million kilometres long, and we take pride in our work. We know that our work is important and that people count on us to deliver for them – so in a normal week we complete around 177,000 provision and repair jobs across the country. We also make fibre broadband available to a further 17,000 homes and businesses each week.

## Openreach's ongoing transformation

<u>Our record and progress to date</u>

58. Over the last decade, Openreach invested billions of pounds in a new fibre broadband network that is transforming Britain's broadband landscape. Today more than 26.5 million premises can access this fibre network and we believe our deployment has been one of the fastest anywhere in the world. Figure 5 below shows the UK is a leader among European countries in non-cable NGA coverage.

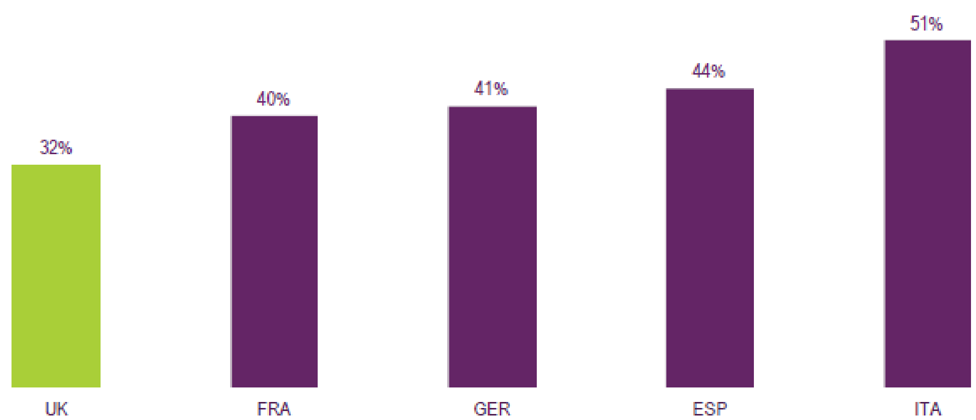
*Figure 5: Non-cable NGA coverage in European countries*




*Source: Cullen International*

59. Our commitment to the model of functional separation that we have implemented over the last twelve years has delivered one of the most competitive markets in the world for broadband services. Consumers have a wide choice of products and services offered by competing retailers, almost 600[5] of which deliver to their customers over the Openreach network. Ofcom's own research,[6] as set out in Figure 6 below, shows that BT has the lowest share of fixed lines of any ex-incumbent in the five largest European economies. This demonstrates how successful Ofcom's regulatory regime and Openreach's strategy have been at promoting competition in retail markets.

*Figure 6: Incumbents' shares of fixed lines in the EU5 countries*




*Source: HIS*

60. Since the 2014 FAMR we have worked hard to improve service. We have exceeded the MSLs Ofcom mandated, as Figure 7 shows.

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5 Source: BT's Annual Report and Accounts 2017

6 Source: Ofcom International Communications Market Report 2016: EU5 Broadband Scorecard

*Figure 7: Openreach performance against copper MSLs*

| | Year to date MSL Performance (RAG 2016/17 targets) | | | | | |
|---|---|---|---|---|---|---|
| Ofcom MSL Performance | WLR3 FAD | LLU FAD | WLR L2C On Time | LLU MPF L2C On Time | WLR3 & MPF SML1 | WLR3 & MPF SML2 |
| Scotland | 85.2 | 90.5 | 93.3 | 93.9 | 86.9 | 78.5 |
| North East | 94.2 | 95.3 | 94.2 | 94.3 | 83.4 | 80.3 |
| North West | 95.5 | 96.3 | 94.0 | 94.0 | 85.8 | 82.1 |
| North Wales & North Midlands | 85.6 | 88.9 | 92.9 | 93.6 | 84.4 | 80.6 |
| South Wales & South Midlands | 88.0 | 89.8 | 93.0 | 93.4 | 83.6 | 80.4 |
| Wessex | 90.7 | 93.3 | 93.5 | 93.6 | 84.9 | 80.4 |
| South East | 95.3 | 96.1 | 93.4 | 93.9 | 85.3 | 82.1 |
| London | 87.4 | 90.0 | 93.7 | 93.1 | 88.7 | 84.0 |
| East Anglia | 85.0 | 87.9 | 93.4 | 93.6 | 82.8 | 79.0 |
| Northern Ireland | 99.2 | 99.9 | 93.4 | 93.6 | 91.5 | 80.0 |
| UK | 90.0 | 92.4 | 93.5 | 93.7 | 85.1 | 80.7 |
| 2016-17 Target Hits | 10 | 10 | 10 | 10 | 10 | 10 |
| Targets 2016-17 | 79.0 | 79.0 | 89.0 | 89.0 | 77.0 | 77.0 |

*Source: Openreach*

61. In parallel, we have taken other steps to put into practice our commitments to high quality service and we have put service at the heart of our strategy. We have proactively shared our plans to raise standards, and we publish quarterly Key Performance Indicators (KPIs)[7] to let our customers know how we are doing. We have also developed a set of service commitments to underpin our ambition to improve customer experience. These commitments are summarised in Figure 8.

*Figure 8: Openreach's new service commitments*

| |
|---|
| **For our Provision customers we will:** |
| Achieve 95% of ALL customer Provision orders on time by the end of 2017 |
| Halve the proportion of fibre (FTTC) orders that receive an Openreach fault clear in 28 days |
| Ensure customers moving into a new home will have their service ready on agreed date |
| Provide more fibre capacity for customers wanting FTTC |
| Improve the speed of delivery on FTTP orders –(% within industry standard of 18WD) |
| **For our Repair customers we will:** |
| Ensure that at least 83% of repair customers have service restored on time |
| Invest in our network health to reduce 183, 000 customers experiencing a loss of service |
| Halve the customers experiencing multiple faults (3+ repeats faults) and appointments |
| **For our customers with delays we will:** |
| Ensure customers will not wait longer than 30 days for service restoration or 90 days for order completion |
| Ensure we take care of our most vulnerable customers if we cannot resolve their service on time by providing a temporary solution |
| **For our customers with appointments we will:** |
| Consistently deliver low level missed appointments (<2.5%) & ensure we never miss again. |

*Source: Openreach*

[7] https://www.homeandwork.openreach.co.uk/OurResponsibilities/our-performance.aspx

## Our strategy going forward

62. Like Ofcom, we have strategic objectives of greater investment in wider broadband coverage and ultrafast networks - including more 'full fibre' - and higher levels of service. Demand for our services continues to grow and whether it is copper or fibre, data-hungry customers are demanding more and have higher service expectations. We have invested more than £10bn in our network over the last decade and we have made significant progress on improving the service we provide to CPs and their customers. We want to go further: indeed our entire strategy is built around delivering better service, broader coverage and faster speeds.

63. In line with our strategic aims, in September 2015 we publicly committed to:

- Raise our service standards, offering quicker installations and faster fixes;
- Develop new initiatives and technologies to help the UK Government go beyond its 95% target for superfast broadband;
- Provide the speed people need, including making ultrafast broadband available to 12 million homes and businesses by the end of 2020;
- Be a trusted partner for CPs, continuing to guarantee fair and equal treatment for all;
- Make a difference to the communities we serve, inspiring over half our people to become volunteers in the community; and
- Invest to sustain Britain's digital leadership.

64. Our current commitments, shown in Figure 9 below, build on the commitments made in 2016, and are focused on delivering better service, broader coverage and faster speeds:

*Figure 9: Openreach commitments 2017/18*

| | |
|---|---|
| **Better service** | • Delivering a step change in customer experience, meeting or exceeding Ofcom's Minimum Service Levels and fixing key irritants<br>• Our approach is to deliver on time, right first time, own it, and work smarter<br>• For consumers: that means halving missed appointments, multi-skilling engineers, case managing problems and improving network health via proactive maintenance |
| **Broader coverage** | • Go beyond 95%: aiming to extend superfast broadband coverage including 'gain-share' dividend from BDUK areas, to take fibre further<br>• More competition: providing access to Openreach's ducts and poles<br>• Ready to deliver 10Mbps Universal Service Commitment: developing and testing technology and commercial options |
| **Faster speeds** | • Taking the UK from Superfast to Ultrafast:<br>• Ambition to extend Ultrafast with mix of technologies to 12m premises by 2020<br>• Delivering G.fast coverage to 10m homes and businesses by 2020<br>• Ambition to increase FTTP coverage to 2m new homes and SMEs |

*Source: Openreach*

### *Better Service*

65. We continued to improve service levels for our customers during 2016/17, and launched new proactive maintenance initiatives that will lead to lower fault volumes in future years. We not only exceeded all 60 of Ofcom's MSLs for copper services, as shown in Figure 7 above, but in 2016/17 we also halved the number of missed appointments we are responsible for as compared to 2015/16. Openreach's response to Ofcom's QoS consultation provides more details on our performance.

66. We arrested a six-year rise in network fault volumes, and launched a new multi-year network health programme to deliver sustained reductions in faults over the coming years. The number of faults on our network grew by an average of c. 6% per annum between 2009/10 and 2015/16 but in 2016/17 we held fault volumes at the same level as in 2015/16.

*67.* We increased the capacity of both our FTTC and FTTP networks, leading to a significant improvement in availability, through proactive activities such as adding extra line cards to VDSL cabinets, and adding extra tie cables between VDSL cabinets and PCPs. As a result of the increased focus, the capacity availability of our FTTC network was 97.7% in March 2017.

### *Broader Coverage*

68. We increased the UK fibre footprint to 26.5 million premises at March 2017, equivalent to 88% of premises. This is an increase of 1.1m since March 2016, and includes over 5 million premises passed as part of the Broadband Delivery UK (BDUK) programme. As coverage passes 95% at the end of 2017, the remaining areas to be upgraded are increasingly remote or inaccessible, and hence for a given level of investment the number of new premises covered continually declines.

### *Faster Speeds*

69. Our technical trials of G.fast were successful, demonstrating the ability of the technology to deliver 300 Mbps+ with good levels of stability. We conducted technical trials of G.fast equipment from three vendors (Alcatel, Adtran and Huawei). These trials confirmed the capability of the technology to provide stable, ultrafast speeds over our network, and provided insights into the level of technical performance that we can expect over different lengths of copper tail.

70. In Spring 2017 we launched a G.fast pilot that covered 25,000 premises in Cherry Hinton and Gillingham, with subsequent extension to 19 other locations covering c. 100,000 premises. The pilot is enabling us to refine our processes for rolling out the network and connecting customers, and to assess in-life performance with end customers. To date we have c. 400 connected customers, and in-life performance is good. A further 31 sites covering c. 100,000 premises have been shared with CPs and will be built later this year.

71. The pilot is providing insight into technical and process issues that arise when upgrading an area to G.fast, including the speeds that are likely to be achieved and the performance of G.fast over aluminium lines. It is also letting us monitor the home environment, enabling us, for example, to understand how frequently we can expect to need to move the NTE in customers' homes. It is also helping us to validate our modelling assumptions and to ensure the speed estimation process is as accurate as possible.

72. Our FTTP footprint is c. 400,000 premises, and new sites with more than 30 premises are served using FTTP. We have also made significant improvements to the FTTP infrastructure by moving to

connectorised build technology as opposed to splicing blown fibre. This enables a single-step provision process for these premises and a better customer experience.

## Our new governance model will transform our ability to deliver our strategy

73. On 10 March 2017, following voluntary commitments made by BT under Ofcom's Digital Communications Review, an agreement was reached with Ofcom over the future of Openreach. This will see Openreach become a distinct, legally separate business – Openreach Limited – potentially from April 2018, around the same time as the new WLA regulation comes into effect. [8]

74. The new company will have a Board with a majority of independent members including the Chairman. The Board will be responsible for Openreach's strategy, planning, spending and service commitments, as well as overseeing its performance. The Board will have a responsibility to ensure that Openreach treats all its customers equally, not only in delivery of existing products but also in the setting of strategy and in decisions on investment in new products and services. All of the c. 32,000 people in Openreach will transfer from BT plc to Openreach Limited, and the BT logo will disappear from Openreach branding.

75. Openreach will operate a new process allowing CPs to make proposals for significant investments in new Openreach network and service developments. This process includes a confidential phase in which details of CPs' proposals cannot be shared with any other part of the BT Group unless the CP has given its consent. Openreach will be open to proposals that involve new investment models, including co-investment with other CPs.

76. Openreach is pressing ahead with implementation of the new model in advance of incorporation. The Openreach Board has been set up under Chairman Mike McTighe, and it has already met five times. We will be making an early start on Openreach rebranding, and we are currently consulting with CPs on the details of how the new confidential process for investment proposals should work.

77. This summer we will also be consulting with CPs on how to drive additional full fibre investment and the regulatory challenges this involves. We want to invest in more full fibre infrastructure, as long as the economic case can be established, and we will be consulting with CPs on how best to achieve that aim. We are also consulting with industry on the potential for Long Reach VDSL (LR-VDSL), which can help improve speeds on longer fibre lines. We need Ofcom to engage in this process to ensure the correct regulatory approach is in place that incentivises and drives the optimum outcomes for UK consumers and businesses.

78. The greater independence that Openreach enjoys under the new model will be a key enabler for the delivery of Openreach's strategy. Openreach will be setting its own strategy within the overall BT Group governance framework and the Openreach Board will hold the Openreach Executive to account for delivery of the strategy.

[8] Legal separation of Openreach will come into effect once certain conditions in BT's March 2017 Notification to Ofcom under section 89C of the Communications Act 2003 have been met. These conditions are: extension of the Crown Guarantee to cover members of the BT Pension Scheme who transfer to Openreach Limited; acceptance by the BT Pension Scheme Trustee of Openreach Limited as a participating employer in the Scheme; completion of the required TUPE consultation with the relevant employees and employee representatives; and Ofcom's release of BT from the Enterprise Act Undertakings which Ofcom accepted from BT in 2005.

## The role of Ofcom and regulation

79. Investing in fibre networks and higher service levels is expensive. Whether by Openreach or others, building a business case for more full fibre network in the UK is extremely challenging, and service improvements have to be fully funded. It is crucial that the regulation Ofcom imposes in its market reviews supports investment and does not distort efficient investment decisions. In particular, building a positive business case for further discretionary fibre and copper investment in broadband over the coming years will be dependent on a supportive regulatory approach. Any excessively onerous regulatory controls will undermine not only Openreach's case for investment, but the cases of other potential investors.

80. This response assesses Ofcom's proposals from the perspective outlined above, setting out our evidence to show the impact of the proposals on investment. In particular we highlight aspects of the proposals that are inconsistent with delivery of the advanced digital infrastructure that UK businesses and consumers will need over the coming years.

81. In order to ensure that Ofcom is able to make the right decision, based on the relevant facts, it is important that Ofcom's proposals are subject to full, proper and fair consultation. This is particularly so given the magnitude of the impact of Ofcom's proposals, especially on Openreach.

82. A great deal has changed since Ofcom published the WLA Consultation:

    - In this response Openreach submits extensive evidence on Ofcom's assessment of the WLA market and proposed remedies, including very detailed observations on Ofcom's modelling;
    - Ofcom has sought and Openreach is providing significant new and updated information on a range of substantive issues;
    - Ofcom has informed Openreach that it intends to require Openreach to provide even more information, in particular in relation to 2016/17, so that Ofcom can update its base year from 2015/16;
    - Openreach is providing an updated NGA business case which reflects Openreach's most up-to-date view of its NGA investment;
    - Openreach has been involved in an iterative process with Ofcom to understand its modelling and analysis; and
    - Openreach has finalised its service-cost modelling using its allocations model which is currently being audited by Analysys Mason on behalf of Ofcom.

83. This information should have a significant impact on Ofcom's consideration of the WLA market and the remedies it intends to impose, including on:

    - Ofcom's assessment of the fair bet and the impact of its proposals on incentives to invest;
    - Ofcom's modelling of the appropriate price for MPF and the 40/10 product; and
    - Ofcom's modelling of the impact of the proposed MSLs.

84. In addition, Openreach also has concerns about the consultation to date, in particular whether sufficient reasons for the proposal have been provided to allow intelligent consideration and response. In this regard, the nature of the consultation must reflect the seriousness of the outcomes. Given the very significant impact on industry (and Openreach), an especially detailed

and comprehensive consultation is required.

85. Openreach feels that its ability to respond to the consultation in full has been hampered by:

- Ofcom's approach to modelling, which:
    i. is novel in that it involves both top-down and bottom up models. This hybrid approach has made it more challenging to understand and respond to Ofcom's modelling;
    ii. does not consistently follow modelling best practice, which means it is very difficult for Openreach to understand how the modelling works and the consequences of the assumptions and approaches adopted by Ofcom. For example:
        1. there is no control cross-check total;
        2. it is not consistently obvious where all inputs from the model have come from; and
        3. the control module is very limited, which has in turn limited Openreach's ability to test sensitivities appropriately.
- It not being possible to understand fully Ofcom's modelling based on the information published by Ofcom on 31 March 2017. We have had to revert to Ofcom with large tranches of queries and to hold a number of meetings with Ofcom in order to clarify further aspects of Ofcom's analysis and modelling. This process has eaten into the ten week consultation period (11 weeks with the one week extension granted). Indeed, to date, we still have outstanding queries.
- The partial and delayed release of key cost modelling information: Ofcom's working models have only been made available with randomised numbers that do not tie exactly back to the published outputs and the cumulo model has not been available at all to Openreach
- Ofcom publishing clarifications on 20 April, 2 June and 9 June 2017 (the latter two at the very end of Ofcom's consultation period).

86. These issues have been exacerbated by the very tight timeframe in which we have been required to respond. In this regard, Ofcom has allowed ten weeks to respond to this Consultation (rather than the usual twelve), to which we were granted an extension of one week. In normal circumstances eleven weeks might be sufficient time, however for Openreach it has been very difficult here because, in addition to the reasons set out above:

- First, the WLA market review is effectively four separate consultations: main WLA; charge control; quality of service provision; and ducts and pole access. This essentially amount to four large consultations, with overlapping issues, responses to which are due within a week of each other.
- Second, Ofcom published an unexpected fifth consultation on 31 March 2017 on the pricing of the MPF SML1 product during the lacuna period. That consultation diverted significant resources that would have otherwise been focused on the preparing responses to the WLA consultations referred to in the bullet above.
- Third, each of these consultations contains a large raft of detailed analysis and modelling which require considerable resource to review, synthesise and develop responses to.
- Fourth, the ten week consultation period included Easter and May half-term, when

considerable numbers of employees are unavailable.

- Fifth, Ofcom has also required Openreach respond to detailed draft and final statutory information requests on overlapping issues, and drawing on the same specialist resource as were engaged in preparing Openreach's consultation response, during the same time period.

87. We look forward to working with Ofcom in order to address the concerns set out above and so that, a re-consultation, which currently appears necessary, can be avoided. In the meantime, we will continue our consideration of issues raised, including: (i) any subsequent information obtained from Ofcom; and (ii) any information Ofcom requires us to submit, and we will make any further representations where appropriate.

# 4. Market definition and significant market power assessment

| |
|---|
| ***Question 3.1: Do you agree with our proposed product and proposed product and geographic market definition? Please provide reasons and evidence in support of your views.*** |

| |
|---|
| ***Question 3.2: Do you agree with our proposal that BT holds SMP in the supply of WLA products in the UK excluding the Hull Area? Please provide reasons and evidence in support of your views.*** |

## Summary

88. In reaching its preliminary findings on market definition and market power, Ofcom has significantly understated the competitive constraints on Openreach, particularly for its VULA services, and therefore overstated both Openreach's market power and the extent of the alleged competition issue relating to VULA supply. As a result, Ofcom has overstated the extent to which price regulation of VULA is required and, where remedies are imposed, how intrusive the necessary remedies need to be (see also section 9 of this response).

89. The WLA market has become a broad and deep market including copper loop, fibre and cable based fixed local access, and judged to be national in scope. The finding of a single product market across the three access technologies and their associated speeds is consistent with a belief that they still significantly constrain each other. Nonetheless, Ofcom casts doubt on the degree of competitive constraint between these forms of access and relies on these alleged weakening constraints in justifying the imposition of a charge control on the 40/10 variant of VULA in order to provide protection to SFBB customers against the risk of high prices. There is an unresolved tension in these positions.

90. The evidence set out in this section suggests that the constraints from copper and cable on fibre remain relevant. SBB, although not a perfect substitute for SFBB, is a real choice for a sufficient number of customers (both now and over the review period) that the risk of excessive pricing is mitigated (as Ofcom has concluded in previous market reviews). Even if Ofcom does not accept this, it should acknowledge that if demand has shifted towards SFBB, then Virgin Media becomes a closer competitor in relation to higher speeds and one which has important technical advantages and a widening geographic presence. Virgin Media has made steady progress in eroding Openreach's market share in fixed local access and will continue to do so over the review period.

91. Openreach agrees with the definition of a single market for this review period, given the indirect competitive constraints from SBB and cable on SFBB services (and vice versa). Going forward, however, on the basis of Ofcom's stated vision for increasing network competition including through passive infrastructure access (PIA), Ofcom must re-consider both product and geographic market boundaries. It may, for example, be appropriate to define a distinct physical infrastructure market in areas where competitive network roll-out is viable with the prospect of deregulation below the physical infrastructure market. There may also be a need to define sub-national geographic markets reflecting boundaries between contestable and non-contestable areas (as suggested by Ofcom itself).

92. As regards other access technologies, the widespread availability of 4G has brought a major increase in broadband capabilities in the mobile market, providing an alternative to fixed access to a minority of customers, but with the potential for this to grow significantly with upgrades to 4G and the move to 5G. Innovation in high capacity high speed wireless may also increase the potential for this technology to act as a substitute for fixed access. New generation satellite broadband technology may similarly extend the potential reach of these alternative forms of broadband delivery in the future.

## The evolution of WLA market definition

93. Ofcom provisionally concludes that the scope of the relevant market is the provision of copper loop-based, cable-based and fibre-based WLA at a fixed location. Mobile, fixed wireless and satellite access are considered to lie outside the relevant market. Ofcom also provisionally finds that there are two distinct geographic markets: the UK excluding the Hull Area; and the Hull Area.

94. In reaching this view, Ofcom adopts the same methodology and reaches the same conclusions as in previous reviews, namely:

- A focal product is defined as the provision of WLA at a fixed location by a network that uses a mixture of copper loops and fibre;
- Market boundaries are determined by assessing the extent of <u>indirect</u> constraints due to substitution at the retail level. This is because CPs with access networks (namely BT, KCOM and Virgin Media) are deemed unlikely (without regulation) to grant third party access to their networks, meaning direct constraints on the provision of the focal product are considered to be less relevant.[9] Moreover, entry barriers to establishing a substantial new fixed network are found to be high.
- Cable based WLA is included within the WLA due to indirect constraints arising from competition between cable and loop-based services at the retail level and consumers regarding them as substitutable services.
- Mobile access is considered unlikely to act as an effective retail substitute for fixed local access for many customers because most consumers buy both a mobile and a fixed broadband service, and substitutability is considered to be limited due to data volume and speed limitations.

95. Over the last decade this definition has evolved but only to a limited extent. Until 2010 market definition for WLA was based on a pre-existing copper network with a largely ubiquitous network design. From 2010, fibre-based local access was included within the scope of the relevant wholesale market because of the likely constraint on a hypothetical monopolist of NGA services exerted by customers switching back to current generation access (CGA) services.

96. As a consequence, Openreach was considered to have SMP in relation to fibre-based local access (due largely to its strong position in CGA which remained the form of access used by the majority of customers) even though NGA services were fairly nascent at this time and Openreach faced competition from an NGA competitor (Virgin Media) which commenced NGA roll-out earlier (2008)

9 i.e. the "modified greenfield" approach.

and was therefore a larger player in terms of both NGA deployment and take-up.

97. Equally, Ofcom has consistently reached the view that the geographic market definition is national (on the basis of common pricing constraints) despite the growth of cable and the roll-out of NGA services suggesting a degree of market fragmentation by geography. Ofcom has previously recognised this tension (at least in the case of cable) by pointing out that "*we recognise that Virgin Media is present in the market only on a sub-national basis, i.e., in its cable footprint. Therefore, while we consider that the market is national in scope, it nevertheless exhibits local characteristics*" (emphasis added).[10]

98. Put simply, Ofcom's approach to market definition and market power has been very conservative, for example in finding Openreach to have SMP in relation to fibre-based local access from the moment it invested in NGA, and taking a national rather than a local view despite there being geographic areas in which Openreach is not the local access provider (e.g. new builds) or has fewer access connections than Virgin Media (e.g. if measured by reference to higher speed service).

99. Effectively, Ofcom has defined the WLA market in such a way that Openreach has an enduring position of SMP whilst devising remedies which reflect nuances in Openreach's actual market power across different segments of the WLA. This gives Ofcom a very broad discretion to intervene, but it has chosen to exercise this discretion in different ways acknowledging the tensions arising from its broad brush approach to market definition. The decision to grant a degree of pricing flexibility in relation to VULA, for example, reflects the tension in regulating, from the outset, a new and risky service in which competitors (in particular Virgin Media) were also investing.

100. It is less clear that this approach is appropriate going forward given Ofcom's statement that "[w]*e are at an important juncture in the development of the networks that will serve the needs of the UK in the future. In particular, network competition would make the decisions about how to serve the needs of customers in the future contestable*."[11]

101. This has two implications namely: (i) going forward, Ofcom's approach to broadband regulation must avoid creating an unlevel playing field between Openreach and rival investors; and (ii) the need for an analysis of how economic bottlenecks will evolve and what this means for market definition.

Broadband regulation should avoid creating an unlevel playing field for network investors

102. In particular, there is a risk of asymmetry in Ofcom's approach, namely: if third parties invest in ultrafast networks (e.g. FTTP) in part relying on physical infrastructure access, this will be deemed pro-competitive and outside the regulatory remit, whereas if Openreach invests in ultrafast network in response to the threat of third party investment, this will be tied to its existing position as a provider of local access (albeit for legacy access technologies) and brought within the scope of regulation (albeit without, initially, charge controls).

103. Ofcom (correctly) identifies a relationship between incentives to invest in ultrafast and the access

[10] Ofcom, Review of the Wholesale Local Access Market - Statement, October 2010, paragraph 3.101.

[11] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 4.12.

terms which can be achieved in the absence of investment. More specifically, Ofcom describes "a first mover advantage" for third party investors in ultrafast networks if their competitors are subject to higher unregulated access charges.[12] There is no mention, however, of how Openreach might be able to enjoy a similar first mover advantage if it responds to the risk of third party investment by investing in ultrafast itself, thereby delivering the benefits of competition.

104. There is a risk, therefore of Openreach being subject to a regulatory regime by default. This is incorrect – if Ofcom sees deregulation acting as a spur for third party investment in ultrafast investment, then Ofcom should also ensure that the regime promotes Openreach's incentives to invest in ultrafast particularly where such investment is led (and constrained) by market forces – e.g. where large customers are consulted or indeed directly involved through co-investment; and/or where Openreach is constrained by the risk of losses to network rivals which might, going forward, include wholesale losses if rivals adopt an open access model. In this context, Ofcom should consider excluding nascent ultrafast services from the WLA market definition.

<u>An analysis of how economic bottlenecks will evolve is required</u>

105. Ofcom indicates that it expects "*the relative importance of different points of access to evolve over time as competition between network providers grows – PIA will become significantly more important in the future and is important to our goal of promoting investment in competing ultrafast networks.*"[13] Ofcom also indicates that some geographic differentiation is likely between areas where network competition is viable and areas where it is not, with greater reliance on PIA in the former and a continuing need for LLU and VULA access obligations in the latter.

106. This evolution brings into question where, in the value chain, the economic bottlenecks sit and how deeply into the network competition can occur. A broader debate is required on what would be deemed to constitute "efficient" entry, the degree to which fixed costs should sensibly be duplicated and Ofcom's tolerance for short term "inefficiency" if there is a reasonable prospect of longer term benefits as these are the key economic questions which will shape regulation going forward.

107. There will also be a need, in future market reviews, to reconsider both product and geographic market boundaries, to develop a market view that is consistent with Ofcom's vision for future network based infrastructure competition, based on Ofcom's proposed PIA remedies.[14]

108. It may, for example, be the case that a physical infrastructure market is appropriate which is distinct from activities further down the value chain which are potentially contestable. This would appear to be the logical extension of Ofcom's proposed PIA remedies which, whilst being characterised by Ofcom as a remedy to address issues arising in the WLA market, ostensibly affect civil engineering infrastructure inputs that are upstream of the WLA market. Ofcom has also acknowledged the

[12] Ibid, paragraph 4.32: *"We consider that the proposals set out in this consultation should give BT's competitors strong incentives to invest in their own networks, anticipating the potential for reduced access regulation in the future. Competitors who invest now in new networks can therefore expect to benefit from a first mover advantage, and consumers can expect to benefit from competition between networks."*

[13] Ibid, paragraph 4.18.

[14] Openreach comments on the proposed PIA remedies in its response to Ofcom's consultation on Duct and Pole Access Remedies published on 20 April 2017.

possibility of sub-national geographic markets reflecting the boundaries between contestable and non-contestable areas.[15]

109. Even if these issues only bite in future reviews, it is important that Ofcom signals the direction of travel and relevant economic issues now. The current (very broad) market definition for WLA is unlikely to remain appropriate as the market changes and Ofcom should move as swiftly as possible to a framework that is more attuned to the variety in competitive conditions that network rivalry will bring.

## Inconsistencies between Ofcom's market definition approach and its conclusions on competitive constraints

110. Ofcom has previously taken the view that the key question for the purposes of market definition is the extent of substitutability between services provided by different networks, rather than between different (broadband) services supplied by the same network.[16] It nevertheless considers the degree of substitution between different broadband speeds at the retail level in order to inform its understanding of the (indirect) constraints on the pricing of WLA products.[17]

111. Ofcom reaches the provisional conclusion that "*while SFBB is likely to be a stronger constraint on SBB during the review period, SBB is likely to exert a diminishing constraint on SFBB*".[18] Although Ofcom is not explicit on what this means for market definition at either the retail or the wholesale level, it is clear that, despite this "diminishing constraint", Ofcom does not consider that broadband services offering lower and higher speeds constitute separate markets (in other words that the "chain of substitution" identified by Ofcom in the 2014 WBA Review remains intact).

112. As different speeds are considered to be in the same retail markets, it follows that fibre, cable and copper access technologies are in the same WLA product market (which Ofcom does clarify). Openreach agrees with this market definition but disagrees with Ofcom's contradictory finding that the competitive constraint of copper on fibre is weak, despite being in the same market (assuming a relationship between SBB broadband services and ADSL WLA inputs, and SFBB services and VULA inputs).[19]

113. Although the constraint of SBB on SFBB is considered by Ofcom to be weakening, if the constraint is not so weak as to suggest separate markets, then there must be a degree of constraint that is consistent with a broad product market. For the reasons set out below, Openreach considers that this constraint has been significantly understated by Ofcom.

114. Put simply, Ofcom cannot define markets expediently in order to deliver a large market share for

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[15] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 4.34.

[16] Ofcom, Fixed Access Market Reviews, Volume 1 – statement, June 2014, paragraph 7.45.

[17] Ofcom explains indirect constraints as follows "*if a cable network competes strongly with a copper- or fibre-based service at the retail level, then the notional price that the copper of fibre network supplies WLA is also likely to be constrained*" (Ofcom, WLA Market review – Volume 1, March 2017, paragraph 3.6)

[18] ibid, paragraph 3.46.

[19] There are some anomalies in the relationship between input technology and broadband speeds. While fibre based services generally offer faster speeds, there are some cases where ADSL will deliver faster speeds than NGA technologies, due to line length limitations resulting in a degree of overlap in the speeds actually delivered.

Openreach (consistent with SMP) and then dismiss the constraints exerted by the alternative forms of WLA within this market.

## SBB has been an important constraint on SFBB and remains a relevant constraint even if the market is moving towards greater fibre take-up

115. Ofcom has not demonstrated that market and demand conditions have changed sufficiently (or will do so over the market review period) to justify a different conclusion to that reached in 2014 on the constraint exerted by SBB. SBB has been an important constraint on SFBB and remains a relevant constraint even if the market is moving towards greater fibre take-up.

116. A significant proportion of customers will continue to regard SBB as a sufficient and viable substitute for SFBB services, sufficient to constrain the pricing of SFBB services for the following reasons:

- There is little evidence that during this review period SFBB will become "must have" in the sense of un-locking apps and services which cannot be accessed using SBB (or, if accessed, at lower quality). The most popular internet activities do not have high bandwidth requirements.[20] Even for video, compression technologies will reduce the bandwidth requirements of content apps[21] and high use scenarios (e.g. simultaneous 4k streaming) are unlikely given that 4k devices and Ultra HD content are not yet commonplace.[22]
- Customers indicate very high levels of satisfaction with their current broadband speeds[23] and a material proportion do not have (or anticipate having) a need for higher speeds.[24, 25]
- SFBB take-up is driven by marketing activities and attractive retail packaging more than it is driven by customer need.[26] Recent take up of SFBB, for example, has been driven by Sky and TalkTalk marketing SFBB services more strongly and offering deeper acquisition discounts after a period of several years when they chose not to. Ofcom itself (in its 2016 Connected Nations report) notes that the rate of migration from basic to superfast broadband is slowing and that providers will need to work harder to entice customers to switch including through

[20] Ofcom's Communications Market Report 2016 indicates that the top activities online are general browsing, sending and receiving emails, online shopping, banking and using social networking sites, the same as in 2014. In 2014, Ofcom concluded that this pattern of usage did not indicate that take up of SFBB was driven by specific uses; "[t]*he adoption of SFBB appears to result in users spending more time on applications already used with CGA, rather than new applications, suggesting the take-up of SFBB is not driven by specific uses*." (Ofcom, Review of the wholesale broadband access markets - statement, June 2014, paragraph 3.57)

[21] Ofcom has taken no account of the fact that the broadband speeds needed by customers are related to compression technology. With technological advances in compression techniques, the amount of bandwidth needed for any particular service decreases.

[22] Annex 1 to this response, paragraphs 3-16.

[23] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 3.30 and footnote 63: 82% of SBB customers say that their broadband speed is sufficient for their household and 90% of SFBB customers say that their broadband speed is sufficient for their household.

[24] Ibid, paragraph 3.31: 43% of customers indicate that they probably would not, or would never, upgrade to superfast speeds.

[25] Annex 1 to this response, paragraphs 17-25.

[26] Virgin Media, for example, automatically upgrades broadband subscribers to faster speeds (e.g. the lower tier moved from 50Mbps to 70 Mbps in 2015) at no extra cost.

lower prices.[27] Ofcom's own research and commentary (outside of the WLA market review), therefore, is consistent with a constraint on fibre pricing exerted by standard broadband products.[28]

- Customers are price sensitive and clearly prioritise price over speed. Openreach notes that consumer research commissioned by BT Consumer indicates that ✂ .[29] The incremental price for higher speed has to reflect customer valuation in order to entice the remaining SBB customers to make the price/quality trade up (and avoid SFBB customers making the price/quality trade down).[30] BT notes that Ofcom has not undertaken any empirical analysis of likely switching in response to a price increase (in either the SBB or SFBB price) and cannot therefore reach any firm conclusions on the nature of the constraint between SBB and SFBB.
- It is not the case that BT's price differential between retail SBB and SFBB services has widened in recent years (as suggested by Ofcom). Nor is this the case for Sky and TalkTalk (which Ofcom accepts). Contrary to Ofcom's claims, the price differential between SBB and entry level SFBB products decreased over the last three years, rather than increased. Pricing does not, therefore, support Ofcom's hypothesis of greater demand for fibre and its reduced substitutability with copper.[31]
- Analysis of competition within and outside the Virgin Media footprint supports arguments made above: ✂. This suggests that broadband speeds across the entire spectrum (from SBB to Virgin Media's 100Mbps+ services) compete effectively with each other and consumers' decisions may be driven more by ✂. than by line speed, and the take up of fibre continues to be highly influenced by providers' commercial strategies.[32]
- For the reasons outlined above, demand for fibre will be significantly less than estimated by Ofcom over the review period.[33]

117. The impression given by Ofcom that customers are clamouring for speeds above what SBB can deliver and that SBB is, therefore, becoming an increasingly unattractive alternative, is not accurate. By and large, customers are satisfied with what they have, but they do care about price and would

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[27] Ofcom notes that "[t]*he rate that new subscribers are migrating from basic broadband services and adopting superfast services appears to be slowing, dropping from 31% in the year to 2014, to 15% over the past year*." Ofcom goes on to suggest that "[i]*n order for superfast broadband take up to continue growing at the same rate as it has in the past, providers may need to consider new approaches for attracting customers, including articulating its benefits more clearly and lowering prices further.*" (Ofcom, Connected Nations 2016, paragraphs 4.57 and 4.60)

[28] Annex 1 to this response, paragraphs 357-358.

[29] Ibid, paragraph 360.

[30] Ibid, paragraphs 359-363.

[31] Ibid, paragraphs 364-368.

[32] Ibid, paragraphs 369-372.

[33] Ibid, paragraph 333.

in most cases not, without the push of an attractive proposition, consider higher speeds (and might even spin down from SFBB to SBB if the extra benefit from higher speeds is not seen to be value for money).

## Ofcom understates the competitive constraint on Openreach from Virgin Media

118. Cable is included within the WLA product market on the basis that it provides an alternative method of delivering the same retail service[34] but Ofcom undertakes no analysis and reaches no provisional conclusion on the nature and degree of this constraint as part of its market analysis. This is surprising given that Ofcom has consistently examined this issue in previous reviews[35] and Virgin Media's share of fixed access connection has increased from 16% of fixed access connections in the UK (CGA and NGA lines combined) in 2010 to around 20% today and is projected by Ofcom to increase to around 25% by the end of the review period. This is a material expansion in share at the expense of Openreach[36] and indicates that the competitive constraint from Virgin Media has increased since 2010.

119. It is even more surprising given Ofcom's belief that the constraint from SBB may be weakening which might lead Ofcom to examine (following Ofcom's logic) closer SFBB constraints such as cable services in some detail. Virgin Media has a significant share of super- and ultrafast connections (approximately 40% based on Ofcom's Figure 3.17) and is the only scale supplier of ultrafast connections based on Ofcom's current definition. In its own footprint, Virgin Media's retail market share is consistently above 40% of all broadband lines.

120. Elsewhere in the Consultation document, Ofcom states: "*We believe that Virgin Media's services are likely to continue to constrain retail prices to some extent. However, we do not believe that competition from a single, smaller competitor is enough to constrain BT's VULA prices to a competitive level. This is reflected in our forecasts in which BT's market share of wholesale SFBB services increases from around half of lines in 2016/17 to around three-quarters of lines in 2020/21 (see Figure 3.17).*"[37] Virgin Media is regarded by Ofcom as an insufficient constraint on the price of VULA access because:

- Virgin Media is only present in just under half the country – "*its coverage is likely to remain significantly less than that of BT's SFBB network*"; [38]

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[34] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 3.14.

[35] In its statement on the Fixed Access Market Review in June 2014, for example, Ofcom concluded the following: "*Given that the retail products available over BT's network compete with those provided over Virgin's network, we consider that this indicates that cable-based wholesale local access exerts an indirect constraint on the provision of wholesale local access by a network that uses a mixture of copper loops and fibre. This is because an increase in the wholesale price of copper- and fibre-based local access that increased retail prices would likely trigger retail switching towards cable-based services. This view is consistent with past market reviews, where we have consistently concluded that cable-based wholesale local access lies within the WLA market on the basis of indirect constraints*." (paragraph 7.44)

[36] Ofcom, WLA Market Review – Volume 1, March 2017, Figure 3.17.

[37] Ibid, paragraph 8.28.

[38] Ibid, paragraph 8.27.

- A single, smaller competitor is not sufficient to constrain VULA prices to a competitive level;[39] and
- "*a monopolist in one region facing competition in other regions may use national pricing to soften competition in those other regions. This is because uniform pricing commits the monopolist to price less aggressively than it otherwise would in the competitive areas. This commitment can induce rivals to price less aggressively too*."[40]

121. Ofcom is in no position to reach such a conclusion because it undertakes no analysis of the (indirect) constraint exerted by Virgin Media, nor how this constraint may be expected to change as Virgin Media continues its expansion. This is a notable omission given that Virgin Media's network expansion represents one of the largest capital expenditure programmes in the communications sector in Europe.

122. Ofcom has significantly underplayed the relevance of Virgin Media as a competitive constraint for the reasons set out below.

<u>Virgin Media is a strong network competitor with an expanding network and technical advantages</u>

123. Virgin Media is upgrading its network[41] and now offers services with download speeds of 300 Mbit/s (compared to Openreach's highest widely available download speed of 80 Mbit/s for FTTC).[42] As noted by Ofcom, later versions of Virgin Media's technology could support, in theory, download speeds of up to 10 Gbit/s and upload speeds of up to 1 Gbit/s.[43] Ofcom accepts the pressure on Openreach to invest in order to deploy faster broadband due to Virgin Media's regular and ongoing technology upgrades, thereby acknowledging the strength of Virgin Media as a network competitor.[44] Ofcom cites this as an example of the benefits to customers provided by network competition.[45]

<u>At the retail level, Virgin Media is a very strong competitor</u>

124. In addition to the speed advantages described above, Virgin Media also offers triple play services

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[39] Ibid, paragraph 8.28.

[40] Ibid, paragraph 3.106.

[41] Virgin Media has been offering super-fast broadband services since the end of 2008, and it completed the rollout of a 50 Mbit/s capability across its entire network in Q3 2009.

[42] Virgin Media's fibre network can be easily upgraded to offer higher speeds which allows it stay one step ahead of its SFBB competitors. More specifically, the DOCSIS3 cable interface standard permits the addition of high-bandwidth data transfer to an existing cable TV system.

[43] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 2.18.

[44] Ibid, paragraph 4.8 (emphasis added): "<u>[t]*he degree of network competition from cable networks plays an important role in encouraging incumbents to deploy faster broadband*</u>*. In the early 2000s, one of the factors that drove BT to increase the performance of its initial broadband service was the availability of cable broadband. When we allowed access to LLU, we saw innovation around the electronic equipment deployed and the capacity of broadband connections. Recent research has confirmed that this policy led to faster broadband speeds. Similarly,* <u>*BT announced its rollout of superfast broadband shortly after Virgin Media's upgrade to DOCSIS 3.0.111 BT's recent announcement of G.fast investment plans was in the context of Virgin Media offering a maximum service speed of 200 Mbit/s compared to a maximum of 80 Mbit/s available from Openreach using its current FTTC network*</u>."

[45] Ibid, paragraph 4.8.

including highly attractive pay TV packages. Virgin Media was also the first of the four main retail broadband providers to be able to offer quad-play services, which it has been able to do since 2007.

125. In short, Virgin Media and BT compete head to head for retail consumers in the areas in which Virgin Media is present reflecting the substitutability of cable-based services and copper- and fibre-based services at the retail level, as well as the dynamics created by strong bundled propositions.[46] There is no reason to expect the extent of retail substitution to reduce during this review period.

<u>Virgin Media constrains BT's pricing at the wholesale (Openreach) and retail (Consumer) level</u>

126. When setting prices for access to networks (which, as indicated above, have been upgraded due to competitive pressure from Virgin Media), there can be no presumption that Virgin Media is insufficient to constrain prices because of its limited coverage.

127. Openreach's national price for VULA takes into account the competitive pressure Openreach faces in Virgin Media areas, with non-Virgin Media areas indirectly benefitting.[47] Paradoxically Ofcom argues the opposite – that the lack of competitive network presence outside Virgin Media areas may lead to prices above the competitive level also in areas in which Virgin Media is present.[48] But failing to address the competitive threat of an alternative network presence in almost one half of the market is entirely implausible from a commercial perspective. In other words, a strong constraint is exerted and this constraint may be expected to increase as Virgin Media's network footprint expands.

128. In addition to a national pricing policy at both the wholesale and retail levels which recognises the competitive threat posed by Virgin Media, Openreach understands that ✂

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129. Finally, any assessment of whether Virgin Media is constraining Openreach's VULA price "*to a competitive level*" begs the question, what is a competitive price in a dynamic market in which both entities are engaging in significant and successive waves of investment in superfast and ultrafast broadband networks. Virgin Media may be expected to be constraining Openreach's prices given its own network capability, but this should be measured by reference to a dynamically efficient price (i.e. one which is capable of supporting efficient investment). Section 9 discusses further how the efficient price level for a long term asset investment should be appropriately assessed.

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46 This is consistent with the conclusions which have been reached by Ofcom in previous WLA market reviews that cable- and loop-based broadband access services are similar in terms of product specification and pricing, that marketing materials from both types of operators supported the view that they were substitutes, and that cable is, in practice, a strong competitor at the retail level (for example Ofcom, Fixed Access Market reviews – statement, June 2014, paragraph 7.41).

47 ✂

48 Ofcom has provided no empirical evidence, nor cited any internal documents, supporting this academic thesis that BT might be using uniform pricing, either at the wholesale or retail level, in order to signal less aggressive pricing in order to induce rivals to price less aggressively too. This would effectively amount to coordinated behaviour but Ofcom provides no evidence whatsoever to substantiate such an allegation.

## Alternative access technologies may impose greater constraint on fixed access broadband in the future

130. Ofcom discusses whether mobile, leased lines, fixed wireless access or satellite are strong substitutes to fixed access and conclude on each that they are unlikely to be significant constraints on fixed access broadband.[49]

131. Ofcom has neither assessed the cumulative constraints of alternative technologies on fixed access networks, nor considered particular geographic differences. For example, a customer in London may face a choice between copper, fibre and cable solutions, but also may consider mobile offers combined with access to a wifi network (e.g. O2) or home products such as HomeFi from Three, and fixed wireless access services such as Relish, as alternatives to fixed broadband.

132. This is echoed in a report by Communications Chambers from January 2017, which argued that actual and potential competition between very different network technologies, including not only cable and fixed telecoms networks but also mobile networks, wireless and "possibly low earth orbit low-latency high-capacity satellite" was one important factor which distinguished the telecoms sector from other utilities.[50]

133. As highlighted in paragraph 107 above, future market reviews need to consider carefully the scope for more fragmentation of the WLA market into possible sub-national geographic markets and different product markets. As the competitive pressures from alternative access technologies vary for specific parts of the WLA market (e.g. mobile may be a good substitute for lower bandwidths in specific geographic areas) these need to be fully incorporated into any future assessments of more fragmented WLA markets.

### <u>Mobile</u>

134. Ofcom excludes mobile from the relevant product market on the following grounds:

- Even though average speeds achieved over mobile are comparable (and often even better) to standard broadband, they are far below superfast fixed broadband speeds, and speeds can be more variable especially inside buildings.[51]
- Mobile data contracts tend to constrain data usage to low levels compared to average fixed broadband data usage, and larger mobile data packages are typically sold at significant premiums.[52]
- For a small number of consumers who only require low bandwidth and little data, mobile may be a reasonable substitute to fixed broadband. However, because of the bandwidth and data restrictions, Ofcom argues that most consumers would not regard it as a viable substitute.[53]

135. This assessment underestimates the constraint from mobile on fixed broadband and its potential

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49 Ofcom, WLA Market Review – Volume 1, March 2017, paragraphs 3.56-3.81.

50 Communications Chambers/Brian Williamson, Mobile first, fibre as required - The case for Fibre to 5G (FT5G), January 2017, page 33.

51 Ofcom, WLA Market Review – Volume 1, March 2017, Figure 3.13 and paragraphs 3.60-3.61.

52 Ibid, Figure 3.14 and paragraph 3.63.

53 Ibid, paragraph 3.64.

growth over time for at least parts of the WLA market serving consumers with lower bandwidth demand.

136. In Figure 3.15 Ofcom shows the proportion of customers using fixed or mobile broadband for different online activities. Mobile broadband lags only slightly behind fixed broadband for the top three activities quoted by the majority of respondents (namely emailing, purchasing goods/services and social networking). Larger differentials only emerge for activities that are named by only a minority of respondents, including a number of different variants of watching TV or video content online.

137. Ofcom and other commentators have found that there is a trend towards accessing the internet increasingly via mobile devices and wireless connections[54], even when in the home.[55] Applications that are designed to run on mobile devices (over wireless connections) tend to require lower bandwidths.[56] These factors combined tend to dampen bandwidth requirements and download file size, to levels more easily matched by mobile networks. This would suggest that a larger share of consumers may regard a suitably priced mobile data package (particularly in areas where free wi-fi networks are available, such as e.g. O2 wi-fi, that mobile users can access to balance their mobile data usage) as a reasonable substitute, to fixed broadband, and with the advent of 5G may increasingly do so in the future.

138. As the trend towards higher available mobile bandwidth and data usage continues, its competitive constraints on parts of the WLA market should be reviewed carefully.

## Fixed wireless access

139. For similar reasons as for mobile, Ofcom considers that fixed wireless access is unlikely to be a close substitute for fixed broadband services over copper, fibre or cable: data tends to be capped, and speeds are comparable only to SBB services, while the service tends to be less reliable than fixed broadband over copper, fibre or cable. Ofcom also argues that fixed wireless broadband services are only available in small geographic areas and are, therefore, not available to a large proportion of the country. For these reasons, Ofcom proposes not to include it in the relevant product market.

140. Openreach agrees with Ofcom's assessment that with innovations in wireless technology and the advent of 5G spectrum standards, such services could become a stronger substitute in the future, and urges Ofcom to closely review its position on alternative mobile and wireless access technologies as and when the necessary spectrum is made available in the UK.

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[54] Communications Chambers, Communications Chambers/Brian Williamson, Mobile first, fibre as required - The case for Fibre to 5G (FT5G), January 2017, page 9: "Ericsson research shows that since 2012, the average consumer globally has increased their viewing on mobile devices by 4 hours a week, while their fixed screen viewing has declined by 2.5 hours a week.16 Between 2011 and 2015, teens increased their TV/video viewing at home on smartphones by 85 percent and nearly halved their time spent watching on a traditional TV screen – with smartphone viewing and TV comparable by 2015.17 As video consumption moves to mobile devices, peak speed requirements may decrease."

[55] See also Annex 1 to this response, paragraph 346.

[56] Ibid.

141. The Communications Chambers report from January 2017 presented evidence from the US which suggested that once the necessary spectrum is made available for 5G this could lead to a major increase in fixed wireless access technologies, either from new start-ups or as alternatives from existing access network providers where such technologies could become more cost effective ways of connecting consumers than fixed fibre access.[57]

142. Services that are economic substitutes to fixed broadband over copper, fibre or cable should be included in the market, irrespective of whether their inclusion would alter the subsequent SMP assessment. Ofcom acknowledges this to be the case in certain areas; it states "*in some locations fixed wireless access may be functionally equivalent to fixed broadband access, particularly where premises are close to the broadcasting router, or in areas where fixed broadband speeds are particularly low*."[58]

## Satellite

143. As for mobile and fixed wireless access technologies, Ofcom ruled satellite out as belonging to the WLA market. It found that it had higher latency levels affecting broadband performance, higher prices for higher data allowances and high upfront costs for installation of equipment and so tended to be advertised as an alternative solution to fixed broadband only where good fixed broadband was unavailable.[59]

144. Recent evidence suggests that a number of new systems are being planned, and with innovative satellite technology[60] satellite broadband access could become a more acceptable substitute to fixed broadband in the near future. For example, ViaSat plans a new GEO satellite system that would have more capacity than all existing telecommunications spacecraft in the world combined, delivering significantly reduced unit costs.[61] Other projects which have recently been announced include LEO systems from OneWeb[62], LeoSat[63] and SpaceX.[64]

145. Even if Ofcom considered that these plans were insufficiently certain to be included in this market review period, the constraints from satellite broadband, taking account of its evolving capabilities,

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[57] Communications Chambers, Communications Chambers/Brian Williamson, Mobile first, fibre as required - The case for Fibre to 5G (FT5G), January 2017, page 16-17.

[58] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 3.73.

[59] Ibid, paragraphs 3.77-3.81.

[60] All existing satellite broadband platforms use Geostationary Earth Orbit (GEO) technology, where a single spacecraft is used that appears stationary in the sky to the user. The satellites are at very high altitudes, which introduces high latency. A number of new projects plan to use Low Earth Orbit (LEO) systems which are closer to earth, reducing latency, and use multiple satellites that move relative to any fixed point on the earth. LEO systems might provide a better end-user experience and be able to make available more capacity over an area the size of the UK.

[61] http://www.satellitetoday.com/telecom/2016/02/10/dankberg-viasat-3-satellites-will-have-more-capacity-than-the-rest-of-the-world-combined/, accessed on 9 June 2017.

[62] http://www.fiercewireless.com/wireless/oneweb-track-for-its-first-satellites-to-be-operational-less-than-one-year, accessed on 9 June 2017.

[63] http://www.cnbc.com/2017/05/25/this-satellite-provider-plans-to-beat-fiber-optic-cable-at-its-own-game.html, accessed on 9 June 2017.

[64] Communications Chambers, Communications Chambers/Brian Williamson, Mobile first, fibre as required - The case for Fibre to 5G (FT5G), January 2017, page 19.

will need to be kept under review in the future.

Conclusion

146. A more detailed assessment of the competitive constraints exerted by alternative access technologies in different geographic areas is required, if not in this market review then in the next. The reality is that these services are already likely to be playing a significant competitive role in the market for certain customers and this will grow significantly over time.

# 5. Approach to remedies

## Introduction

147. In this section, we:

- Set out our observations on Ofcom's views on the nature of the competition concerns;
- Explain how we would like to work with Ofcom to ensure that the strategic objectives of the various regulatory initiatives, including the Strategic Communications Review, are aligned and are supported by Openreach's own strategic priorities; and
- Consider the impact of Openreach reforms on Ofcom's approach and proposed remedies in the WLA.

## The nature of the competition issue

148. Ofcom considers that BT has SMP in the UK excluding the Hull Areas and is concerned that this could lead to poor outcomes for retail customers such as high prices, reduced innovation and sub-optimal quality.[65]

149. We have set out in detail in section 4 of this response why the constraints on Openreach are greater than suggested in the Consultation and why, accordingly, the competition issues are less significant than assumed by Ofcom. Ofcom itself in section 4 of its consultation only refers to the potential for poor outcomes (i.e. "could lead to poor outcomes") and makes no positive finding of such poor outcomes. It is important that Ofcom's approach to remedies is set against that context.

150. Further, Ofcom sets out a range of developments which suggest that the investment case has improved in recent years, with, in particular, changes in demand and reductions in costs.[66] Ofcom refers to the significant interest in new network investments both by BT and other infrastructure investors.[67] We wholeheartedly agree with Ofcom. We also agree that we are at an important juncture in the development of networks[68] and therefore it is particularly important that any regulatory intervention does not now undermine that investment.

## Consistency between different regulatory initiatives

151. Ofcom refers to a range of tools it is using to address competition concerns in the WLA market, including access remedies, duct and poles access, quality of service targets and price regulation of price regulation of MPF and VULA.

152. Openreach is concerned that the inter-relationship of these different regulatory initiatives has not been appropriately taken into account. For example, although Ofcom intends to achieve increased network competition through changes to the regulation of DPA, it would significantly constrain the likely success of the DPA remedies by mandating a charge control price for 40/10 of £52.77 in

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65 Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 4.2.

66 Ibid, paragraph 4.9.

67 Ibid, paragraphs 4.10 to 4.11.

68 Ibid, paragraph 4.12.

2020/21.

153. We would expect Ofcom to undertake a more thorough review of the inter-relationship of these initiatives, and this analysis would need to be updated and consulted upon in light of the expected consultation on DPA pricing.

154. We would also expect Ofcom to consider in more detail the consistency of the various regulatory initiatives with Ofcom's Strategic Communications Review, a key goal of which was to ensure "incentives for efficient private sector investment and innovation be maintained and strengthened, to ensure widespread availability and high quality of service".[69] We consider that some of the proposals risk undermining this objective by distorting Openreach's incentives to invest.

## Impact of Openreach reforms

155. On 10 March 2017, under section 89C of the Act, BT formally notified to Ofcom (the Revised Notification) of a series of voluntary commitments (the Commitments) which BT intends to adopt, once a set of pre-conditions have been met, as a substitute for the Undertakings agreed with Ofcom in 2005 (the 2005 Undertakings).[70] The Commitments included a range of measures designed to enhance substantially the operational and strategic independence and legal separation of the Openreach business.

156. On 17 March 2017, Ofcom published a consultation on the Revised Notification in which Ofcom acknowledged that our Revised Notification now addresses all of Ofcom's competition concerns raised as part of its Strategic Communications Review.

157. Upon receipt of BT's Revised Notification, Ofcom is required by section 89C(4) of the Act to consider, as soon as reasonably practicable, the impact of the Revised Notification on SMP conditions set in relation to markets which in Ofcom's opinion will be affected. Ofcom has set out its approach in paragraphs 4.41 to 4.49 of the Consultation. Openreach agrees that, pursuant to section 89C(4) of the Act, it is important to consider the outcomes achieved as a result of the Revised Notification and the Commitments and to consider their wider impact on conditions of competition in the market. This will affect the necessity and proportionality of the SMP conditions that Ofcom is proposing to set in the WLA Market Review as part of this Consultation.

158. BT has already expressed general concerns about the manner in which Ofcom intends to discharge its statutory duties under section 89C of the Act to consider the impact of the Revised Notification on relevant SMP conditions. In BT's response of 28 April 2017 to Ofcom's consultation on the Revised Notification, Openreach also raised specific concerns regarding Ofcom's cursory assessment of the impact of the Revised Notification on its proposed WLA SMP conditions. We continue to believe that Ofcom's assessment is too simplistic and is tantamount to an assertion that the WLA remedies are appropriate without carrying out any proper assessment of the way in which competition has changed, and will change, as a result of the Commitments. Openreach considers it wholly

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[69] Ofcom, "Strategic Review of Digital Communications: Terms of Reference, Competition and investment in converged communications infrastructure", 12 March 2015, paragraph 1.31.

[70] In 2005, in lieu of a market investigation reference to the Competition Commission, BT provided the Undertakings to Ofcom under Part 4 of the Enterprise Act 2002.

insufficient for Ofcom to merely state in the Consultation that Ofcom does "*not consider that any new SMP regulation is necessary specifically to take account of these arrangements and not do we consider that any of our proposals are not unnecessary or requirement [sic] amendment*."[71]

159. Ofcom has recognised the positive impacts of the Openreach reforms and has concluded that they satisfy all of the competition concerns that it identified during its Strategic Communications Review. In particular:

- They build on and enhance the existing functional separation of Openreach achieved by the 2005 Undertakings;[72]
- The reorganisation of Openreach, as a legally separate entity with a new Openreach Board comprised of a majority of independent directors (including the Chair and other non-executive directors), will significantly increase Openreach's independence from the wider BT Group. The Openreach Board will be responsible for its strategy, budget and operational performance, subject only to corporate governance oversight from the BT Group and BT plc. Further, Openreach will be subject to extensive reporting obligations and performance indicators which will enable monitoring of its successful delivery of the desired outcomes;
- The new Governance Protocol and Articles of Association will underpin the obligation on Openreach to secure equal treatment for all its customers, not just the needs of BT Group; [73]
- Openreach's engagement with its customers will further improve with the introduction of a new formal confidential consultation process with CPs for large scale investments.

160. In particular Ofcom has confirmed that the Commitments and the new reforms will remove the risk of Openreach engaging in strategic discrimination in favour of its downstream businesses and against its retail competitors. The new governance arrangements and consultation process are designed to stimulate co-investment and risk sharing arrangements between Openreach and CPs to deliver further investment and innovation. It is critically important that, with the implementation of this new framework already underway, Ofcom sets the right incentives and regulatory environment to foster such investments in future. It would be unfortunate if, as a result of the rigidity of the proposed price caps, Openreach was unable to commit to further investments in its network and was then exposed to the threat of further structural separation from matters beyond its control.

161. Ofcom recognised at an early stage of its Strategic Communications Review that the UK already displays some of the best outcomes in the EU for consumers and that retail competition is thriving. It acknowledges that the 2005 Undertakings have led to new entry by retail competitors, low prices for broadband and higher internet speeds than other comparator countries.[74] In Ofcom's consultation on the Commitments, Ofcom states that it expects the Openreach reforms to lead to more effective,

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[71] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 4.49.

[72] Ibid, paragraph 4.46.

[73] Ibid, paragraph 4.47 and "Delivering a more independent Openreach" consultation of 17 March 2017, paragraph 3.26.

[74] Ofcom DCR Discussion Document, July 2015, paras 4.22 – 4.25

better consultation with CPs, improving investment and innovation,[75] and to foster greater competition.[76]

162. In light of the positive outcomes to date and the expected impact of the Openreach reforms, it is difficult to identify concerns that would justify the intrusiveness of the remedies that Ofcom is proposing. Ofcom should consider, in a more systematic manner, the impact of the Openreach reforms on its market analysis and whether there is a justifiable need to impose each and every proposed *ex ante* remedy in line with its regulatory duties.[77] In particular, Ofcom should ensure that its proposed remedies will promote infrastructure competition, efficient investment and innovation in new or enhanced infrastructure. It appears that Ofcom is satisfied that there is effective and sustainable competition and it should consider whether some of its SMP remedies should be relaxed or lifted to reflect the positive changes in market conditions that have been achieved to date and likely improvements over the next review period. For example, Ofcom should explicitly consider whether, in light of the Commitments, it is still necessary to impose more stringent obligations in relation to requests for new forms of network access (i.e. the new statement of requirements obligations in proposed Condition 3 as explained in paragraphs 5.26 to 5.57 of the Consultation) and the extent to which a strict equivalence of inputs obligation is required (see paragraphs 5.58 to 5.92 of the Consultation). This exercise has not been undertaken.

163. In addition, as the Openreach reforms become more embedded, we would expect such considerations will become increasingly important over time.

164. Finally, we note that a key element of Ofcom's strategy in the Strategic Communications Review was to drive innovation and investment.[78] We would urge Ofcom to consider the representations on investment incentives in this submission in the context of its strategy in the Strategic Communications Review and the extent to which the proposals in the Consultation undermine Ofcom's strategy.

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[75] Ofcom, "Delivering a more independent Openreach", 17 March 2017, paragraph 3.39.

[76] Ibid, paragraph 3.35.

[77] See sections 3 and 4 of the Act and Article 8 FD.

[78] Ofcom, "Delivering a more independent Openreach", 17 March 2017, paragraph 1.1.

# 6. General Remedies

***Question 5.1: Do you agree with our proposed general remedies? Please provide reasons and evidence in support of your views.***

165. The following section puts forward our comments on Ofcom's proposed general remedies, noting that the proposals largely replicate those currently imposed following the 2014 FAMR. Specifically, we:

   a. Make some observations on the application of: (i) the requirement to provide network access on reasonable request; and (ii) the fair and reasonable pricing obligation;

   b. Set out why we think the current SoR process works well and does not need to be changed;

   c. Set out the effectiveness of the FAMR process to put in place new SLGs and enhance existing ones; and

   d. Put forward our views as to why more flexibility in notification periods for special offers would be beneficial to industry and end-customers.

## Requirement to provide network access on reasonable request

166. Ofcom proposes to reimpose the general requirement to provide network access to a third party on reasonable request. Proposed Condition 1.4 repeats the existing FAMR condition 1.4 which states that network access includes associated facilities "*as are reasonable necessary for the provision of network access*".

167. Given the intrusiveness of SMP regulation imposed, it is important that Ofcom undertakes a careful consideration of what is "network access", and in particular whether something is an associated service, before applying regulation to that service. More specifically, finding that a service is not contestable is not, in itself, sufficient to determine that the service is network access and should be subject to regulation. For associated facilities it is important to undertake a disciplined analysis of whether the service is "*reasonably necessary".*

168. An overly expansive approach to defining network access would result in regulation being unnecessarily applied to a range of services which could result in over-regulation. Unnecessary regulatory burdens will constrain Openreach, making it more difficult to innovate and, more generally, to be nimble in the dynamic telecommunications market.

169. In addition, the analysis of whether something is network access, and hence whether it should be subject to regulation, may change over time, not least to reflect technological and market developments. In such a fast-paced industry, that dynamic approach to assessing what is network access is essential, thereby ensuring unnecessary regulation is neither maintained nor imposed.

### <u>Fair and Reasonable</u>

170. For network access not subject to a specific price control under proposed Conditions 6 and 7, Ofcom is proposing to retain an obligation that the charges must be fair and reasonable. Subject to the correct application of "network access" as set out above, Openreach agrees that the retention of a fair and reasonable obligation is appropriate.

171. Openreach also agrees with Ofcom's acknowledgement that fair and reasonable is intended to

afford Openreach pricing flexibility.[79] Indeed, a fair and reasonable pricing obligation is not supposed to be a rigid form of regulatory intervention – there is no set fair and reasonable charge and, in particular, there is no assumption that a fair and reasonable charge must be the same as what might be imposed under a charge control.[80] This is consistent with EU law which recognises that an obligation to ensure prices are "reasonable" is a "relatively light" form of regulatory price control.[81]

172. These general principles apply to the fair and reasonable obligation whenever it is applied, including in "lacuna periods" as set out in Openreach's response of 5 May 2017 to Ofcom's consultation on its proposal to issue a direction specifying the fair and reasonable charge for MPF Rental at Service Level 1. Openreach maintains all the representations set out in that response.

## Requests for new forms of network access

173. Openreach considers that the current Statement of Requirements (SoR) process is working well and as such does not warrant being changed. Our rationale for this conclusion is as follows:

- Ofcom has overstated the issues with the current SoR process;
- There is no evidence that Openreach unduly discriminates in favour of downstream BT;
- Since the last FAMR, Openreach has, and continues to, develop the ways in which it engages with industry and has made various and significant improvements to the SoR process (as recognised by industry, the OTA2 and the EAB), making this form of self-regulation highly effective;
- Openreach receives a wide range of requests and therefore a one size fits all approach is not appropriate - an unduly rigid methodology is likely to lead to unfavourable outcomes for all involved; and
- Ofcom has not taken into sufficient account changes arising from the reform of Openreach (see section 5).

174. Below, we highlight a number of factors which cast doubt on the case for change, and further detail is set out in Annex 2.

175. Ofcom's justifications for imposing a more rigid requirement in relation to requests for new forms of regulatory access are not robust:

- First, the average time taken for Openreach to review SoRs has, contrary to Ofcom's assertion, decreased significantly since 2014 - from 24 months in 2013/14 for non-BT CPs to 13 months in 2016/17 (see Figure 10). Ofcom should base forward looking intervention on the most recent data and relying on data from 2007 to 2014 to set a regulatory condition to apply from 2018 is not appropriate.

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79 See, for example, Consultation, paragraph 1.37.

80 Ofcom Determination of dispute between TalkTalk and Openreach relating to the MPF Rental Charge, January 2012, paragraphs 4.28 to 4.31.

81 Access Directive, Recital 20.

*Figure 10: Openreach SoR statistics, 2013-14 to 2016-17*

*Number of SoRs delivered*

| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | Total |
|---|---|---|---|---|---|
| *BT CP* | 6 | 5 | 1 | 2 | 14 |
| *non-BT CP* | 5 | 9 | 1 | 9 | 24 |

*Average months to deliver SoRs*

| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 4-year average |
|---|---|---|---|---|---|
| *BT CP* | 11 | 30 | 15 | 17 | 18 |
| *non-BT CP* | 24 | 14 | 17 | 13 | 17 |

*Source: Openreach SOR Tool*

- Ofcom's concerns about distinguishing between regulatory and commercial SoRs are unfounded. The key issue here is that regulatory SoRs are dealt with consistent with the applicable regulatory obligation. There is no evidence in the Consultation that this is not the case. How Commercial SoRs are treated is not relevant.
- Openreach has also made recent improvements enhancing transparency, as outlined in Annex 2 of this response.

176. Ofcom states[82] that the purpose of imposing additional regulation with regard to the SoR process is to ensure Openreach does not discriminate in favour of downstream BT when considering reasonable requests for network access.[83] There is no evidence presented to suggest that downstream BT is treated favourably. In Ofcom's February 2016 publication setting out its initial conclusions from the Digital Communications Review, Ofcom explained that it had looked into the issue of product discrimination as part of its SoR monitoring programme and "*did not find any significant differences in SoR acceptance rates and completion times between products or between downstream communications providers including BT*".[84]

177. This view that there is no discrimination in the operation of the SoR process is further endorsed by the Equivalence of Access Office (EAO). Specifically, the EAO has recently conducted a deep dive into the SoR process and concluded that "*the SoR process is equivalent and that Openreach governance of the process is currently acceptable*".

178. Ofcom itself also noted improved consistency in the completion of SoRs and stopped attending monthly audit meetings or carrying out any monitoring itself after 2014, passing the responsibility over to the EAO.[85] In circumstances where Ofcom appears to have passed ongoing responsibility to monitor ongoing SoRs to the EAO, it is difficult to understand the basis of Ofcom's proposed

[82] Ofcom, WLA Market Review – Volume 1, March 2017, paragraphs 5.27 – 5.57

[83] Ibid, 5.27 – 5.29, 5.53

[84] Ofcom, Initial conclusions from the Strategic Review of Digital Communications, February 2016, paragraph A1.186

[85] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 5.39.

changes.

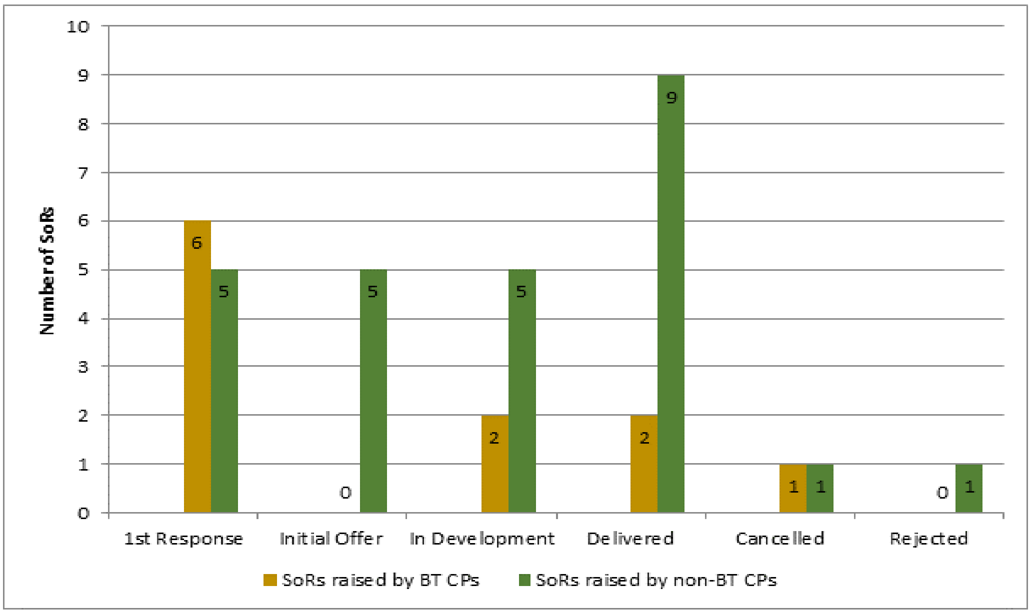
179. Additionally in the last year the EAB reviewed compliance in a number of areas with Openreach, including the SoR process. In its 2017 Annual Report[86], including in the chart reproduced in Figure 11 below, the EAB commented as follows:

*Since the last report, Openreach has refined the existing SoR process and refreshed the progress of the older requests. Improvements include:*

- *defining a process for the strategic requirements that are too large to progress using the normal SoR process, and for the very minor requirements that are potentially too small;*
- *putting in place a revised and transparent SoR dashboard; and*
- *addressing the delayed progression of longstanding SoRs that were a cause of industry frustration.*

*The chart indicates that nine SoRs were delivered for non-BT CPs, and two SoRs were delivered for BT CPs. From our monitoring work we recognise that new requirements are often complex and expensive land believe that the new proposed SoR process framework improvements will increase industry satisfaction with the way the process operates. Overall, we are satisfied that Openreach is committed to running an Equivalent SoR process and that governance and transparency remain acceptable.*

*Figure 11: EAB chart on SoRs raised by BT and non-BT CPs*




*Source: EAB Annual Report 2017*

86 The EAB's annual reports are published online at: http://www.btplc.com/Thegroup/Ourcompany/Theboard/Boardcommittees/EqualityofAccessBoard/Publications/Publications.htm

180. This demonstrates the Openreach SoR process is run on an equivalent basis. CPs are able formally to request the introduction of a new product, or a change to an existing one within the Openreach product portfolio. Openreach publishes industry guidelines on how to raise an SoR.[87] Openreach evaluates each request and provides the same commercial information to all customers (whether within BT Group or third parties) with no priority given to any customer. Acceptance of an SoR request is based on whether there is an objective business case, not on the identity of the requesting CP.

181. The existing regulatory regime of Undertakings and SMP Conditions already requires that Openreach is responsive to customers under the mandated SoR regime and no evidence that this has been unsuccessful has been presented. Indeed, the current regulatory approach is driving improvements to the SoR process. However this is not acknowledged in the Consultation nor is consideration of the process constituting effective self-regulation as part of the wider industry engagement strategy.

182. Lastly, and in any event, Ofcom has not taken into account the reform of Openreach, which Ofcom itself accepts will address concerns about Openreach 'strategically discriminating' in favour of downstream BT.

183. Accordingly, in light of the above and the submissions in Annex 2, Ofcom should reconsider its proposal in order to ensure that its requirements for SORs are:

- objectively justified, in compliance with section 47(2) of the Act;
- the least intrusive remedy to address the harm identified and therefore proportionate in compliance in section 47(2) of the Act; and
- consistent with Ofcom's obligation to consider reducing regulation where there is or is likely to be effective self-regulation and not impose unnecessary burdens in compliance with section 6 of the Act.

184. In our view, on the basis of the above, there is no rationale for Ofcom to intervene in the ongoing

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[87] See https://www.openreach.co.uk/orpg/customerzone/products/newproducts/newproducts.do

Including: Sharing of Openreach CP Statement of Requirements
Openreach Products Statement of Requirements Process
Copper and Fibre Products Commercial Group Benefits Criteria
Openreach Products Statement of Requirements Template
Openreach Products SoR Process
Statement of Requirement Overview

and https://openreach.sormanagement.net/login.aspx?ReturnUrl=%2fDefault.aspx

Including: SoR Management Tool Quick User Guide
Customer Quick User Guide
Customer Industry Collaboration Guide
Product Commercial Group Benefits Criteria

constructive dialogue with industry and impose additional regulation on the SoR process.

## Requirement not to unduly discriminate and Equivalence of Inputs (EOI)

185. Openreach refers Ofcom to the considerable changes to the operation of Openreach as a result of the Openreach reform (see section 5 above). Openreach has already started implementing those changes and they are already altering how Openreach operates. We are working to fully implement those changes by 1 April 2018. Accordingly, Ofcom should assume that, by the time the proposals comes into effect, Openreach will be operated more independently from BT Group.

186. Therefore, in considering whether the same "no undue discrimination" and "Equivalence of Inputs" conditions should be re-imposed, Ofcom should specifically consider the impact of the Openreach reform on a forward looking basis.

187. As market conditions change and become more competitive, Ofcom should consider, in light of its duty not to impose unnecessary regulatory burdens[88] whether a "no undue discrimination" obligation is sufficient and whether it is no longer appropriate to require "Equivalence of Inputs" for all products and services.

188. Further, Openreach has stated publically its willingness to discuss and take forward opportunities for co-investment with CPs, but in so doing Ofcom needs to look at the implications of any remedies which may need to be altered as a result.

## Requirement to publish a Reference Offer

189. Openreach agrees with Ofcom's proposals that BT should be required to publish a Reference Offer (RO). Openreach's comments on the SLA and SLG aspects of the RO are set out below.

<u>SLAs and SLGs (General Remedies paras 5.104 – 5.127)</u>

190. In summary Openreach agrees with Ofcom's proposals to re-impose a regulatory requirement on BT to include SLAs and SLGs linked to specific services in its RO for specific forms of network access and, as a consequence, not to re-impose the 2008 SLG Directions. This approach also continues to allow SLAs and SLGs to be negotiated by industry rather than imposed by regulation. The OTA2's role of facilitation of SLA/SLG negotiation has been highly effective since the process was set up as part of the FAMR and should continue during this next market review period.

191. Openreach agrees with Ofcom that Service Level Agreements (SLAs) and Service Level Guarantees (SLGs) are an important element of contractual arrangements. The last FAMR put in place a mechanism for industry to negotiate changes to existing and to introduce new SLAs/SLGs. This included consideration of contract negotiation principles and SLA/SLG criteria to be applied as part of the industry negotiation process. This process included facilitation by the OTA2 and a six month window in which parties should to come to agreement; if this could not be achieved then the matter would be referred to Ofcom.

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[88] The Act, section 6

192. Openreach supported this approach at the time, and considers that it has been effective in the evolution of an effective industry-led SLA/SLG regime, indeed Ofcom recognises this referencing the 'significant progress'[89] over the last few years. Over 20 SLAs/SLGs have been discussed resulting in 17 either new or enhanced SLAs/SLGs being introduced. Furthermore, Openreach has been proactive in its participation of the SLA/SLG negotiations and, as a result, since the last FAMR we have seen enhancements to and the introduction of a new suite of SLAs and SLGs as shown in Figure 12 below.

*Figure 12: New SLA/SLG enhancements launched since the last FAMR*

| Request Summary | Outcome |
|---|---|
| Improved SLA/SLG for responding to a Cablelink failure | Launched with effect from 27 November 2014 |
| New SLA/SLG for Appointment Availability for GEA-FTTC Engineer Install | Launched with effect from 1 January 2015 |
| SLG against a maximum timescale for providing a CCD or 'meaningful message' update to the CP | SLG quantum agreed as £8, process agreed at CPPG and implemented with effect from 1 April 2015 |
| Increase in Missed Appointment SLG | Increased payment to CPs from £40 to £56 per implemented with effect from 2 March 2015 for each Missed Appointment |
| Increase SLG for Care Levels 3 and 4 | Implemented with effect from 2 March 2015 |
| Enhanced Service Credit mechanism for ELF & DoAs and improving how ELF/DoAs are dealt with | Launched with effect from 16 February 2015 |
| GEA SoR - SoR for an SLA/SLG on GEA regarding Dead on Arrival (DoA) | Launched with effect from 1 April 2015 based on £12 quantum per DoA event |
| Availability of Openreach provided AC and DC power serving co-mingling facility and for subsequent remedial work | Launched with effect from 11 May 2015 |
| SLA for a maximum provisioning timescale for a non-appointed order to align with appointed orders | Launched with effect from 19 September 2015 (R2950) |
| Removal of Missed Appointment SLG for PCP only (GEA-FTTC) | SLG was removed on the 1 January 2015 as per industry agreement |
| Payment of Missed Appointment SLG of £56 for cancelled WLR, LLU (MPF and SMPF) and GEA (FTTC and FTTP) provision orders | Launched with effect from 1 August 2016 |
| Payment of SLGs for WLR sub-order types for late delivery | Launched with effect from 1 August 2016 |
| Payment of £12 SLG for FTTC Dead on Arrivals showing ADSL service as working | Launched with effect from 1 August 2016 |
| Removal of SMPF 12 week repair SLG | Launched with effect from 1 August 2016 |
| Cessation of LLU MPF SLG payments as soon as service is up and working (including when KCI3 is delayed) | Launched with effect from 1 August 2016 |
| Implement a change to GEA such that late delivery payments will be calculated on the basis of calendar days | Implemented with effect from 1 August 2016 |

[89] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 5.113

| Request Summary | Outcome |
|---|---|
| Appointment availability SLA to include Generic Ethernet Access (GEA) -Fibre To The Cabinet (FTTC) Primary Connection Point (PCP) Only | Launched with effect from 1 October 2016 |
| Payment of Missed Appointment SLG of £56 for cancelled WLR, LLU (MPF and SMPF) and GEA (FTTC and FTTP) fault orders provided that the fault is re-reported within 28 days | Launched with effect from 1 October 2016 |
| Introduction of a 'Repeats' SLG of £10 per event to cover same network fault, network fault following fault not found (FNF) or right when tested (RWT) and 'in home' repeat; in each case where repeat occurs within 28 days of each other | Launched with effect from 1 January 2017 |

*Source: Openreach*

193. In addition, Openreach has proactively put in place measures to increase transparency and understanding of how the sometimes complex world of SLAs/SLGs operates. The Business Rules Overview[90] document is a good example and has been drawn up in liaison with industry and the OTA2 in order to clearly explain when and how SLAs and SLGs apply to each part of the Openreach portfolio.

194. It should be noted that the wide range of SLAs/SLGs in place between Openreach as a supplier and CPs as customers is not mirrored in the contractual relationships between CPs and their end-customers, thus fostering the potential for service differentiation at the retail level. This is important given Ofcom's consultation regarding auto compensation,[91] i.e. given the comprehensive range of SLAs/SLGs already in place, any new obligations on retail CPs should not need to be reflected at the wholesale level.

195. Our comments on the implications for the WLA Charge Control in relation to SLGs are provided in our response to Section 4 of Volume 2 of the WLA Market Review Consultation.

## Requirement to notify charges, terms and conditions (paragraphs 5.128 to 5.147)

196. Ofcom is proposing to retain the existing requirements to notify charges, terms and conditions as imposed in FAMR insofar as they apply to WLA.

197. In general terms, Openreach agrees with being subject to notification requirements. In practice, however, Openreach has found that the current notification provisions can be very rigid and therefore unnecessarily burdensome. We believe this negatively impacts CPs and consumers as well, particularly in relation to Special Offers (as defined in FAMR Condition 9.8 and proposed Condition 9.8) and non-material changes.

[90] This document is available at http://www.openreach.co.uk/orpg/customerzone/products/serviceproducts/proactiveslgs/businessprocess/proactiveslgsprocessdescription.do

[91] https://www.ofcom.org.uk/__data/assets/pdf_file/0030/98706/automatic-compensation-consultation.pdf

## Special Offers

198. FAMR and the proposed Condition 9.8 require Openreach to provide 28 days' notice for a price reduction, including Special Offers. However, for other terms and conditions (including changes to non-price terms and condition of an existing Special Offer), Openreach is required to give 90 days' notice (FAMR and proposed Condition 9.8(d)). As a result, if Openreach launches a Special Offer (with 28 days' notice) but then subsequently needs to change the terms and conditions of that offer (and that change is not a further reduction in the price), Openreach must give 90 days' notice. This has a number of negative consequences, including:

- It is difficult to amend Special Offers during their lifetime, even where a change might make the Special Offer more attractive to CPs;
- Openreach tends to be more cautious when launching Special Offers because it needs to ensure the terms and conditions address all potential outcomes. This can delay the launch of Special Offers;
- It can also reduce the incentive to make some Special Offers at all.

199. Further, "Special Offer" is defined as "*a temporary price reduction for a particular product or service, applicable to all customers on a non-discriminatory basis, which is stated to apply for a limited and predefined period and where the price immediately on expire of that period is no higher than the price immediate before the start of that period*". There are two issues with this definition.

- First, in circumstances where a new offer is immediately implemented after the end of a previous offer (i.e. they are consecutive and the price does not revert to the original price), this definition might require the price after the end of the new offer to be no higher than the previous offer price. Openreach should be able to return the price to the level before the previous special offer was introduced (i.e. the original price). Otherwise, Openreach is disincentivised to make consecutive offers, i.e. immediately make a new offer on the expiry of an old offer.
- Second, the reference to a "*predefined period*" could restrict the ability of Openreach to extend existing Special Offers, i.e. because the original Special Offer might not be considered to be for a predefined period.

200. The current Condition 9 is broadly drafted and could, on a strict reading, require 90 days' notice for all changes to terms and conditions, regardless of materiality. If Openreach cannot easily amend non-material terms and conditions, this could, for example, delay the announcement and launch of product developments, to the detriment of CPs and their customers, until Openreach is able to define the full set of terms and conditions.

201. Accordingly, Openreach proposes that proposed Condition 9 is amended as follows:

- explicitly allow Openreach to vary the terms and conditions of Special Offers on 28 days' notice;
- make the definition of "Special Offers" clearer so the price at the end of the Special Offer is no higher than the price immediately before the start of that period or where there has been more than one consecutive special offer, the price immediately before the first Special Offer; and
- state explicitly that non-material terms and conditions can be changed without prior notification.

# 7. Specific access remedies

***Question 6.1: Do you agree with our proposals for access regulation in respect of LLU, SLU and VULA? Please provide reasons and evidence in support of your views.***

202. Ofcom is proposing specific remedies associated with BT's SMP in the WLA market. This section of our response sets out our comments on the proposed specific remedies, which relate to:

- Proposal for regulation of MPF;
- Proposal for deregulation of SMPF;
- Allowing for potential changes to LLU obligations to enable Openreach to deploy Long Reach VSDL (LR-VDSL);
- Allowing for potential changes to SLU obligations to enable Openreach to deploy vectoring; and
- Requirement to provide VULA.

## Proposal for regulation of MPF

203. Openreach does not disagree with Ofcom's proposal to retain the specific access obligation in relation to MPF. However**,** we have serious concerns over the specific charge controls Ofcom proposes to apply to MPF over the period from 2018 to 2021. These concerns are set out in our response to Volume 2 of the WLA Consultation.

## Proposal for deregulation of SMPF

204. Openreach supports Ofcom's proposal to remove the specific obligation to provide SMPF. Such an obligation is no longer proportionate given the forecast decline in SMPF volumes to below 500,000 by the end of the review period and the fact that SMP will continue to be covered by the general remedies applying to BT in the WLA market.

205. Ofcom is proposing an obligation that the charges must be fair and reasonable. Openreach refers to its submissions in section 6 above on the flexibility that a fair and reasonable charging obligation provides. Openreach reiterates those observations here.

## Allowing for potential changes to LLU obligations to enable Openreach to deploy Long Reach VSDL (LR-VDSL)

<u>The benefits of LR-VDSL</u>

206. As Ofcom notes,[92] the potential now exists for new technologies to significantly improve broadband performance under certain circumstances but these solutions can conflict with existing technologies deployed in the network.[93]

207. LR-VDSL is one such technology. LR-VDSL is a modified version of the VDSL2 technology that

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[92] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 6.21

[93] Ibid, paragraph 6.22

already exists in Openreach's network. It is primarily aimed at delivering download speeds of greater than 10 Mbps to the premises for those lines that currently (or are likely to) receive a less than 10 Mbps download speed. The technology will also provide a significant uplift across the board for VDSL lines. Downstream improvement rates at trial locations currently range from 0.1 Mbps – 22 Mbps, and there is an expectation that average downstream speeds will increase by c. 16 Mbps at the point of strategic deployment.

208. Openreach believes that the LR-VDSL technical enhancement to its GEA-FTTC (VDSL2) product will have considerable benefits for end customers and industry in terms of increased download speed and extended superfast broadband footprint, and could also be an important solution which could be used by Openreach and CPs to meet the Government's universal broadband service objectives, as set out in the Digital Economy Act 2017.

209. We therefore support Ofcom's proposals regarding LR-VDSL and the selective removal of regulatory obligations on Openreach relating to LLU and SLU (using ADSL/SDSL technologies) preventing the implementation of LR-VDSL in the network.[94]

## Ofcom's proposed process

210. Ofcom outlines a proposed process[95] allowing BT to request, and Ofcom to consent to, the removal of the obligation to provide LLU in specific areas where Openreach intends to deploy a new technology such as LR-VDSL. The proposed process seems broadly correct to us, although the devil will be in the detail. It will be important that the process does not introduce undue delay and can be applied in bulk to multiple cabinet locations. Our initial research and technology trials strongly indicate that there will be significant net benefits to be gained if deployed in targeted locations. We are currently collating data on initial cabinet locations where we may want to deploy LR-VDSL and we are aiming to request a consent in relation to these locations in summer 2017. We would urge Ofcom to then consult on the request as soon as possible.

211. Ofcom's proposed process requires Openreach to offer LR-VDSL-based services to CPs to replace affected LLU services. Openreach launched an initial industry consultation on such services and the associated processes on 11 May 2017, for response by 14 July 2017. Openreach will also gather CPs' views through industry communications channels such as the CFPCG, bi-lateral and multi-lateral meetings and meetings with industry groups, for example Federation of Communications Services (FCS).

212. The LR-VDSL-based replacement products will be designed to ensure that customers currently consuming legacy xDSL based services will receive comparable service performance to copper based broadband, whilst still allowing CPs to offer superior products within the VDSL portfolio. Our view is that new broadband customers in a LR-VDSL cabinet area should be able to select from the new VDSL/LR-VDSL portfolio, but not including the protection product. Comparable protection products would be provided with no additional rental costs when compared with the current xDSL

[94] Ibid, paragraph 6.24

[95] Ibid, paragraph 6.24 – 6.27

service.

213. We note Ofcom's proposals on cost recovery via the forthcoming charge controls and will work with Ofcom to ensure appropriate financial information is provided as plans mature for LR-VDSL and further information becomes available regarding funding mechanisms for the Government's proposed broadband USO.

214. We also note that, as Ofcom states,[96] the proposed consultation process for the removal of LLU and SLU obligations may have further application in the future with regard to other technologies. Potential FTTP 'cut-over' scenarios, where existing copper networks are removed, may also benefit from this type of consultation process in the future.

<u>Access Network Frequency Plan (ANFP) and International Standards</u>

215. LR-VDSL is made up of three key components: 1) increased transmit power in the ADSL band; 2) vectoring; and 3) extending the reach of VDSL.

216. Much of the LR-VDSL specification already forms part of international VDSL standards (1 and 2 above), and therefore Openreach is able to use existing available VDSL equipment to carry out its trial and pilot LR-VDSL deployments. In the longer term we will be looking to enhance the international standards (3 above), and working with vendors to implement in new VDSL features, to enable longer reach and higher performance. To this end we have already made significant progress within the United Nations standards body, the International Telecoms Union (ITU), with initial agreement to the new amendments likely in June 2017 and potentially final approval by the end of 2017.

217. Depending on further internal research and standards progress, Openreach will be also be submitting a work item to the Network Interoperability Consultative Committee (NICC), to amend the Openreach Access Network Frequency Plan (ANFP) to permit the use of LR-VDSL in designated locations in the Openreach network. Recent experience, for example to introduce changes to permit the use of G.fast, have proved reasonably straightforward but that has not always been the case. We would look to Ofcom to support Openreach in the standards negotiations and in relevant committee meetings to implement the LR-VDSL proposals. We would expect to begin the ANFP process in autumn 2017 with a view to its conclusion within approximately 12 months.

## Allowing for potential changes to SLU obligations to enable Openreach to deploy vectoring

218. Ofcom proposes to re-impose an obligation to provide SLU, but with a framework for disapplication of the obligation in specific areas where Openreach intends to deploy LR-VDSL (which uses vectoring). This process will be the same as that which Ofcom proposes should apply to the disapplication of LLU obligations to enable Openreach to deploy LR-VDSL.

219. We support Ofcom's position on vectoring and SLU. As Ofcom notes there is currently no operationally viable solution available which enables more than one CP to deploy VDSL2 at the

96 Ibid, paragraph 6.21

same location, and for either to successfully operate their vectoring capability. Any deployment of VDSL2 by a subsequent CP (whether vectored or not) will significantly degrade the service provided to consumers with a vectored cabinet.[97] Hence, we agree with Ofcom that it would be reasonable for Openreach not to accept an SLU order in these circumstances, i.e. at a location where Openreach has deployed vectoring.[98]

220. We also note Ofcom's view regarding situations where an SLU CP is already deploying vectoring via their own FTTC cabinet before Openreach has deployed an FTTC cabinet in the same area. To this end, Openreach implemented an internal process in autumn 2016 designed to prevent Openreach from deploying at the same location as an SLU CP and degrading their vectored service. Although the new process has prevented any significant overbuild in recent months, there are still isolated conflicts which occur due to incorrect or missing information. Openreach resolves these problems with CPs on a case by case basis. We note that not all incidents are due to secondary Openreach deployments, since in some cases Openreach is already in the location when the CP builds their FTTC cabinet. We would look to Ofcom to support our position in these cases should a dispute arise with a specific CP.

221. As Ofcom notes the vectoring guidance should also apply to situations where LR-VDSL is deployed as LR-VDSL will be vectored in Openreach's proposed implementation to maximise its performance.

222. Openreach's planned G.fast deployments will also be vectored as it is a fundamental part of the G.fast standard. We would look to Ofcom to clarify that the vectoring guidance also applies with regards to Openreach's G.fast locations.

## Requirement for BT to provide VULA

223. We would challenge the assumption that, absent regulation, Openreach would have the incentive and ability to favour downstream parts of BT in supplying VULA services.

224. Openreach believes it is constrained in relation to the supply of VULA services. VULA enables telecoms providers to supply fibre access services in downstream markets in competition with downstream parts of BT, but also in competition with Virgin Media and with standard broadband services supplied over copper loops. Refusal to supply VULA on commercial terms that allow other providers to offer compelling fibre access services could therefore lead to fewer VULA connections as end-users are retained on attractive copper-based services or churn to Virgin Media's range of ultrafast services. For more details on the constraints on Openreach, we refer to section 4 of this response.

225. In addition, Openreach would observe that Ofcom itself has confirmed that the reform of Openreach will remove the risk of Openreach engaging in strategic discrimination in favour of downstream BT. Against this background, Openreach considers its ability and incentive to engage in such discrimination is far less than is assumed by Ofcom.

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[97] Ibid, paragraph 6.43

[98] Ibid, paragraph 6.44

226. Notwithstanding the above, Openreach has no specific concerns with retaining an obligation to supply VULA services. Openreach observes that Ofcom sets out five key characteristics of a VULA service,[99] which it considers remain appropriate.[100] These defined characteristics should not restrict Openreach's ability to adapt the VULA portfolio over time to reflect network capabilities and meet customer needs.

## Minimum contract period

227. Openreach disagrees with Ofcom's proposal to direct BT to limit the length of its minimum contract period following VULA FTTC connections to no longer than one month.[101, 102] Ofcom's proposal is based on its view that (i) restricting the minimum contract period is "*likely to facilitate switching and promote retail competition*"; and (ii) there is no longer any significant benefit from allowing BT to vary the balance between connection and rental charges because "*the take-up of SSFT is more certain*" than at the time of the FAMR. Openreach does not agree with either of these points.

### *Facilitating switching and promoting retail competition*

228. Ofcom states that its proposal will "*facilitate switching*". There is, however, no evidence that the current position has a significant impact on switching by end-users. Indeed, retailers often have minimum contract lengths in their consumer contracts that are longer than the minimum contract length in upstream inputs (as is the case for broadband services using MPF or SMPF). There is no evidence in the Consultation that Openreach's minimum contract lengths are driving retail terms and conditions thereby restricting switching at the retail level.

229. Without evidence that Ofcom's proposal will facilitate switching and promote retail competition, the proposed restriction on Openreach's commercial freedom is not objectively justified. Given that Ofcom is proposing a new SMP condition limiting BT's contractual freedom and restricting its business model, Ofcom must justify that change with more specific evidence of the proposed benefits of the new SMP condition.

### *Pricing flexibility in relation to the balance of connection and rental charges*

230. As recognised by Ofcom in FAMR 2014, the ability to impose minimum contract periods provides important flexibility to Openreach, including the ability to vary wholesale pricing to drive GEA take-up.[103]

231. Ofcom states that this flexibility is no longer necessary given that the take up of superfast

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[99] Ibid, paragraph 6.70

[100] Ibid, paragraph 6.72

[101] Ibid, paragraph 6.100 and Annex 23, "[Proposed] Direction under section 49 of the Communications Act 2003 and condition 1 relating to the terms on which BT provides network access (Virtual Unbundled Local Access, which it currently provides by way of its GEA product)", paragraph 8.

[102] For completeness, Ofcom is not proposing to extend the condition on minimum contract period to other services, principally FTTP-based deployments. Ofcom recognises that "*there may be higher costs associated with each customer connection and with roll-out and take-up at a nascent stage, there are likely to be benefits in recovering connection costs over an extended period*" (Ibid, paragraph 6.99). Ofcom agrees that it is appropriate to continue to afford BT flexibility as to minimum contract length for FTTP.

[103] Ibid 12.237.

broadband is more certain now (compared to in 2014).[104] This statement is not supported by any reasons or evidence. Further, this statement appears misplaced because:

- First, we agree with Ofcom that there is significant potential demand for FTTC services e.g. Ofcom forecast commercial footprint demand will grow from less than 7 million lines today to 14 million lines by 2020/21. The commercial roll-out of infrastructure is more or less complete and there are no plans to expand footprint substantially. Therefore to achieve this growth Openreach will need to have increased take-up from customers who have so far not shown themselves keen to upgrade from copper services. In these circumstances it is imperative that Openreach retains the maximum flexibility to encourage more reluctant end users to take up FTTC services.

- Second, as Ofcom itself has recognised, the "*minimum contract period in respect of the initial connection should provide a basis for BT to recover relevant wholesale costs and investments*"[105] and that pricing flexibly "*facilitates [Openreach] achieving a return on its investment*".[106] Given that, as set out in this response and in Ofcom's own analysis, Openreach's original wholesale costs and investment for GEA have not yet been recovered, it is appropriate for Openreach to retain the flexibly to vary its pricing to recover these costs. That is particularly the case where Openreach has to incur costs in increasing capacity on its network to accommodate additional customers. If it is no longer allowed to recover its costs plus a reasonable return on its investments,[107] there will be a disincentive to invest in future innovations and technological upgrades (such as FTTP and G.fast) which would undermine Ofcom's wider strategic objectives.

- Third, Virgin Media is investing heavily in faster services on their network (and broader network coverage). To compete effectively, Openreach will need to promote its higher bandwidth FTTC services by offering attractive deals to downstream CPs (so that they can compete with Virgin Media).

232. Ofcom has also failed to take into account the negative consequences of removing this flexibility The flexibility to offer reduced prices or higher speeds/service levels in exchange for longer minimum length contracts (e.g. 6 or 12 months) will provide Openreach with more opportunities to promote the take-up of higher bandwidth services, with consequent benefits for downstream customers, and mitigate the risk of market distortion to Virgin Media's benefit.. This could reduce consumer choice as well.

233. Finally, notwithstanding the submissions above, if Ofcom is nonetheless minded to impose the draft Condition, Openreach observes that the definition of VULA connection potentially captures G.fast. This is wholly inappropriate. It is clear from the Consultation that Ofcom is intending to aim this remedy at SFBB (see paragraph 6.96 where Ofcom justifies intervention on the basis that SFB; there is no reference to UFBB). Further, the reasons why Ofcom does not impose the remedy on

[104] Ibid, paragraph 6.96.

[105] Ibid, paragraph 12.242.

[106] Ibid, paragraph 12.245.

[107] The risk of this occurring is great in light of Ofcom's proposed charge control for the 40/10 product. We set out in detail our response to the WLA Consultation Volume 2 why Ofcom's proposed charge control does not allow Openreach to recover its efficiently incurred costs.

FTTP apply equally to G.fast, i.e:

- there are incremental costs for G.fast on top of the usual FTTC costs for SFBB and, accordingly, higher costs associated with each customer connection and with roll-out; and
- take-up is at a nascent stage.

234. Intervening to impose a minimum contract term on G.fast would amount to the imposition of an unnecessary regulatory burden that is not objectively justified. It also limits the ability of Openreach to vary the balance between connection changes, minimum terms and rental charges in order to incentivise take-up. This could affect the take-up of UFBB, thereby distorting competition in relation to UFBB. Together this indicates that the proposed application to G.fast would be even more disproportionate than applying the remedy to just SFBB over FTTC.

***Conclusion***

235. For the reasons set out above, Ofcom has not met the legal tests for imposing this further restriction on top of the existing fair and reasonable obligation.

- Ofcom has not demonstrated that its proposal is objectively justified and proportionate because there is no evidence that it will facilitate switching and promote retail competition for VULA services.[108] On the contrary, the evidence suggests that reducing the minimum contract period for FTTC at the wholesale level to one month will have no effect on the terms of consumer contracts offered by CPs downstream. Ofcom provides no evidence to justify why a period of one month is appropriate and necessary as opposed to a longer period of, say, six months. It does not consider whether there are other potential contractual provisions that may be used in conjunction with the minimum term to mitigate any adverse effects (such as rights of suspension, early termination or transfer).
- Ofcom has also not considered the negative outcomes arising from this proposal (as set out above). When these factors are taken into account alongside the protections from the existing fair and reasonable terms and conditions obligation, the proposed imposition of a one month minimum contract term for FTTC constitutes a disproportionate and unwarranted interference with Openreach's commercial freedom.
- Ofcom has not considered whether the imposition of this new condition is consistent with Section 6 of the Act, i.e. the requirement on Ofcom to carry out its functions "*with a view to securing that regulation by Ofcom does not involve…the imposition of burdens which are unnecessary*".

236. On that basis, Ofcom should not direct BT to limit the length of minimum contracts period following VULA FTTC connections to no longer than one month. The Draft Legal Instrument, specifically "*[Proposed] Direction under section 49 of the Communications Act 2003 and condition 1 relating to the terms on which BT provides network access (Virtual Unbundled Local Access, which it currently provides by way of its GEA product)*" should be amended to remove this obligation.

237. If, however, Ofcom in any event imposes the draft condition, at the very least it should be amended to clarify that it does not apply to G.fast.

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108 Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 6.104.

# 8. Quality of Service Remedies

***Question 7.1: Do you agree with our proposal to impose a quality of service SMP condition? Please provide reasons and evidence in support of your views.***

238. A commitment to high quality customer service has been and continues to be at the heart of Openreach's strategy and plans. Openreach has been proactive in sharing its service plans publicly, the investment we have been putting into our digital future and how we are raising standards to meet the demands of consumers and businesses both today, and in the future. We also put in place a suite of Key Performance Indicators (KPIs) that are published every quarter to let our customers know how we are doing.

239. Our commitment to service is a very important and integral part of Openreach's response to the Strategic Review of Digital Communications. Openreach has not shied away from its responsibilities in the service arena.

240. Essentially we agree in principle with the majority of Ofcom's proposals to impose a quality of service SMP condition, subject to the commentary provided in our response to Ofcom's 'quality of Service for WLR, MPF and GEA Consultation as published on 31 March 2017. In particular Openreach agrees with Ofcom that it is appropriate to continue to report on its performance. Openreach supports the need for transparency and already provides a highly detailed set of reports relating to service performance. We are however concerned that the reporting burden on Openreach will further increase, as covered in our response to Question 7.1 in our response to Ofcom's 'Quality of Service for WLR, MPF and GEA' Consultation.

# 9. Price regulation of virtual unbundled local access

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| ***Question 8.1: Do you agree with our proposals for the price regulation of VULA? Please provide reasons and evidence in support of your views.*** |

241. Ofcom proposes to introduce:

- a cost-based charge control on Openreach's supply of the 40/10 GEA service and ancillary services; and
- a fair and reasonable charges obligation on all other VULA services.

242. We do not agree that Ofcom's proposals secure regulatory and legal certainty as they are not consistent with its own stated assessment criteria nor do they strike an appropriate balance between its competing regulatory objectives, in particular between promoting future investment and technological innovation in the long term, securing the wider benefits of infrastructure based competition in terms of choice, availability and quality of service and protecting consumers' more immediate interests in lower prices.[109]

243. Among other things, we believe Ofcom has not properly assessed the risk that Openreach could maintain GEA prices at excessive levels, as it is required to do before it can impose SMP regulation,[110] and we do not agree with Ofcom's position that its proposed form of regulatory intervention is appropriate based on its view that:

> "… *BT has had a fair opportunity to make a return on its original risky investment and… a charge control would be consistent with the 'fair bet' principle*."

244. But while we disagree with Ofcom's provisional conclusion on this matter, we are aligned on the important of ensuring consistency with the fair bet principle – i.e. that any regulation imposed in this review must be consistent with the *expectations* faced ahead of the decision to invest in the fibre rollout programme that the investment would generate a fair return. We also believe there is broad agreement that the principle requires that returns above the required rate of return should be allowed given the *ex ante* risks that lower returns could have been made. However, we do not believe that Ofcom has carried out a sufficiently detailed assessment of whether its proposals would be consistent with the fair bet principle.

245. We expand on these points below in assessing the overall approach Ofcom has taken to considering the need for price regulation of VULA in Section 8. We also refer to Section 5 of our response to Volume 2 of the Consultation in which we set out our views on why, including by reference to compatibility within the fair bet principle, Ofcom's proposals should be revised in order to ensure compliance with Ofcom's statutory obligations, including proportionality.

**Ofcom's assessment framework**

246. Ofcom's starting point for considering the need for SMP price regulation of VULA is that

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[109] See, further, Ofcom's regulatory duties under the Act sections 3 and 4 and the requirement to resolve any conflicts between in the manner it considers best in the circumstances.

[110] The Act, section 88

Openreach's SMP in the broadly defined WLA market could result in higher prices for VULA services with a knock-on impact on retail superfast broadband prices. However, at the same time as focussing on the abstract potential for price increases, Ofcom also repeats its strategic objective of wanting to promote investment in ultrafast networks by all telecoms providers.

247. As such, Ofcom frames its assessment of the need for price regulation by reference to four key objectives:

- Preserving investment incentives faced by other access network suppliers;
- Preserving investment incentives faced by Openreach;
- Protecting customers against the risk of high prices; and
- Protecting retail competition, where necessary, based on access to Openreach's access network.

248. We consider Ofcom's approach against each of these objectives.

**Preserving investment incentives faced by other access network suppliers**

249. Ofcom acknowledges that tighter price regulation of Openreach's supply of VULA services might affect the 'buy vs build' decisions faced by other telecoms providers. Ofcom therefore states that it has "considered whether we should continue with an approach of pricing flexibility in some form to preserve the investment incentives"[111] of other access network suppliers. We accept that this consideration is important; however, it is not clear exactly how this has been factored in to Ofcom's approach.

250. As a general principle, investors considering whether to invest in a project will do so if the incremental value that can be driven by that project, relative to other alternative projects or a 'do nothing' scenario, delivers a return at least equal to the cost of capital relevant to that project over a suitable time period. That is, the expected net present value (e(NPV)) of projected incremental cashflows over that period, discounted at the project's cost of capital, would be at least equal to zero.

251. Ofcom correctly notes that the incentives faced by telecoms providers who are considering whether to develop their own superfast or ultrafast access network investments will be shaped, among other things, by the regulatory terms on which Openreach must supply its suite of wholesale access services.[112] The e(NPV) of any potential investment in alternative access network capabilities will reflect expectations of the incremental value that can be generated from downstream sales and/or wholesale sales over and above the comparative revenues they could generate based on sales using Openreach inputs. The lower the price of regulated Openreach wholesale access inputs, and the broader the range of inputs Openreach is required to supply, the more limited the incentives and opportunities will be for competitors to generate incremental value from their own network infrastructure investments.

252. We also agree with Ofcom that, in light of this and the strategic importance they attach to promoting new network investment, there are risks of making access to Openreach VULA inputs "too easy",

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[111] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 8.16

[112] For example ibid, paragraph 8.9

which will have a long-term impact on the competitive structure of the market. Ofcom, however, does not explain how this strategic importance of promoting investment in ultrafast networks aligns with its proposal to impose a steep decline of over 40% in the current price for high volume 40/10 GEA wholesale services supplied by Openreach. While Ofcom has not proposed to directly regulate the wholesale price level of other closely-related GEA inputs, the price levels of those substitutable services are likely to be constrained by the availability of the 40/10 service at the regulated prices. The range and pricing of services supplied by Openreach will then shape the value that another telecoms provider could generate from access services at the same or higher bandwidths.

253. Ofcom should therefore explicitly consider how such steep reductions in the prices of Openreach 40/10 inputs will impact the likely level of prices that any alternative access network investor could maintain for services at higher bandwidths (whether supplied at the wholesale and/or the retail level).

254. This general concern with Ofcom's limited assessment of investment incentives on alternative suppliers is compounded by the fact that, in imposing a control on 40/10 GEA services at a level that significantly understates Openreach's costs of supply, Ofcom will inevitably be sending inefficient pricing signals to potential investors facing a build or buy decision. These concerns are set out in Volume 2, Section 4.

**Preserving investment incentives faced by Openreach: <u>the 'fair bet' principle</u>**

255. Ofcom's assessment of how price regulation of Openreach's supply of VULA might affect Openreach's investment incentives focusses on whether imposing price regulation in this control period would be consistent with the regulatory 'fair bet'.

256. Before making any investment, Openreach needs to consider how future regulatory decisions might directly impact on future cashflows and on the e(NPV). These regulatory risks will need to be layered on top of the inevitable commercial uncertainties surrounding any investment decision. All else equal, the threat of future intervention to reduce prices would necessarily reduce the e(NPV) of a project, making investment less likely. This creates a potential imbalance in assessing investment projects as the risks of projects being unsuccessful (i.e. failing to deliver the required WACC over the target time period) will have to be offset against a constrained set of upside scenarios.[113] It is therefore critically important that regulatory consistency is maintained from one review period to the next so that there is a predictable framework for assessing and managing risks.[114]

257. We therefore share Ofcom's view that it is vital to take full account of the 'fair bet' faced by investors and agree with Ofcom that, for instance:

> *"…in order for an investment to be a fair bet, the firm should be allowed to enjoy some of the upside risk when demand turns out to be high (i.e. allow returns above the cost of capital) to balance the fact that the firm will earn returns below the cost of capital if demand turns out to be low."*[115]

258. We also share Ofcom's view that it is vital to adhere to the principles of the 'fair bet' when

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113 See the report by Oxera which forms Annex 3 to this response

114 The Act, section 3(4) and Article 8(5)(a) Framework Directive.

115 Ofcom, WLA Market Review – Volume 1, March 2017, paragraph A8.4

considering what pricing remedies to apply to Openreach's supply of VULA in order to preserve *future* investment incentives.

259. However, we are concerned that Ofcom's actual application of these principles in the consultation does not assess the fair bet in a consistent or appropriate manner. We set out below:

- Our position, supported by a report from Oxera at Annex 3, on how Ofcom should consider whether the fair bet in relation to Openreach's fibre investment programme has 'played out';
- Our views on the factors Ofcom gives weight to in assessing the fair bet;
- Detail of the returns we expect to make on our fibre investments under Ofcom's proposed approach to price regulation and why we do not believe these would be consistent with the fair bet principle.

*How Ofcom should assess the fair bet applying to Openreach's fibre investment programme*

260. The report from Oxera sets out a clear, generally applicable framework for assessing the fair bet, and states that:

- The 'fair bet' framework requires that regulation does not undermine investors' expectation at project inception that they would earn a fair return – i.e. regulation imposed now, a decade after the decision to invest was made, should not change the basis on which we decided to go ahead with the fibre investment programme;
- A fair return should be equal to the project-specific cost of capital faced at project inception and not a forward-looking cost of capital estimated at the point of intervention; and
- Imposing price regulation to cap returns above that project-specific cost of capital is not a sufficient condition for concluding that the fair bet has been honoured; any cap on returns imposed by regulatory intervention needs to be sufficiently high to compensate for the downside risks faced ahead of investment – i.e. there should be a 'spread' above the project-specific cost of capital.

261. In applying this analytical framework to Openreach's fibre investment programme, the Oxera report concludes that:

- The project-specific cost of capital relevant to Openreach's investments in fibre is in the range 11.4% to 12.8% and should be towards the top-end of this range – i.e. above 12.1%;
- Given that Ofcom estimates that its proposed price remedy would cap returns *below* this level at 11.8%, the specific form of regulation proposed – i.e. LRIC + EPMU pricing based on the outputs of Ofcom's bottom up LRIC model – would clearly breach the fair bet principle even before any the extent of any upside spread is considered; and
- Analysis suggests that regulatory pricing action which has the effect of constraining returns on Openreach's fibre investments beneath 15% would run the risk of being inconsistent with the fair bet principle.

262. We believe Oxera's conclusions are clear and compelling.

*The factors considered by Ofcom in assessing the fair bet*

263. Ofcom appears to agree in principle with many of the points raised in the Oxera report.[116] However, Ofcom does not attempt to follow an analytical framework in assessing the fair bet that is focussed on explicitly identifying the level at which truncating upside returns would be consistent with the terms on which the original investment decision was made. Instead, Ofcom's assessment is based on looser criteria, specifically:

    a. How much time has elapsed compared to the expected payback at the time the investment was committed;

    b. The perceived riskiness of the initial investment;

    c. The performance of the investment against initial expectations and the level of returns.

*Elapsed time*

264. We do not consider that the mere elapse of time provides sufficient evidence to conclude whether the fair bet has played out, nor that setting controls that allow ongoing returns on undepreciated assets can be considered "generous".

265. As noted above, in the face of uncertain outcomes ahead of making an investment, any expectation of an outcome will be based on the probability of different upside and downside scenarios. We therefore support Oxera's position that Ofcom should identify an appropriate level at which returns above the project-specific cost of capital could be truncated without shifting the basis on which the decision to invest was taken – i.e. truncated upside returns should still be sufficient to offset, on balance of probabilities, the *ex ante* risks faced such that the investors would still have had an expectation of earning the project-specific cost of capital. Oxera refer to this 'spread' above the project cost of capital as 'Y' in their report.

266. The *ex ante* date of expected payback provides no information on the level of Y. The fact that that date is reached is therefore irrelevant to full consideration of whether the fair bet has been allowed. That is a function of the *ex ante* risks faced, revenues earned to date and the specific forward-looking level of price regulation proposed.

267. Furthermore, Ofcom's position is that that payback was expected to occur on the "first tranche of investment", started in 2009/10, within this charge control period. Ofcom refers here to a June 2008 BT Board paper which made a number of other points which Ofcom does not report, but which are relevant when trying to make inferences from the paper. In particular:

    - ✂

    - The ✂ year payback was described as *"an indicative payback period"* and related only to investments to cover 40% of the UK, as opposed to Ofcom's control which would apply to the entire commercial footprint; and

[116] For example ibid, paragraphs 8.17, 8.18 and A8.4

- Even then, payback under the indicative scenario which Ofcom quotes was actually forecast to be in ✂,[117] ✂ the period under review.

268. There was, therefore, no single expectation of payback, or a simple belief or understanding which was held by the BT Board and can now be said to have been fulfilled by Ofcom. The 2008 paper does not say that the decision to invest was based on an assumption that BT would face no price regulation until 2020/21 (which is the inference that Ofcom draws) nor that any such assumption formed the basis on which the investment proceeded (let alone the only relevant basis).

269. Furthermore, Ofcom refers to a presentation given by BT Group to Ofcom in 2008 and notes the expected payback dates in that paper were shorted than those detailed in the Board paper. That presentation set out feedback from the Board, noting in particular that they were concerned at the level of risk the indicative business case – e.g. the level of risk that required level of demand for premium services does not transpire and risk of Ofcom setting active or passive access prices set at rates which would not support return required.[118] The presentation also concluded that: "the Board had serious reservations about the level of risk for the investment, given the relatively low return and long payback".[119] This further challenges the weight Ofcom attaches to the payback dates in the 2008 Board paper and the presentation given to Ofcom shortly afterwards.

<u>Perceived riskiness of the initial investment</u>

270. Ofcom considers that while the 2008 decision to invest in fibre was risky:

*"the risk was mitigated to some extent by the investment being split into tranches and expectations about the eventual evolution of demand".*[120]

271. It is not clear what specific conclusion Ofcom draws from this in the context of assessing the fair bet. The acknowledgment that the investment was risky supports the key point that investor expectations were a function of downside risk and upside opportunities. If Ofcom's intention is to suggest that these risks were minimal, such that they can be ignored, we strongly disagree:

a. It is inevitable that network investment projects will be carried out in tranches given the need to utilise scarce resources. The fact is that Openreach was investing in extending the reach of the VDSL2 network at a time when take-up of services on that network remained low. Peak capex in the commercial footprint was incurred in 2012/13 when take up was around 9% by which point Openreach's cumulative capital spend had exceeded £1bn.

b. The observation that demand for bandwidth was growing and that demand for fibre speeds would emerge "eventually" does not remove the risks that arise from uncertainties over the timing at which demand would materialise or about the rate of growth in customer willingness to pay a premium for higher speeds.

c. Slower take-up of services would have reduced returns and pushed back payback significantly.

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117 The paper states there was an expected payback period on the FTTC elements under the indicative case "of ✂ years", but this related to payback being achieved in "year ✂" with the investment starting in 2008/9.

118 Slide 4 of 2008 presentation to Ofcom.

119 Ibid, slide 11.

120 Ofcom, WLA Market Review – Volume 1, March 2017, paragraph A8.18

d. Openreach was making a technology choice at a point in time with a risk that alternative technologies could emerge at a future date with better cost economics and/or for which capabilities might be more attractive to end users. It could not simply be assumed that payback would be reached "eventually" and the further expected payback stretched into the future, the more uncertainties would arise.

e. Higher demand than forecast drives different future capex requirements – e.g. for larger cabinets, more line cards and vectoring capabilities to ensure a full range of bandwidths can be supplied to a larger volume of customers.

272. More generally, it is not plausible to argue that risks could have been mitigated such that all project risks could effectively be dismissed.

Performance of the investment against initial expectations and the level of returns

273. Ofcom's assessment here is extremely limited and is, again, solely focussed on the Base Case assumptions presented as the 'indicative view' in the 2008 board paper. Ofcom's assessment is not made by reference whether performance aligns with any specific level of 'Y'.

274. Ofcom states that by providing pricing flexibility for 10 years it has provided *"… significant opportunity to earn returns above the cost of capital*".[121] However, Ofcom does not present any evidence to demonstrate that Openreach has earned such returns, let alone whether such returns would themselves be regarded as excessive. That is particularly striking when Ofcom is required, as part of the statutory framework, to assess the risk of adverse effects, in terms of the ability to maintain prices at an excessively high level, *before* it can have recourse to a SMP price control[122] Further, in so doing, Ofcom must establish that any excessive pricing produces *adverse consequences* for end-users. Openreach submits that such a conclusion is unsustainable once the fair bet analysis is properly applied – i.e. a price cannot be considered to have adverse consequences for consumers where it supports the fair bet principle and, therefore, ongoing investment and innovation.

275. Rather than applying the fair bet consistently with previous practice, Ofcom references two measures of returns:

- ROCE as reported in the RFS, noting that, while returns were well below the cost of capital in the early years of supply, they are now above the cost of capital and "expected to grow".
- Ofcom's calculation of Internal Rate of Return (IRR) based on its bottom up model which, it claims, would "exceed 15%" if pricing flexibility were retained during this market review period.

276. Neither measure provides sufficient evidence that the 'fair bet' has played out. The statement that the RFS returns are "expected to grow" ignores the expected increases in costs of expanding capacity to meet demand over the coming years and takes no account of the scale of reported RFS losses made in previous years. Ofcom's IRR estimate is based on its 20 year bottom up model which also fails to capture the extent of future costs of meeting demand. But, again, neither measure of returns is assessed by reference to a benchmark measure of 'Y' as defined in the Oxera

[121] Ofcom, WLA Market Review – Volume 1, March 2017, Annex 8, paragraph A8.21

[122] See further section 88(1) and (3) CA 2003.

report.

**Our expected returns on fibre investments**

277. Reference has been made in the analysis above to *Ofcom's* assessment of the returns we are making and will make on our fibre investment programme under different regulatory pricing scenarios: i.e. based on in-year accounting returns in the RFS and on IRRs generated from the cashflows in Ofcom's 20 year bottom up model. Any assessment of the returns on our fibre investment needs to take a longer term view of cashflows, but we have a number of concerns with the bottom up model produced by Ofcom. In particular, this model assumes that significant growth in demand out to 2028/29 can be met by Openreach at a much lower cost of supply than set out in our latest business case projections. We address our concerns with the bottom up model in more detail in Volume 2, but believe our business case provides the most reliable basis for projecting cashflows over 20 years. We have therefore overlaid impacts of Ofcom's proposed pricing remedy onto our latest NGA business case, shared with Ofcom alongside this response. We set out brief background on the case below before assessing what the outputs of this case reveal about the consistency of Ofcom's approach with fair bet principles.

The Openreach fibre business case: scope and background

278. BT Group first announced plans to invest in the provision of superfast broadband access in July 2008. This announcement set out ambitions to provide connections to around 10 million homes. Following operational trials and clarity around the regulatory framework, commercial rollout began in 2009. In 2010, BT Group announced ambitions to extend commercial rollout to two thirds of the country.

279. The rollout programme was delivered by Openreach and wholesale superfast access services made available on Equivalence of Inputs (EOI) terms to all downstream CPs. The programme was based on a 'mixed economy' approach aimed at providing superfast connections as quickly and efficiently as possible taking account of the technical capabilities of different technological solutions. Commercial deployment to date has mainly been based on VDSL2 fibre to the cabinet (FTTC) technology, but Openreach expects to increase the provision of superfast connections via fibre to the premises (FTTP) particularly to new build housing developments over the coming years. Changes in frequency plans have allowed us to extend the portfolio of access services provided to include 80/20 connections.

280. The rollout programme reached the two thirds coverage target in 2014. Take-up has increased over time as shown in Figure 13 below.

*Figure 13: Superfast fibre connections: coverage and take-up in commercial areas (millions)*

✂

*Source: Openreach business case*

281. Alongside these commercial plans, we have signed a number of contracts to supply superfast broadband as part of the BDUK programme in areas which would otherwise be loss-making. The costs of serving these areas are higher than in the commercial areas and requires public funding support to cover expected shortfalls arising from supplying those areas at the same level as the prices charged within commercial areas. Ofcom has not taken into account the impact of the proposals on BDUK areas.[123]

<u>Our forecast view of costs and returns</u>

282. Our latest NGA case presents a view of costs and revenues separately in commercial and BDUK areas. It reflects our latest plan of record building on our mixed economy approach. As such, it includes plans to build out to a number of new build sites via FTTP, but does not capture any ultrafast ambitions based on G.fast or increased volumes of FTTP. These ambitions are still under consideration.

283. We project costs and revenues over a ✂ year period (i.e. ✂ ). These projections have been periodically updated to reflect changes to factors such as costs per home passed, changes to the design and pricing of the portfolio and changes in take-up. Original cases were configured around an assumption that take-up would peak at ✂ of homes passed; the latest case ✂

[123] See Openreach response to WLA Market Review – Volume 2, March 2017, Section 3

284. Our case shows that we have not yet hit payback and do not expect to do so on our investments across commercial and BDUK areas at current fibre prices until ✂ (discounted at our standard corporate hurdle rates).

285. We have then to consider the impact of the specific pricing proposals set out in the Consultation:

- The direct impact of Ofcom's proposals to reduce specific 40/10 GEA rental, connection and ancillary charges for each year from 2018/19 to 2020/21;
- The indirect impacts arising from Ofcom's proposed form of regulatory intervention:
    i. Price impacts across the GEA portfolio: the effect that reductions in 40/10 GEA prices will have on rental prices for all other services in our GEA portfolio: it is reasonable to assume that those prices will fall in line with the 40/10 prices, reflecting limited willingness to pay for higher bandwidths;
    ii. Volume impacts: Lower price levels for GEA can be expected to drive higher volumes and therefore higher total costs than assumed in our case before regulatory impacts are considered;
    iii. Recovery of common costs: Ofcom's overall regulatory approach requires that common costs previously allocated to and recovered from regulated copper access prices can no longer be recovered from those charges. As such, the burden of cost recovery falls on fibre services from 2018/19 onwards. Ofcom identifies that these costs are around ✂ per annum from 2018/19 in commercial areas and ✂ per annum from 2018/19 in BDUK areas and we have assumed these costs remain at the same level out to 2028/29 for the purposes of considering long term returns;
    iv. Impacts beyond this market review period: A move to cost-based price regulation of GEA services in the market review period to 2020/21 is likely to be maintained beyond that date such that prices in each year from 2021/22 will also be subject to cost-based regulatory remedies. We assume that prices from this date would align with the outputs of Ofcom's LRIC model and that unit common costs fall in line with Ofcom's volume growth assumptions.

286. There is clearly significant uncertainty about future Ofcom decisions; these would need to be based on the most up to date information on costs and volumes at that time. However, there is an obvious risk that if Ofcom uses its bottom up model to set prices in this review period, it will use the same model in the future. We also note that Ofcom's own assessment of the 20 year impact of its proposed regulatory intervention broadly aligns with the pricing assumptions out to 2028/29 we have used. For the avoidance of any doubt, we are clearly not suggesting this is the right approach; on the contrary, the exercise has been conducted to highlight the scale of our concern that Ofcom may be proceeding down this route.

287. Our business case suggests that if price cuts of the magnitude proposed by Ofcom are imposed and if this approach to regulation gives rise to the indirect effects detailed above, returns over the 20 year period in the commercial area would be only ✂ and even lower across the UK-wide case. As such, we would still not have hit discounted payback after 20 years. This would clearly be inconsistent with the fair bet principle. It is reasonable to assume the BT Board would not have supported Openreach undertaking the commercial fibre investment programme in 2008 on the

basis of projected risky 20 year returns of c. ✂.

288. This finding is, of course, driven by the *level* of pricing proposed by Ofcom based on its bottom up modelling. As noted, we critique that modelling in Volume 2. But this analysis also exposes problems with Ofcom's proposed approach for assessing whether it is appropriate to impose cost-based charge control by reference to a relatively loose set of criteria around *ex ante* expectations, risks and performance. As well as addressing gaps in modelling of costs, Ofcom needs to ensure that the impact of any proposed price cuts on project returns is considered within an analytical framework designed to consider consistency with a fair bet principle. There inevitably needs to be a linkage between any assessment of *whether* Ofcom should now seek to price regulate fibre services and *how* Ofcom might regulate such prices. We would note again here Oxera's analysis which suggests that any pricing intervention that reduced returns to less than 15% runs the risk of being inconsistent with the fair bet.

## Protecting SFBB customers against the risk of high prices

289. As set out in Section 4, we believe that Ofcom has significantly overstated the extent to which the constraints faced by Openreach in supplying VULA inputs can be said to have weakened. As such, as well as proposing an approach which understates impacts on future investment, Ofcom has understated the degree to which the stated risks of excessive pricing are mitigated by market constraints. It is relevant here to note that supply and demand is evolving over time and so there is considerable risk that a static, short term view of constraints will not offer full insight into how to balance seemingly conflicting objectives. We would invite Ofcom to reconsider its conclusions in light of the evidence set out in Section 4.

290. In this subsection, Ofcom also positions its proposal to only regulate the price of GEA 40/10 services as striking a balance between protecting consumers against the risk of high prices and preserving investment incentives. This balance appears to arise because Ofcom proposes to "maintain pricing flexibility" on higher bandwidth GEA services. Our position is that regulation of the 40/10 price will act as a very strong constraint on the prices of all other services; and Ofcom itself notes that higher bandwidth prices will be constrained by the availability of the regulated 40/10 service. As such, it is unclear how Ofcom's approach would – in itself – promote investment in higher bandwidth services.

## Protecting retail competition where necessary

291. Openreach is committed to supplying VULA inputs to all its customers on EOI and fair and reasonable terms to allow them to compete effectively, efficiently and profitably across the supply of all broadband services. We do not believe additional protections are required to support fair downstream competition. While we welcome the proposed removal of the VULA margin condition, we do not believe this needs to be contingent on Ofcom imposing charge controls on 40/10 access services in the form proposed.

# 10. Price regulation of local loop and sub-loop unbundling

***Question 9.1: Do you agree with our proposals for the price regulation of LLU and SLU? Please provide reasons and evidence in support of your views***

292. In Section 9, Ofcom sets out its proposals to:

- Set a cost-based charge control on MPF SML1 rentals, connections and relevant ancillaries;
- Remove cost-based charge controls on SMPF rentals and connections;
- Impose a basis of charges obligation on SLU services; and
- Impose a basis of charges obligation on electricity services.MPF should serve as the sole anchor.

293. Openreach believes that WLA copper access regulation can be limited to an appropriately set CPI-X charge control on the provision of MPF services – i.e. a control that provides an opportunity for Openreach to recover efficient forward-looking costs of supplying MPF to the defined level of service, including a fair return on investments and contribution to common costs.

294. We agree with Ofcom that, given the requirement to supply MPF SML1 on a charge controlled basis and the strength of indirect constraints from retail suppliers of standard broadband services using MPF, there is no longer any justification of regulating Openreach's charges for SMPF.

295. We note Ofcom's comments in paragraphs 9.16 to 9.17 about the risk of adverse effects arising from Openreach fixing and maintaining its SMPF charges at a level that creates a margin squeeze. Ofcom proposes to address this risk via the fair and reasonable charges obligation, as appropriate, and states that its starting point for any assessment of costs and margins would be consistent with ex post competition law. Openreach refers to its submissions in section 7 above on the flexibility that a fair and reasonable charging obligation provides. We reiterate those observations here.

296. In any event, we do not accept that Openreach has the incentive and ability to impose a margin squeeze through SMPF charges, noting that the majority of downstream competition in broadband services is not reliant on SMPF and taking account of the restrictions on Openreach co-ordinating commercial behaviour with downstream parts of BT. Openreach's incentives are to maximise profitability within regulatory constraints and attempting to sell SMPF at prices that would not allow CPs to compete effectively and profitably in downstream markets would be counter-productive to this aim. Nevertheless, we note that Ofcom rejects the option of imposing any more prescriptive rules to address the risk and the fair and reasonable charges obligation would only become relevant where evidence was put forward to demonstrate competitor harm. In this context, while we would question the necessity of maintaining any regulatory remedy as a 'safeguard', we do not have significant concerns about the effect this will have on Openreach's commercial options.

297. The cost orientation price obligations proposed for Sub Loop Unbundling (SLU) and Electricity Charges is largely unchanged from the previous charge control and we have no issue with the proposals for these services. We would refer to our response to Volume 2 question 5, where we disagree with the change to align SLU prices to MPF SML1 rather than SML2.

# 11. Regulatory financial reporting

***Question 10.1: Do you agree with our proposals for BT's regulatory financial reporting? Please provide reasons and evidence in support of your views.***

## Introduction

298. We set out below in detail our views on Ofcom's proposals for regulatory financial reporting. Our key concerns are described in detail below in the section headed 'Public information', but in summary are:

- We consider it is disproportionate to require BT to publish service level cost information for WLA services which are affected by the reattribution of common costs assumed for modelling purposes (and not reflected in regulatory financial reporting). Our concern applies equally to regulatory financial reporting in the WFAEL market, which is subject to a separate market review,
- We consider it is disproportionate to continue to require BT to publish separate returns for the WLA and WFAEL markets, given the extent to which common costs have been transferred from WFAEL to WLA for charge control modelling purposes (and not reflected in regulatory financial reporting).

299. The main changes Ofcom proposes to make to the information contained in BT published RFS are the changes to the lists of services reported, with the removal of SMPF services and the inclusion of key GEA services.[124, 125]

We welcome Ofcom's proposals for the removal of the reporting obligations on SMPF services. We agree with Ofcom's reasoning that, as the SMPF services are no longer to be subject to cost-based pricing remedies, it is not appropriate to publish FAC information at the service level.[126] However, as noted above, we also consider that such publication requirements should be withdrawn from the majority of WLA and WFAEL services.

### Proposed charge control adjustments

300. We welcome Ofcom's proposal of an additional criterion to apply when considering whether to apply changes to the RFS:[127] a cost adjustment would not be expected to be reflected in the RFS or Adjusted Performance Schedule where it is only made for forecasting purposes and is not based our incurred costs. Such adjustments would require significant additional effort and judgment on our part and would not add significantly to stakeholder value.

301. Ofcom has made a number of changes to the base year costs including in the charge control

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124 During the charge control period BT will be required to implement new accounting standards, in particular IFRS16.

125 Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 10.6

126 Ibid, paragraph 10.80

127 Ibid, paragraph 10.30.

models and we concur with Ofcom's proposal that two of these changes are reflected in the way that we report costs in the RFS:[128]

- a change to the treatment of capitalisation credits for self-installation costs, which we will implement as of the 2016/17 RFS; and
- a change to the Cumulo attribution methodology for GEA rental services, which we accept as a reflection of the way we are currently charged for Cumulo. However, as Ofcom is aware, the value and method of calculating our Cumulo charges are currently under discussion with the Valuation Office Agency, which may lead to a change in the way our Cumulo charges are calculated.

302. Ofcom proposes that we reflect three further adjustments to base year costs in the Adjusted Financial Performance schedule beginning with the 2018/19 RFS:[129]

- Averaging the impact of making the provisions for restructuring and property over three years. This adjustment was implemented for the BCMR markets in the 2015/16 RFS.[130] We agree with Ofcom's proposed adjustment which we will implement for the WLA market as of the 2018/19 RFS.
- Reflecting the net proceeds from copper scrap as a creditor against the E-side copper capital network component. We do not agree that we should implement this adjustment: as Ofcom notes, this adjustment will be difficult to calculate and may be volatile.[131] Given this, there would not seem to be any significant value to stakeholders in publishing this information.
- Making 'steady state' adjustments to nine components, increasing the NRC/GRC ratio to 50% and adjusting OCM depreciation accordingly. This adjustment is similar to one previously implemented for DSLAM assets affecting WBA Market A.[132] We agree with Ofcom's proposed adjustment which we will implement for the WLA market as of the 2018/19 RFS.

303. Ofcom proposes the three final adjustments to base year costs are not reflected in either the RFS or in the Adjusted Financial Performance schedule:[133]

- We agree that we should not implement reattribution of common costs across Copper and GEA products in the WFAEL and WLA markets for the reason that Ofcom states: we should not be expected to recalculate Ofcom's view of network costs each year. However, the effect of not implementing this change in the RFS is that the service level FAC information is materially inconsistent between what we would publish in the RFS and the costs used as the basis for setting prices. The implications of this are discussed further below in relation to Ofcom's proposed obligations for publication.

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[128] Ibid, Table 10.3

[129] Ibid, Table 10.4. The Adjusted Financial Performance Schedule can be found on page 131 of the 2015/16 RFS

[130] As set out on page 245 of Annex 35 of Ofcom's 2016 BCMR Statement

[131] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 10.3.

[132] Ofcom, Directions for Regulatory Financial Reporting, March 2015, Annex 6

[133] Ofcom, WLA Market Review – Volume 1, March 2017, Table 10.5

- We agree with Ofcom's proposal that we should not remove the costs and income associated with the provision of subsidised services.
- We agree with Ofcom's proposal that we should report our incurred costs for SLGs and DPA implementation rather than Ofcom's forecasts.

**Other accounting requirements**

304. Ofcom proposes changes to the basis of preparation in three areas: GEA services, sales of property and the ACPA class of work.[134]

305. For GEA services, Ofcom proposes we make a number of changes to accounting treatment:[135]

- We agree with Ofcom's proposal that we should change the attribution of fibre costs to FTTC and FTTP to take account of the rate at which these services use fibre. We intend to implement this change in the 2017/18 RFS, subject to our internal governance processes.
- We agree with Ofcom's proposal that we should make an appropriate attribution of the costs of deployment in BDUK areas to FTTP services.
- We do not agree that change is required in the accounting for BDUK funding and BDUK roll out costs to provide further transparency over how the BDUK is spent. We propose to discuss this with Ofcom if necessary to provide further clarification and explanation.
- We recognise that the description in the Accounting Methodology Document (AMD) requires clarification for NGA provisioning and maintenance components, which will be implemented in the 2016/17 AMD. However, we do not agree that change is required in the network components. We propose to discuss this with Ofcom if necessary to provide further clarification and explanation.
- We do not agree that change is required in the treatment of capital costs incurred during provisioning. We propose to discuss this with Ofcom if necessary to provide further clarification and explanation.

306. We agree with Ofcom's proposals for changing the accounting for sales of property, that is treating profits or losses on disposal in line with the costs for the type of property (general purpose or operational).[136]

307. We agree with Ofcom's conclusion that the Class of Work ACPA includes assets at differing stages in their life cycles and which are used to provide a number of services.[137] In line with Ofcom's proposal, we will change our accounting treatment of these assets so that assets used to deliver GEA services are accounted for separately from those used to deliver Co-mingling services.[138] However, we are reviewing the most effective way of implementing this change and this may not be

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[134] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 10.44

[135] Ibid, paragraph 10.48 and Annex 22 Cartesian report, page 9

[136] Ibid, paragraph 10.50

[137] Ibid, paragraph 10.51

[138] Ibid, paragraph 10.54

the creation of an additional Class of Work, as Ofcom proposes. We request the flexibility to implement the change in the most effective way.

**Network components**

308. Ofcom proposes to make a number of changes to the network components we are required to use when preparing the RFS:[139]

- We agree with Ofcom's proposals for additional GEA network components. However, as Ofcom is not proposing that GEA services are to be charge controlled based on a top down model consistent with the RFS, we should not be required to publish information on these components as Ofcom proposes.
- We are unclear on Ofcom's proposal to create a new duct component 'able to disaggregate into Plant Groups that align to the network elements utilised by DPA services'. We note that Ofcom has not yet completed consultation on DPA services, therefore it is not yet possible for Ofcom to define its requirements fully. The reporting and attribution of the cost of 'duct' (including other elements of physical infrastructure, such as poles and manholes), is complex, spanning as it does many components and services, and careful consideration will need to be given to designing changes if implementation is not to be disproportionately time consuming. We are willing to work with Ofcom to develop the most appropriate solution to address its concerns.
- We accept Ofcom's proposals to enable separate accounting of FTTC and FTTP services by creating additional network components for Fibre Voice Access (FVA), to carry the cost of enabling an FTTP line to carry voice traffic, and Fibre to the Premises (FTTP). However, we should not be required to publish information on these components as they do not relate to services on which Ofcom proposes to impose charge controls.
- We accept Ofcom's proposal to publish the costs of the Project Services component reported in SMP markets.

**Preparation, delivery, publication, form and content of the RFS**

309. Ofcom's approach to the preparation, delivery, publication, form and content of the RFS is the same as that proposed in the Narrowband Market Review Consultation.[140] In response to this, we proposed a framework to be applied in determining the regulatory financial reporting obligations which are appropriate to the pricing remedy imposed.[141] This framework is similarly relevant to the WLA market review and should be considered as forming part of this response.

**Public information**

310. Ofcom proposes that BT should publish market level information for the WLA market, specifically in

[139] Ibid, paragraph 10.57

[140] Ofcom, Narrowband Market Review Consultation, December 2016, paragraph 19.31 and ibid, paragraph 10.66

[141] Narrowband Market Review Consultation responses 27 March 2017 by BT paragraph 5.38 and Openreach paragraph 85.

the Performance Summary by Market and Attribution of Wholesale Costs and Mean Capital Employed.[142]

311. We do not agree with Ofcom's proposal, which is not consistent with our proposed framework for regulatory financial reporting and will not provide significant benefit to stakeholders. Ofcom's proposal would result in the reattribution of common costs between copper and fibre services across the WLA and WFAEL markets, applied in charge control modelling, being inconsistent with the RFS, making the separate market returns potentially misleading.

312. The FAC of common costs reattributed from the WFAEL market to the WLA market in Ofcom's charge control models for 2020/21 is ✂ , representing ✂ of the total FAC for the WFAEL market.[143]

313. Given the scale of the reattribution of costs between the WFAEL and WLA markets, we propose that only a combined market return is published as the returns for the separate markets do not reflect the impact of Ofcom's pricing remedies and will be of little benefit to stakeholders.

314. Ofcom proposes that we publish service level FAC information for WLA services.[144]

315. We do not agree with Ofcom's proposal, which is inconsistent with our proposed framework for regulatory financial reporting and will not provide significant benefit to stakeholders. Our reasons for not agreeing with Ofcom's proposal for service level reporting are the same as those given above in relation to market level reporting. In addition, the continued publication of this detailed information represents a significant and disproportionate burden, disclosing potentially commercially sensitive information.

316. As an example of the impact of the reattribution of common costs, consider MPF rentals. The FAC of this service in 2020/21 is reduced by ✂ representing over ✂ of the total FAC for the service.[145] This is significantly above the threshold of a material error in the RFS, which is defined as any correction of a figure in the RFS which exceeds the higher of £1m or 5%.[146]

317. We welcome Ofcom's proposal that services with revenue below £5m do not need to be published separately.[147] However, if GEA services were not to be charge controlled there should be no requirement to publish service level information.

318. Further, even if price regulation is imposed as proposed by Ofcom, publication of service level FAC information should be restricted to services where the pricing remedy is based on our incurred costs

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[142] For example, see 2015/16 RFS pages 21, 25 and 28

[143] The value of common costs transferred from the WFAEL market has been calculated from the workbook 'CPI-X Model', worksheet 'Common cost allocation' using the product unit costs before attribution (rows 5-11), the product unit costs after attribution (rows 250-256) and product volumes (rows 76-82)

[144] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 10.76

[145] The change in FAC as a result of reattribution for MPF Rentals has been calculated from the workbook 'CPI-X Model', worksheet 'Common cost allocation', using the product unit cost before attribution (row 15), the product unit cost after reattribution (row 260) and the product volume (row 86)

[146] Ofcom, WLA Market Review – Volume 1, March 2017, Annex 23, page 156

[147] Ibid, paragraph 10.79

as reported in the RFS. Therefore this requirement should not apply to the GEA services listed (40/10 FTTC Rentals, 40/10 Other Rentals, GEA Other Rentals, 40/10 FTTC PCP Only Install and Start of a Stopped Line, 40/10 FTTP Other Connection, Cable Link 1 Gigabit, Cable Link 10 Gigabits).[148]

319. Similarly, this requirement should not apply to a number of other (non-GEA) WLA services listed, which may be priced at LRIC (MPF Single Migrations, MPF Bulk Migrations), include reattribution of common costs (MPF Rentals) or consist of a range of services, making meaningful unit cost reporting impossible (Other MPF Ancillary Services, Other WLA).

320. Publication of service level FAC information should therefore be limited to: MPF New Provide Services, Hard Cease Services, Co-mingling New Provide and Rental Services, Tie Cables, Special Fault Investigations and Time Related Charges.

321. We welcome Ofcom's proposal to withdraw the requirement to publish service level FAC information on SMPF services and agree with Ofcom that the proposed pricing remedy, which is not based on our incurred costs, makes such publication inappropriate.[149]

322. We do not agree with arguments presented by Ofcom in favour of publication of service level FAC for GEA services:[150]

- Ofcom argues that BT's cost data is used for calibration purposes. However, the top-down service level FAC data in the RFS is only one of the sources of cost information used in the calibration, with equal weight attached to top-down RFS LRIC and with consideration also given to the management accounts and the 'BT Model'.[151] We welcome Ofcom carrying out a range of comparisons, but do not agree that comparison with the RFS (particularly as one source amongst many) means service level FAC data should be published in the RFS when it is clear it is prepared on a materially different basis from the FAC used in charge control modelling. In the circumstances, RFS service level FAC data will not inform stakeholders when scrutinising cost movements against prices.
- Ofcom considers that BT's cost data will provide stakeholders with information as to how regulated prices relate to BT's costs. However, this is not the case where the basis on which regulated prices will be set is materially different from the basis on which we will report our incurred costs.
- Ofcom considers that FAC information will provide stakeholders with an insight into the ongoing impact of Ofcom's common cost calculations because GEA FAC information is used together with WLA and WFAEL information in the attribution of common costs. However, this is not the case as the attribution of common costs will not be published in the RFS (only the outcome of the calculation) and the calculation behind the reattribution of common costs, based on Ofcom's bottom-up modelling, is extremely complex.

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[148] Ibid, Annex 23, page 190: this shows the list of services Ofcom propose to be published

[149] Ibid, paragraph 10.80

[150] Ibid, paragraph 10.81

[151] Ibid, Table A13.6 and paragraph A13.66.

- Ofcom considers that stakeholders should have access to a time series view of GEA service costs to enable them to contribute to any future reviews of pricing. However, access to a time series view of costs prepared on a different basis from that used in setting prices will not provide stakeholders with information of significant value in making an informed contribution.

323. We welcome Ofcom's withdrawal of the requirement to publish Appendix IV Time Related Charges and Special Fault Investigation Costs and agree that this is no longer appropriate, given that the information it contains will no longer be used as the basis of setting prices.[152] However, we do not agree with Ofcom's proposal that we continue to prepare and provide this information privately. Ofcom has used such information in a dispute, but such use has not been justified by Ofcom on an ongoing basis.[153] The ongoing annual provision of information which was used for a one-off purpose is disproportionate.

324. Ofcom's proposal is that we publish the calculation of service FAC based on network component costs and usage factors for those services where we publish FAC.[154] As noted above, the services for which FAC information is published should be limited to those where the FAC is based on our incurred costs as reported in the RFS. We therefore only agree that the calculation of service FAC based on network component costs and usage factors should be published for this limited number of services.

**Private information**

325. We welcome Ofcom's agreement that where information is provided within the Data File, no separate AFI should be required.

326. We therefore welcome Ofcom's proposal to remove the requirement to provide revenue and FAC information by service and component for GEA services.[155] This information is available to Ofcom through the Data File and therefore there is no need for it to be provided separately.

327. We agree that there should be set criteria as to when an AFI is needed as a separate data submission to Ofcom, such as Ofcom's principles set out in section 10.104.

328. However, we do not agree with Ofcom's conclusion that there are no further specific AFIs relating to the WLA market that should no longer be provided:[156]

- Firstly, there are other AFIs which duplicate information already provided to Ofcom. For example, the new AFI requested in section 10.102, setting out the calculation of WLA service FACs based on components and usage factors, can be extracted in a straightforward way using the data file and a published AMD annex ("AMD S9 - Component to Service").

- Secondly, throughout the charge control period BT and Ofcom should be able to agree where other AFIs are no longer required.

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[152] Ibid, paragraph 10.82

[153] Ibid, paragraph 10.93

[154] Ibid, paragraph 10.83

[155] Ibid, paragraph 10.94

[156] Ibid, paragraph 10.105

### Accounting deadlines

329. In draft Condition 12 (p.90 of Annex 23 of the Consultation) and the draft direction setting the requirements in relation to preparation, delivery, publication, form and content of the Regulatory Financial Statements (p.174 of Annex 23 of the Consultation), Ofcom proposes the following accounting deadlines, by which we would be required to:

- Two weeks ahead of publication of the RFS:
  i. provide to Ofcom a final version of the RFS, reconciliation report and any corresponding audit opinion, AMD and Wholesale catalogue. This includes all the documents listed in para.13a) of the draft direction.
  ii. publish the price controls in wholesale markets (non-confidential statements) (under the exception in para.14 of the draft direction).
  iii. provide the AFIs listed in paragraphs 17(a) and 17(b) of the draft direction, with the exception of those listed in para. 17(a)(i)(ii)(xii) and (xvii).
- Four months after the end of the FY:
  i. publish the RFS, reconciliation report and corresponding audit opinion, AMD and Wholesale catalogue. This includes all the documents listed in para.13a) of the draft direction.
  ii. provide the AFIs listed in 17(a)(i)(ii) and (xvii) of the draft direction.
- Two weeks (or 10 WD) after publication of the RFS:
  i. provide the Data File (under the exception in 17(a)(xii) of the draft direction).

330. In draft Condition 7B.7 (p.58 of Annex 23 of the Consultation), Ofcom proposes that we would be required to:

- Three months after the end of the FY:
  i. Provide in electronic format the data necessary for Ofcom to monitor compliance with condition 7B.

331. We broadly agree with Ofcom's proposals above, however:

- We consider that the same reason for extended deadlines related to LRIC AFI also applies to the reconciliation report, as both rely on the final RFS. Therefore, we propose that a final version of the reconciliation report is provided to Ofcom on the same date that the RFS is published, and published two weeks after the RFS is published.
- While Ofcom acknowledges that LRIC data (including all LRIC AFIs) cannot be prepared under the same deadlines as the RFS, Ofcom's proposed LRIC deadlines do not fully reflect the system processing time that LRIC production needs, nor does it allow for any governance. To ensure appropriate checks and approvals take place to assure Ofcom of robust and reliable data, we propose that BT shall provide the AFIs listed in 17(a)(i)(ii) and (xvii) of the draft direction, at the same time that we provide the Data File (under 17(a)(xii)), i.e. two weeks after publication of the RFS.

# Annex 1: Analysis of competitive constraints between broadband services of different speeds

332. Ofcom's provisional finding that the constraint of SBB on SFBB is diminished relies on the following arguments set out in paragraph 3.45 of its consultation document:

- Continued high take up of SFBB, with nearly three quarters of all broadband lines forecast by Ofcom to be SFBB by 2020/21;[157]
- Consumers' demand for bandwidth continues to increase (especially by those using multiple broadband based services simultaneously), driving further demand for SFBB;[158]
- As the share of customers already on SFBB will exceed the share of potential upgraders, the pricing constraint is shrinking as customers very rarely switch back down to SBB and the remaining SBB base can be targeted through acquisition offers;[159]
- The price premium for SFBB services over SBB services has been growing and is now "significant".[160]

333. The evidence is more finely balanced than is suggested by Ofcom. Continued take-up of fibre over the review period is to be expected but the effect is not so overwhelming as to make the constraint from SBB irrelevant or significantly diminished. Openreach expects a significant proportion of customers to continue to regard SBB as a sufficient and viable substitute for SFBB services, sufficient to constrain the pricing of SFBB services. This annex supports this position with the following evidence:

- There is little evidence that SFBB has (or will) become "must have" in the sense of un-locking apps and services which cannot be accessed using SBB. The most popular internet activities identified by Ofcom's research do not have high bandwidth requirements, and compression technologies have reduced the bandwidth requirement of content apps and are expected to reduce them further;
- Customers indicate very high levels of satisfaction with their current broadband speeds and a material proportion do not have (or anticipate having) a need for higher speeds;
- SFBB take-up is driven by marketing activities and attractive retail packaging more than it is driven by customer need;
- Customers are price sensitive and the incremental price for higher speed will remain constrained by SBB prices in order to entice SBB customers to upgrade and avoid downgrading by SFBB customers;
- The price premium between SBB services and the entry level SFBB services has not increased since 2014, on the contrary on market averages it decreased significantly; and
- There is evidence of effective competition between retail rivals offering SBB and SFBB

157 Ofcom, WLA Market Review – Volume 1, March 2017, paragraphs 3.18-3.20.

158 Ibid, paragraphs 3.21-3.30.

159 Ibid, paragraphs 3.31-3.40.

160 Ibid, paragraphs 3.41-3.43.

services in Virgin Media areas i.e. market outcomes corroborate the evidence above pointing to a competitive constraint between SBB and SFBB services;

- Ofcom's forecast of SFBB demand is overstated, based on unrealistic assumptions of "essential demand" for higher bandwidths, and the unsubstantiated expectation that non-BT providers will convert the majority of their customer SBB bases to SFBB by 2020/21.

## There is little evidence that SFBB has become "must have" for most customers

334. This section presents evidence showing that, for most consumers, SBB speeds are (and will continue to be over the review period) sufficient such that SBB services offer a viable substitute to SFBB services, and Ofcom has therefore overestimated demand for higher bandwidth services over the review period.

<u>There is little evidence that SFBB has (or will) become "must have"</u>

335. Ofcom suggests that there are trends which mean that, in many cases, SBB speeds will no longer be sufficient for a majority of households.[161] However, Ofcom's own evidence is mixed and other evidence suggests otherwise. SFBB certainly provides users with a better experience for some devices or applications but it remains the case that, for a significant proportion of customers, SBB is enough to meet their needs (and is likely to do so going forward).

336. In its 2014 WBA Statement Ofcom found that SFBB was <u>not</u> a "must have" product, and argued that "[t]*he adoption of SFBB appears to result in users spending more time on applications already used with CGA, rather than new applications, suggesting the <u>take-up of SFBB is not driven by specific uses</u>. This is reflected in the research conducted for the CMR which suggests that in 2013 the top activities were general browsing, sending and receiving emails, online shopping, banking and using social networking sites. <u>None of these require SFBB</u>.*"[162] (emphasis added)

337. Ofcom's Communications Market Report 2016 indicates that the top activities online are still general browsing, sending and receiving emails, online shopping, banking and using social networking sites. The changes in reported internet usage within these categories is minimal between 2013 and 2016 and does not justify a different conclusion to that reached in 2014.[163]

338. Ofcom quotes figures from research conducted for BT in 2014 which suggested that, by 2018, most users could need ✂ . The documents BT disclosed to Ofcom contained a range of demand forecasts. For example, another internal BT document provided to Ofcom quoted BSG forecasts in early 2015 estimating that only the top 10% of users would require 33Mbps or more.[164]

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[161] Ofcom highlights demand for new services needing more bandwidth (e.g. UHD streaming), demand for a higher quality experience (e.g. less buffering when streaming video) and demand for higher upload speeds (e.g. for cloud data back up or content sharing) (WLA Market Review, Volume 1, paragraphs 3.22-3.24)

[162] Ofcom, Review of the Wholesale Broadband Access markets - Statement, June 2014, paragraph 3.57.

[163] The only notable difference between the reported internet usage profile is that the percentage of TV/Video viewing in 6th place has increased from just under 50% to just over 50%. All other uses, and the order of their importance have remained broadly the same. (Ofcom, Communications Market Report 2016, Figure 5.21; and Communications Market Report 2013, Figure 4.34)

[164] BT internal document ✂ , provided to Ofcom in response to the 1st WLA s135 request, dated 14 January 2016.

339. Furthermore, the particular forecast that Ofcom quoted reflected an early stage of BT's research into future consumers' bandwidth demand and it did not differentiate between an essential minimum level of bandwidth consumers may require for their typical online activities and additional bandwidth consumers *could* use for discretionary activities.

340. BT has since carried out further analysis and found that "brittle" monthly peak bandwidth demand (defined as bandwidth below which consumers would experience a service degradation, for example, excessive buffering, and for which demand is likely to be highly inelastic) is unlikely to exceed ✂ . "Soft", or adaptable, demand can better tolerate some lack of bandwidth (e.g. web browsing) or adapt to bandwidth availability, e.g. a software update download such that the customer does not have an immediate and significant degradation of service experience. Consumers are therefore likely to be much more price elastic for higher bandwidths that would fulfil 100% of their adaptable demand instantly.[165]

341. The table in Figure 14 below summarises the typical weekly and monthly "peak time" activities that BT believes typically take place in a range of different households who take broadband (c. 85% of UK households). Figures in bold indicate typical peak hour weekly and monthly "brittle" demand needs, and figures in brackets include an estimate of adaptable demand which can tolerate some lack of bandwidth.

342. It shows that ✂ of bandwidth in the peak time will satisfy the prime customer-experience affecting demands of ✂ of UK households (✂ ). And while consumers do use more bandwidth where available, consumers tend to be more accepting of trade-offs between different simultaneous uses and some delay for what is defined as "soft demand" (e.g. in order to watch a 4k video, an IOS update download can wait until the video is finished). Their willingness to pay extra for higher bandwidths that accommodates 100% of soft demand instantly will therefore be more nuanced and on average significantly more price elastic than for bandwidth required to meet "brittle demand".[166]

165 For example, if a customer watched a 4k video online and attempted a software update download at the same time and bandwidth were constrained, the software update download may run more slowly in the background, or the download may be delayed until the 4k video finishes. Consumers will likely have a higher willingness to pay for a service that allows them to watch the 4k video without interruption, but would have a lower willingness to pay for a service that would cover, simultaneously, a fast download of a large software update.

166 The fact that most customers' "essential" bandwidth demand can still be met, in most cases, with SBB until the end of this review period does not reduce Openreach's incentives into higher bandwidth networks, for two reasons: 1) demand for bandwidth does increase over time, and in order to meet the demand as and when it emerges in the future, investments need to take place now, which need to be financed now; and 2) competitive pressure from Virgin's high speed network requires Openreach to offer higher bandwidths, too, particularly where Virgin can offer higher speeds at the same or lower prices than services based on Openreach's network.

*Figure 14: BT customer demand assessment, 2017-2025*

✂

*Source: BT internal research*

<u>It is not clear that SBB speeds constrain customers' data consumption</u>

343. Ofcom argues that customers with higher broadband speeds generally consume higher volumes of data, as illustrated by Figure 3.5 in its consultation document. The relationship between speeds and data consumption is not, however, straightforward and does not suggest that SBB speeds are currently constraining users' data consumption:

- The relationship between higher speeds and higher data consumption highlighted by Ofcom (in Figure 3.5) breaks down beyond 40 Mbit/s and, excluding the high data usage at 40 Mbit/s which appears to be an outlier,[167] the relationship is unclear after average download speeds exceed 25 Mbit/s. This could reflect diminishing returns in the incremental benefits from higher available speeds for most customers, as only a small share of customers require higher speeds in order to meet their specific demands (e.g. large families running several high-bandwidth applications at the same time, or online gamers).
- Average data usage on all broadband speeds up to 40mb has increased significantly, by around 50%, between 2015 and 2016, with lower growth rates only on the very lowest single digit speeds.[168] This suggests that the current SBB line speeds have in most cases not, to date, constrained data usage, and Ofcom does not explain why average data usage for SBB lines could not increase still further in the future.

[167] As shown in Figure 14 of Ofcom's Connected Nations report from December 2016, the spike in average data usage for the 40mb speed point did not occur in the previous year. Absent any further explanation of the cause of the spike this particular data point appears to be an outlier which should be interpreted carefully.

[168] Ofcom, Connected Nations, December 2016, Figure 14.

344. In any event, a 2016 report by Communications Chambers found that increased data usage was not, in itself, a strong indicator of a need for higher bandwidths given ample spare capacity in the existing access network.[169]

Ofcom has ignored the role of technology in mitigating demand

345. Ofcom has not considered the impact of more sophisticated demand management measures such as improved compression technologies which offset the impact of the growth of high quality content applications on growing bandwidth demand. These have been documented in various places.[170]

346. The trend towards accessing the internet via mobile devices,[171] including within the home via wifi, also serves to dampen future bandwidth requirements, as mobile applications are designed to require less bandwidth. One recent report suggested that 4K video may require less than 10 Mbps in the medium term, with HD video requirements in the low Mbps range in order for these services to be readily accessible on mobile devices for a mass market.[172]

347. Put simply, very few applications individually require high SFBB speeds and those that do are likely to be managed through compression and careful scheduling.

## Customers indicate very high levels of satisfaction with their current broadband speeds

348. A very high proportion of customers say they are satisfied with their broadband speeds. When asked, "*Is the speed of service you receive from fixed broadband service sufficient for your household, i.e. are you able to do the activities that you want with it*?"[173]

- 82% of SBB customers say that their broadband speed is sufficient for their household; and
- 90% of SFBB customers say that their broadband speed is sufficient for their household.[174]

349. Not only are these satisfaction levels very high, suggesting that needs are being met, but there is no material difference in the satisfaction levels between SBB and SFBB customers suggesting that SBB customer are not prevented by the broadband speeds available from doing the activities that

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169 Communications Chambers, An analysis of FTTP's role in UK connectivity. The evidence for a targeted approach, October 2016, page 6: *"even in the evening busy hours, the UK's broadband access network is carrying traffic representing just 1.4% of its total capacity. This is not to say that there are no individual connections operating at full capacity at certain points in time – certainly there are – but rather to highlight that extra traffic need not imply a need for extra bandwidth."*

170 For example, Plum report for BT, 2016, section 4.2.3; Brian Williamson/Communications Chambers, Mobile first, fibre as required – The case for "Fibre to 5G" (FT5G), January 2017, pages 7-12.

171 See Ofcom's Communications Market Report 2016, page 192 and Figure 5.14: the majority of consumers (56%) now regard a mobile device (mobile or tablet) as the most important device for internet access, as opposed to only 23% in 2013.

172 Brian Williamson/Communications Chambers, Mobile first, fibre as required – The case for "Fibre to 5G" (FT5G), January 2017, pages 7-12.

173 Ofcom, WLA Market Review – Volume 1, March 2017, Footnote 63.

174 Ibid, paragraph 3.30 and footnote 63.

they want to do.

350. Ofcom places more weight, however, on the demand from households using multiple broadband based services at the same time. However, as shown in Figure 14 above, BT's research suggested that ✂

. Focusing only on the particular demands of the top ✂ of households in terms of bandwidth requirements inevitably overstates the bandwidth demands of the majority of households.

351. In particular Ofcom highlights that only 64% of SBB residential customers (54% of SME customers), as opposed to 83% of SFBB residential customers (85% of SME customers), indicate that they are "always or mostly" "*satisfied with the quality of speed of the connection while conducting these activities simultaneously*":[175] Ofcom concludes "*this corroborates the greater need for SFBB for multi-users households, and suggests that as households increasingly need to carry out high-bandwidth activities simultaneously, more customers may upgrade*."[176]

352. Openreach notes that two thirds of SBB residential customers and just over half of SBB SME customers who consider themselves to be satisfied with connection speeds while conducting activities simultaneously is still a very material proportion.[177]

353. Furthermore, given that 82% of SBB consumers stated that their broadband speed was sufficient for their household, it can be inferred that any constraints arising from simultaneous high bandwidth activity is having no significant impact on satisfaction levels.

354. As regards future behaviour, Ofcom highlights survey evidence suggesting that, although customers may be satisfied with SBB speeds now, a significant proportion of them (47%) expect to upgrade in the future.[178, 179]

355. However, 43% indicate that they probably would not, or would never, upgrade to superfast speeds which (again) is a very material proportion of non-fibre customers who predict that they will, or are likely to, remain satisfied at current speeds.

356. It is clear from this evidence that a large proportion of customers do not yet require SFBB bandwidths over the market review period to 2020/21.

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[175] Ibid, Footnote 64.

[176] Ibid, paragraph 3.30.

[177] Equally, the list of high bandwidth activities presented to respondents may have artificially dampened their satisfaction responses as they may have envisaged simultaneous usage across all of the listed activities (which is unlikely in practice). For example, the list for residential customers includes "watching TV or films online on any device (including on a Smart TV set)", but Smart TVs still represent a small proportion of TV viewing: Figure 2.36 in Ofcom's Communicatins Market Report 2016 suggests that only 28% of UK homes have a smart TV, and only a proportion of TV watching via a smart TV will be via the internet as opposed to DTT or a satellite platform.

[178] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 3.31.

[179] 29% of these, however, do not anticipate needing to upgrade within the next 12 months (with future behaviour inherently less certain).

## SFBB take-up is driven by marketing activities and attractive retail packaging more than it is driven by customer need

357. Customers are "pushed" by marketing more than being "pulled" by the attractions of higher speeds. Recent take up of fibre, for example, has been driven by Sky and TalkTalk marketing more strongly after a period of several years when they chose not to. Equally, customers might improve their speeds without actively making a choice because of the upgrade and migration strategies adopted by suppliers: Virgin Media, for example, automatically upgrades broadband subscribers to faster speeds (e.g. the lower tier moved from 50Mbps to 70 Mbps in 2015) at no extra cost.

358. In its Connected Nations 2016 report Ofcom itself notes that "[t]*he rate that new subscribers are migrating from basic broadband services and adopting superfast services appears to be slowing, dropping from 31% in the year to 2014, to 15% over the past year*."[180] Ofcom goes on to suggest that "[i]*n order for superfast broadband take up to continue growing at the same rate as it has in the past, <u>providers may need to consider new approaches for attracting customers, including articulating its benefits more clearly and lowering prices further</u>.*"[181] (emphasis added)

## Customers are price sensitive and the incremental price for higher speed will remain constrained by SBB prices in order to entice SBB customers to upgrade and avoid downgrading by SFBB customers

359. Evidence presented by Ofcom suggests that broadband customers are highly price sensitive: Ofcom's own consumer research indicates that "*62% of customers considered price an important factor when changing broadband providers, compared to 35% who considered speed an important factor*."[182]

360. This is corroborated by information provided by BT Consumer whose consumer research,[183] summarised in Figure 15 below, indicates that consumers continue to ✂ in making purchasing decisions. The ✂ reasons given were related to price factors. Reasons related to receiving higher speeds ✂ . It also reinforces the finding that many consumers do not yet have an "essential" need for SFBB speeds and consider broadband speed as just one element of a larger communications bundle.

[180] Ofcom, Connected Nations 2016, paragraph 4.57.

[181] ibid, paragraph 4.60.

[182] Ofcom, WLA Market review – Volume 1, March 2017, paragraph 3.44.

[183] ✂.

*Figure 15: Consumers' stated reasons for choosing a new broadband bundle*

✂

*Source: BT Consumer ✂ survey Q3 2016/17*

361. Other data from the ✂ survey for October-December 2016 suggests that overall around ✂ of all customers who have switched have downgraded from an SFBB service (fibre or cable based) to a SBB service. There are some notable differences between providers, in particular of all customers that have taken up a service with ✂ have downgraded from SFBB to SBB.

362. These data suggest a significantly higher rate of downgrading than Ofcom's survey (which had found 2%). More importantly it also confirms the evidence Ofcom received that some providers continue to be able to compete effectively by enticing consumers to trade "down" to a lower broadband speed, presumably through other elements of the offer, including price or attractive triple play offers.[184]

363. In conclusion, there is evidence of constraints on the pricing of SFBB due to the availability of viable SBB alternatives and the for SFBB customers to discipline a price increase by downgrading to SBB.

<u>The price differential between retail SBB and SFBB services has decreased since 2014</u>

364. Evidence of decreasing price premiums for SFBB over SBB is consistent with the path of customer migration from SBB to SFBB over time and declining incremental willingness to pay for higher speeds by marginal SBB customers. When SFBB was first launched, early adopters would have been first to take up the new services and would have been willing to accept a higher price premium. This was reflected in the premium that most providers (other than BT) were charging for SFBB services who offered no, or very few, discounts.[185] Persuading the next tranche of customers

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[184] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 3.37.

[185] Both Sky and TalkTalk have been charging a £10 premium and additional connection fees for SFBB, without offering any initial discounts. Only BT was actively promoting SFBB when it first came to market, and it order to incentivise more customers to upgrade gave deeper initial discounts and kept a lower price premium. The majority of BT's broadband base now takes a SFBB service.

to upgrade will likely require lower price premiums, by all providers: consumers with the highest valuation and willingness to pay would have upgraded to SFBB by now[186], and the remaining SBB customers will have successively lower valuations of SFBB speeds, so that the price premium has to keep shrinking.[187]

365. Furthermore, as incremental willingness to pay declines with each customer that upgrades to SFBB, the incremental propensity to downgrade to SBB again in response to a price increase will rise. Value-oriented customers tend to be more active seeking out the best deal and are likely to be most prepared to downgrade again to a service with lower bandwidth in response to a price increase as long as their "essential", or "brittle", demand is met (see paragraphs 340 to 342 above).

## Market outcomes indicate that SBB offers a competitive alternative to SFBB

366. Analysis of competition within and outside of Virgin Media areas indicates that copper broadband continues to be a successful competitive product to Virgin Media's high speed services.[188]

367. Furthermore, analysis of competition within and outside the Virgin Media footprint, shown in Figure 16 below, indicates ✂

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[186] Internal analysis suggests that only about 30% of households that are fibre enabled have actually taken up fibre, despite it having been available for several years. This suggests households who have chosen not to upgrade (70% in fibre areas) do not value the additional bandwidth highly.

[187] This is corroborated also by a recent (4 June 2017) article in the Financial Times which reported that consumers became more resistant to broadband price increases: "The UK average broadband speed has risen to 36 Mbps from 29 Mbps over the past year, according to Ofcom. But after previously tolerating price rises, consumers appear less willing to pay more for a faster service in 2017." Source: https://www.ft.com/content/3eba27e2-3fc0-11e7-82b6-896b95f30f58, accessed on 8 June 2017.

[188] Internal research of fibre take up was carried out in 2016. The evidence presented in this paper for market shares within and outside of Virgin Media areas is based on 2015 data.

*Figure 16: Market shares of main retail broadband providers within and outside of Virgin Media areas, 2015*

✂

*Source: Internal BT research*

368. This suggests that consumers' decisions may be driven more by factors such as ✂ than by line speed, and the take up of fibre continues to be highly influenced by providers' commercial strategies in addition to demand-side factors.

## Ofcom's projections of fibre take up are over-stated given these demand constraints

369. Openreach responds in more detail to Ofcom's modelling of volume forecasts in response to question 4.2 of Volume 2. The observations below highlight the steep rate at which Ofcom expects non-BT broadband retailers to migrate their customer bases from SBB to SFBB. These assumptions appear to be unrealistic and therefore Ofcom's forecast of SFBB take up by the end of this price control are overstated.

370. Ofcom expects that, by the end of the market review period, 73% of all broadband lines will be

SFBB lines.[189] This implies a 55% (or nearly 30 percentage points) increase in the share of SFBB lines over a four year period (between 2016/17 and 2020/21).

371. Ofcom's model predicts that Openreach's current number of GEA lines will more than double from just under 7m at the end of 2016/17 to just over 14m lines at the end of 2020/21. ✂ of the predicted volume growth is expected to come from non-BT broadband retailers ("external" GEA lines). That requires other CPs to upgrade their customers ✂ : over the next four years they will need to ✂ their fibre customer base, from currently just over ✂ to ✂ by the end of 2020/21, with the absolute number of SFBB customers added each year ✂ , as depicted in Figure 17 below.

*Figure 17:* ✂

✂

*Source:* ✂

372. Sky and TalkTalk's efforts to promote fibre broadband have, in the recent past, been modest; any marketing of fibre broadband offers only began from 2013. The level of predicted fibre growth outlined above can only be achieved if these CPs are able to upgrade a significant proportion of their existing SBB customer base. It is at best uncertain whether Sky and TalkTalk will push fibre to this extent amongst their existing customer base and, even if they do, whether this will deliver the expected take up given the factors set out above indicating that demand for higher speeds may be more modest than suggested by Ofcom. Openreach discusses this point in more detail in our response to Question 4.2 in Volume 2 of Ofcom's consultation.

[189] Ofcom, WLA Market Review – Volume 1, March 2017, Figure 3.3.

# Annex 2: Operation of the Statement of Requirements Process within Openreach

373. Openreach considers that the operation of the current Statement of Requirements (SoR) process is working well and as such does not warrant changing. Our rationale for this conclusion is as follows:

   a) Ofcom has overstated the issues with the current SoR process;

   b) There is no evidence that Openreach unduly discriminates in favour of downstream BT;

   c) Since the last FAMR, Openreach has, and continues to, develop the ways in which it engages with industry and has made various and significant improvements to the SoR process (as recognised by industry, the OTA2 and the EAB), making this form of self-regulation highly effective;

   d) Openreach receives a wide range of requests and therefore a one size fits all approach is not appropriate - an unduly rigid methodology is likely to lead to unfavourable outcomes for all involved.

<u>Ofcom has overstated issues with the existing SoR process</u>

374. Ofcom justifies the imposition of a more rigid requirement in relation to requests for new forms of regulatory access on the basis that:

   - The average time taken for BT to review SoRs has increased;
   - Lack of transparency on the reasons for rejecting SoR and BT's costs assessment;
   - BT does not distinguish between regulatory and commercial SoRs.[190]

375. However, Openreach considers that these issues are considerably overstated, in particular in light of more recent developments.

376. First, in terms of average time taken for Openreach to review and reach a decision of SoRs, There are a number of issues with this quantitative data that Ofcom is relying on, including:

   - This data shown is from 2007 to 2014 i.e. is almost three years old. As is clear from Figure 18 below, since 2014 the average months to deliver SoRs decreased significantly (from 24 months in 2013/14 for non-BT CPs to 13 months in 2016/17). Ofcom should base forward looking intervention on the most recent data. Relying on data from 2007 to 2014 to set a regulatory condition to apply from 2018 is not appropriate; and
   - The data is quantitative and does not take into account qualitative factors such as complexity of SoRs.

377. Second, in terms of lack of transparency, Ofcom's analysis does not appear to have taken into adequate account recent improvements enhancing transparency, as set out in more detail in a paragraphs 383 et seq. below.

378. Third, in terms of distinguishing between regulatory and commercial SoRs, Openreach confirms that

[190] Ofcom, WLA Market Review – Volume 1, March 2017, paragraph 5.32.

regulatory SoRs are treated consistently within the applicable regulatory obligation. There is no evidence in the Consultation that this is not the case. In terms of commercial SoRs, Openreach might not distinguish them from regulatory SoRs where it chooses to apply the same SoR process, i.e. a more burdensome process for Openreach commercial SoRs than what might otherwise be appropriate. Ofcom can draw no conclusions about Openreach's compliance with its regulatory obligation from the way in which Openreach deals with commercial SoRs. On this basis, Ofcom's claim is irrelevant.

379. Accordingly, given that the issues Ofcom have identified are not sustainable, Ofcom has not objectively justified, in compliance with section 47(2) of the Act, the imposition of more intrusive regulation as regards requests for new forms or network access.

380. Further, given that any remedy must be the least intrusive remedy to address the harm identified, where that harm is demonstrably less than originally considered, it follows that an even less intrusive remedy is more likely to be appropriate. As a result, Openreach also considers that the remedy is not consistent with Ofcom's requirement to act proportionately in compliance in section 47(2) of the Act.

381. Openreach therefore urges Ofcom to reconsider the imposition of such an intrusive regulatory obligation on requests for new forms of network access.

## Improvements to the SoR Process and wider engagement strategy since the last FAMR

382. Since the last FAMR Openreach has continued to develop the ways in which it engages with industry and has made various and significant improvements to the SoR process. Openreach continues to work closely with the EAO, OTA2 and industry to improve the SoR process further going forward, for example, by recognising that one size does not fit all and distinguishing between the various different types of requests Openreach can receive to ensure a better outcome for all. These improvements are recognised and welcomed by industry and it is acknowledged there has been real change.

## Transparency improvements

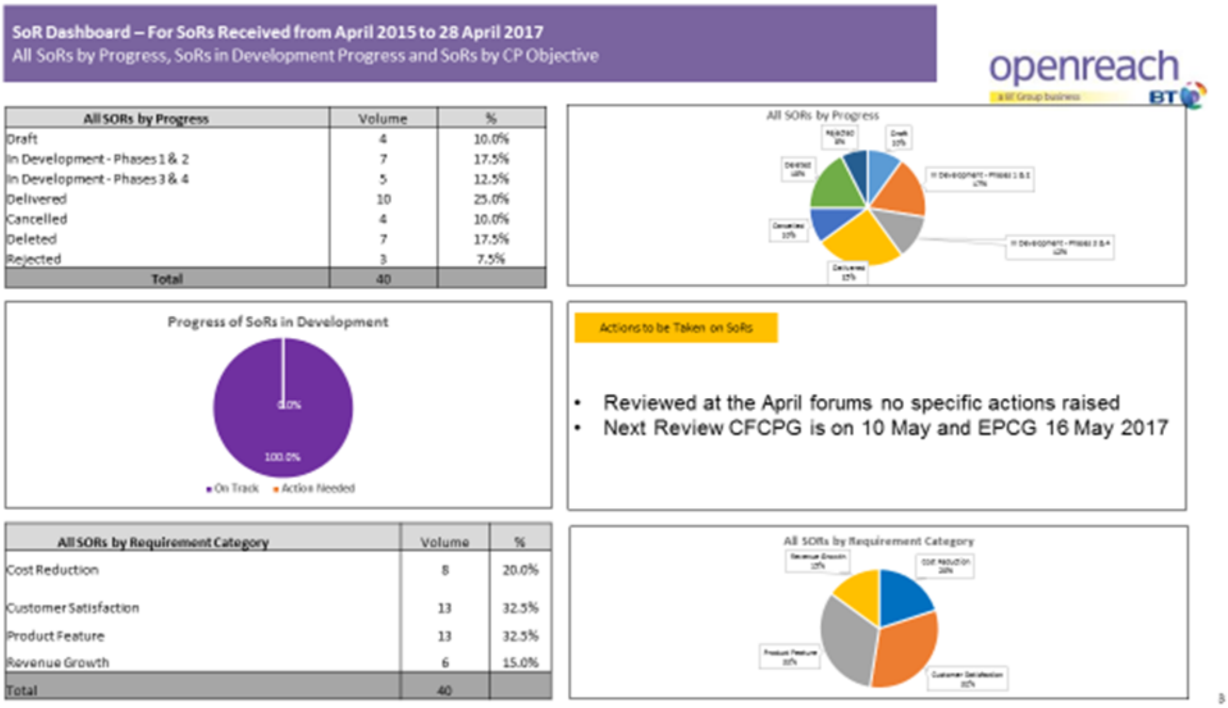
383. Since FAMR 2014, Openreach has worked closely with OTA2 and industry to improve transparency of the SoR process for CPs.

384. Figure 18 below shows an example of the new SoR dashboard, dated 28 April 2017. This has been shared in Industry Forums. On 10 May, the CFPCG CPs requested that we share month on month changes, which we are happy to do going forwards, demonstrating increased transparency and that we are further listening to our CPs. This was also well received at the EPCG on 16 May 2017 and no issues were raised.

385. The dashboard shows the status of SoRs over the last two years, as follows:

- we delivered 10 SoRs during this period and 30% are in the development stage; and
- the breakdown of benefits are favouring Customer Satisfaction/Product Feature and not Revenue Growth.

*Figure 18: Ofcom SOR dashboard as at 28 April 2017*




| All SORs by Progress | Volume | % |
|---|---|---|
| Draft | 4 | 10.0% |
| In Development - Phases 1 & 2 | 7 | 17.5% |
| In Development - Phases 3 & 4 | 5 | 12.5% |
| Delivered | 10 | 25.0% |
| Cancelled | 4 | 10.0% |
| Deleted | 7 | 17.5% |
| Rejected | 3 | 7.5% |
| Total | 40 | |

| All SORs by Requirement Category | Volume | % |
|---|---|---|
| Cost Reduction | 8 | 20.0% |
| Customer Satisfaction | 13 | 32.5% |
| Product Feature | 13 | 32.5% |
| Revenue Growth | 6 | 15.0% |
| Total | 40 | |

*Source: Openreach*

386. We also believe that the Ofcom's explanation of why transparency is an issue significantly understates the nuances associated with operating transparently. In this regard, Ofcom suggests that many SoRs are rejected or cancelled with the simple statement "*insufficient business or forecast volumes*" (para. 5.34). Whilst we accept that we should inform a CP exactly what information is required, where it has been agreed at an industry forum that Openreach requires business or forecast volumes to assess the reasonableness of an SoR, this information must be provided, failing which Openreach should not be expected to carry out a feasibility study. In these circumstances, it is difficult to how "*insufficient business or forecast volumes*" is not a clear and transparent enough explanation for CPs involved in the process.

387. Similarly, if no CP has committed in writing to take-up a proposed new/enhanced products should it be developed and launched by Openreach, Openreach should be able to reject the SoR without progressing to a feasibility study.

388. Openreach accepts that any rejection of an SoR should provide sufficient reasons, in a clear and transparent manner, for a CP to understand why a CP has been rejected. However, any process must recognise that Openreach cannot disclose commercially confidentiality information, in particular relating to costs, to CPs.

389. A key element associated with the above improvements is that there will be <u>a single industry view of SoR progress, reviewed and agreed at monthly industry fora</u>. Industry and the OTA2 will assess and mark the progress of each change initiative flowing through the change processes via the industry fora. The SoR progress will also be reviewed as part of new formal governance structure, including compliance by the OBARCC and review by the Openreach Board.

SoR Process as wider part of Openreach industry engagement process

390. The operation of the SoR process is just one part of this engagement strategy and should therefore not be considered in isolation, but in liaison with wider aspects of the industry consultative process. In addition the assessment of any future changes to the process should be carried out with reference to the improvements already in train which have been discussed and agreed with industry and the OTA2. In this respect the way in which new proposals and SoRs are considered is a shared responsibility. Notably we are already putting in place:

- New clear industry guidelines on which process Openreach and CPs will use for each type of change they initiate;
- Processes that are clearly defined (based on small, medium and significant changes) and much more transparent to all parties;
- A new documented process including confidentiality rules and governance to discuss new significant CP ideas, including those incorporating co-investment proposals;
- That Openreach initiated change including service changes will follow one of the newly defined processes;
- An improved and clarified process for industry consultation for significant Openreach investments; and
- New, improved communications starting with an SoR dashboard (see above) that can be expanded to cover all consultation processes where appropriate.

## Openreach receives a wide range of requests and has a flexible process to accommodate all

391. Openreach is concerned that Ofcom's analysis is overly simplistic and does not take adequate account of the complexity and variety of SoRs that Openreach receives. Set out below is a summary of the specific SoRs that have or are continuing to be progressed. As can be seen from Figure 19 below, there is a wide range of requests received and as such they come with varying degrees of complexity by way of example.

*Figure 19: All active SoRs as at 28 February 2017*

| SOR No | Title | Product | Raising CP | Requirement Category | Status | Phase | Progress | Submitted Date | Time Taken |
|---|---|---|---|---|---|---|---|---|---|
| 8340 | Actual Delay Messages and CCD | WLR | BT Consumer | Customer Satisfaction | In Development | 3 | On Track | 13-Jul-12 | 58 Months |
| 8374 | Sharing PQT results with CPs | LLU | BSkyB | Revenue Growth | In Development | 3 | On Track | 14-Nov-12 | 55 Months |
| 8421 | Enhance Search in Openreach Order and Fault Tracker | Other | Vodafone Ltd | Cost Reduction | Draft | | | 03-Apr-14 | |
| 8423 | Daily publication of Tie Pair Reconciliation Report (LLU) | LLU | BSkyB | Cost Reduction | In Development | 4 | On Track | 09-Jul-14 | 33 Months |
| 8435 | Lightweight DHCP Relay Agent for DHCPv6 (GEA) | NGA | BSkyB | Product Feature | In Development | 2 | On Track | 10-Dec-14 | 28 Months |
| 8439 | SLA2 Phase 2 - CP Requirements capture for a proactive SLG process for KCI2 messaging | Other | Openreach | Customer Satisfaction | In Development | 2 | On Track | 02-Feb-15 | 26 Months |
| 8440 | OSA Enhancements Phase 2 | Ethernet | Openreach | Revenue Growth | In Development | 4 | On Track | 25-Mar-15 | 25 Months |
| 8455 | Choose to Divert | WLR | BT Consumer | Customer Satisfaction | In Development | 4 | On Track | 12-Nov-15 | 17 Months |
| 8422 | Pre-Order Wayleave Application | Ethernet | BT Wholesale (and Ventures) | Customer Satisfaction | In Development | 4 | On Track | 17-Nov-15 | 17 Months |
| 8461 | Care Level 1 on Single Order GEA | NGA | BSkyB | Cost Reduction | In Development | 3 | On Track | 13-Apr-16 | 12 Months |
| 8462 | Openreach New Sites to provide Ethernet Infrastructure | Ethernet | Hyperoptic | Customer Satisfaction | In Development | 3 | On Track | 04-Jul-16 | 9 Months |
| 8463 | Fit CPE Provided to the End Customer by the CP | NGA | Club Communications Ltd | Customer Satisfaction | In Development | 3 | On Track | 08-Aug-16 | 8 Months |
| 8465 | Evolution of NGA for real time services | NGA | BT Consumer | Customer Satisfaction | Draft | | | 23-Sep-16 | |
| 8468 | D-Side Copper Loop Statistics | Other | BSkyB | Revenue Growth | In Development | 1 | On Track | 09-Nov-16 | 5 Months |
| 8466 | Named Engineer for Ethernet Services | Ethernet | BT Wholesale (and Ventures) | Customer Satisfaction | In Development | 1 | On Track | 16-Nov-16 | 5 Months |
| 8467 | NGA Self Serve Tools | NGA | TalkTalk Group | Product Feature | In Development | 2 | On Track | 23-Nov-16 | 5 Months |
| 8471 | DDI Block Splits for Number Porting | Service | OTA | Customer Satisfaction | In Development | 1 | On Track | 21-Dec-16 | 4 Months |
| 8473 | Non-Appointed Network Engineer | WLR | BT Consumer | Customer Satisfaction | In Development | 1 | On Track | 09-Feb-17 | 2 Month |
| 8476 | Confirmation of SLA breach in KCI3 | LLU | BSkyB | Product Feature | Draft | | | 03-Mar-17 | |
| 8477 | EAD Fibre Route Maps | Ethernet | Hyperoptic | Product Feature | In Development | 1 | On Track | 23-Mar-17 | 1 Month |
| 8472 | Stand Alone Survey for Dark Fibre | Ethernet | BT Global Services | Customer Satisfaction | In Development | 1 | On Track | 27-Mar-17 | 1 Month |
| 8479 | DFA RO2 Duct Sepracy | Ethernet | BT Wholesale (and Ventures) | Revenue Growth | Draft | | | 20-Apr-17 | |
| 8480 | Cross Product RO2 Solution | Ethernet | BT Wholesale (and Ventures) | Revenue Growth | Draft | | | 20-Apr-17 | |

| Status Key | |
|---|---|
| (green) | In Development |
| (orange) | Draft Creation Date |

| Phase Key | |
|---|---|
| 1 | Feasibility |
| 2 | Design and Initial Business Case |
| 3 | Development and technical trial |
| 4 | Pilot, Final business case, launch |

*Source: Openreach*

392. The SoR process must be flexible to deal with this variation and complexity. By way of example, whereas simple SoRs (for example, SoR 8458 relating to the introduction of Enhanced Call Barring in R3350 to reduce the lead times for call barring on ISDN lines) could be processed, and indeed implemented, within a relatively short time, more complex SoRs (for example, SoR 8389 CP installation of NTE5 might require a significant length of time to investigate fully and develop a solution. Further, Openreach is reliant on CPs to produce developed, considered, practical SoRs. Unfortunately given that CPs do not always have full insight into the practical implications of their SoRs or the impact on other CPs, SoRs can need to be refined in order to make it possible and fit for industry more generally. This requires significant liaison with industry.

393. Against this background, Openreach has considerable concerns about the overly rigid new SoR process that Ofcom proposes. There is a real risk that a rigid process will lead to unintended negative outcomes, for example, rejecting an SoR for being undeveloped, too complex in order to meet the necessary time frames.

394. In addition there is a risk that Openreach will have to go through inefficient processes, diverting resources from more important activities which could lead to improvements for CPs. By way of example, Openreach considers that it would be inappropriate for Ofcom to undertake detailed feasibility studies where CPs have been unable to demonstrate demand for the new network request, for example via forecasts. There are a number of areas where change is initiated outside of the SoR process which work well, for example:

- Day-to-day BAU CP specific requests;
- Requests which require negligible development resource/finances to implement;
- Requests from the billing forum; and
- Service desk requests.

395. In summary, the Openreach SoR process is run on an EoI basis. CPs are able formally to request the introduction of a new product, or a change to an existing one within the Openreach product portfolio. Openreach publishes industry guidelines on how to raise an SoR.[191] Openreach evaluates each request and provides the same commercial information to all customers (whether within BT Group or third parties) with no priority given to any customer. Acceptance of an SoR request is based on whether there is an objective business case, not on the identity of the requesting CP.

396. As regards the question of whether there is sufficient transparency for CPs to assess whether Openreach accepts or rejects SoRs on the basis of an objective business case (which Ofcom is considering), Openreach ensures transparency of the SoR process through the Openreach SoR Management Tool, which is available to all customers. This enables customers to enter product requirements, view active and historic SoRs, and vote to support or not support a request and to provide accompanying evidence.

397. The existing regulatory regime of Undertakings and SMP Conditions already requires that Openreach is responsive to customers under the mandated SoR regime and no evidence that this has been unsuccessful has been presented.

398. In light of the above we do not see the case for changing the existing operation of the SoR process.

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191 https://www.openreach.co.uk/orpg/customerzone/products/newproducts/newproducts.do

Including: Sharing of Openreach CP Statement of Requirements
Openreach Products Statement of Requirements Process
Copper and Fibre Products Commercial Group Benefits Criteria
Openreach Products Statement of Requirements Template
Openreach Products SoR Process
Statement of Requirement Overview

https://openreach.sormanagement.net/login.aspx?ReturnUrl=%2fDefault.aspx

Including: SoR Management Tool Quick User Guide
Customer Quick User Guide
Customer Industry Collaboration Guide
Product Commercial Group Benefits Criteria

# Annex 3: Oxera report "*Does Ofcom's approach in the WLA market review honour the fair bet principle?*"

This report, prepared for Openreach by Oxera, has been provided as a separate document.

# Annex 4: Comments on Legal Instruments

Openreach has commented on substantive aspects of the draft legal instruments in the main body of this response and our responses to the other WLA consultations which Ofcom is conducting in parallel. In this Annex we set out Openreach's typographical comments on the draft legal instruments.

**Part I Proposal for SMP services conditions**

Consistency across the whole document is needed with respect to:

- use of Ofcom/OFCOM;
- use of significant market power/SMP; and
- use of SMP services conditions/SMP service conditions/SMP conditions.

Para 3 (Page 1) – double inverted commas to be placed around "Regulatory Financial Reporting: Final Statement"

Para 3 (Page 2) – comma should follow "On 30 March 2015" in second sentence.

Para 4 (Page 2) – "SMP service conditions" should be "SMP services conditions" in second sentence.

Para 4 (Page 2) – should be a comma following "the 2014 FAMR Notification" in second sentence.

Para 5 (Page 2) – the colon following "entitled" should be removed in first sentence.

Para 5 (Page 2) – extra "and" at the end of the third bullet point should be deleted.

Para 8 (Page 3) – add "services" between "SMP" and "conditions"

Para 10 (Page 4) – includes an erroneous "access"

Para 12 (Page 4) – SMP not defined.

Para 12 (Page 4) – BEREC to be bolded and surrounded by double inverted commas.

Para 20 (Page 6) – reference to the Interpretation Act 1978 has an erroneous 1978.

*Schedule 1*

Part 1, Para 1 (Page 7) – the square brackets around 1 April 2018 should be removed.

Part 2, Para 1(c) (Page 8) – there is no overarching definition of Charge Controlled Service despite the term being capitalised (NB it has different meanings dependent on where referenced in condition 7).

Part 2, Para 1(g) (Page 8) – there is no definition of Electronic Communications Network despite the term being capitalised.

Part 2, Para 1(h) (Page 8) – there is no definition of Electronic Communications Network despite the term being capitalised, same as above at Part 2, Para 1(h) (Page 8).

Part 2, Para 1(r) (Page 10) – there needs to be a semi colon inserted at the end of the sentence and the whole definition needs to be removed and re-inserted above Part 2, Para 1(n) (Page 9) so that it falls in correct alphabetical order.

Part 2, Para 1(cc) (Page 11) – there is no definition of Affected Communications Provider despite the term being capitalised (NB it has different meanings dependent on where referenced in condition 7).

Part 2, Para 2 (Page 12) – there is no definition of SMPF despite the term being capitalised.

Part 3, Para 1.2 (Page 14) – formatting needs sorting.

Part 3, Para 1.3 (Page 14) – formatting needs sorting.

Part 3, Para 2.1 (Page 16) – drafting note in square brackets needs to be amended.

Part 3, Para 3.12(a) (Page 23) – there should be an "or" at the end of this paragraph following the semi colon.

Part 3, Para 5.5(a)(B) (Page 27) – there should be semi colons at the end of all subparagraphs and the "or" at the end of subparagraph (iv) should be "and".

Part 3, Para 5.5(b)(vi) (Page 27) – the "or" at the end of the subparagraph should be "and".

Part 3, Para 6.5(a) (Page 30) – there should be a semi colons at the end of the subparagraph.

Part 3, Para 6.5(c) (Page 30) – there should be an "and" at the end of the subparagraph.

Part 3, Para 7A.1(g) (Page 31) – there should be an "and" at the end of the subparagraph.

Part 3, Para 7A.2 (Page 31) – the figures need to be confirmed/square brackets removed.

Part 3, Para 7A.12(b) (Page 39) – formatting needs sorting.

Part 3, Para 7A.12(x) (Page 41) – formatting needs sorting.

Part 3, Paras 7A.12(aa)-(cc) (Page 42) – formatting needs sorting.

Annex to Condition 7A, Part 1 (Page 43) - Part 5 (Page 51) – remove square brackets in header of table.

Part 3, Para 7B.1(d) (Page 52) – there should be an "and" at the end of the subparagraph.

Part 3, Para 7B.2 (Page 52-53) – the figures need to be confirmed/square brackets removed.

Part 3, Para 7B.5 (Page 57) – formatting needs sorting.

Part 3, Para 7B.6 (Page 57) – formatting needs sorting.

Part 3, Para 7B.10(g) (Page 59) – remove square brackets.

Part 3, Para 7B.10(t)(i) (Page 61) – there should be an "and" at the end of the subparagraph.

Part 3, Para 7C.2 (Page 63) – the figures need to be confirmed/square brackets removed.

Part 3, Para 7C.4 (Page 67) – the figures need to be confirmed/square brackets removed.

Part 3, Para 7C.5 (Page 70) – there should be an "and" at the end of the subparagraph (a) and a full stop at the end of subparagraph (b).

Part 3, Para 7C.11(m) (Page 76) –"Non-working day" should be all capitalised to reflect usage in 7C.2.

Part 3, Para 7C.11(x) (Page 78) – there should be an "and" at the end of the subparagraph.

Part 3, Para 8.3 (Page 80) – the "and" at the end of the subparagraph (i) should be moved to the end of subparagraph (j)(ix).

Part 3, Para 10.2 (Page 87) – there should be a full stop at the end of the sentence.

Part 3, Paras 12.6, 12.7, 12.8, 12.13, 12.26, 12.27, 12.30, 12.31, 12.33, 12.35 (Pages 90-101) – the numbering of sub-paragraphs needs to be aligned with the rest of the instrument i.e. the numbering style list should be 12.6, with sub-paragraphs using (a), (b), (c) etc, and further sub-paragraphs using (i), (ii), (iii) etc.

Part 3, Para 12.26(v)(c) (Page 97) – there should be a semicolon at the end of the sentence.

Part 3, Para 12.26(vi) (Page 97) – there should be a semicolon followed by "and" at the end of the sentence.

Part 3, Para 12.33(iii) (Page 100) – there is no independent definition of "externally" and "internally".

Part 3, Para 12.35(ii) (Page 101) – the "and" at the end of the paragraph needs to be moved to Para 12.35(iii).

**Part II Proposal for VULA**

Consistency across the whole document is needed with respect to the use of notification/Notification.

**Part III Proposal for regulatory financial reporting requirements**

2.1, Part 7, (Page 122) – there needs to be appropriate numbering for paragraphs.

2.1, Part 5, Para (d) (Page 121) – there needs to be a comma at the end of the sub-paragraph.

2.2, Schedule, Part 1(b) (Page 129) – should be phrased as "'**Class of Work'** or '**CoW**'".

2.2, Schedule, Part 1(i) (Page 130) – "Fibre" should be bolded.

2.2, Schedule, Part 2 (Page 132-133) – formatting should be consistent with all other Directions.

2.2, Schedule, Part 2, Para 3.3 (Page 132) –there should be an "and" at the end of the sentence.

2.2, Schedule, Part 2, Para 4.2.1 (Page 133) –there should be an "and" at the end of the sentence.

2.3, Schedule, Para 13(a) (Page 139) – the reference to paragraph 15 should be paragraph 14.

2.3, Schedule, Para 14(a) (Page 139) – the sentence should have a full stop at the end.

2.4, Para 1(a) and (b) (Page 140) – both "FPIA" and "PPIA" need to be bolded.

2.4, Schedule, Para 13 (Page 144) – both "FPIA" and "PPIA" need to be bolded.

2.4, Schedule, Paras 14 and 15 (Pages 145-146) – all references to "his", "him" and "he" should be gender neutral.

2.5, Schedule, Paras 13 and 14 (Pages 153-154) – the numbering format in these paragraphs should be consistent with the rest of the Schedule i.e. 13(a)(i).

2.5, Schedule, Para 13(i) (Page 153) – "In" should not be capitalised.

2.5, Schedule, Para 13(d) (Page 153) – the "and" at the end of the paragraph should be moved to the end of Para 13(c).

2.5, Schedule, Para 13(ii)(b)(i) (Page 153) – the bracketed reference "Corrected Previous Year Figures" should be bolded.

2.5, Schedule, Para 13(ii)(b)(ii) (Page 153) – there should be a semicolon and an "and" at the end of the sentence.

2.5, Schedule, Para 16(a) (Page 155) – there should be a semicolon at the end of the sentence.

2.5, Schedule, Para 16(f)(ii)(b) (Page 156) – there should be an "and" at the end of the sentence.

2.6, Schedule, Para 13(Page 160) – "direction" should be capitalised.

2.7, Schedule (Pages 169-170) – the Direction should follow the format of all other Directions e.g. include appropriate introduction, duly authorised signature, interpretation, date of effect etc.

2.7, Schedule, Part 1, Para (d) (Page 169) – "or FTTP" is incorrectly stated twice.

2.7, Schedule, Part 1, Paras (h) and (i) (Page 169) – the defined terms should be capitalised to reflect usage in Part 2.

2.7, Schedule, Part 1, Para (i) (Page 169) – there should be an "and" at the end of the sentence.

2.7, Schedule, Part 2, Para 1(a) (Page 169) – there should be an "and" at the end of the sentence.

2.7, Schedule, Part 2, Paras 1 and 3 (Page 170) – definition/references for statements and components required.

2.7, Schedule, Part 2, Para 3 (Page 170) – there is no definition of "OCM depreciation".

2.8, Schedule, Para 12 (Page 175) – reference to paragraph 2 should be paragraph 1.

2.8, Schedule, Para 13 (Page 175) – as there is no subsequent paragraph 13(b), paragraphs 13 and 13(a) are duplicative/can be combined.

2.8, Schedule, Para 13(a)(xiv) (Page 176) – there should be an "and" at the end of the sentence.

2.8, Schedule, Para 14(a) (Page 176) – there should be a full stop at the end of the sentence.

2.8, Schedule, Para 15 (Page 176) – there should be a full stop at the end of the sentence.

2.8, Schedule, Para 16 (Page 177) – there bracketed term "PDF" should be bolded.

2.8, Schedule, Para 17 (Page 177) – there should be an "and" at the end of paragraphs (a)(xvi) and (b)(vii) as well as a semicolon and "and" at the end of paragraph (XVII).

2.8, Schedule, Para 18 (Page 178) – there should be a closed bracket after xvii.

2.8, Schedule, Para 19 (Page 178) – "direction" should be capitalised.

2.8, Schedule, Para 20(a) (Page 179) – the reference to paragraph 20 should be paragraph 21.

2.8, Schedule, Annex A (Pages 180-199) – formatting needs to be addressed e.g. in Regulatory Financial Review the bracketed term "RFR" should be bolded and in inverted commas; appropriate numbering needs to be inserted; page orientation; use of "and" at the penultimate paragraph of a list etc.

2.8, Schedule, Annex B (Pages 201-209) – formatting needs to be addressed e.g. use of "and" at the penultimate paragraph of a list; strikeout reference and bracketed drafting note at 5(b)(iii); use of underlining.

2.9, Schedule (Pages 216) – the Direction should reference condition 13A. 20.