# Openreach response to Ofcom's consultation document

*"Fixed access market reviews: Openreach quality of service and approach to setting LLU and WLR Charge Controls"*

18 February 2014

**Non Confidential VERSION**
**Redacted items shown as** [✂]

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# Foreword

On 3 July 2013, Ofcom published its proposals on the Fixed Access Market Reviews (FAMR). It subsequently published its consultation on the charge controls for Wholesale Line Rental (WLR) and Local Loop Unbundling (LLU) on 11 July 2013 and amended this on 20 August 2013 to correct errors in its cost modelling (the First Charge Control Consultation). On 19 December 2013 Ofcom published a further consultation (Fixed access market reviews: Openreach quality of service and approach to setting LLU and WLR Charge Controls (the Consultation)). The proposed controls are for the period from 1 April 2014 to 31 March 2017 (the Control Period).

This document forms Openreach's response to Ofcom's 19 December 2013 consultation on the Fixed Access Market Reviews and the proposed LLU/WLR Charge Controls. Openreach will be responding separately to Ofcom's 16 January 2014 consultation. (Fixed access market reviews: Further consultation on notification periods, compliance with requirements on the VULA margin, and approach to pricing for TRCs and SFIs)

This response is in addition to our previous responses submitted 30 September 2013: Openreach response to service-related questions in Ofcom's consultation documents "*Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30*" and Openreach response to questions in Ofcom's consultation document "*Fixed access market reviews: Approach to setting LLU and WLR Charge Controls*".

This submission is provided on behalf of British Telecommunications plc (BT) by Openreach, a line of business within BT, in response to the issues contained in the FAMR Consultation, the First Charge Control Consultation and the Consultation.

This submission gives Openreach's responses to Ofcom's questions which relate directly to the regulation of Openreach service levels and charges, together with further evidence and argumentation relevant to a number of charge control issues. We may subsequently provide further information if required.

BT Group has also provided a separate response (the BT Group response) to the Consultation. This covers issues with implications across the BT Group and which impact BT in its role as a provider of retail services to consumer and business end-users.

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# 1 Executive Summary

## Quality of Service

### Introduction

1. We take the opportunity in our response to this further Consultation to give our views on Ofcom's specific proposals and also to set out what we believe are the desired outcomes from this important review. For the first time in a charge control review, Ofcom is specifically addressing the relationship between Openreach funding prices and the service standards Openreach delivers and this review provides the opportunity for a cross-industry outcome that:

    - properly reflects the changing demands of end users and Communications Providers (CPs);
    - balances the trade-offs between Openreach prices and service standards/service levels;
    - recognises the challenges of delivering consistent service levels in this dynamic market; and
    - incentivises industry collaboration to prioritise service improvements.

2. The UK has probably the most competitive voice and broadband market in the world, with the most keenly priced products from a wide range of suppliers and a record of continuous innovation. The challenge now is to establish the right service regime to go alongside this; we want consumers and businesses to be as consistently satisfied about the quality of the fixed telecoms services they buy as they are about the prices and choice they enjoy.

3. Openreach has demonstrated over the years a commitment to efficiency and innovation, delivering service with some of the lowest wholesale prices in the world. The customer (both industry and end users) has never been more important, given the heightened political focus on the cost of living and the telecoms sector is expected to drive growth, encourage innovation and deliver products and services at an affordable price, with sustainable service levels. The telecoms sector has delivered for consumers – for example, as a proportion of household expenditure, telecoms equates to less than 4% of average household expenditure compared to utility services at around 8%[1]. This demonstrates how far the market has delivered in relation to other sectors. Openreach wants to maintain that momentum and as part of this, wants to be able to ensure its customers (and their customers) receive a consistent quality of service that meets their expectations.

4. In this context, it is important to recognise the extent (and success) of UK regulation already governing the fixed access market. In this response we have included new international benchmarking from Analysys Mason who compared the wholesale telecommunications services provided in 15 countries, including prices and the scope and terms of applicable service level agreements (SLAs) and service level guarantees (SLGs); the UK rates very highly across this 'balanced scorecard'.

[1] Telecoms equates to 3.8% in 2012 (Ofcom Communications Market Report 2013), compared to utility services (energy and water) at c. 8% of average household expenditure in 2011 (ONS).

**Delivering the right level of service**

5. This response sets out our further views on the costs (and trade-offs) of delivering required levels of service on a consistent basis. This is against an increasingly challenging backdrop, with more frequent extreme weather conditions and growing customer expectations. From an Openreach perspective, we look to the Charge Control review to ensure sufficient funding is in place to cover all our efficiently incurred costs of service delivery. If an enhanced level of service is required, the funding needs to reflect this and we are pleased Ofcom recognises this principle in proposing a cost uplift to meet the proposed service standards.

6. This review presents an opportunity to be explicit about the service standards underpinned by Openreach's wholesale charges, so that all stakeholders can have clear and consistent expectations about what can and needs to be delivered efficiently. Setting such a clear baseline also enables informed discussion of premium service offerings with industry; our experience shows that different industry players have differing requirements, all of which we are keen to address.

7. This opportunity will however be missed if Ofcom fails to get the key parameters right in its modelling. In this response:

    - we evidence our view that Ofcom should base its modelling on 2012/13, and indeed 2013/14, fault levels rather than 2011/12;

    - we demonstrate that 2012/13 and 2013/14 are much more representative years in terms of the impact of weather and other exogenous factors impacting our fault intake; and

    - we show that fault rates will continue to rise steadily throughout the Control Period if the trend evidenced from 2011/12 to 2013/14 YTD continues, although we believe this increase can be stemmed with sustained industry collaboration and progress.

8. The failure to use the most recent available data and to correctly anticipate future trends will lead not only to Ofcom understating our costs. It will also lead to service targets being set that will be unachievable, both nationally and regionally, without a considerably higher cost uplift than Ofcom currently proposes.

9. In this response we also set out our views on what is needed to address the trend of increasing fault rates and make constructive proposals regarding more meaningful service targets.

**2012/13 and 2013/14 data is the right starting point**

10. Ofcom's current analysis is based on 2011/12 data as Ofcom believes erroneously that 2012/13 was atypical in terms of weather and our service delivery performance. Ofcom's use of 2011/12 data rests heavily on the fault rate analysis carried out by Ofcom's consultants, CSMG, which presented a view that fault rates and fault volumes were flat between 2011/12 and 2012/13.

11. Openreach has reviewed the findings of the CSMG analysis, reported in Ofcom's consultation, and have identified a number of concerns which we see as preventing a correct assessment of historical fault rates and trends and therefore distorting assumptions which should be applied to the next Control Period (i.e. their analysis should have produced a fault rate increase per annum of 3.5% rather than the 'flat' trend set out in their report).

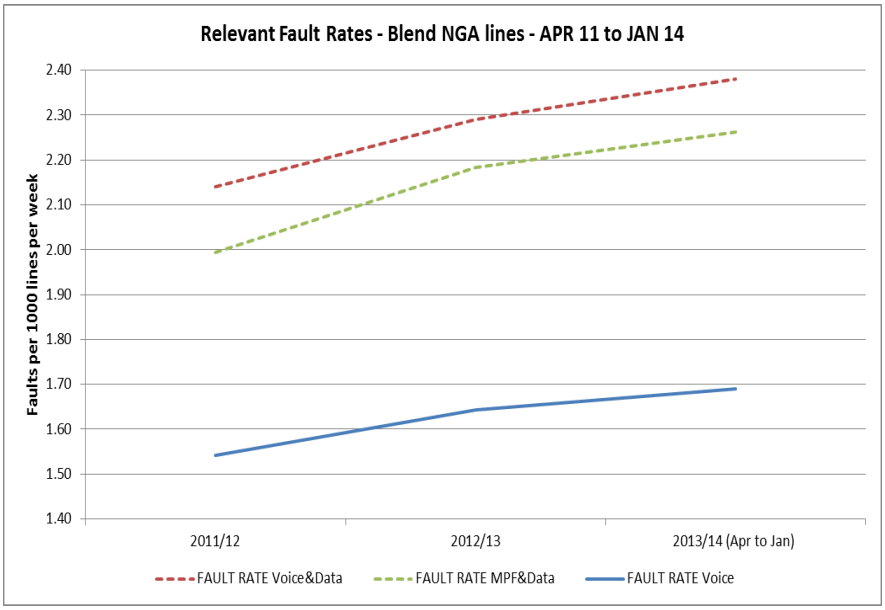
12. We have also carried out an extensive analysis of the CSMG methodology, detailed later in this response, and have identified a number of shortcomings which, when addressed, significantly change these findings. In summary:

- CSMG incorrectly excluded a number of fault categories proper to the copper charge control, including those relating to SFI jobs which are found to be non-chargeable (482k faults between April 2011 and January 2014);

- CSMG ignored data for the period April to September 2011 (883k faults), masking the true year-on-year trend; and

- relevant faults on copper lines associated with NGA have also been excluded (374k faults between April 2011 and January 2014);

13. The corrected position actually shows a 6.3% increase in fault rates year-on-year, shown below.




| Average fault rate increase per annum (blended fault rates) = 6.3% | | |
|---|---|---|
| **Product** | **Ofcom proposal** | **Average over~2.75 years** |
| MPF | 1.00 | 1.00 |
| WLR | 0.87 | 0.76 |
| SMPF | 0.13 | 0.30 |
| WLR+SMPF | 1.00 | 1.06 |

| Average fault rate increase per annum (excluding NGA 'premium') = 5.5% | | |
|---|---|---|
| **Product** | **Ofcom proposal** | **Average over~2.75 years** |
| MPF | 1.00 | 1.00 |
| WLR | 0.87 | 0.76 |
| SMPF | 0.13 | 0.28 |
| WLR+SMPF | 1.00 | 1.04 |

14. The analysis above reflects the fact that fault rates on copper lines associated with NGA have higher fault rates than those associated with ADSL-based broadband, and we have calculated blended fault rates to deal with this. While we believe the additional costs incurred from these incremental fault rates, should, following agreed previous methodologies, be recovered over the

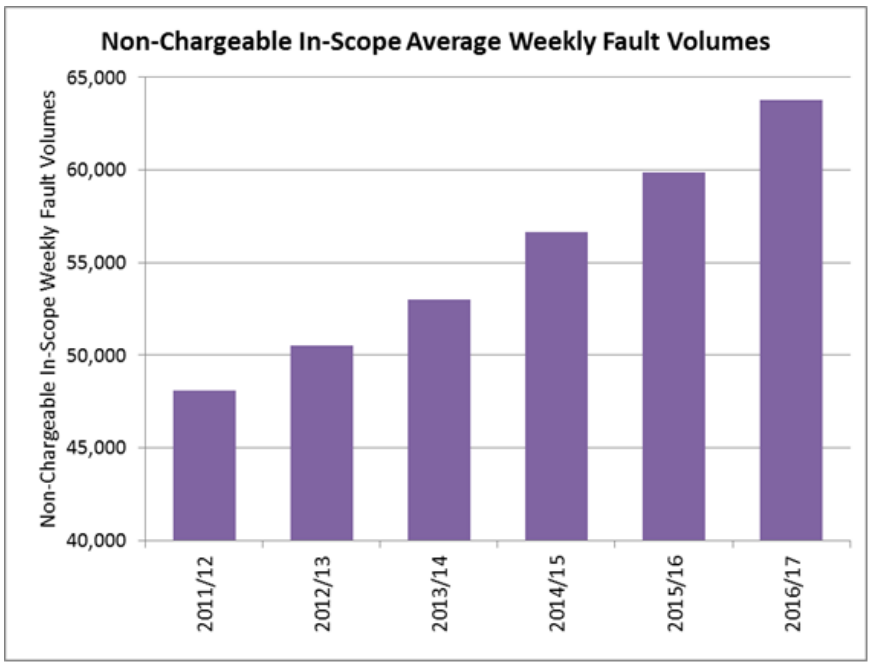
copper lines, we understand Ofcom would rather these were reflected in fibre pricing. But even excluding this NGA 'fault premium' still leaves an average fault rate increase of 5.5% per annum.

15. Overall our analysis of fault rates shows that there is a steady increase from 2011/12 through to 2013/14 YTD. We have included with this response an updated analysis of faults from April 2011 to January 2014 and this confirms that 2012/13 sits on the trend line. Ofcom is setting a charge control to commence in 2014/15 so this should be based on the latest fault data and, having seen 2013/14 trends, 2012/13 is clearly more representative than 2011/12.

**Fault volumes continue to increase**

16. Ofcom has not taken a realistic view of future fault trends and hence the increasingly challenging service environment facing us.

17. Our forecast average weekly non-chargeable fault intake for 2013/14 is circa 53k per week.[2] Projecting current fault rate trends combined with our latest product volume forecasts produces a forecast of non-chargeable fault volumes for the next three years that grows to circa 64k per week by the end of the Control Period (set out in the figure below):




18. A number of actions are possible to stem this continually increasing rise in fault intake over the forthcoming Control Period. Openreach supports all of these actions and we look for Ofcom support in reflecting this in the charge control and driving sustained industry collaboration and progress to make this a reality. Our best estimates indicate that the total weekly fault intake for 2016/17 could be reduced to 55-57k per week through these actions. Significant additional investment in proactive maintenance to cover more areas that are subject to more frequent extreme weather events could account for up to 60% of the potential reduction, although the proposed charge control outcome does not cater for these incremental costs. The remaining 40% of the potential reduction is dependent on greater CP adoption of fault and order, qualification and placement best practices, supported by increased investment in Test & Diagnostic capabilities, and

[2] This is an adjustment to previous weekly volumes discussed having aligned with Ofcom on the treatment of Exchange equipment faults being covered and their costs accounted for separately in the Charge Control process.

sharing of service layer information at fault placement and to support improved targeting of proactive investment. Based on the CP dependency that we understand Ofcom is not able to guarantee, we expect a more realistic outcome from continued work with industry, via the Office of Telecoms Adjudicator (OTA), to be a weekly average non-chargeable fault intake of 58-60k.

19. The factors influencing the underlying growth in fault rates can be summarised as follows:

- **Extreme Weather Events -** Whilst we expect challenging weather, the increasingly volatile weather in the UK, hitting more varied geographies more often, is very difficult to plan and prepare for. Increasingly frequent extreme weather events are a major driver of a growth in more complex faults, with Distribution-side Underground and Overhead faults up 12% per year vs. the total increase of 6.3%.

- **Broadband Usage –** Broadband drives higher non-chargeable copper fault rates and volumes in a number of different ways that are expected to continue – the proportion of lines with broadband (over 80% of lines will have broadband by 2016/17, compared to 68% in 2011/12 and 73% in 2013/14); the amount of time a line is used – Enders[3] estimates usage per home broadband line per day growing from 102 minutes in 2013 to 137 minutes by 2017, a 34% increase, and that by 2017 50% of home broadband usage will be 'very fault intolerant', e.g. video streaming; more demanding applications (higher frequency broadband traffic results in more line conditions being service affecting than for voice-only services); and more network components.

- **Demands on the copper network are increasing –** In addition to customers demanding more and more from their telecommunications, with ever higher rate/quality video applications 'stretching' the copper network (by 2017, Enders estimates that 50% of home broadband usage will be 'very fault intolerant', e.g. video streaming), the natural deterioration of network (as experienced with all external copper networks) is increasingly difficult to proactively address, despite consistent investment in copper in the past and due to the impact of increasingly frequent extreme weather events in unpredictable locations.

20. We cover these factors in more detail below.

**Extreme weather events are on the increase**

21. The increasing frequency of volatile and extreme weather – from the St Jude storm to the multiple storms during 'Stormy December' (BBC News), confirmed by the Met Office as the stormiest conditions since December 1969, and the floods of January/February 2014, means Openreach and the wider industry face tougher and tougher challenges in meeting customer expectations by maintaining consistent service performance and driving new ambitions and innovation in the marketplace.

22. Record extreme weather continues to cause record fault levels; the trends identified in our initial response to the FAMR have continued throughout 2013 and into 2014. In December 2013 the geographical volatility was also extreme with both Scotland and South-East England experiencing more than 200% of average rainfall. This was followed in January 2014 by further record rainfall in the South-East and central southern part of the UK - more than double the long term average at 175.2mm (6.9in) - beating the previous record of 158.2mm, set in 1988. The geographical volatility was again extreme but also very different to the pattern in December 2013 highlighting the near impossible nature of forecasting the impact of weather events on a regional basis.

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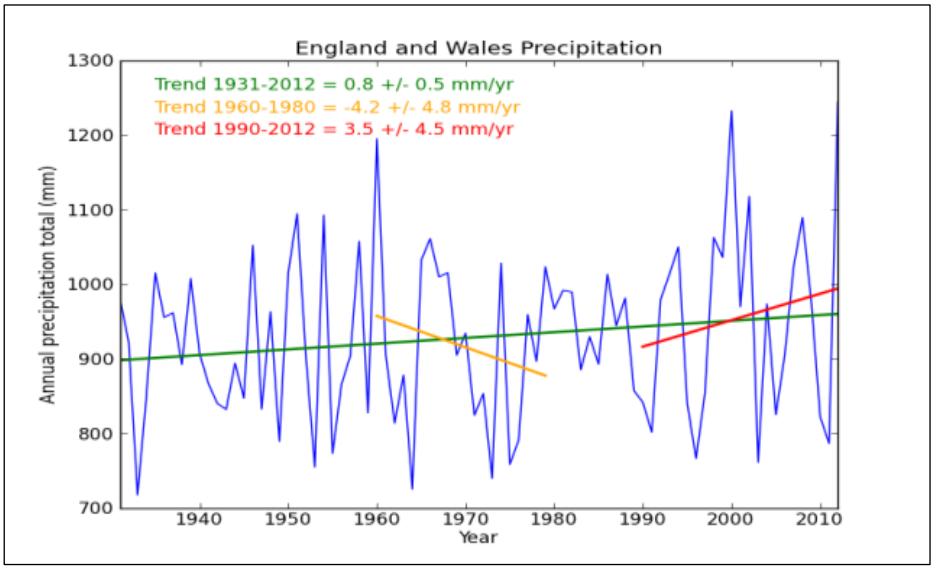
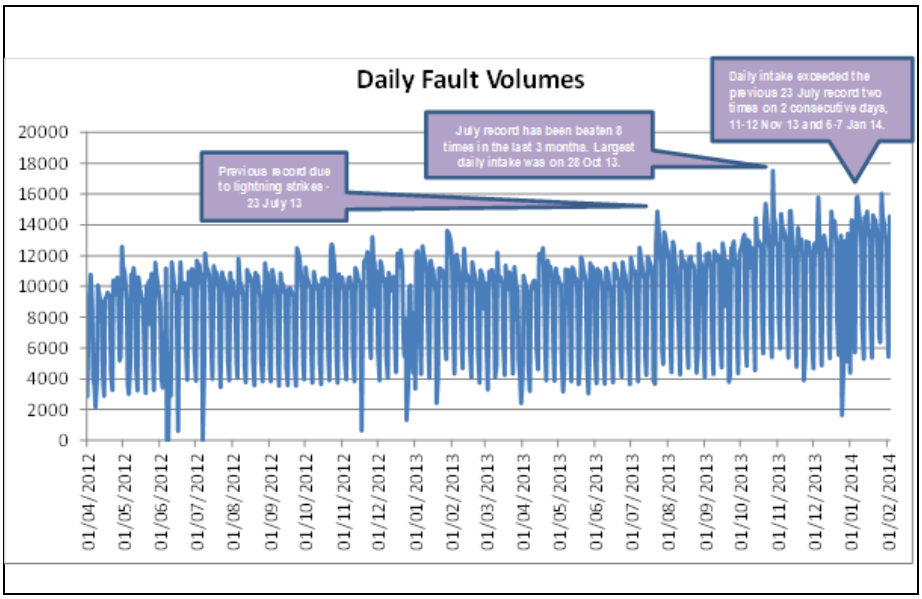
[3] Report by Enders Analysis – *Broadband volume and uses* (September 2013).

23. The incidence of volatile and extreme events in the last 2 years clearly shows that the extreme weather events in the summer of 2012 were anything but a 'one-off'. It is now evident that 2011/12 was an unusually dry year and, as the figure below shows, 2012/13 was in line with trends for increasing levels of rainfall. Four out of the UK's five wettest years have occurred since 2000.




24. The incidence of extreme weather events in 2013/14 YTD has actually exceeded 2012/13, with a direct impact on our fault intake. Our daily fault volumes are set out the figure below with the spike in July reflecting the lightning strikes on 23 July 2013. At the time, this gave rise to a record daily fault intake but that daily record has now been exceeded eight times in the last three months.




25. The impact of extreme weather events on our fault intake is further intensified by flooding. In this response, we describe the situation in Wessex, one of the Openreach regions[4] worst affected by the recent extreme weather. This extreme weather has left many areas in the UK with abnormally high groundwater levels and extensive areas of flooding – most notably in the Somerset Levels.

[4] Wessex covers Cornwall, Devon, Somerset and Dorset.

Some areas of flooding here extend for up to 15 to 20 km continuously, damaging the Openreach network and preventing us carrying out repairs, new provisions and, in some cases, even assessing the extent of the damage.

26. Guidance from the Department for Environment, Food and Rural Affairs (Defra) is clear that increased flood risk in the UK is becoming a reality in terms of coverage (larger flood plains) and extremity (increased peak rainfall). The Chartered Insurance Institute currently predicts that 23.1% of the homes (5.2m) in the UK are at risk of flooding and that risk is increasing with 13% of new homes now being built on flood plains. This can be much higher in specific areas: for example, between 2001 and 2011, 24% of new build in Maidenhead was on a flood plain, rising to 63% in Sedgemoor in Somerset and 52% across the whole of North Somerset.

27. Wherever possible Openreach infrastructure is positioned away from flood plains but this is not always possible: as an example, 7.2K of our 90K copper cabinets are on the flood plain and hence at heightened risk.

28. Extreme weather events present significant challenges for any access network. Weather damage is often the most complex to fix, demanding repeated pumping out of underground chambers, multiple digs, road safety apparatus and hoists for overhead work. On average, such faults take twice as long to fix as normal faults and the engineers fixing them need to be multi-skilled with years of experience and specialist training. After periods of flooding and underground water damage, the percentage of underground faults increases, typically to 25% of the total number of faults against the usual 15%, and this change in the mix of faults can remain for many months as underground water cannot drain away quickly. The majority of flash flooding tends to be in rural areas and getting engineering resource to those areas is always more challenging and time-consuming.

29. High winds also damage our overhead network, bringing down cables and telephone poles: replacing this type of infrastructure requires specialist engineering resource, heavy plant and vehicles.

**There is a worldwide recognised 'broadband premium'**

30. Broadband affects non-chargeable copper fault volumes in a number of different ways – more network components, the amount of time a line is used, more demanding applications, the proportion of lines with broadband, all of which are driving an increasing trend in fault rates that is expected to continue.

    - **Growing proportion of lines carrying broadband traffic** – the percentage of voice-only lines was 32% at the start of the current Control Period, dropping to 26% at the end of this period and is projected (based on expected provision volumes and market movements) to have reduced to below 20% by the end of the forthcoming Control Period. This change in working system size mix drives an increase in fault intake as lines carrying broadband traffic (be they MPF, WLR and SMPF or lines carrying NGA) all have higher non-chargeable copper fault rates than voice only lines (as highlighted above).

    - **Lines are being used more heavily** – according to Enders, active use of broadband lines (i.e. time on-line) will rise by 35% from 2013 to the end of the forthcoming Control Period. In addition to this 'time on line', more demanding applications are in use with ever increasing frequency. The demands of streaming video and consuming content in real-time are significantly greater than those of making telephone calls and downloading basic two-dimensional web-page content.

- **More demanding applications** – broadband traffic is transmitted over copper pairs at higher frequencies to voice (0 to 4 kHz). DSL Technologies have developed from the original ADSL1, ADSL2+ up to VDSL2, utilising increasing frequencies from 26 khz up to 17 Mhz in order to carry higher data rates over the same copper infrastructure, as demanded by CPs to meet the growing needs of their customers, our industry and Broadband Britain as a whole. The use of higher frequencies will be more heavily impacted by pre-existing line conditions (attenuation) than voice traffic – that is to say pre-existing line conditions (as assessed against SIN349) may not have impacted the quality of voice services to a degree that resulted in end customers raising faults, but would sufficiently affect the more demanding applications now in ever-increasing use and be more likely to result in end customer faults being reported.

- **More components** – depending on the individual products more network components are involved in the delivery of service, leading to more points of failure. Whilst these components are often CP owned (either at the exchange end or in the premise), inability to isolate root causes can drive additional fault volumes to Openreach. Where these visits result in any external work (from network upgrades, preventative actions or actions beyond SIN349) they are not charged through to CPs.

31. As indicated above, broadband usage continues to grow with more demanding applications. Ofcom regularly carries out its own substantial analysis of broadband usage trends which support this. There is now a growing trend for increasingly demanding usage of broadband to deliver highly interactive and media rich services. In its 2013 Communications Report, for example, Ofcom looks at the different ways users said they had changed their use of broadband since upgrading to a superfast service, particularly in relation to the streaming of TV programmes and full-length films. 72% of respondents said that they had increased their levels of streaming high-definition content while 64% had increased streaming of standard-definition content (the same proportion that reported increased use of cloud services). Ofcom noted that this increase was likely to be related to the increase in the speed of the broadband service, but also to the increase in the general use of these services since 2011. There were also notable increases in the uploading of video content (cited by 52% of superfast users) and the proportion who said that they worked from home more frequently (51%).

**Demands on the copper network are increasing**

32. In common with any other telecoms companies with copper external networks, our network unfortunately deteriorates and at the same time is being driven harder by the demands of the broadband world. We therefore invest significantly on a regular basis to stem this deterioration, even before the additional pressures caused by the recent extreme weather. Our network operations and underlying copper access fault rates benchmark competitively, with an average time between faults per line of 11.8 years, but we are not complacent. Over recent years, our investment in the network, both through capital expenditure and proactive maintenance activities, has been maintained at significant levels, as shown in the figure below.

[✂]

33. We are also continually assessing the best ways to target our fault reduction programmes. To partially stem the steady increase in fault rates outlined above over the coming three years, we would need to make major investments to renew parts of our network and our Test & Diagnosis capability. The level of investment required would need to increase significantly to combat the network deterioration combined with the increasing impact of extreme weather and we will need to evaluate what is possible under existing charge control rules. At the same time, we will continue

our end-to-end process improvement programmes, working with our industry customers, but a major step-change is also needed here.

**Improved industry collaboration**

34. There is much that needs to be done across the whole industry value-chain to improve the end-customer experience and there need to be common incentives for all players to prioritise the collaboration required to make change happen.

35. It is also important to stress that CPs can and should play a vital role in managing fault rates and we need them to make the right decisions, for example in testing and diagnostics policies and service-layer data sharing if we are to make the improvements needed to stem the increase in fault rates. We estimate that 40% of the potential improvement in fault rates from process changes is dependent on CP behaviour.

36. Openreach continues to work with the OTA to support the major CPs in the adoption of best practice to minimise faults, wasted visits and improve end customer fault resolution times. There are observed differences between CPs on, for example, 'Line Test OK' rates and 'same day repeat visits' creating avoidable fault volume when there is no objective difference in service. This is clear evidence of the inconsistent use of broadband fault products and varied success in take-up of industry best practice.

37. Although CPs do engage in these process improvement activities, they do so with limited priority and, frankly, there is little to motivate them to do so. A different level of CP commitment and prioritisation is required for substantial and sustainable results to be achieved. Ofcom's help in this is critical to set the right tone for all of industry to be similarly motivated to improve. Improving service for end-customers is a challenge that has to be owned right across the value chain. We recognise that Ofcom's legal powers are limited regarding CPs without SMP but we would like to see Ofcom setting out clear expectations which can then be followed in industry commercial discussions, including those facilitated by the OTA.

**The impact of next-day repair needs to be addressed**

38. We would also look to Ofcom to recognise the impact on service delivery of MPF growth leading to a growth in the requirement for next day repair of faults that can be reported up to midnight on the previous day. We have seen a 20% increase in the percentage of this Care Level 2 work in 13/14 (YTD) vs. 2011/12 and the prioritisation of next day repair impacts on all other repair and provision work, particularly in periods of high fault intake. In part this is a pricing issue; hence the importance of Ofcom correctly assessing the cost differential between service levels, as we indicate below. But, more fundamentally, next day repair places increasing pressure on the Openreach engineering resource and it is not realistic within the current price control construct to continue supporting next day repair on faults reported post 6pm. Although such a change would need to be agreed via contract discussions, we look to Ofcom to signal its support for a 6pm cut off for Care Level 2 products.

**Service targets need to be achievable**

39. Given the rigour of the existing SLA/SLG regime and the current wide range of service level reporting to stakeholders, we are not convinced of the need for an additional layer of service measures, but if Ofcom does decide to introduce new Minimum Service Levels (MSLs) as SMP targets these need to be proportionate and achievable and based on the most recent operational and financial data.

40. As we have explained above, in setting the new targets based on 2011/12 performance levels, Ofcom would overstate our current performance against SLAs and understate the costs required to achieve the proposed targets. During the current year, we have increased our engineering resources beyond the level funded by the existing charge control. Despite this injection of resources, combined with investment in training and tools to improve performance, we will still not be able to deliver by region at the proposed 67% target against repair SLAs by region for 2014/15. Our performance for 2013/14 to date, reflecting current fault rates and the extreme and volatile weather, suggests that we will do well to deliver consistently at a 60% level across all regions, the bottom of Ofcom's proposed range for 2014/15.

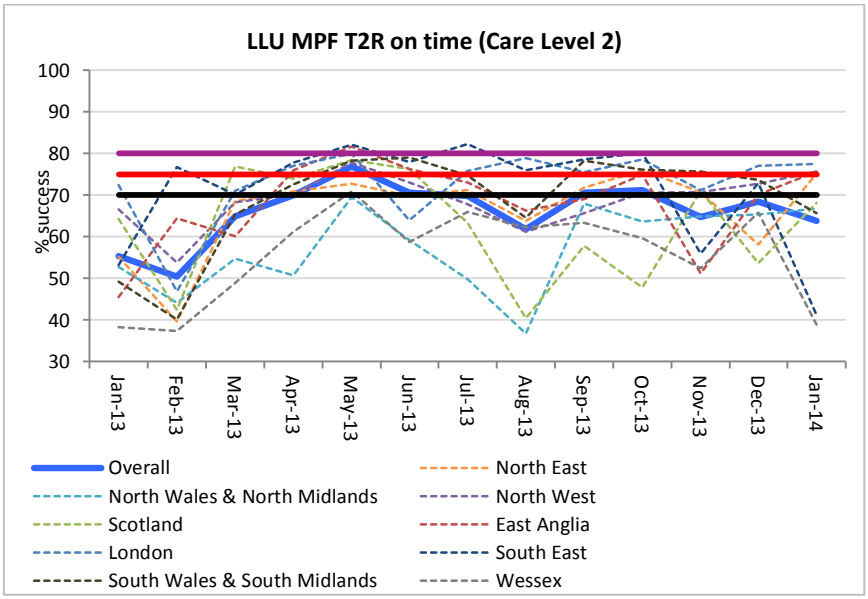
41. Ofcom therefore needs to set realistic targets that properly reflect our service performance as we enter 2014/15. Such a realistic assessment is also crucial in setting the glide-path to an appropriate target in 2016/17. This needs to take account of the time required to increase resourcing further, even assuming a sufficient uplift to funding, and the extent to which progress has been made on cross-industry initiatives necessary to stem the rise in fault rates.

42. As we set out in detail in our September Response, there are a number of reasons why there is a practical limit to the level at which we can consistently deliver service, including the significant level of local repair demand variability on the day, compounded by local repair skill level demand volatility, and the 'glass ceiling' factors that prevent jobs being completed on the day. We concluded then that, with the current level of repair challenges, targets for the end of the Control Period should be set at a maximum of 75% on a national basis, compared to Ofcom's proposal of a headline figure of 80%. The need to hit such targets on a regional basis makes the task even harder and, on this basis, achieving a 77% performance in 2016/17 against repair SLAs across all regions appears virtually impossible.

**More flexibility is needed on regional targets**

43. We recognise that Ofcom needs to assure stakeholders regarding regional as well as national service delivery performance and we acknowledge that regional targets are now proposed at the level of the 10 Openreach General Manager areas rather than the 26 forecasting regions, which is more appropriate. However, Openreach will not be able to meet all the 60 required regional targets at the levels defined on a consistent basis as our performance against SLA varies significantly by geography by month and is heavily , and increasingly, affected by extreme weather events, including MBORC (Matters Beyond Our Reasonable Control). To meet these targets consistently would require additional funding to allow Openreach to better resource for the peaks in demand, that is, through appropriate use of engineering contingencies. Alternatively, a more flexible approach on regional targets could be adopted to reflect the different geographical challenges faced and local volatility.

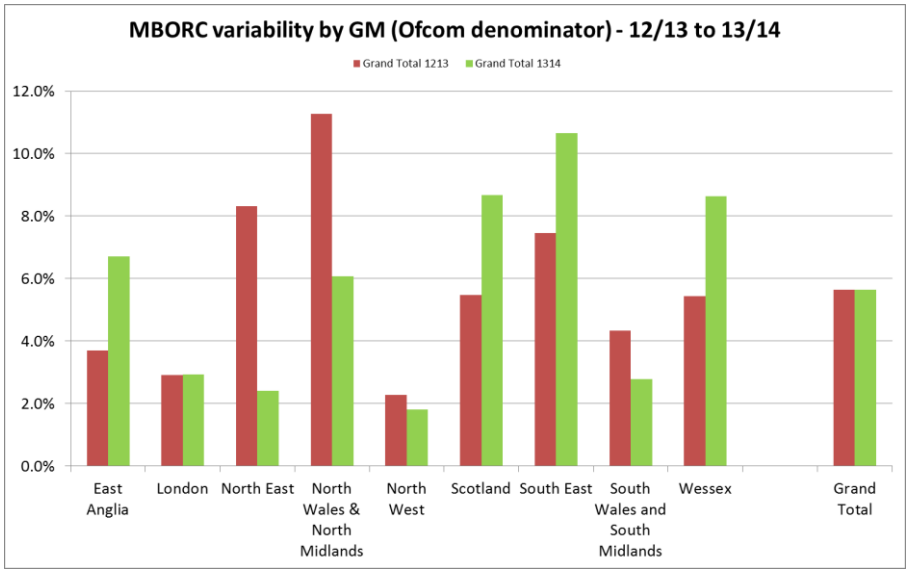
44. Our regional performance over the last year emphasises the likelihood of widespread compliance failures against the proposed minimum standards. Measured over the last 12 months, the year 1 minimum standard would have been missed in 2 of 10 regions for WLR repairs (North Wales and North Midlands plus Wessex) and 3 of 10 regions for MPF repairs (North Wales & North Midlands, Wessex and Scotland). A number of regions only just passed (4 regions within 3% of target). This pattern of performance variability is also evident for the provision appointment availability SLA. The figure below shows the position for MPF repairs:




45. All the regions where targets would have been missed had high MBORC levels in the year and our data shows that extreme weather events in any one month can make achieving annual targets impossible. For example, in Wessex in January 2014, our performance against the MPF repair SLA fell to 38.85%, compared to 65.89% the previous month and bringing the annual average down to 57.16%; this would have led to us failing the SMP target had it been in place. However, anyone looking at our fault intake and the extreme weather conditions our engineers are battling would agree this would be a punitive assessment beyond all levels of fairness.

46. It is clear then that MBORCs will be a major factor in determining our performance against Ofcom's targets. MBORC levels are, by definition, impossible to predict, particularly in the context of weather volatility, but it is important to note that Ofcom understates the level of MBORCs; we have supplied Ofcom with information to demonstrate that the true level of repair MBORCs in 2012/13 for the purposes of Ofcom's proposed targets was 6% rather than 3%.

47. MBORCs vary by region – from 2.3% to 11.3% on an annual basis during 2012/13 – and no-one could have predicted the impact of the most recent January 2014 rainfall in the Wessex area. This variability, across regions and over time, is illustrated in the figure below:



48. Given this unpredictability, it is illogical to set expected MBORC levels in advance. This would create a strong likelihood of regular and widespread target failures purely on the basis of unexpected weather events. We would expect Ofcom to publish clear guidance as to how they would investigate any potential instances of non-compliance and take into account any extenuating circumstances before deciding on any penalty. Multiple compliance investigations will only create uncertainty and encourage disputes and are no substitute for establishing a workable set of targets in advance.

49. We detail in this response some alternative options for regional targets for Ofcom to consider. Given the volatility and unpredictability of extreme weather events and MBORCs from year to year, we do not see that any approach that involves rigid pre-set targets, even if region-specific, will offer sufficient flexibility. One option, therefore, would be to exclude the MBORC allowance from the service targets but also to exclude from our performance average any MBORC jobs where we have failed the SLA. A variant of this is for Ofcom to keep the targets as proposed (that is, with an MBORC allowance) but exclude from our performance average any jobs affected by agreed 'extreme events' such as the St Jude's storm.

50. Alternatively, on the basis of the variation of historic MBORC volumes by GM patch, the "mean" MBORC allowance in Ofcom's proposal could be replaced by a "mean plus one standard deviation" in the calculation (for example, giving an MBORC-adjusted target of c. 72% for repair for 2016/17) with the resulting target applied only to the best performing 8 of the GM patches, to allow for the inevitable variation in how matters outside Openreach control will likely affect geographic patches differently.

**Any increase in service levels needs to be fully funded**

51. A key principle of this charge control review is that the funding should be uplifted for any required increase in service levels. This concept fails in practice, however, if the latest and most appropriate data is not used to calculate this uplift. We estimate that, based on 2012/13 fault rates and performance and our view of fault trends, we would require an additional £80m per annum by 2016/17 to meet Ofcom's proposed service targets.

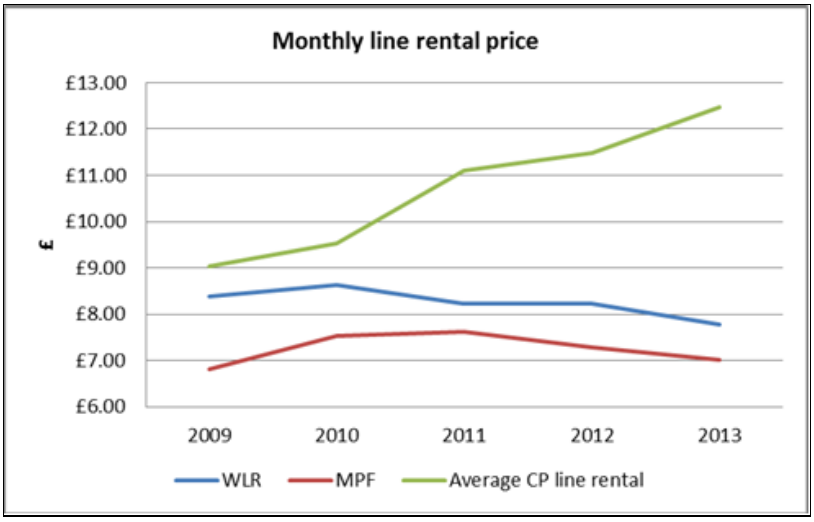
52. As part of this response, we include a report from Ernst & Young (EY) responding to the points made by Ofcom and their consultants, Analysys Mason, in respect of the service-cost modelling work carried out by EY on behalf of Openreach. Most importantly, this sets out why EY's approach to modelling a cost uplift based on 2012/13 data was appropriate and hence why a higher cost delta than the 3.9% uplift, based on 2011/12, should be used. EY demonstrate that their methodology for modelling 2012/13 data was robust but we do accept that Openreach did address the resourcing challenges in that year with some exceptional measures, which created some modelling challenges. To address this, EY have considered how the model might be used to reflect the additional complexity of short term resource deployment. They have now estimated a modified cost uplift of 15.3% for achieving the 2016/17 targets, on the assumption that during the forthcoming Control Period, Openreach is able to make short term forecasts of repair volumes more accurately than was the case during 2012/13.

53. The EY report also sets out further explanation of the issues highlighted by Ofcom that are used to decrease the estimated difference in cost between providing Care Level 1 and Care Level 2. Ofcom proposed to make adjustments to the model outputs, which reduce the estimated differential from 23% to 14.1%. As EY explain, these adjustments would be inappropriate. Openreach remains firmly of the view that the 23% estimate of additional costs is an accurate reflection of the significantly increased effort required to meet the requirement to fix faults by the end of the working

day following receipt of the fault report, a requirement that continues to grow in line with MPF volumes.

**Wholesale and Retail pricing**

54. We estimate that, based on 2012/13 fault rates and performance and our view of fault trends, an additional £80m per annum by 2016/17 would be required to meet Ofcom's proposed service targets. This means that the price for some key copper access services, such as MPF and WLR rentals, will need to increase so that they properly reflect efficiently incurred costs and Ofcom should not be afraid to support such proper and appropriate price increases. We recognise that price increases at the wholesale level may raise concerns about short-term impacts on consumers, but as the figure below shows, historically changes in wholesale access prices have not been passed directly on to end customers so retail prices do not necessarily need to rise.




55. Although this is a stark image, we do also acknowledge that the relationship between Openreach's wholesale charges and the retail prices faced by individual customers is complex given the prevalence of bundles of broadband and other services. The key point is that the cost of Openreach inputs is a smaller share of the overall costs of providing such bundles, and hence is not what drives prices. On that basis, this should not be a consideration for Ofcom when deciding the charge control.

## LLU/WLR Charge Controls

56. In addition to consulting on quality of service proposals and their impact on regulated prices, Ofcom has taken the opportunity in this consultation to further consult on a number of issues from the First Charge Control Consultation. We respond here to those proposals and also take the opportunity to reiterate our position on some of the other key charge control issues.

**2012/13 Cost Base**

57. Ofcom's charge control modelling has to date been based on the published 2011/12 RFS data. Ofcom has indicated that it is not currently minded to use the 2012/13 RFS as published by BT as the base year but instead suggests it will update its models with 2012/13 costs using the 2011/12 RFS cost allocation methodologies, but potentially with an adjustment applied to the 2012/13 repair components. Openreach disagrees with Ofcom's decision not to use the most up-to-date methodologies, for the reasons set out in detail in the BT Group response to this Consultation, but we stress the importance of at least using the full 2012/13 cost base. As explained above, 2012/13

is the most appropriate base year for the purposes of considering Openreach service and the full costs of service delivery therefore need to be reflected in Ofcom's modelling.

**Volumes**

58. As we set out in our response on 30 September 2013, Ofcom should reconsider the assumptions underpinning its volume forecast of Openreach copper lines, in particular:

- Ofcom's assumption of the growth in the number of new households is too high (by 360,000 Openreach fixed lines in 2016/17) as it incorrectly uses a government projection that is unconstrained by the future supply constraints of building more residential properties; and

- Ofcom's assumption regarding the level of substitution to mobile-only homes is too low as it runs counter to past trends and ignores clear evidence that the 4G launch in the UK is likely to increase the number of mobile-only homes during the Control Period.

**Efficiency**

59. Despite a consensus that the scope for achieving savings is becoming more difficult, Ofcom proposes to increase, rather than decrease, the efficiency target from 4.5% to 5% per annum.

- Benchmarking analysis of European operators shows that BT's network business is highly efficient compared to a representative group of European operators. Deloitte's study[5] was consistent with a trend rate of efficiency improvement for BT of between 2.5% and 3.5% per annum.

- Ofcom asserts that analyst opinion supports its assessment of the massive scope for future efficiency savings it proposes. However, the consensus view is that Openreach will hold costs approximately flat in nominal terms over the period to 2016/17 i.e. 3%.

- The RFS data does not support a rate of 6% achievement historically, as Ofcom states. 4% is more appropriate, and in any case there is a downward trend which suggests that historical rates are unlikely to be achieved in future.

- Ofcom relies heavily on Openreach's own 'Price Volume Efficiency Other' (PVEO) analysis of actual and forecast efficiencies, but there is effectively double counting of some of the reported savings as a result of the way Ofcom uses this data in its model.

- Since Ofcom made its original efficiency proposals it has published its service proposals and it is imperative that these proposals, including required service level targets, are aligned with the efficiency targets. We believe that an efficiency target of 5% per annum will make it harder to meet these service targets and negate the benefit of the small cost uplift Ofcom proposes for service delivery.

**Calling number display**

60. Ofcom proposes to reduce the wholesale charge for this service down to LRIC; a price reduction of 90% to 95%. Openreach disagrees with Ofcom's assessment that without further investment Openreach could meet the resulting higher demand (even a doubling of demand) at 'acceptable

[5] See BT Wholesale's response to Review of Wholesale Broadband Access Markets, Annex 4: Analysis of the Efficiency of BT's Regulated Operations.

service levels' (which they do not define). In fact it is most likely that, without incremental investment, caller display will routinely fail.

61. BT has three exchange types, System X, AXE10 and UXD5, in operation. We know we can increase capacity for UXD5 and AXE10 but the minimum lead time to deliver the extra capacity is two years. We do not currently know whether it is possible, how much it would cost and how long it would take to increase capacity for System X, which supports two-thirds of the network. Openreach is therefore working with the equipment vendors (Telent) to understand what solutions are possible in order to expand capacity in each case, what deployment timescales would be involved and what the incremental cost would be. This is a major piece of work which will not be finished until April 2014. Until the costs and the effectiveness of possible upgrades are known, it is premature and unjustified to consider a radical re-structuring of the wholesale price.

**Broadband line testing costs**

62. Openreach has argued consistently for the last six years that LLU TAM costs are specific to MPF and should be recovered only from MPF lines and we support Ofcom's decision to make this adjustment to better reflect cost causality. At the same time Ofcom proposes to exclude EvoTAM costs from the SMPF cost stack as a start-price adjustment on the basis that only downstream BT uses this 21CN facility. This change is arguable given EvoTAMs could be used by other CPs but, in any case, Ofcom should remove these costs over the Control Period, analogous to its treatment of the differential between WLR+SMF and MPF where the need for regulatory certainty is cited to justify a glide-path.

**LRIC Differential**

63. Ofcom proposes to maintain an artificial LRIC differential of £10 between MPF and WLR rentals at the end of the next Control Period. Openreach should be agnostic as regards the relative pricing of the copper access products on the basis that these prices are properly cost-reflective but this unnecessary adjustment is likely to send the wrong economic signals and distort buying and investment decisions. It also belies the detailed consideration of cost attributions elsewhere in this review if this adjustment can be introduced without proper justification. This issue is covered in more detail in the BT Group response to this Consultation.

**Conclusion**

64. In this response, we evidence the need for a balanced outcome to this important charge control review, recognising the need to continue to support a competitive copper line access market with keenly-priced wholesale products but also the need to properly fund a level of service delivery that can be consistently provided to meet end-customer expectations. This review provides an opportunity for an outcome that properly reflects the trade-offs between cost and service. Overall, consumer interests are best served in the long run by ensuring that regulation allows Openreach to recovers its efficiently incurred costs and deliver a consistent level of service.

# 2 Introduction to Service related questions and answers (questions 3-5)

65. In this section we set out the Openreach response to Ofcom's questions covering minimum standards, the relationship between service and cost, and fault rates.

66. In our response we set out data and analysis showing that:

- Ofcom must not set minimum standards in such a way that Openreach is likely to fail any of the proposed formal targets due to factors that are outside of its control.

- If Ofcom maintains its proposal to introduce minimum standards at a regional level, it also needs to build extra flexibility into the measurement and/or compliance regimes in order to account for the variability in the occurrence of unpredictable events that is evident at a regional level. In many cases, such events would impact Openreach performance against the measures that Ofcom have proposed, to an extent which would be impossible for Openreach to recover from. Openreach sets out alternative options for Ofcom to consider.

- Ofcom should re-calculate the proposed repair MBORC allowance; using the correct data inputs in the Ofcom algorithm will show that the allowance should be set at a level around 6%.

- Ofcom should use 2012/13 as the base year for assessing resource and cost increments to meet the minimum standards. Ofcom should also uplift the relevant 2012/13 base year costs by 15.3% to reflect the additional cost to hit the overall service performance level Ofcom proposes for 2016/17.

- Ofcom should set the "year 1" minimum standards for the on-time repair and provision appointment availability minimum standards at the bottom end of the proposed range, and should set the year 3 targets at a level of 75% rather than the 80% proposed (with appropriate additional funding at a corresponding level).

- Ofcom is currently excluding large numbers of faults that should be included in the charge control assessment – which has contributed to some mis-leading results from the Ofcom fault rate trend analysis.

- Including the right levels of faults in the assessment clearly shows that 2012/13 fault rates were different to 2011/12. Openreach has continued this analysis to cover faults reported during 2013/14, which shows a further increase in fault rate compared to 2012/13. From this analysis it can be seen that 2011/12 is unlikely to be representative of future years. Openreach believe that the most recent data should be used in the charge control models and 2012/13 and should be used as the base year for costs and for corresponding assessment of future fault levels.

- The evidence from 2011/12 through to 2013/14 clearly shows that the number of faults relevant to the charge controls has been rising at above 6% per annum.

- There are powerful factors that will continue to drive an increase in fault rates during the next Control Period including: (a) the greater prevalence of extreme weather (b) the broadband fault premium and (c) the increasing demands being placed upon the copper access network.

- Finally we set out the work Openreach is doing to drive down faults, argue that CPs can (and should) do more to help to reduce faults, and set out some of the dependencies for further fault reduction going forward.

67. We support our views with extensive analysis described in the following section of this response, provided by experts within Openreach as well as from external sources. This includes:

- Detailed analysis of the proportion of repair jobs that missed the SLA and that were subject to MBORC, by region, by month covering the period April 2012 to January 2014.

- Detailed analysis of the Openreach performance against the SLAs on which Ofcom is proposing to base the minimum standards, by region, covering the period April 2012 to December 2013/January 2014.

- Further detailed analysis of extreme weather events, including a case study on the impacts of recent severe weather and flooding along with external views on the future likelihood of such extremes increasing in magnitude and frequency. (Annex A).

- Further (and final) detailed analysis of Openreach fault trends covering the period April 2011 to January 2014 by Deloitte (Annex B).

- A detailed report from EY setting out its response to comments made by Ofcom and Analysys Mason in respect of the Openreach Discrete Event Simulation Model. (Annex C).

- Finally, in Annex D to this response Analysys Mason provide a further international telco benchmarking study covering wholesale SLA arrangements for WLR and MPF. The study supplements the previous Analysys Mason benchmarking study[6] that covered wholesale SLA/SLG arrangements across European telcos, and which concluded that the UK offered the most comprehensive provision and repair SLAs for WLR and MPF.

- The new Analysys Mason report focuses on repair SLA arrangements, and also takes into account the relative price of the underlying regulated services to create a composite measure that accounts for SLA <u>and</u> price. Using this composite measure, the UK benchmarks towards the top of the sample for both MPF and WLR. For example, see Figure 1, below showing the UK composite performance for the MPF repair SLA.

- Against the 3 telcos claimed in the Webb Henderson study[7] to be best in class: Australia, Ireland and Belgium, the UK performs better than Australia, significantly better than Ireland and is comparable with Belgium. We would argue that a credible comparison of SLAs cannot be made if the underlying price is ignored as a consideration, and also note that there is very low MPF take up in Belgium.

- Openreach therefore believes that the conclusions drawn by Sky from the Webb Henderson reports are erroneous, being based on unrepresentative data. Openreach believes that even without any of the proposed new layers of Ofcom regulation, the Openreach service offering is already near to best in class internationally, taking into account the price level set by the regulator.

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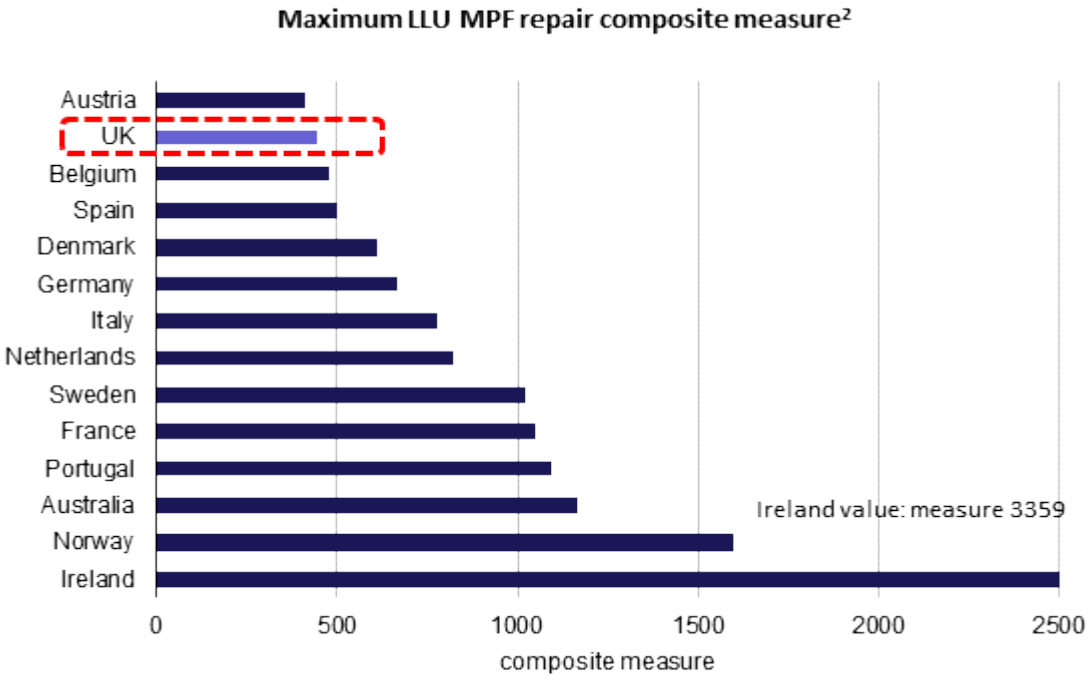
[6] Analysys Mason Fixed Access Market Review. May 2013.

[7] Webb Henderson. Service Levels. Benchmarking study and analysis. July 2013.

***Figure 1 - MPF repair SLA / price composite benchmark***




Source: Analysys Mason 2014

# 3 Responses to the Ofcom Service questions

## 3.1 Responses to Question 3

**Question 3.1:** Do you agree that it is appropriate to use the existing SLAs as the basic standard around which to set the new minimum standards? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

68. Yes. Openreach agrees that it is appropriate to use existing SLAs as the service levels around which to set the new minimum standards. Taking this approach is both practical in that it builds on service levels that are already understood by stakeholders, and also provides for regulatory certainty and proportionality in that it is aligned with Ofcom's approach to the setting of SLAs and to focussing regulatory remedies against the "core" WLR and MPF rental products.

69. The existing SLA arrangements have been developed over time, primarily via a process of industry negotiation that has been supplemented from time to time by regulatory intervention.[8] As such, they are well understood by stakeholders. Openreach's "familiarity" with the delivery requirements associated with these SLAs also enables a more predictable assessment of the relationship between service level and cost. Ofcom is right to be concerned about the difficulties on this key point that alternative approaches could entail.[9] Ofcom is also right to highlight that any desire for enhanced SLAs also needs to take account of consumers' willingness to pay extra. Their lack of willingness to pay extra is evident in the research available.[10] These are all compelling reasons to use existing SLAs as the appropriate basis for any additional service regulation in the form of minimum standards.

70. Any departure from this approach would contradict Ofcom's general approach, including in the current FAMR, to the regulation of SLA/SLGs. In its FAMR proposals, Ofcom correctly proposes to eschew further regulatory intervention in the creation or amendment of SLA/SLGs, preferring instead to recommend that existing arrangements evolve via a process of facilitated industry negotiation. Openreach agrees with this approach, not least because the SLA/SLG regime it offers is already one of the most competitive (taking account of SLA and wholesale price) across an international sample of 15 countries, as well as the most comprehensive in Europe (see Annex D to this response).

71. If CPs wish to discuss amendments to existing SLA/SLG arrangements, Ofcom has already set out a suggested process for doing this via OTA facilitation. This is the right approach and should not be conflated with the process for establishing minimum standards, nor need the creation of minimum standards be an impediment to further industry discussion relating to SLA/SLG arrangements.

72. Further, were Ofcom to apply minimum standards against SLAs that do not currently exist (either because they are a more exacting version of an existing SLA or because the SLA itself would be new), this could represent a "double-whammy" of regulation being imposed on Openreach (i.e. new minimum standard plus new or amended SLA) that would be not be proportionate, and that would raise further questions in relation to charge control funding and the legal requirements for SLA/SLG regimes to be set in line with established liquidated damages principles.

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[8] Service level guarantees: incentivising performance. Ofcom Statement and Directions March 2008.

[9] Consultation, paragraph 3.18.

[10] Consultation, paragraph 3.14.

73. Minimum standards are in a sense a "second tier" regulatory remedy being introduced to (in theory) supplement / amplify the effectiveness of the existing "first tier" remedies (in this case existing SLA schemes). For them to be effective they therefore need to operate in coherent manner with the first tier remedies. The simplest way to achieve this is, as Ofcom proposes, to align the minimum standards with existing SLA arrangements. Introducing a minimum standard where an SLA does not exist would be to put the "cart before the horse" by introducing second tier remedies in advance of even assessing if first tier remedies are required.

**Minimum standards should align with the terms of the associated SLAs**

74. The minimum standards should reflect the terms and conditions of the SLAs they are based on. Specifically, Ofcom needs to explicitly recognise the need for accurate forecasting in the provision minimum standard relating to First Available Appointment Date (FAD).

75. As Ofcom is aware, the FAD SLA includes forecasting terms and conditions for larger CPs where, in order to be eligible to be paid an SLG, CPs are required to provide Openreach with demand forecasts that are accurate to within +/- 10% at a regional level. This arrangement is essential in that it better enables Openreach to meet industry demand within the SLA by having a clearer view of how that demand will appear by time and geography.

76. The same forecasting terms and conditions were also found to be fair and reasonable by Ofcom, and hence compliant with FAA9.2, in the MPF New Provide dispute.[11]

77. In situations where such forecasting CPs under-forecast their true level of demand within certain areas, and where in consequence of this the aggregate (total industry) forecast for those areas is also under-called, this can and does hamper Openreach's ability to meet the FAD SLA (since Openreach may not have the sufficient levels of resource in place to meet the levels of aggregate demand within those affected areas).

78. Because Openreach's ability to meet the SLA is impacted by the accuracy of CP forecasting, it follows that Openreach's ability to meet the minimum standard will also be impacted by the accuracy of CP forecasting. This factor therefore needs to be explicitly recognised by Ofcom in the formulation of the FAD minimum standard or in terms of how Ofcom assesses compliance. Failure to do so will not only put the minimum standard out of alignment with the relevant SLA, but could also lead to perverse outcomes that we presume Ofcom is not intending in its proposals; for example, Openreach could in theory be faced with large levels of un-forecast demand late in the year against which compliance is measured, which could directly lead to failure against minimum standard targets, whilst at the same time the "offending" CPs would not receive SLG payments due to the same forecasting inaccuracy. It is important that the SLA <u>and</u> minimum standard are aligned and contain the same incentives for CPs. This could be achieved by calibrating the measurement of Openreach performance to take account of forecasting accuracy, or by Ofcom setting guidance up-front that any measure and/or compliance regime would discount periods where CP forecasting accuracy was outside of the tolerance required in the terms of the FAD SLA/SLG.

79. Similarly, the minimum standards should also align with other relevant terms and conditions of the SLAs upon which they are based, particularly those that set out the extent of Openreach's responsibilities. For example, in the SLA covering FAD, a small number of remote geographic areas such as certain Scottish islands are excluded (in agreement with industry) on the basis that

[11] Dispute relating to whether Openreach offered MPF New Provide to TalkTalk Telecom Group PLC on fair and reasonable terms and conditions. Determination 15 August 2013.

there are extra difficulties associated with delivering service in those areas.[12] The minimum standard should align with the SLA in this respect.

80. Finally, Ofcom needs to confirm that the minimum standards align with the SLA by enabling the time by which the job needs to be completed to meet the SLA to be changed in circumstances where completion is prevented due to issues that are proper to the CP. Current SLA arrangements allow for occurrences such as Openreach engineers not being able to access premises on the appropriate day, or other issues which are the responsibility of the CP to arrange, or the CP explicitly requests a delayed target completion date for the job, effectively to "stop the SLA clock" if this causes delay to execution of the work. Once the CP issue is cleared, the SLA clock starts again, and Openreach measures success against the SLA measure according to the revised job completion target date, not the original. This point needs to be clarified by Ofcom whatever overall approach to minimum standards measures and targets is adopted – and in any of the alternative options on which Openreach sets out suggestions in the response to Question 3.3.

**Question 3.2:** Do you agree that it is appropriate to use General Manager areas rather than forecasting regions in the minimum standards and the KPIs? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

**Minimum service levels**

81. Ofcom's current proposals to use General Manager (GM) areas are an improvement on the previously proposed 26 regions. In particular, we welcome Ofcom's recognition of the extra costs and complexity that compliance with large numbers of regional targets would bring[13].

82. However, Openreach continues to believe it would be more appropriate to introduce the new minimum standards, at least initially, at a national rather than regional level. Aggregation of minimum standards at a national level would allow Openreach to manage resources such that the inevitable (and highly unpredictable) localised peaks can be met most efficiently. This approach would be a sensible first step in the introduction of what is a major new piece of regulation, the impact of which is unclear.

83. If Ofcom does set minimum standards at a regional level, it is imperative that it also adequately takes account of the additional cost and difficulty that comes with meeting such standards in sub-national regions (where the costs and difficulties can become more pronounced the smaller the geography).

84. It is imperative that Ofcom does not set up the new regulation or the associated compliance scheme where there is a high chance of Openreach failure on any one of the 60 proposed new measures due to factors outside of its control. In particular, Ofcom should additionally recognise that real differences exist between the GM regions, and that these differences will inevitably impact upon Openreach's ability to achieve SLAs. For example, Ofcom should take account of the differences that exist at a regional level in terms of the incidence and operational impact of MBORC and in terms of the differences in geo-types. We set out our thinking in respect of these important considerations in more detail in our response to Question 3.3 below.

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[12] See business rules associated with the FAD SLA.

[13] Consultation, paragraph 3.24.

85. Setting minimum standards at a GM level will therefore need to accommodate relevant regional factors and mean the need for extra funding for Openreach to meet these, together with requiring greater flexibility within the standards themselves (and the compliance framework associated with them) to account for those regional differences.

86. On the basis that Openreach would seek to hit all targets (totalling 60 per annum), Openreach would need to plan to exceed all targets in all regions by at least as much as would be at risk from an unforeseen event (which would typically be outside of Openreach's ability to control), which might occur towards the end of the compliance year such that recovery would not be possible prior to year end. This means that in order to assure being able to meet all such targets Openreach would need to be funded within the charge controls to a level set a number of percentage points above the minimum standard.

87. Ofcom should also consider at the outset of setting regional minimum standards how the standard would be measured in the event of change to a GM patch boundary. Openreach will make organisational changes from time to time for good operational reasons and should not be constrained in this exercise between market review consultations. The ability to accommodate such business as usual changes should be explicitly acknowledged on an ex-ante basis in the relevant legal instrument.

88. In summary, the GM patches are an improvement on Ofcom's previous overly complex proposal for minimum standards to be assessed against 26 regions. In particular, the GM patches are better aligned to Openreach operational units. However, Openreach remains of the view that national targets would be more proportionate and sensible as a first step and that if Ofcom does introduce regional standards, it also needs to recognise the extra cost and difficulty of meeting such standards, along with the need for greater funding and flexibility.

**Key Performance Indicators (KPIs)**

89. Openreach considers that the KPIs that measure performance against the minimum standards should align with the final construct of those minimum standards, be that national or regional.

90. KPIs that are not associated with minimum standards should be measured at a national level. To do otherwise would be disproportionate, potentially confusing and add little value to stakeholders, particularly if those stakeholders are not familiar with Openreach processes, terminology and organisational structures.

91. Notwithstanding the point made above concerning KPIs that are not associated with minimum standards, Ofcom should also consider at the outset how the regional results should be measured in the event of changes to GM patch boundaries.

**Question 3.3:** Do you agree that it is appropriate to apply the same minimum standards to all regions? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

92. We do not agree that it is appropriate to apply the same minimum standards to all regions. Ofcom needs to provide extra flexibility on an ex-ante basis in the target measurement and / or a clear compliance assessment methodology that takes account of the inevitable and unpredictable differences that exist at the regional level.

93. This will also be needed to ensure that the minimum standard regime does not create the likelihood of Openreach breaching any targets due to factors outside of its control.

94. Differences exist between the regions that directly impact on Openreach's ability to deliver service within the specified SLAs. These differences can be caused by factors (such as severe weather) that are totally unpredictable and the impacts of which are to a large extent outside of Openreach's control.

95. Openreach understands Ofcom's position that the minimum standard regime should not inevitably lead to Openreach failure due to matters outside of its control, together with the expectation that Openreach will need to restructure and resource in a manner that will allow us to "assure" delivery against the minimum standards[14]. This means, however, that the minimum standards regime needs to be sufficiently flexible to accommodate the inevitable variability that exists between the regions.

96. It is not appropriate to apply the same minimum standard to all regions inflexibly, especially if that standard is, as Ofcom propose, a performance measure across all jobs, whether or not they are subject to MBORC.

**The impacts of regional differences**

97. It is clear from the data available that the factors that give rise to MBORC have a major impact on Openreach's ability to deliver service within SLAs.

98. It is also clear that those factors are highly variable by region, by month, and that this variability cannot be predicted in advance.

99. MBORC is a *force majeure* contractual provision commonly used in commercial relationships. It is there to provide relief to a party affected by MBORC circumstances which prevent, hinder or delay the performance of a contractual obligation (such as meeting an SLA). The declaration of MBORC is stringently applied within Openreach. On this point, we welcome Ofcom's acknowledgement that there has been no evidence to suggest manipulation of the MBORC process by Openreach[15]. The main causes of MBORC are exogenous and difficult to prevent and / or forecast in advance. The principal causes of MBORC are: extreme weather such as flooding and lightning strikes, criminal activity such as cable theft and vandalism to the network, damage to the network caused by parties not employed (either directly or indirectly) by Openreach and other factors such as health and safety risks and local / national emergencies (including for example epidemics e.g. rural foot and mouth disease outbreaks) which can affect fault volumes directly and / or affect Openreach's ability to travel / access locations in order to deal with those faults.

100. MBORC aside, other factors such as terrain and socio-economic differences between regions will also create (somewhat more predictable) variations in the difficulty of delivering service in different areas (areas with greater average distances to travel and more extreme terrain being more challenging than more urban areas for example).

101. Given this, it is quite possible that Openreach could miss its minimum standards due to regional factors that it cannot control such as, for example, a spike in SLA failures where MBORC was also applied, particularly if that spike occurred late in the compliance year (i.e. insufficient time remained to recover the position).

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[14] Consultation, paragraph 3.107.

[15] Consultation, paragraph 3.97.

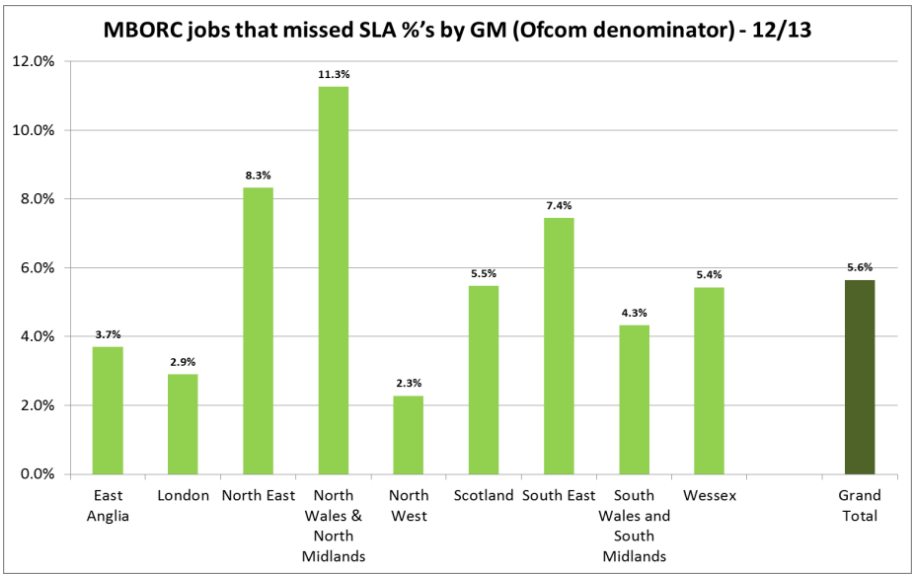
102. In summary, although Openreach welcomes Ofcom's recognition that different regional characteristics may affect Openreach's ability to hit targets[16], we do not consider that the level of difference / variability that is apparent at a regional level has at this stage been sufficiently accounted for. To deal with this problem, we set out below a number of options for Ofcom to consider prior to making it final decision.

**Variations in Matters Beyond Our Reasonable Control**

103. A key observable difference between the regions has been in respect of the occurrence over time of events that have led to MBORC declarations being made, and more specifically the percentage of repair jobs that (a) missed the SLA and (b) were subject to the application of MBORC.

104. Figure 2 below shows the percentage of total repair jobs split by GM region, where MBORC was applied <u>and</u> where the SLA was missed (i.e. aligns with Ofcom's formulation for its proposed repair MBORC allowance). The year covered is 2012/13 which also aligns with the year that Ofcom is proposing to base the repair MBORC allowance on.

***Figure 2: Percentage of repair jobs where the SLA was missed and that were subject to MBORC, by region 2012/13[17]***




105. The high degree of variation by GM region is apparent. Even measured over a year, the range varies from 2.3% to 11.3%, against a national average of 5.6%. Note that the figure quoted by Ofcom for this national average is c.2.5%. That figure is incorrect. The correct figure is 5.6% as shown here.

106. The areas that had the highest levels of jobs where the SLA was missed and that were subject to MBORC (North Wales and North Midlands) corresponded closely with those areas that were particularly badly affected by severe weather during 2012/13. There was no way to predict in advance what the incidence of MBORC would be at a regional level. Note that a more detailed discussion of the weather impact is supplied in our response to Question 5.2 below.

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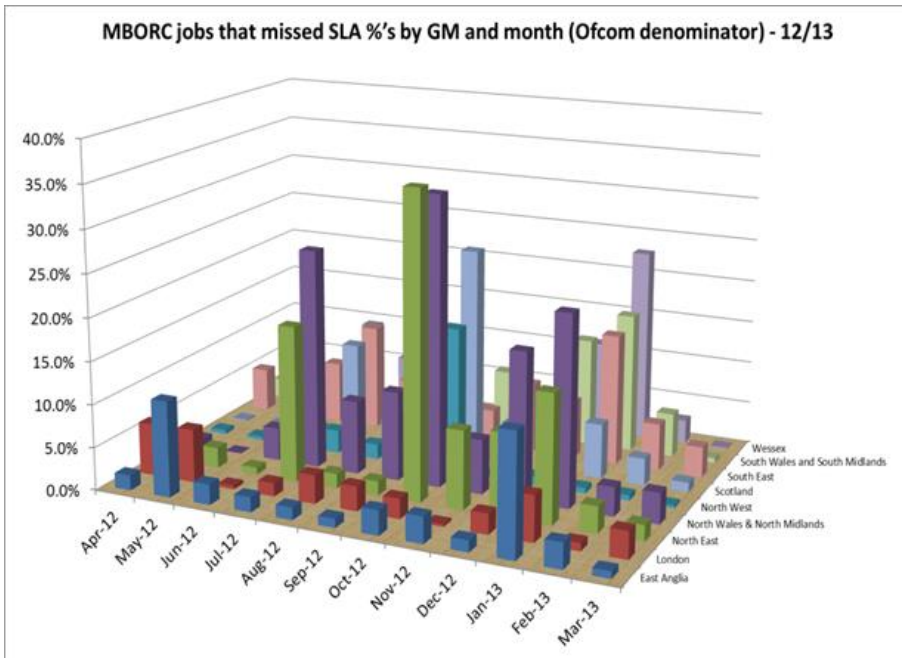
[16] Consultation, paragraph 3.29.

[17] Northern Ireland excluded from analysis on the basis that it is not directly comparable with the other regions due to relatively small size (composed of two SOM patches, whereas in GB the regions are made up of between five and eight SOM patches).Please see our response to Question 3.8 for the definition of the "Ofcom denominator."

107. Figure 3 below covers the incidence of repair jobs that missed the SLA and that were subject to MBORC declarations by GM area by month in 2012/13. What is clear from this data is that this measure is not only highly variable by region but also on a month by month basis within each region, also in a pattern that appears to be highly unpredictable.

***Figure 3: Percentage of repair jobs where the SLA was missed and that were subject to MBORC, by region by month 2012/13***

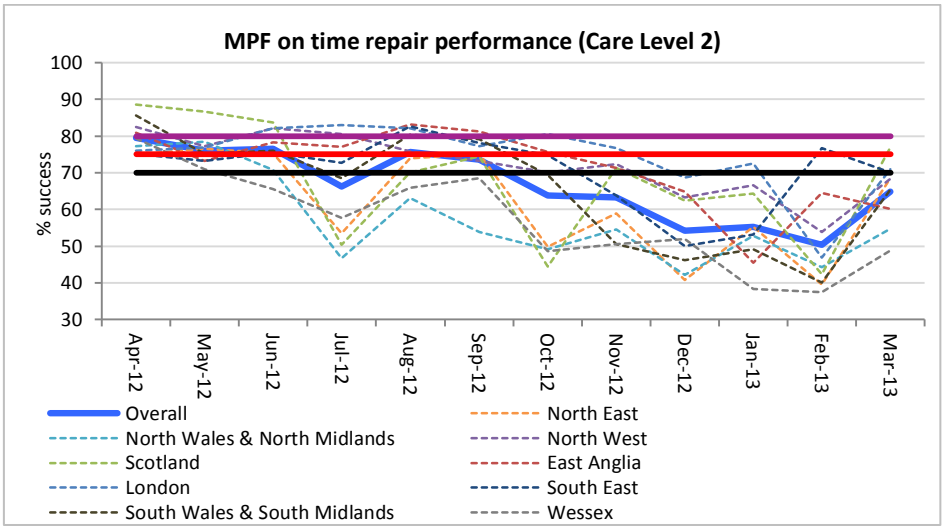



108. It is evident from this data that the percentage of jobs that miss the SLA and that are subject to MBORC can fluctuate wildly over short periods of time. For example, in the North Wales and North Midlands region, repair jobs that were affected by MBORC and that missed the SLA rose to over 34% in October 2012 before falling below 7% in the following month. It is also evident from the data that extreme spikes associated with the proportion of jobs missing their SLA that were subject to MBORCs are possible at any point during the year.

109. The data in Figure 2 and Figure 3 shows that measured on an annual, GM area basis, the percentage of jobs that missed the SLA and were subject to MBORC application were highly variable between regions and by month.

110. Figure 4 below shows Openreach's actual performance in 2012/13 by GM patch against the "on-time" repair SLA for MPF. This is the SLA on which Ofcom is proposing to base the repair minimum standard.

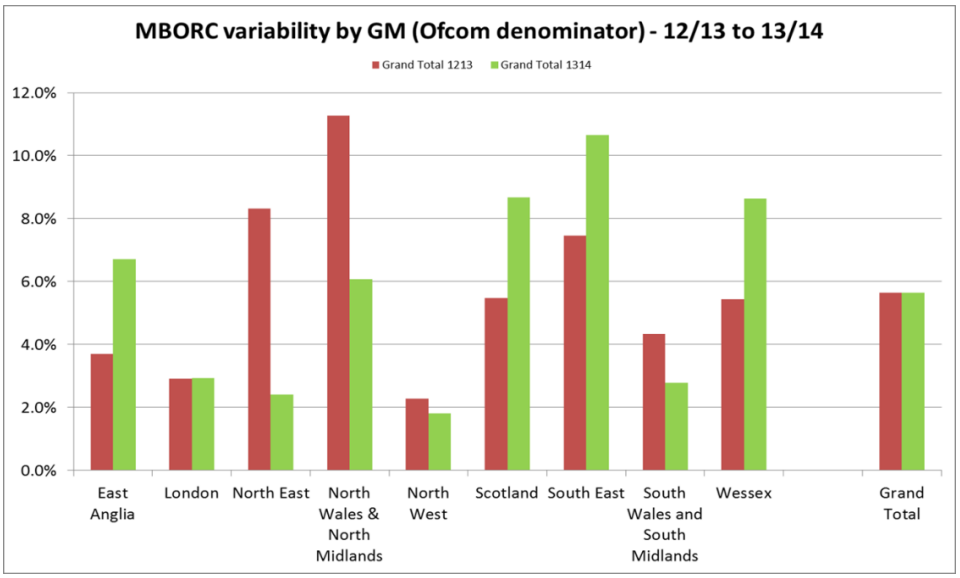
***Figure 4: MPF on time repair performance, by region 2012/13***




111. What is clear from this data is that performance against the SLA also varies significantly by region and over time. There is also a clear correlation between the level of regional jobs that missed the SLA and were subject to MBORC declarations and the actual performance against the repair on-time SLAs (see Figures 2 and 4). For example, there was a clear correlation between the lowest performing GM patches (Wessex, North Wales and North Midland, South Wales and South Midlands, North East and Scotland), and regions with relatively high levels of jobs that missed the SLA and were subject to MBORC declarations, while the decline in actual performance against SLA evident between October 2012 and January 2013 coincided with particularly high levels of jobs that missed the SLA and that were subject to MBORC declarations.

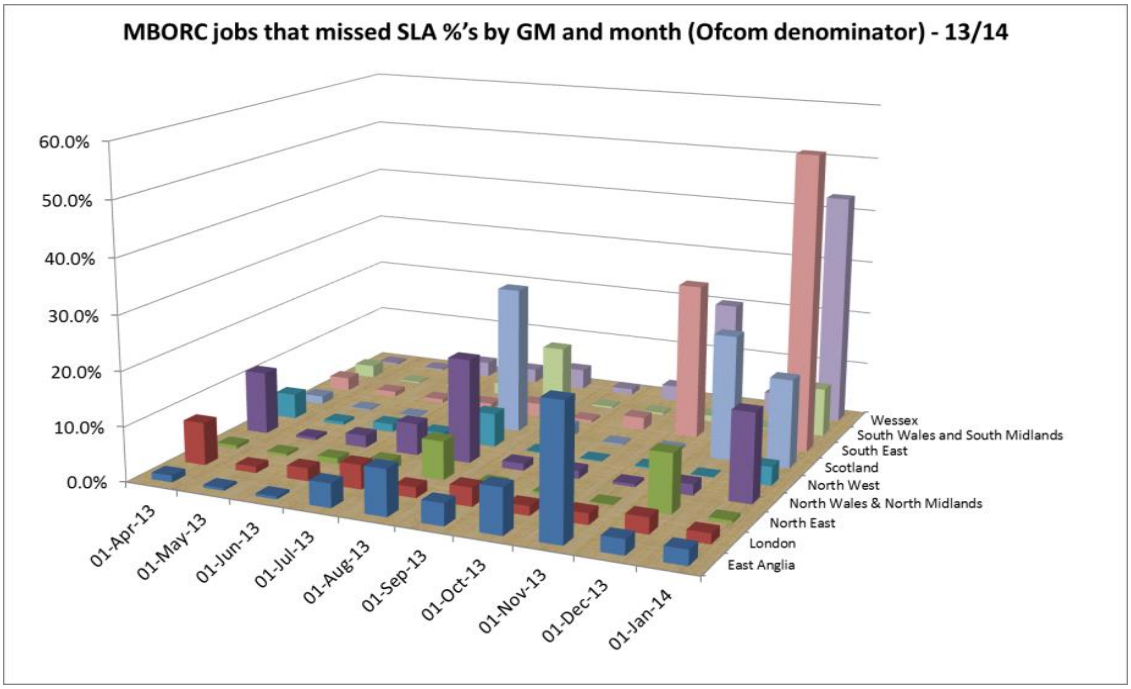
112. Furthermore, Figure 5 below also shows that, although the pattern of variability of the percentage of jobs that missed the SLA and were subject to MBORC declarations by GM area has continued into 2013/14 (the data covers the period April 2013 to part through January 2014 inclusive), what happened in 2012/13 is no indicator of what has happened since with significant year on year changes (up and down) evident in a number of GM areas.

***Figure 5 - percentage of repair jobs where the SLA was missed and that were subject to MBORC, by region - 2012/13 and 2013/14 YTD[18]***




113. The pattern of variability by region, by month has also continued into 2013/14 as shown in Figure 6 below where dramatic monthly spikes are apparent for example in January 2014 in Wessex and the South-East caused by the extreme weather conditions.

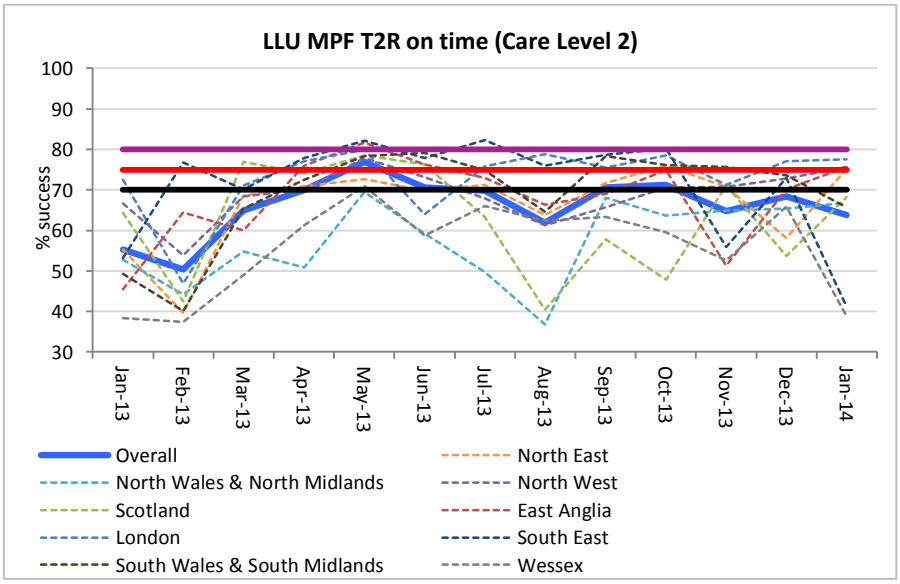
***Figure 6 – percentage repair jobs where the SLA was missed and that were subject to MBORC, by region by month 2013/14 YTD***




[18] 2013/14 includes the period April 2013 to part way through January 2014.

114. Figure 7 below also shows the significant impact of these weather events on the most affected regions, with performance against the MPF repair SLA in the same regions falling to 39% and 41% respectively in the same period.

***Figure 7 - performance against MPF on time repair SLA 2013/14***




**Other regional differences that impact Openreach's ability to deliver service**

115. The Openreach GM areas are quite varied in terms of size and population density, as well as the types of geography they cover and the associated degree of remoteness.

116. Just how "urban" or "rural" an area is can impact on Openreach service delivery by, for example, influencing the average travel times incurred in engineering tasks for repair and provision work due to varying degrees of population density and relative remoteness across different geo-types.

117. Openreach has conducted geo-type analysis across all Senior Operations Manager (SOM) areas, using the following geo-type classifications: Super-Urban, Urban, Sub-Urban, Sub-Urban to Rural and Rural. Figure 8 below shows how the GM regions are composed in terms of SOM patches and the matching of the latter to geo-types.

***Figure 8 - GM composition by SOM by Geo-type***

| | Number of SOM patches by Geotype | | | | | |
|---|---|---|---|---|---|---|
| | Rural | Sub-Urban to Rural | Sub-Urban | Urban | Super-Urban | Total |
| Scotland | 2 | 3 | 1 | | | 6 |
| North East | 1 | 2 | 2 | | | 5 |
| North West | 1 | | 4 | | | 5 |
| North Wales & North Midlands | 2 | 3 | 1 | | | 6 |
| South Wales & South Midlands | 1 | 6 | | | | 7 |
| Wessex | 2 | 6 | 1 | | | 9 |
| South East | | 2 | 3 | 1 | | 6 |
| London | | | 1 | 4 | 1 | 6 |
| East Anglia | 3 | 2 | 3 | | | 8 |
| **Total SOM Patches** | 12 | 24 | 16 | 5 | 1 | 58 |

118. Figure 9 below then shows that, taking the on-time repair SLA as an example, there is a correlation between SOM geo-type and actual performance, with performance decreasing the more rural the geo-type. This also suggests that GM regions that are "more rural" are likely, other things being equal, to be naturally more challenging from a service delivery perspective.

***Figure 9 - Grouped SOM performance by Geo-type performance versus on-time repair SLA[19]***

| | % on time | |
|---|---|---|
| | **Dec-13** | **13/14 (to date)** |
| Rural | 63% | 65% |
| Sub-Urban to Rural | 65% | 70% |
| Sub-Urban | 70% | 72% |
| Urban | 74% | 72% |
| Super-Urban | 75% | 75% |

119. As noted in our response to Question 3.1 above, some areas of the UK are excluded from some of the SLA arrangements on the basis that their remoteness introduces much greater challenges in delivering service[20]. Severe weather events can also have a disproportionate impact on more remote areas e.g. heavy snowfall in London would impact service, but not generally prevent engineering movement, where heavy snowfall in a remote area with few access roads could lead to days or weeks of service disruption if key communication arteries were closed. This is further evidence that material differences do exist between the GM regions that impact Openreach service delivery, and that these differences are essentially exogenous. In this context, it is important that the Ofcom minimum standard measurement and / or compliance regimes are able to accommodate such differences.

**Alternative proposals for Ofcom to consider**

120. In light of the above, Openreach strongly believes that if Ofcom continues with its regional proposals, then it also needs to find a way to recognise and accommodate the differences evident between the regions. In particular, Ofcom should take account of the sheer volatility / unpredictability of events occurring where MBORC is then declared, where it is quite possible that the impact of such events caused by factors exogenous to Openreach could itself lead to wide failure against minimum standards, even with provision of a general allowance for MBORC.

121. We set out below some options for Ofcom to consider.

**a) Options that exclude elements of MBORC from the measures**

122. An initial option that Ofcom could consider would be to have no pre-set MBORC allowance at all, with compliance against the minimum standard reflecting the actual MBORC declaration rate by region. In effect this would mean that the measurement of the minimum standard would exclude all jobs where the SLA had been missed and MBORC had been applied. This option would have the benefit of removing a largely exogenous and highly volatile factor from the measurement of the minimum standard, thereby providing a cleaner measure of underlying Openreach performance that is within its control. Further, Openreach believes that the incentives Ofcom suggests are

[19] WLR and MPF combined. Period covered: April 2013 to November 2013 inclusive.

[20] For example the provision FAD SLA does not apply to certain Scottish islands.

inherent within the MBORC allowance would not be undermined since Openreach already has much stronger incentives, such as reducing the cost of rising fault levels and having to switch resources away from revenue generating activities.

Capping local MBORC levels within the measure

123. A variant to this option would be to simply exclude from the minimum standard performance measurement any local spikes in the percentage of jobs where the SLA was missed and MBORC was applied due to, for example, extreme weather events. This would require setting an objective basis for excluding/defining a "spike". Our recommendation would be to align the exclusion criteria with a standard inherent within Ofcom's existing formula for creating the proposed MBORC allowance. The obvious measure is the percentage of jobs subject to MBORC where the SLA failed, measured on a monthly basis by region.

124. Having assessed the impact and variability of MBORC-affected SLA failures in 2012/13 and 2013/14 at a monthly and regional level; Openreach would suggest that capping the measure at 10% would be appropriate. This would mean that all the data from those months where the levels of MBORC affected SLA failures were in excess of 10% would not be counted as part of Ofcom's minimum standard compliance assessment for that measure (whether a regional or national measure is applied).

125. The assumptions used to derive 10% as a reasonable level (a) are based on actual data, excluding monthly levels above 10% and would broadly bring the GM regions in line with the (correct) national average level of c.6% (assuming the 5.6% national average proportion of jobs that failed their SLA due to MBORC rounded up)[21], (b) would still leave challenges for Openreach in terms of hitting regional targets and (c) would exclude from the measure months where the levels of spikes were due to exogenous factors and very clearly not driven by any conceivable deficiency on Openreach's part.[22]

126. This approach would balance the need to deal with the variability associated with MBORC, without disrupting the framework that Ofcom is proposing.

127. Crucially, this approach would also allow Openreach to assess performance/exclusions on a near "real-time" basis (month by month), and therefore have an opportunity to take reasonable steps to maximise the chances of achieving the minimum standards in all of the regions.

128. Because of these factors, Openreach considers that this is the most sensible option for Ofcom to explore.

**b) Options to introduce greater flexibility into the measurement system**

129. If Ofcom continues with regional standards, with a pre-set allowance for MBORC, then one approach it could take would be to introduce greater flexibility into the target measurement regime on an ex-ante basis in order to cater for the inevitable levels of variance between the regions, and to provide stakeholders with the certainty they require.

130. Assessing the historic levels of jobs where the SLA was missed and that were subject to MBORC at a regional level (as set out in detail above) shows that there is a standard deviation across the

[21] See our response to Question 3.8 below.

[22] Based on a cap of 10% and assuming a repair MBORC allowance of 6%, in practice in 2012/13, 26 out of 120 months would have been excluded from the minimum standard measure using this proposal.

regions of approximately 3%.This suggests that if targets are set at a regional level, then the 3% representing variance should be added as an allowance to the existing Ofcom proposal (i.e. 6% plus 3%). Note that the correct national figure for jobs that failed their SLA due to MBORC is 5.6% rather than the figure quoted by Ofcom.

131. However, even setting the allowance at 9% (the mean plus one standard deviation) would mean that, should the extreme weather events seen in 2012/13 occur again during the next 3 years (and 13/14 to date shows this is eminently possible) there would in all likelihood be at least one GM patch with a higher MBORC failure rate, that would be likely to result in failure against the target. Therefore, in addition to providing an additional regional allowance to cater for regional fluctuations, Ofcom should set the minimum standard such that either:

- Openreach is only in breach if more than one GM region misses the "80-9" target; or
- Introduce an additional "national average overlay" measure, with Openreach only in breach if it misses both the national "80-6" measure and more than 1 region misses its "80-9" measure; or
- Openreach is only in breach if (say) more than one GM region misses "80-9" or more than 3 regions fail "80-6"

132. Any steps to accommodate the greater flexibility needed in the measurement of the minimum standards should be set as part of ex-ante regulation rather than as part of an ex-post compliance investigation. In other words, Openreach should be clear on how it is to be measured against minimum standards, with appropriate flexibility either built into the measures or clear guidance provided by Ofcom in advance as to the circumstances in which it would apply flexibility in the context of any compliance investigation arising from a minimum standard not being achieved.

133. Such additional flexibility would not undermine Openreach's incentives to deliver service in excess the target levels, but would minimise the chances of Openreach failing targets due, effectively, to 'bad luck'. Without this flexibility failure is quite likely in any given year. This is the case even when, on a national basis, Openreach performance is equal to or above the target performance level i.e. the level to which Ofcom propose to fund Openreach to achieve.

134. Given the high degree of uncertainty (in terms of timing and degree of impact) associated with the causes of MBORC (which are not limited to weather related circumstances alone), along with the fact that the minimum standards will also be new, Openreach also suggests that the effectiveness of the process for measuring minimum standards is itself reviewed annually during the Control Period to ensure it remains fair and appropriate whilst fulfilling its objectives. This would also afford the opportunity to change the process if evidence in the early years of its operation suggested that improvements were needed.

135. Failure to take one or both of these steps effectively gives Openreach an uncapped risk where an SMP condition could be missed due to factors outside of Openreach's control, and where Openreach could only avoid breach by either spending significantly more than funded by the charge control or hoping for more favourable environmental conditions to prevail.

**Summary**

136. It is imperative that the minimum standards are not set in such a way as to lead to likely failure by Openreach due to factors outside of its control. We urge Ofcom to take account of the evidence set out in this response, which clearly demonstrates that unpredictable variations exist over time and between regions, and that such variations impact on Openreach's ability to deliver service.

137. Given the difficulties in predicting the timing and impact of the causes of MBORC, plus the additional difficulties that regional targets present, Openreach considers that Ofcom should also give careful consideration to the impact of missing any minimum target, however constructed. Openreach suggests that the known difficulties of a "bright line" approach to measuring compliance should be avoided, and that missing any minimum standard target should not constitute an automatic breach of an SMP condition. Rather, this should serve as the basis for a compliance investigation to enable Ofcom to understand the circumstances in which the minimum standard was not achieved.

**Question 3.4:** We have set out the details of our analysis in Annex 5. In light of this analysis, do you agree that the 2011/12 resource deltas from the Resource Simulation Model provide a reasonable basis to assess the resource and associated cost increments associated with minimum standards? Please provide reasoning for your answer.

138. In summary, Openreach believes that Ofcom should:

- use 2012/13 as the base year for calculating a cost uplift related to the proposed service standards;
- use a revised uplift of 15.3%, based on application of the EY modelling to 2012/13 base data;
- apply the uplift to all relevant cost components, including those representing costs for Network Investment and Service Management costs.
- recognise that, if modelling using 2011/12 base data is to be used (in our view, erroneously), the current indicative result of 3.9% is likely to be an under-estimate – with an uplift of 5% or more being more appropriate, even based on the more benign conditions that applied in that year.

139. Openreach welcomes Ofcom's support of the use of such modelling techniques to establish estimates of both (a) the uplift in costs which would be required (all else being equal) to raise service performance from a base case level to a specified higher level, and (b) the difference in costs between different scenarios where specific parameters are varied - such as proportions of different Care Level jobs.

140. As set out elsewhere in this response, Openreach strongly believes that Ofcom should base its charge control calculations on the most recent set of costs and associated information. This means that Ofcom should use 2012/13 costs and operational data.

141. Openreach disagrees with Ofcom that the 2011/12 model results are the correct estimate to use in the charge control calculation to estimate the appropriate uplift in costs to achieve the proposed minimum service performance levels. The 2012/13 model results are more robust and more appropriate to use.

142. Applying the model to 2012/13 base data gives a more robust and more appropriate estimate of required cost uplifts than is the case when considering the application of the model to 2011/12. 2012/13 reflects closely the actual conditions which impacted on Openreach operations during the more recent period, compared to the more benign environment during 2011/12. Applying the model to produce estimates of required cost uplift versus the 2012/13 baseline is more robust than

doing so against 2011/12 baseline (and hence Ofcom should use 2012/13 deltas as input to the charge control review).

143. Openreach does agree with Ofcom that one of the issues which differed significantly between 2011/12 and 2012/13 was the way in which backlogs of repair and provision work built up during the 2012/13 year – driven by the very different pattern of work volumes (caused in part by the particular adverse weather patterns during the year). Ofcom correctly observes that this issue impacts upon the way the 2012/13 model runs should be viewed.

144. However, Ofcom is incorrect in observing that the model did not cope well with this factor. The point to note here is that the accuracy of Openreach short term (weekly) forecasting of resource requirements and deployment is not a factor which is modelled. Rather, it is a factor exogenous to the model – i.e. the model results establish estimates of different resource profiles required for differenct service performance requirements, all else being equal – i.e. assuming that the ability to accurately forecast work volumes remains unchanged. In fact, during 2012/13, there were longer periods where repair volumes exceeded the resource applied – hence backlogs of work built up.

145. As can be seen from in Annex C, EY and Openreach have considered this issue, and identified a parameter within the existing model which can be varied, and which may be regarded as a proxy for the extent to which one would expect actual weekly work volumes to depart from planned resource deployment (i.e. short term resource forecasts). For the model runs using the 2012/13 base data this indicates a range of appropriate estimates for the cost uplift of between 15.3% and 20%, depending on the view taken on expected short term resource forecasting accuracy. Therefore, if one assumed that, for future years, the short term resource forecasts should be expected to be closer to actual levels than was the case during 2012/13, then the appropriate cost uplift derived from the model may be closer to the 15.3% estimate than to the unadjusted model result of 20%.

146. On this basis, we believe Ofcom should therefore uplift the relevant 2012/13 base year costs by 15.3%.

147. If Ofcom is to use model results derived from 2011/12 base data, Ofcom should note the factors which cause this to be less reliable – and would likely result in a significant under-estimate of future costs. The older base data will be a less good indicator of exogenous factors which change over time – for example, the reduced proportion of Care Level 2 jobs, reduced fault volumes and volatility during the year, the operational capabilities of workforce in light of jobs difficult to diagnose and fix, and intermittent faults affecting broadband-carrying lines.

148. Specifically, it should be noted that the baseline performance estimate for this result has been derived as indicative numbers (79% for repair, c. 65% for provision FAD) against the notional assumption that there was a provision FAD of 13 days in place. In fact, during 2011/12, there was no such provision FAD SLA target in place. Therefore, the 3.9% model result should be regarded as indicative only. In fact, if hypothetically there had been a provision FAD SLA in place during the year, it is likely that from time to time during the year, this would have resulted in a greater frequency of occasions where Openreach would have moved resource between repair and provision to address hotspots. Even though it would be normal to prioritise repair work over provision, over a period of a year it is likely that there would also have been localised prioritisation decisions in both directions. This would likely have resulted in a lower repair performance than the 79% measured figure. EY have analysed the sensitivity of the model to varying the assumed 2011/12 repair baseline performance and show that this could be expected to raise the 3.9% cost uplift by up to approximately 1.2%. Therefore Ofcom should regard 3.9% as very much a "low-end"

indicative estimate of the relevant cost uplift, and a figure closer to c. 5% or higher should be considered.

149. Ofcom has proposed only uplifting certain cost components with the modelled result – and these do not include costs incurred in the Service Management functions. Ofcom should note that any increase in Service Delivery activity will result in consequent additional requirements in the service management centres. These service management centres carry out active job/fault control and the level of this activity will increase as more short term deadlines are targeted and more manual intervention is required. It is straightforward to apply the resource deltas to the Service Management functions as the costs are contained in 4 specific cost components. The cost components are 'OR Service Centre Assurance LLU', 'OR Service Centre Assurance WLR', 'OR Service Centre Provision LLU' and 'OR Service Centre Provision WLR'. These 4 additional cost components should have resource deltas applied in line with the deltas already applied to the other 8 cost components.

150. Ofcom has also chosen not to apply the uplift to the Network Investment activity that sits within the 5 repair and 3 provision cost components. Network Investment resource is required for the more complex provision and repair work where, for example, specialised equipment is needed. The same type of constraints and drivers will apply to this resource, because as the service performance level is required to increase there will be higher peaks in demand for Network Investment resource. Therefore, it is reasonable to assume that the same resource deltas are required. At present the resource uplift is calculated by analysing the cost incurred by just the Service Delivery units for the 5 repair and 3 provision cost components. It would be appropriate, and simple, for Ofcom to extend this analysis to also include the costs incurred by the Network Investment units within those same 8 cost components.

151. A number of the other reservations expressed by Ofcom and by Analysys Mason regarding the Resource Simulation Model are not well founded. In Annex C to this response, EY sets out further explanation of a number of the detailed points made in the Consultation document – for example related to technical issues such as usage of gamma distributions, and quantification of "glass ceiling" impacts. It can be seen that these concerns either would not lead to significant changes in model results, or in some cases are unfounded.

**Question 3.5:** Do you consider whether it is appropriate to take account of the difference in the resource levels between 2011/12 and 2012/13 in setting the final resource multiple to account for the more challenging conditions in 2012/13? Please provide reasoning for your answer.

152. Ofcom should use the latest available cost and other information to set the new charge controls. It is inappropriate for Ofcom to use 2011/12 information to set controls which will apply through to 2016/17. As set out in detail elsewhere in this document, the conditions impacting Openreach performance were considerably more benign in 2011/12 than in 2012/13 (and 2013/14 so far). Many factors which govern costs and service have changed and continue to change significantly, including product volumes (with the shift from WLR to MPF driving an increase in next-day repair jobs) and challenging weather conditions – as we set out elsewhere (see the responses to Questions 5.1 to 5.3 in particular), 2011/12 was an atypically dry year.

**Question 3.6:** Do you agree that the existing MBORC statistics form a reasonable basis for inclusion in the minimum standards? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

153. See response to Question 3.8 below.

**Question 3.7:** Do you agree that it is appropriate to base the repair MBORC allowance on the statistics for 2012/13? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

154. See response to Question 3.8 below

**Question 3.8:** Do you agree that it is appropriate to use 3% as the faults MBORC allowance and 1% as the provisioning MBORC allowance? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

155. Openreach understands the methodology used by Ofcom to calculate the repair MBORC allowance. However, we also consider that this methodology has been incorrectly applied; using the method set out by Ofcom with the right data inputs means the level should actually be set at 5 to 6% rather than 3%[23]. As set out in our response to Question 3.3 above we also believe that if Ofcom continues with its current minimum standards proposals, then further MBORC allowance or exclusion of MBORC (either whole or in part) from the measurement may be required in order to cater for the inherent variability that exists between the regions. We agree with the approach taken by Ofcom in setting a "cautionary" provision MBORC allowance of 1%.

156. As set out above, it is near impossible to forecast the future incidence of MBORC declarations. This is evident even at a national level, with any given year being no clear guide to what will happen the following year. The degree of variation and unpredictability is further amplified at regional and monthly levels.

157. The root causes of MBORC declarations (such as, but not limited to, extreme weather, criminal damage, and health and safety concerns for example) are exogenous, and their impact cannot be mitigated purely through Openreach activity. We note that Ofcom aims for the MBORC allowance to contain inherent "incentives" for Openreach to reduce the impact of MBORC, but it has not been specified how / if this could be achieved, to what extent, or if such an incentive exists independent of the existing strong incentives Openreach has to take the steps it can to reduce, for example, the rising costs of repair.

158. Openreach already take steps to minimise the unwanted impacts caused by e.g. the weather and criminal activity where such steps are economically rational. For example, there is an ongoing programme of work to improve local network joints that are particularly prone to faults. It would not be reasonable to expect Openreach to engage in remedial work where the impacts of exogenous factors cannot be accurately forecast, or where the "remedy" is uneconomic. For example, the impact of the current flooding affecting large areas of Southern England (see Annex A to this

[23] 5% if Ofcom uses Openreach's recommendations on fault clear codes, 6% if Ofcom continues to use the clear codes as set out in the CSMG report.

response for a detailed case study relating to the Wessex region) could not be mitigated by Openreach without completely uneconomic levels of investment.

159. In this context Ofcom's existing proposal is to an extent a "bet" based on historic performance that may or may not be correct and where the result, for example, could be determined by the weather conditions in the compliance years.

160. As set out in response to Question 3.3, above, Openreach believes that Ofcom should explore options to either remove the application / measurement of MBORC entirely from the assessment of minimum standards, or to ensure that the measurement / compliance regimes attached to the minimum standards are sufficiently flexible to account for MBORC's inherent unpredictability.

161. In order to properly assess MBORC, Ofcom therefore needs to take account not only of what levels of jobs that missed the SLA and were subject to MBORC existed at a national level in recent years, but also to note the patterns that are apparent at the GM regional levels, on a month by month basis, and also to assess the relationship between MBORC and the difference in Openreach performance regionally against the relevant SLAs.

162. Conducting this more detailed assessment of recent jobs that missed the SLA and were subject to MBORC will not provide a reliable guide as to what the levels against the same measure will be during the years of the Control Period, but will highlight the degree of variation and unpredictability that exist and which would need to be explicitly accommodated on an ex-ante basis within the measurement and / or compliance regime.

**Use of 2012/13 data to set the repair MBORC allowance**

163. Openreach shares Ofcom's concern relating to the risk of underestimating the resources required to deliver service to target levels during more difficult years.[24] On this basis, it is sensible for Ofcom to formulate its proposed MBORC allowance via reference to 2012/13 as opposed to 2011/12.

164. However, as previously noted, it is very difficult to say whether 2012/13 will be an accurate guide to the level of MBORC application in future (albeit 2013/14 is also proving to be a year of high MBORC levels with significant regional and monthly variation), and so its use to suggest an overall allowance should be treated with some caution. In particular, Ofcom should also take account of the more detailed information set out by Openreach in its response to Question 3.3 above in order to inform how the minimum standard measurement / compliance mechanisms are specified to account for the variability that is apparent at a regional level.

165. However, if Ofcom is minded to continue with an MBORC allowance, it is right for it to use the MBORC levels from the more demanding of the years for which data is available (i.e. 2012/13). The purpose of Ofcom identifying an MBORC allowance is to some degree to identify a "worst case" allowance to reflect that the effects of for example, severe weather (or other exogenous effects) in any given year may be greater in volume than any given historic reference point.

166. Therefore, Ofcom should identify the highest volumes of MBORC failures from available previous data or other benchmarks, and <u>then</u> either consider how much this allowance should be inflated to give a reasonable "worst case" scenario or what extra measures need to be taken to deal with the uncertainty inherent within MBORC.

[24] Consultation, paragraph 3.75.

**Levels of MBORC allowance - Repair**

167. As set out above, Openreach considers that if Ofcom maintains regional standards, those standards need to appropriately reflect the variances evident between regions, particularly in terms of the incidence of jobs that missed the SLA and that were subject to MBORC application, either by including additional flexibility or by providing a greater MBORC allowance than suggested by 2012/13 in order to give balance to the uncapped risk otherwise borne solely by Openreach.

168. Openreach also believes that the current Ofcom calculation of 3% needs to be amended to take account of more accurate recent information, as set out below, and that when this is done; the appropriate allowance is between 5.2% and 5.6%. Openreach understands that Ofcom arrived at the 3% MBORC repair allowance in the following way: Ofcom has proposed to set the MBORC repair allowance at the percentage of repair jobs in 2012/13 that were subject to MBORC and that missed the SLA. To calculate this Ofcom took 135,128[25] to be the total number of repair jobs affected by MBORC (whether this led to the SLA being breached or not), and assessed this number to be 3.8% of the total relevant faults in 2012/13. Ofcom then multiplied 3.8% by 66.7% (the latter being the percentage of faults affected by MBORC in 2012/13 where the SLA was missed) to produce a figure 2.5%, which was then rounded up to 3%.

169. Having done further analysis on the percentage of repair jobs that missed the SLA and were subject to MBORC in 2012/13, Openreach believes that Ofcom's calculation needs to be amended. Specifically, the 135,128 number supplied by Ofcom as set out above was not the total number of repair jobs affected by MBORC that Ofcom believed it to be. Rather, it was actually the total number of repair jobs affected by MBORC that had also missed their SLA (i.e. the final number sought by Ofcom to calculate the proposed MBORC allowance) covering the period March 2012 and March 2013. Openreach re-ran this number for the period 1 April 2012 to 31 March 2013 inclusive (i.e. a precise alignment with 2012/13), being careful to ensure that the number only included faults against relevant products (MPF and WLR Analogue), and only included non-chargeable faults (e.g. excluded all SFI etc.) This number is 133,097, described below as the "numerator". To work out the MBORC allowance using the Ofcom formula, Openreach then sets out the denominator, where the denominator was the total number of faults that would be included in the charge control for the relevant products in 2012/13. There is disagreement between Openreach and Ofcom on this point (see our comments in relation to faults in our response to Questions 5.1 to 5.3 below) and so we have included two potential denominators here: the "Ofcom denominator" which is our assessment based on available information on level of faults Ofcom would include for 2012/13 in the charge controls, based on its current approach. The "Openreach denominator" is conversely the number of total faults Openreach believes should be used for any charge control assessment in 2012/13.

170. Based on this approach using the Ofcom denominator the result is 5.6% (133,097 divided by 2,356,122), and the result using the Openreach denominator is 5.2% (133,097 divided by 2,538,680).

171. The further work conducted by Openreach also raises questions in respect of the denominator being used by Ofcom in the Consultation, where Ofcom indicates that 135,128 is 3.8% of total faults, thereby suggesting a total fault denominator (population in 2012/13) of around 4.8m. This number appears (based on available information) to be far too high, and needs to be revised downwards or explained in more detail by Ofcom. For clarity, Openreach's view on the right fault denominator to be used for the purposes of calculating the MBORC allowance is that it should align

[25] As provided by Openreach at the Copper Products Commercial Group (CPCG) in May 2013.

with the final approach taken in assessing the level of faults allowed within the charge controls. To note where Openreach has assessed that the repair MBORC allowance should be 5.6% based on the 'Ofcom denominator' it has used the CSMG assessment of fault levels in 2012/13 as a proxy for the Ofcom denominator.

**Levels of MBORC allowance - Provision**

172. As noted by Ofcom, it is difficult to assess an appropriate MBORC allowance for provision given the lack of historic information available. It is, however, right for Ofcom to be cautious, noting that as with repair, previous years may not be an accurate guide to future levels of provision related MBORC. For instance, since Ofcom issued the Consultation, there have been a number of FAD times when MBORC has been specifically applied to the FAD provision SLA because of the sheer severity / impact of recent weather events / flooding and the need to tap into future provision resources in order to get the repair workstack to acceptable levels in an acceptable period of time.

173. In this context it is therefore right for Ofcom to set a cautionary MBORC allowance for provision but also to recognise that this may also (as with repair), need to be re-evaluated in future, probably on an annual basis. Based on the available evidence, a 1% allowance should be seen as a reasonable bottom end / starting point for any such allowance, given that historically the incidence of provision MBORCs has been significantly lower than repair MBORCs. As set out above, any such measure needs to be amended to include a suitable mechanism to allow for unpredictable variability in matters outside of Openreach control – i.e. eliminate specific months of data where very high MBORC volumes are experienced, and/or eliminate the lowest performing region(s) from the overall success criteria.

**Question 3.9:** Do you agree with the minimum standards we have proposed for the third year? Please provide reasoning for your answer.

174. Openreach agrees with Ofcom's proposal in relation to the "on-time" provision minimum standard, but considers that the 2016/17 80% targets (pre-MBORC allowance) for the "on-time" repair and provision FAD minimum standards will not be consistently achievable across the regions within the current funding arrangements. In particular we are concerned that Ofcom's proposals tend to underestimate the challenges (and costs) associated with consistently achieving such levels.

175. Openreach notes that Ofcom is currently proposing to introduce a very large number (60) of new minimum standards targets all of which Openreach will be required to hit on an annual basis (2 products x 3 minimum standards x 10 regions).

176. For Openreach to achieve these standards <u>consistently</u> will require it to resource to a plan to hit levels well above those stated in the headline numbers – particularly given the inevitability of un-forecast (and potentially unrecoverable) incidents during the year, and due to the extra cost and variability that is apparent at a regional level, as set out in more detail in our responses to Question 3.3 above.

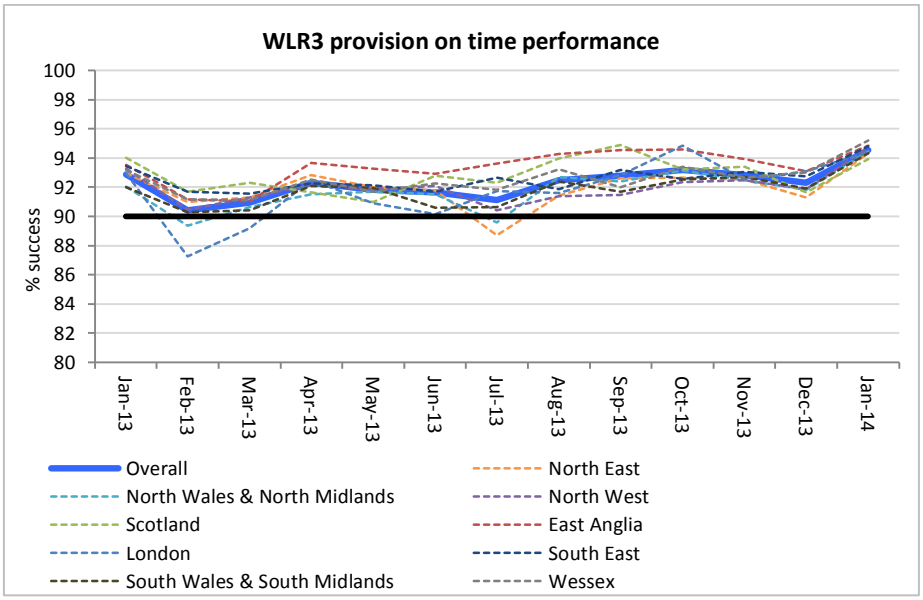
177. Openreach believes that the Ofcom proposals relating to the provision FAD minimum standard and the repair on-time minimum standard do not take sufficient account of the challenges created by glass ceiling effects, regional targets, the impact of CP behaviour and in the case of the repair minimum standard, the increasing challenge posed by the growth of MPF at Care Level 2 within the product mix. In consequence Ofcom has set year 3 targets that are likely within the current funding proposals to be unachievable on a <u>consistent</u> basis.

178. Openreach makes further comments that are specific to the respective minimum standards below.

**On time provision minimum standard**

179. Openreach agrees with Ofcom's proposals relating to the "on-time" provision SLA. Against this particular minimum standard there is a historic track record of sustained high performance, with relatively consistent performance also evident at a regional level (see Figure 10 below). Given this, it is sensible and proportionate to set the standards flat and high (90%) across the Control Period.

***Figure 10 - Performance against provision on-time SLA (WLR3)***




**Appointment availability minimum standard**

180. Given that the FAD SLA was only introduced in January 2012, there is a lack of historic information relating to Openreach performance against the SLA. A third year target of 80% does, however, represent the most aggressive increase in any of the targets over the Control Period.

181. Openreach performance against the FAD minimum standard will also be impacted by a number of factors including glass ceiling effects associated with, for example complex provision jobs along with CP forecasting accuracy (as outlined in more detail in our response to Question 3.1 above).

182. The FAD SLA only covers provision orders where an Openreach engineering visit is required and because of this, performance against the minimum standard will also be significantly impacted by the degree of local causes of the application of MBORC, and during times when fault levels are very high (when resources may be prioritised in favour of repair work).

183. It is well established (and widely accepted) industry practice that during periods of very high fault intake (which have been unfortunately frequent in recent times principally because of severe weather) Openreach prioritises its engineering resources on dealing with repair over provision until such a time as the repair levels have been brought back to "acceptable" levels. Although Openreach will always aim to deliver good provision and repair service simultaneously, in circumstances where prioritisation is needed we consider that doing it this way is common sense from a consumer protection perspective in that customers that have no service at all will typically be more negatively impacted than customers who are awaiting the provision of a new service (but in many cases will already have existing services). When such prioritisation is used, the provision

lead times will naturally extend as resource is diverted to conduct repair work. The fluctuation in performance evident in the provision FAD SLA is in part driven by the impacts of high fault rates and subsequent prioritisation.

184. Openreach's performance against the FAD minimum standard is therefore (absent considerably greater levels of engineering resources) inevitably subject to spikes in fault levels which are not predictable. These facts introduce a further impediment to consistently hitting this particular standard.

185. As shown in Figure 10 above, the performance against the FAD SLA has fallen during times of high fault intake / high incidence of repair jobs that missed their SLA and were subject to MBORC.

186. In addition, it is particularly important that Ofcom's minimum standard construct acknowledges the requirement for accurate CP demand forecasts in line with the terms of the SLA. If this is not done, there is a clear danger that Openreach could fail the FAD minimum standard because of inaccurate CP forecasting whilst simultaneously not paying out SLGs in line within the terms of the SLA. Circumstances where Openreach carries all potential downside risk cannot be right and should be acknowledged and accounted for by Ofcom. This could entail including within the target measurement and / or compliance regime an appropriate ex-ante mechanism to cater for inaccurate forecasting.

187. For example, the measurement of minimum standard performance could exclude periods where CP under-forecasting had led to impaired Openreach performance.

**On time repair minimum standard**

188. Openreach does not agree with Ofcom's current proposal relating to the repair "on-time" minimum standard, where a target of 80% (excluding any MBORC allowance) is proposed unless there are changes to Ofcom's current funding proposals.

189. Openreach considers that this target is around 5% too high given current funding arrangements, and that in its formulation of the year three target Ofcom has not taken sufficient account of (a) the rising fault levels that should be accounted for in the charge controls and (b) the impact of rising MPF and in consequence a greater percentage of repair jobs needing to be cleared by end of next working day. It is not reasonable to assume that a mass-market SLA of end of next working day will be as straightforward to achieve as an SLA that is one day longer than this.

190. The current year 3 target also does not take account of how CP behaviour can impact upon Openreach's ability to clear repair work within the SLA. For example, some CPs submit significant bulk batches of their faults into Openreach right at the end of the window available to them (i.e. midnight). Although technically within the terms of the existing contract, we do not consider that this behaviour is either fair or reasonable as it places a (quite avoidable) extra burden on Openreach in meeting the SLA.

191. Deloitte analysed these issues and found that when orders with fault tickets were sent into Openreach in the later 6pm to midnight slot, they were 22% more likely to miss the SLA than those sent through in the earliest slot (between midnight and 7am). Deloitte also found that this was a growing issue, with the percentage of faults submitted in the later slot growing by 19% between quarter 3 in 2011/12 and quarter 1 in 2013/14.[26]

[26] Deloitte report: Openreach Fault Data. Data Analysis. Pages 20-21.

192. Given that CPs could take steps to smooth their submission of fault tickets into Openreach, we believe that Ofcom should incentivise this either by reducing the year 3 repair target by an appropriate amount to cater for unnecessary "late" fault placement and / or by making the current proposed target contingent on a change in the pattern of fault placement to a smoother distribution over time.

193. These issues are placing an increasing pressure on Openreach and are principally caused by factors outside of Openreach's control. Openreach believes that these issues, along with the increasing toughness of the wider repair "context" driven by rising fault rates and a more challenging product mix, should be accounted for in the setting of the year 3 targets on the basis that they will constrain the performance levels that can reasonably be achieved within existing funding arrangements.

194. As noted above, the minimum standards also need to take account of the fact that very real differences at the GM regional levels, such as the level of MBORC application, will also lead to varying degrees of difficulty in hitting regional targets. This means that the absolute targets either need to be set lower to account for the greater difficulty in hitting sub-national targets and / or other steps should be put in place to provide greater flexibility to account for uncontrollable regional variability.

**Providing appropriate funding for the specified target achievement**

195. Openreach considers that Ofcom is currently underestimating the additional costs associated with delivering 80% performance against SLA for the provision FAD and repair on time minimum standards.

196. Specifically, and as set out in more detail in our answer to Question 3.4, Openreach is concerned that Ofcom's assessment of a 3.9% cost uplift is incorrect in that (a) the uplift is based on the wrong base year – using 2011/12 instead of 2012/13; and (b) using the correct base year (12/13), the actual uplift that is evident is 15.3%

197. We are also concerned, as set out in more detail in our answer to Question 3.4, that Ofcom has also underestimated the cost differential between Care Level 1 and Care Level 2, where Ofcom estimates a 14.1% cost uplift and we believe that a 23% differential is appropriate.

**Question 3.10:** Do you agree with the range we have identified for the minimum standard in the first year and our proposed recommendation within that range? Please provide reasoning for your answer.

198. Openreach believes that the minimum standards for the first year should be set at the bottom of the Ofcom range (i.e. in alignment with the actual performance delivered in 2012/13), rather than the proposed mid-point. Despite investing heavily in engineering since 2012/13 and delivering a step change in its operational capacity to do provision and repair work in the same period, Openreach's actual performance against the minimum standards in 2013/14 offers clear evidence as to the difficulty in hitting regional targets consistently.

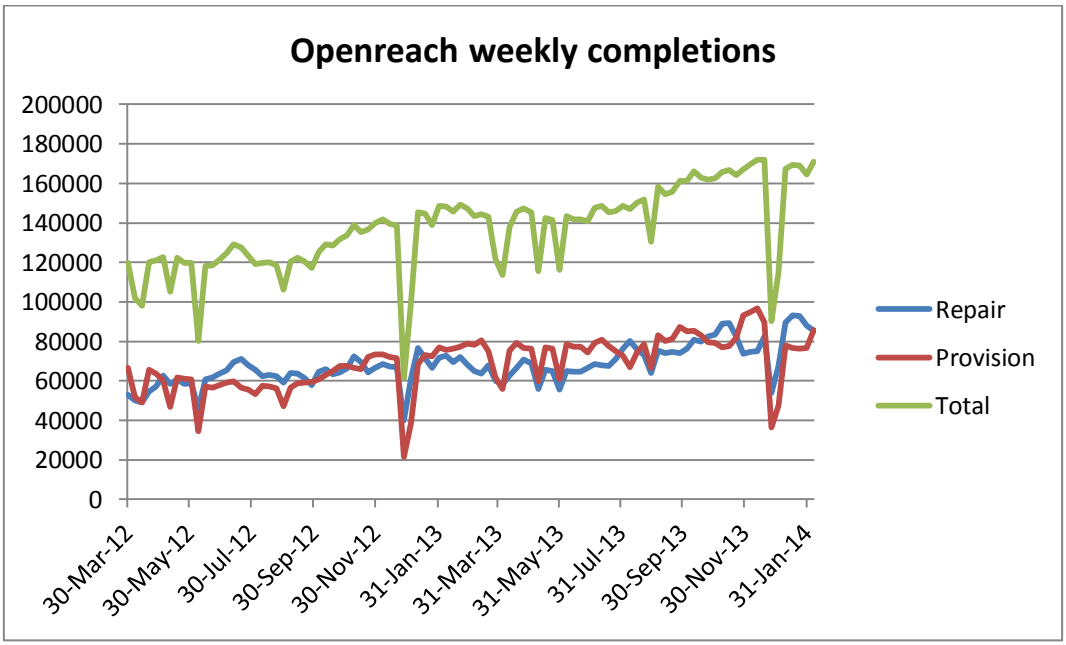
199. Given that Ofcom is proposing to introduce 60 new measures per annum for Openreach will be required to comply with above and beyond its existing obligations, it is right that for the provision FAD and on-time repair minimum standards Ofcom should implement "transitional" arrangements in the first years of the Control Period that allow Openreach to make the necessary changes required to meet such a large set of additional targets.

200. Openreach supports Ofcom's proposals in respect of the on-time provision minimum standard, but believes it would be more appropriate for the FAD provision and on-time repair minimum standards to be set at the levels achieved in 2012/13 (i.e. at the lower end of the range currently proposed by Ofcom).

201. In terms of severe weather and increasing fault rates, 2013/14 has (to date) been far more similar to 2012/13 than 2011/12. Since 2012/13, Openreach has invested significantly in its engineering workforce, and has also through this process delivered a step change in the engineering organisation's capacity for completing work.

202. Figure 11 below shows that since April 2012 by increasing the levels of engineering resource through process improvements, Openreach has increased its engineering capacity to do work (measured in terms of weekly "completions"). For example, in absolute terms Openreach's weekly level of completions (in essence a measure of the engineering force's capacity for doing provision and repair work) has increased by over 40% between April 2013 and February 2014.

***Figure 11 – Total Openreach Weekly Completions***




203. In this context of significant investment and improvement, it is instructive to assess how Openreach would have performed against the provision FAD and repair on-time minimum standards proposed by Ofcom had those standards been in place in 2013/14.

204. Figures 12 to 14 below show the actual performance achieved by Openreach during calendar year 2013 against the provision FAD and repair on-time SLAs. As a whole they show a pattern of significant variability over time and by region. There is also a correlation between falling performance across the measures and the increase of fault rates (arising, for example from severe weather).

***Figure 12 – MPF Repair on-time performance 2013/14 to date***

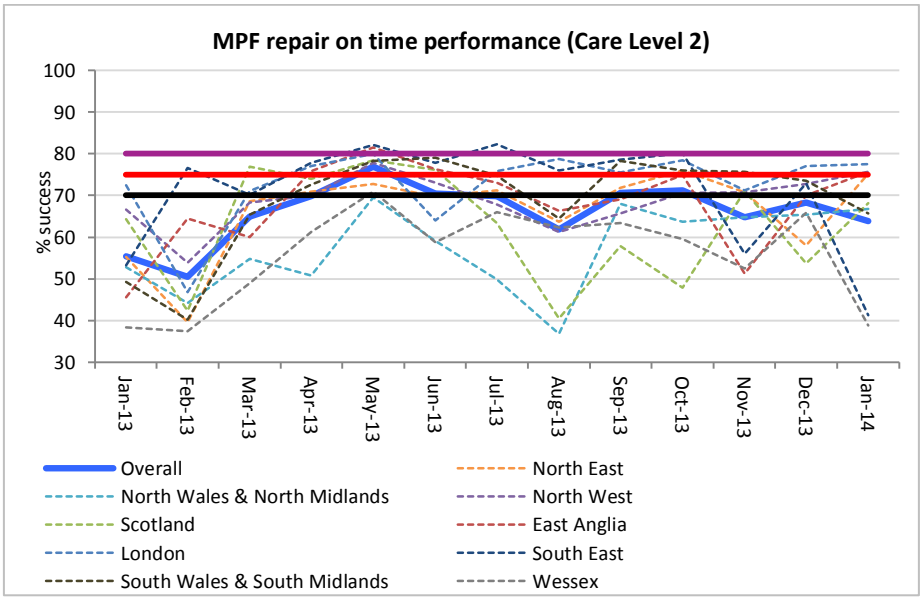



***Figure 13 - WLR3 repair on time performance 2013/14 to date***

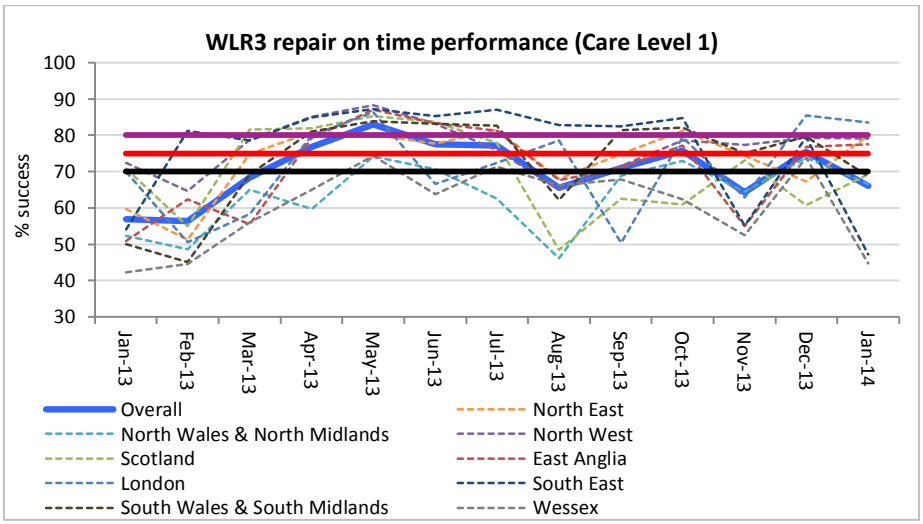
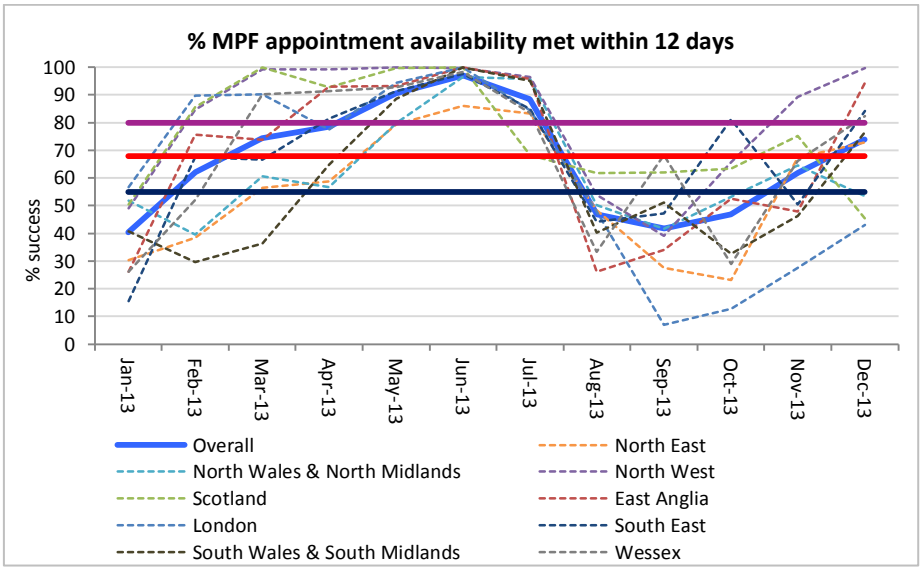


***Figure 14 – provision FAD performance 2013/14 to date***




205. Figures 12 and 13 above show some dramatic swings in performance by region over the year, particularly in areas that have been most affected by severe weather and other causes of MBORC declaration. For example, in Wessex and the South East performance against the on-time repair SLA fell to 39% and 41% respectively in January 2014. In the same period, both regions suffered spikes associated with jobs missing their SLA that were subject to MBORC (see Figure 6 above) due to the relentless severe weather and flooding.

206. For the appointment availability minimum standard the dip in performance apparent in August 2013, for example, coincided with periods of high fault intake and the need to divert engineering resources.

207. Plotting the low end, midpoint and top end of Ofcom's current year 1 minimum standard target proposals would have led to the hypothetical results in 2013/14.

***Figure 15 - Openreach hypothetical performance against minimum standards 2013/14***

| Minimum standard | Target at low end of Ofcom range | Target at midpoint of Ofcom range | Target at top end of Ofcom range |
|---|---|---|---|
| On time repair | Target missed in 2 regions for MPF | Target missed in 2 regions for WLR and 3 regions for MPF | Target missed in 6 regions for WLR and 9 regions for MPF |
| FAD | | | Target missed in 4 regions for WLR and 4 regions for MPF |

208. Given that Openreach has made significant recent investments in its engineering force (as set out above), and that Openreach's copper service performance has been widely acknowledged to have been much improved for large portions of 2013/14, these results highlight, particularly in the case of repair performance (and within repair, particularly in the case of Care Level 2 performance) the difficulty in hitting minimum standards across multiple regions in the context of a difficult repair environment (principally driven by continued extreme weather in large areas of the country in

2013/14), and where regional variation of performance is also apparent, as is the link between performance and the incidence of MBORC.

209. The distribution of the hypothetical results (as set out in Figure 15 above) against the low, mid and top of Ofcom's proposed year 1 range also emphasises (as acknowledged by Ofcom)[27] that Openreach needs to be given time to adjust to the requirements of the minimum standards, and that setting year 1 targets at anywhere other than the bottom of the proposed range would effectively ignore this important principle.

210. In view of these factors, Openreach strongly suggests that Ofcom adopt the lower end of its range as an appropriate year 1 target, and / or that the existing year 1 mid-point proposals are combined with other changes to better accommodate the flexibility needed given the challenges arising from the regional nature of the targets (see our response to Question 3.3 above). Taking the high end of the range as the year 1 target will inevitably result in failure to hit the targets due to exogenous factors and providing Openreach insufficient time to develop its capability to successfully deliver against the minimum standards.

**Question 3.11:** Do you agree with the proposed glide path? Please provide reasoning for your answer.

211. It is difficult at this stage to assess what an appropriate minimum standard glide-path should be.

212. The uncertainty associated with how minimum standards will operate, or how unpredictable factors such as those which may give rise to MBORC declarations will impact on Openreach's ability to comply with minimum standards at a regional level, both suggest that Ofcom should at this stage take a simple approach to setting the year 2 targets but also retain the ability to make changes if learning after year 1 suggests that a different approach is warranted.

213. In this respect, Openreach considers that Ofcom's current glide path proposals are sensible in terms of a straight-line from year 1 to year 3 (albeit we disagree with the level of targets in these years), but also believes that the proposals should be subject to review (along with other aspects of the minimum standards) after more is known based on the standards being in operation for a suitable period. For example, a general review of the year 2 standards could be considered towards the end of the first compliance year.

**Question 3.12:** Do you agree with our analysis of the risks of unintended consequences in the setting of the minimum standards and our proposed approach to addressing the risk, including the use of new (TAILS) KPIs? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

214. Although Openreach recognises the hypothetical unintended consequences as set out by Ofcom, we do not agree that the principal unintended consequence in the setting of the minimum standards relates to tails performance.

215. In particular, Openreach notes that it already reports to stakeholders including CPs and Ofcom on tails performance (i.e. transparency already exists and is provided on a voluntary basis), that Openreach habitually targets tail reduction during times when this is required, and that aside from

[27] Consultation, paragraph 3.107.

the increased SLG payments that extended tails would bring, there is also an existing (and significant) reputational impact associated with customers either being without service or waiting for service for unacceptable periods of time. These incentives to improve tails performance will remain after the introduction of minimum standards.

216. Further, and as noted above in our response to Question 3.3, Openreach considers that the minimum standards as they are currently proposed could lead to a number of other unintended consequences which Ofcom should also guard against, including:

- Rigid regional targets leading to failure against the target in instances of high local MBORC circumstances or inviting inefficient (and excess) levels of investment by Openreach purely to hit the minimum standard. The mitigation to this could be via lower targets, or greater flexibility in the measurement or compliance schemes; and

- Openreach performance against the provision FAD minimum standard being undermined by inaccurate forecasting (particularly under-forecasts). The mitigation to this is via better alignment between the SLA and the minimum standards.

217. In summary, Openreach therefore recommends to Ofcom that while it is right to guard against unintended consequences, particularly with a form of regulation that has not been tested previously, there are more potential unintended consequences than those identified by Ofcom, and that, as set out above, measures can and should be taken to mitigate the other unintended consequences risks identified.

**Question 3.13:** Do you agree with the set of (TAILS) KPIs proposed? Is it sufficient that they are national rather than regional? Do you agree they should be publically available? Please provide reasoning for your answer. If you do not agree, please also give your proposed alternative.

218. Ofcom's request that we should propose, on a voluntary basis, a set of performance targets (above and beyond the existing KPIs) for WLR and MPF tails. We are currently in the process of finalising proposed targets, and will provide these to Ofcom (and industry, as appropriate) in due course. Discussion of these KPIs will need to include (given that Ofcom intends for these KPIs to be of use to a wide variety of stakeholders including end users who will not be familiar with industry terminology) further consideration to ensure they are meaningful to the intended audiences.

219. Ofcom is proposing 3 new KPIs and 3 new volume measures for WLR (analogue) and MPF covering provision and repair[28]. Openreach agrees with Ofcom that it will be sufficient for these measures to be tracked on a national basis since the reports will provide more than enough information to assess if performance is within an acceptable range. This is also consistent with the timing of the fault repair KPI Ofcom is proposing for VULA (KPI(xiii)), Shared Access (KPI(viii)), ISDN2 exchange line services (KPI(x)) and ISDN30 exchange line services (KPI(ix)) and for which regional reporting is not required.

220. We would also like to propose alternative KPIs for the timing of fault repairs (KPI(i) for WLR and MPF) and the timing of appointed orders not provisioned in time (KPI(v) for WLR and MPF) where the KPIs, as currently defined, are not true tail measures (volume of incomplete faults or orders outside their commitment at particular points in time), would not provide Ofcom with a consistent

[28] 1 new KPI (KPI(i)) and 1 new volume measure (KPI(ii)) for repair and 2 new KPIs (KPI(iii) and KPI(v)) and 2 new volume measures for provision (KPI(iv) and KPI(vi)).

view of the tails (KPIs (i) and (v) are not defined in the same way and measure different things) and would require systems development to implement.

221. To ensure a consistent approach between KPIs and targets, we will include our proposal for alternative KPIs with our proposal for targets (see below for details) as well as detailing any other concerns that we have with the remaining KPIs.

## 3.2 Responses to Question 4

**Question 4.1:** Do you agree with our proposal on how conceptually to estimate the cost differential? Please provide reasoning for your answer.

222. Openreach agrees with Ofcom that using the Discrete Event Simulation (DES) modelling technique does provide a legitimate basis for estimating the impact on total costs of varying the proportions of repair jobs which differ only in the required lead-time to complete. (i.e. between Care Level 2 which requires next day repair and Care Level 2 which requires next working day +1 repair)

223. As set out in the accompanying EY report (Annex C), the specific detailed concerns raised by Ofcom and Analysys Mason are either not material, or relate to specific issues which have been incorrectly analysed by Analysys Mason. Ofcom proposes to make two specific adjustments to the modelled results, reflecting (a) changing to the "Maximum Day" modelling approach and (b) the scope economy of repair and provision activities. In each case, as the accompanying EY report sets out, these adjustments would be inappropriate: In the case of (a) EY is not able to replicate the results put forward by Ofcom and Analysys Mason, and the first of the adjustments proposed by Ofcom (from the 23% original model result to a suggested 17.9%) cannot be verified. Openreach suggests that this is likely to be an error on the part of Ofcom or Analysys Mason. In the case of (b) this relates to the issue of potential latter, EY have supplied model runs which include both provision and repair jobs in the simulation runs. These show the potential scope economies at a much lower level than is suggested by Ofcom and Analysys Mason, reducing the overall cost differential from c. 23% to c. 21% - i.e. a much smaller level than Ofcom suggests. It is also not clear why such potential scope economies (if they exist) would be appropriate to reflect in the repair cost differential at all. Openreach remains of the view that the modelling applied to repair work is the best indicator of the level of the cost difference between the two types of work (i.e. repair and provision).

224. Therefore, if Ofcom keeps its proposed choice of base year and its proposed 80% performance target then, the cost differential Ofcom should use is the c. 23% model result provided by Openreach using the DES model, rather than the 14.1% adjusted model output Ofcom proposes. Different Ofcom choices for base year and performance target would make different model results more appropriate, but in all cases, the cost differential estimate is of the order of c. 20%.

225. It Ofcom proceeds with the 14.1% estimate, this will very likely lead to a significant under-estimate of the additional costs which Openreach would incur with the increased proportion of jobs requiring completion by the end of the working day following fault report.

226. Ofcom has concluded that there is a 14.1% cost differential between Care Level 2 products such as MPF and Care Level 1 products such as WLR Basic. As the volume of MPF lines increases over the Control Period and therefore the ratio of Care Level 2 products to Care Level 1 products increases, so should Openreach's repair costs be expected to increase, even if there were no growth in faults in absolute volumes. In Ofcom's charge control model this is achieved through the use of component volumes which take into account the usage factor (incorporating care level differential) of each service using the component. However, the additional cost included in the model is less than what it intuitively may be expected to be because of Ofcom's application of the component CVE to the cost increase. For example in the case of 'E-side copper current' and 'D-side copper current' cost components the CVE is 0.54 which has the effect of halving the cost increase or creating an effective differential of nearer 7%for those volumes that migrate from WLR to MPF. This is an inappropriate application of the CVE elasticity factor. Ofcom should reconsider how the care differential is applied to ensure that the expected cost lift is achieved as volumes

migrate from WLR basic to MPF. This is covered in more detail in the Openreach section on WLR/LLU charge control modelling in this response.

**Question 4.2**: Do you agree that the Resource Simulation Model appropriately adjusted for estimating the cost differential is an improvement on the way we previously used to set this differential? Please provide reasoning for your answer.

227. The Resource Simulation Model developed by EY on behalf of Openreach in support of the current regulatory review of the relationships between operations costs and quality of service levels can also be applied to the specific question of service care level costs as defined by the parameter in the Ofcom charge control model.

228. For any modelling technique, the extent to which the "real world" operational factors are reflected by the modelling technique should be considered. In the case of service level differences for copper products, the essential difference between Care Level 1 and Care Level 2 is that there is a one day reduction of the allowed lead time to complete the job. Given the normal profile of jobs received by Openreach through a given period, with normal peaks and troughs of work, by location, by engineering skill level, etc., this directly causes a greater "peakiness" in the time profile of work required to be executed each day (for a given performance level) - with higher peaks of resource required.

229. Using this new model allows the whole of the UK geography to be reflected, with the full range of operational issues impacting the distribution of job completion times to be at least implicitly reflected in the modelled outputs.

230. That was not the case for previously used approaches. For this reason, the new model is a much improved method.

**Question 4.3**: Do you agree that we have undertaken the correct and appropriate adjustments to the Resource Simulation Model to better reflect reality? Please provide reasoning for your answer.

231. As set out in the accompanying EY report (Annex C), the two adjustments proposed by Ofcom are inappropriate, and would reduce the robustness of the estimate of cost differential.

232. Ofcom should not make these adjustments – and should use the unadjusted model output, which produces a cost differential of c. 23%.

**Question 4.4**: Do you consider that there may be ways in which the Resource Simulation Model could be changed to make it more reflective of the reality – e.g. Gamma distribution assumptions and exclusion of Saturday working for Service Level 2? Please provide reasoning for your answer.

233. As set out in the accompanying EY report (Annex C), there is little benefit in considering further the adjustments in the areas mentioned by Ofcom. Changes of such parameters would be unlikely to improve robustness of the modelled differential.

## 3.3 Responses to Question 5

**Overview**

234. Openreach has carried out further extensive analysis of fault rates since the previous submission. We have also commissioned Deloitte to carry out a further and final update to the fault analysis previously submitted in September 2013.[29] We have also analysed and replicated the work carried out by CSMG to understand why Ofcom and CSMG have inferred a substantially different picture on base fault rate and trends to Openreach.

235. We have concluded that Ofcom (and CSMG) have not taken full account of all the faults that should be included within the charge controls. This shortfall appears to be driven by Ofcom erroneously excluding a number of faults types that should properly be included. Further, we believe that it would be appropriate for Ofcom / CSMG to include the periods April 2011 to September 2011 and September 2013 to January 2014 in their analysis of available fault data, on the basis that CSMG's concerns relating to data integrity for the earlier period are unfounded, and the data relating to 2013/14 is essential to any meaningful analysis of the challenges faced by Openreach due to emerging UK weather trends, changes in customer behaviours, and new and emerging technologies and applications based on broadband. As a result of these factors, the Ofcom position and CSMG conclusions appear to us to be incorrect, and overlook a number of important themes evident from the actual data covering the period 1 April 2011 to January 2014, in particular that:

- the total level of faults covering this period that should be included in the charge controls are underestimated by at least 25%;
- in considering the current "realities" of fault levels, 2012/13 is a far more representative base year than 2011/12;
- there is a clear trend of faults relevant to the charge controls increasing by over 6% year on year during this period; and
- a clear difference in the relative fault rates between different line types (MPF, WLR+SMPF and WLR only) is apparent.

236. In this section we summarise our findings following the substantial further analysis we have undertaken on various aspects of fault rates in the UK copper network, in light of the questions, views and analysis set out in the Consultation, and respond to Questions 5.1, 5.2 and 5.3.

237. First, we set out our views on how the fault analysis performed by CSMG for Ofcom should be corrected and updated – and set out the key results and the conclusions Openreach draws from this.

238. Secondly, we set out our analysis, research and views on the reasons for the observed trends.

239. Thirdly, on the basis of the further Openreach analysis above, responses to Questions 5.1, 5.2 and 5.3 are given at the end of this section.

[29] Deloitte Openreach Fault Data Analysis, 17 February 2014.

## Openreach's Analysis of Copper Fault Rates

### Review of the CSMG Analysis

*Fault data covering the period April 2011 to September 2011*

240. Openreach has reviewed the findings of the CSMG analysis, reported in Ofcom's consultation, and have identified a number of concerns which we see as preventing a correct assessment of historical fault rates and trends and therefore distorting assumptions which should be applied to the Control Period. We address each of the following concerns in order below:

- use of correct data period;
- data integrity concerns: CSMG indicate in their report that they had data integrity concerns in relation to fault data provided by Openreach to Ofcom and CSMG covering the period 1 April 2011 to September 2011. Specifically, CSMG indicated[30] that:
    - A small number of fault records had incompatible field codes.
    - The first week of data in the time series was incomplete, and the first ten weeks of data was inconsistent with the remainder of the data provided.

241. Openreach disagrees with this critique of the data covering the early part of 2011. As Openreach has indicated both to Ofcom and CSMG, the data covering this period is robust and can be used with confidence as part of Ofcom's assessment. On this basis, Openreach requests that Ofcom / CSMG reconsider their current exclusion of the data from the analysis. The data is a fundamental part of the historical trend and will strengthen the analysis by extending the period under review by a further 6 months. Given that both Ofcom and CSMG have expressed concerns with the relatively short time covered in their analysis, we see this effect as exacerbated by exclusion of the longer data set of information, particularly as it is available and robust.

*Use of Correct Data Period*

242. In order to ensure that the historic fault analysis covers the longest period possible since Ofcom issued the Consultation in December 2013, Openreach has commissioned Deloitte to carry out a second additional report to supplement its main report previous supplied to Ofcom[31]. This report, set out as Annex B, now includes analysis of the period 1 April 2011 to January 2014 and extends the most recent fault rate analysis to include the period to January 2014.

243. This means that there is now a continuous period of 2 years and 10 months against which to make an assessment of fault rate characteristics. Openreach requests that Ofcom / CSMG base their final assessment / conclusions on the longest continuous data series available, and so use the information covering 1 April 2011 to January 2014 as set out above.

*Data Integrity*

244. Openreach believes that the current Ofcom / CSMG approach to assessing fault rates has wrongly excluded a number of fault categories proper to the change control, and therefore that the correct

[30] See Section 3.15-3.19 of CSMG report.

[31] http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-reviews/responses/Openreach_-_Deloitte_report.pdf

level of faults and fault rate trends relevant for consideration in the charge control has been significantly underestimated.

245. In its analysis, Openreach has only included faults that meet the following criteria:

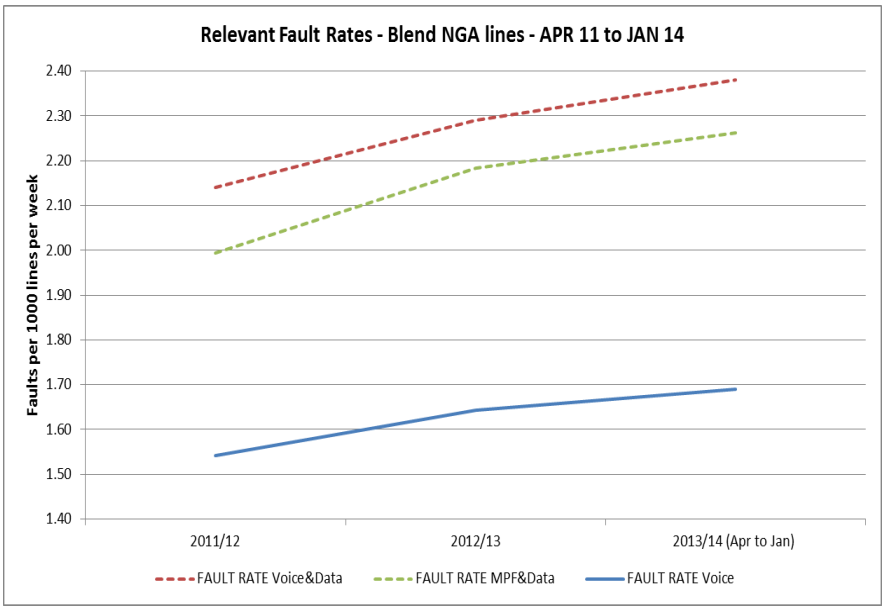
- The faults have been raised against the principal relevant charge control products i.e. WLR analogue, MPF and SMPF;
- The faults are non-chargeable;
- The faults have led to Openreach activity and incurred costs that are not recovered elsewhere;

*Results of the Openreach approach*

246. The initial step was to try to replicate CSMG's modelling. We found that this base level of analysis should have produced a fault rate increase per annum of 3.5% rather than the 'flat' trend set out in their report.

247. Secondly, we carried out an extensive analysis of the CSMG methodology, and corrected for the issues we identified as problematic (i.e. excluded fault categories, excluded data from April - September 2011 and latest available data to January 2014, and relevant faults on copper lines associated with NGA lines). The corrected position actually shows a 6.3% increase in fault rates year-on-year, illustrated graphically in Figure 16 below:

***Figure 16 – Relevant Fault Rates***



| Average fault rate increase per annum (blended fault rates) = 6.3% | | |
|---|---|---|
| **Product** | **Ofcom proposal** | **Average over~2.75 years** |
| MPF | 1.00 | 1.00 |
| WLR | 0.87 | 0.76 |
| SMPF | 0.13 | 0.30 |
| WLR+SMPF | 1.00 | 1.06 |

| Average fault rate increase per annum (excluding NGA 'premium') = 5.5% | | |
|---|---|---|
| **Product** | **Ofcom proposal** | **Average over~2.75 years** |
| MPF | 1.00 | 1.00 |
| WLR | 0.87 | 0.76 |
| SMPF | 0.13 | 0.28 |
| WLR+SMPF | 1.00 | 1.04 |

248. The analysis above reflects the fact that fault rates on copper lines associated with NGA have higher fault rates than those associated with ADSL-based broadband, and Openreach calculated blended fault rates to deal with this. While we believe the additional costs incurred from these incremental fault rates, should, following agreed previous methodologies, be recovered over the copper lines, we understand Ofcom would rather these were reflected in fibre pricing. However, even excluding this NGA 'fault premium' the results indicate an average fault rate increase of 5.5% per annum.

249. Overall our analysis of fault rates shows that there is a steady increase from 2011/12 through to 2013/14 YTD and that 2012/13 fits with the prevailing trend line. As Ofcom is setting a charge control to commence in 2014/15 this should be based on the latest fault data and, having seen 2013/14 trends, 2012/13 is clearly more representative than 2011/12.

250. Incorporation of the correct scope of faults, combined with utilisation of the optimal time series (both as set out above) produces the correct set of key results which should be used as input to the charge control.

*Appropriate base year for fault assessment*

251. As set out in response to Question 5.1 below, 2012/13 is far closer to the current experienced levels of faults and fault rates in the Openreach network. Based on our detailed analysis of fault rates and trends it is critical that Ofcom use an appropriate base year on which to develop its proposals for the Control Period.

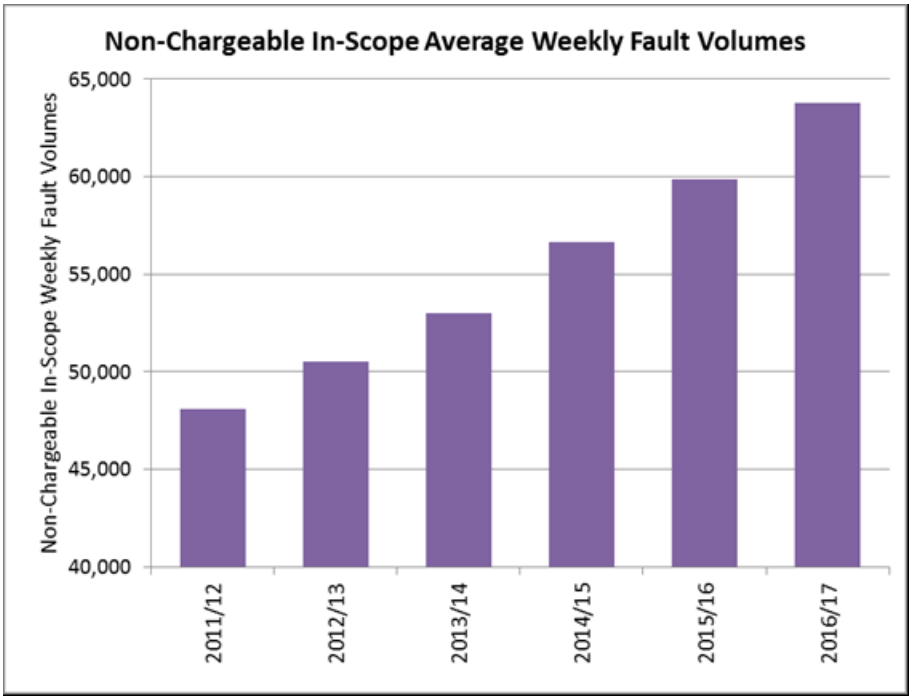
*Fault rate trends*

252. As set out above in Figure 16, by using the correct data set a 6.3% aggregate year on year growth in faults rates the faults rates over the period April 2011 to January 2014 is self-evident. In attempting to project future fault rates, it is therefore reasonable as a starting point to take what has observably happened in the most recent history.

**The factors driving growth in the fault rates**

253. In summary, there are a number of significant external factors, which are driving year on year fault increases. These factors act together to produce an average weekly non-chargeable copper line fault intake currently running at circa 53,000 per week and growing at 6.3% p.a. This is a subset of the total weekly repair intake of circa. 90,000 per week which drives total repair resourcing in Openreach – the difference being predominantly due to faults from payphones, chargeable services and NGA. Using a linear projection of current fault rate trends, combined with our latest product volume forecasts, adjusted to reflect our expectations for continued learnings around NGA deployment, we estimate the following forecast non-chargeable fault volumes for the next three years (shown in Figure 17 below). A continuous and ongoing level of investment in fault volume reduction is assumed to underpin the profile.

***Figure 17 – Non-chargeable average weekly fault volumes***




254. A number of actions could be taken to stem this continually increasing rise in fault intake for the forthcoming Control Period. Openreach supports all of these actions and looks to Ofcom for support in reflecting this in the charge control and driving sustained industry collaboration and progress to make this a reality. Our best estimates indicate that the total weekly intake for 2016/17 could be reduced to 55-57k per week through these actions. Significant additional investment in proactive maintenance to cover more areas that are subject to more frequent extreme weather events could account for up to 60% of the potential reduction, although the proposed charge control outcome does not cater for these incremental costs. The remaining 40% of the potential reduction is dependent on greater CP adoption of fault and order, qualification and placement best practices; supported by increased investment in Test & Diagnostic capabilities, and sharing of service layer information at fault placement and to support improved targeting of proactive investment. Based on the CP dependency that we understand Ofcom is not able to guarantee, we expect a more realistic outcome from continued work with industry, via the OTA, to be a weekly average non-chargeable fault intake of 58-60k.

255. The current Ofcom proposals will not fund this level of fault volumes, as the assumed fault rate is held flat during the Control Period, which implies that Ofcom has not taken account of all the key external factors driving the increases namely:

- **Extreme Weather Events** - Whilst we expect challenging weather, the increasingly volatile weather in the UK, hitting more varied geographies more often, is very difficult to plan and prepare for. Increasingly frequent extreme weather events are a major driver of a growth in more complex faults, with Distribution-side Underground and Overhead faults up 12% per year vs. the total increase of 6.3%.

- **Broadband Usage** - Broadband drives higher non-chargeable copper fault rates and volumes in a number of different ways that are expected to continue - the proportion of lines with broadband (over 80% of lines will have broadband by 2016/17, compared to 68% in 2011/12 and 73% in 2013/14); the amount of time a line is used - Enders estimates usage per home broadband line per day growing from 102 minutes in 2013 to 137 minutes by 2017, a 34% increase, and that by 2017 50% of home broadband usage will be 'very fault intolerant', e.g. video streaming; more demanding applications (higher frequency broadband traffic results in more line conditions being service affecting than for voice-only services); and more network components.

- **Demands on the copper network are increasing** - In addition to customers demanding more and more from their telecommunications, with ever higher rate/quality video applications 'stretching' the copper network, the natural deterioration of network (as experienced with all external copper networks) is increasingly difficult to proactively address, despite consistent investment in copper in the past and due to the impact of increasingly frequent extreme weather events in unpredictable locations.

- **CP behaviours** - CPs play a vital role in managing fault rates – we need them to make the right decisions, for example in testing and diagnostics policies and service-layer data sharing to help control fault intake.

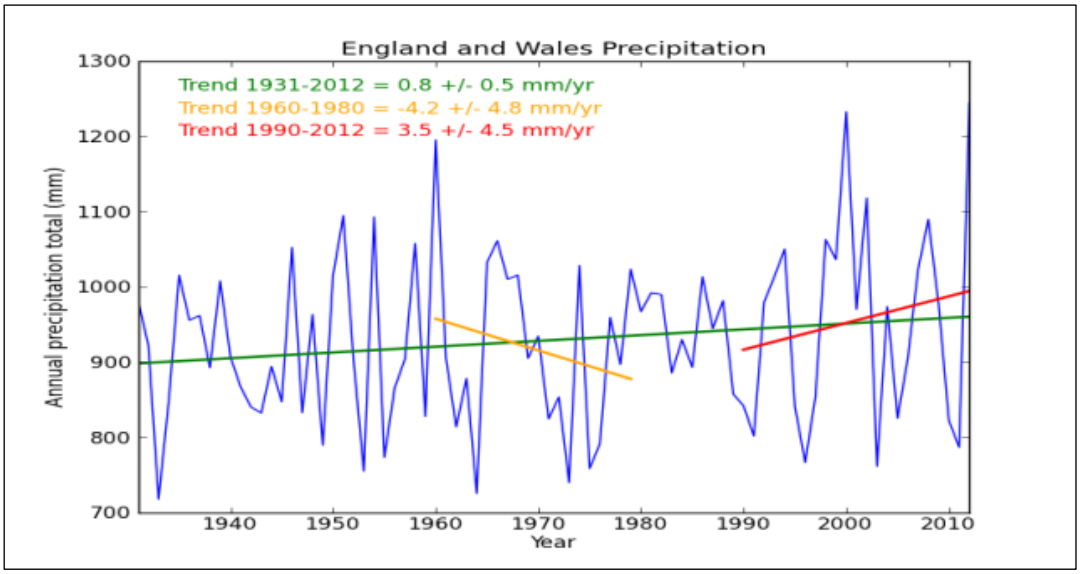
256. We cover these factors in more detail below.

**Extreme Weather Events**

257. The climate data set out in the September response[32] both in terms of long term absolute trends (e.g. increasing rainfall, higher average temperatures, etc.) and the tendency to more extreme weather events, has proved remarkably prescient moving through 2013 and into 2014. As we identified in that response, 2012/13 now looks to form a part of a longer trend in UK weather patterns as identified by the analysis carried out on our behalf by the Walker Institute, University of Reading. It is now also clearly in line with expectations for greater weather extremes which are understood to be driven by man-made climate change. Figure 18 below illustrates both the long term trend for increased annual rainfall in England and Wales and the more recent observed acceleration in the trend over the past two decades.

[32] http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-reviews/responses/Openreach_-_Quality_of_Service.pdf

***Figure 18 - Precipitation***

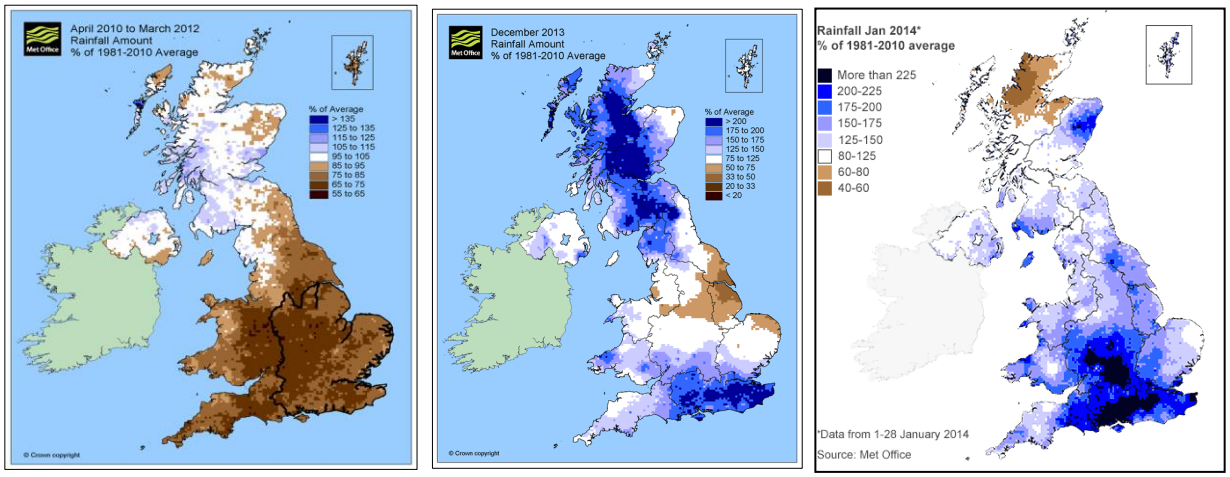



*Source: Ben Lloyd-Hughes, University of Reading. The blue line represents the annual total precipitation for each year from 1931-2012. The green, orange and red lines show linear trends computed using different time periods.*

258. During the wet summer of 2012 the conditions experienced were initially thought to be extraordinary. However, although the summer of 2013 was relatively benign in overall rainfall levels this picture changed substantially as the year progressed, with greater extremes of rainfall, wind, temperature and lightning strikes than those observed in 2012/13. As a result fault volumes are currently running more than 5% higher in 2013/14 than in 2012/13. It is this increasing prevalence of unpredictable and extreme weather which is highly damaging to the Openreach network and its operations. This needs to be fully taken into account by Ofcom in the charge control settlement so that achievable targets are set and appropriate levels of costs allowed for within the charge control to enable such targets to be delivered. The base data and the choice of base year are therefore critical factors for Ofcom to choose correctly if it is to set a sustainable level of funding for Openreach over the Control Period.

259. Ofcom's reluctance to move away from the base year of 2011/12 is a major problem in this respect.

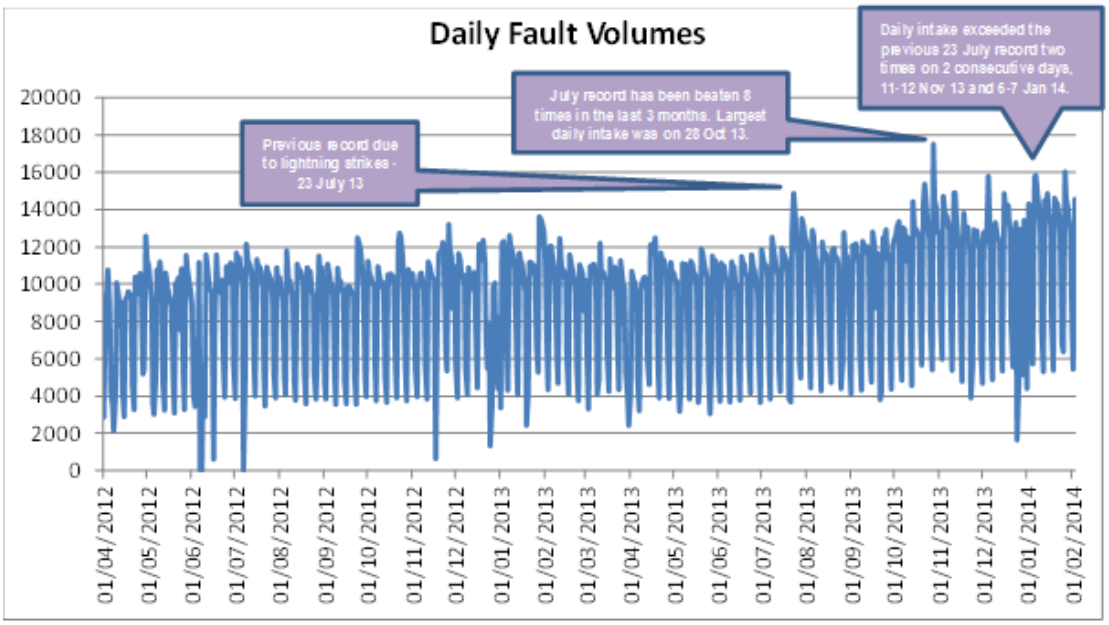
***Figure 19 – Rainfall maps***



260. For the two year period ending in March 2012 the England and Wales rainfall total was the fourth lowest on record. Across southern England, the period was the equal-driest 2 year period on record from 1910. These are not conditions typical of those Openreach faced in 2012/13 or so far in 2013/14 (and are not in line with the predicted trends over the Control Period). The graphics from the Met Office illustrate the vast difference in the operational challenges faced in 2011/12 and more recent months. It is both the extreme and unpredictable nature of the storms over the past months (e.g. St Jude in October 2013, 'Stormy December' and record breaking 'January 2014 Floods') which is the key to problems Openreach faces. In December 2013 the geographical volatility was also extreme with both Scotland and the South-East England experiencing more than 200% of average rainfall. This was followed in January 2014 by further record rainfall in the South East and central southern part of the UK - more than double the long term average at 175.2mm (6.9in) - beating the previous record of 158.2mm, set in 1988. The geographical volatility was again extreme but also very different to December patterns - highlighting the impossible nature of forecasting events on a GM area basis. January 2014 saw even greater extremes focussed in the South-East and Central England (more than 225% of long term average).

261. These extremes of weather cause extreme fault intakes raising overall levels of faults experienced by Openreach but also severely impact operational capability to hit service targets.

***Figure 20 – Daily Fault Volumes***



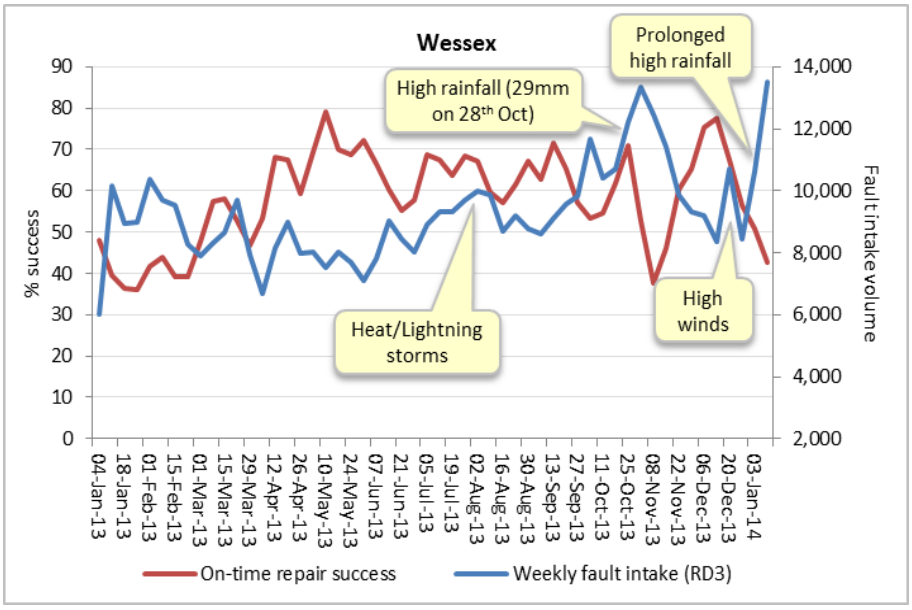

262. In our September response we drew attention to a record fault intake in July 2013 due to a massive incidence of lightning strikes across the UK. This has now been exceeded eight times in the last three months, with the largest daily intake on 28 October 2013 due to the St Jude storm. On two different occasions the daily intake exceeded the previous 23 July 2013 record on two consecutive days (this occurred on 11-12 November 2013 and 6-7 January 2014). It is clear that the base data associated with 2011/12 is no indication of these types of fault trends. These will impact on the ability of Openreach to meet its service targets but more importantly from a financial perspective they raise the overall fault profile of the business, increase repair costs both operationally and in terms of SLGs. MBORC declarations offer no protection from the majority of these costs – all the fault intake has to be cleared eventually and any backlogs resulting from peak intakes increase pressure on the organisation to increase overtime and hire agency labour at extra cost, which is not

accounted for in current charge controls. It is essential that the new control makes such allowances explicit.

**Recent experiences in South West England**

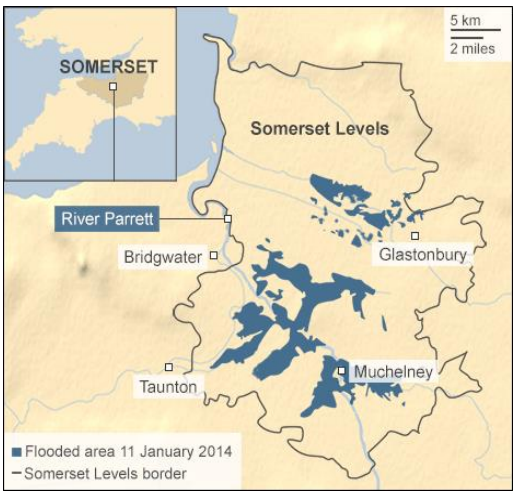
263. Increasingly, it is not only the immediate impact of these weather events that needs to be taken into account. The backlog effects are already being experienced and are noted above, but it is also increasing clear that the extent of such events is expected to increase geographically, leaving Openreach open to massive cost increases. Defra guidance is now clear and sets an expectation of increased flood risk in the UK both in terms of coverage (larger flood plains) and extremity (increased peak rainfall). We have had a very real and recent example of how this impacts on Openreach fault rates and on how its extent and severity can damage Openreach infrastructure and severely impede our operational ability to respond. The graph below illustrates the impact of the recent weather damage in Wessex GM patch[33]. Not only does overall fault intake increase by circa 40-50% on last year, but a direct impact on service quality can also be clearly noted.

***Figure 21 – impact of weather on Wessex performance***




264. This impact is not a short term effect and will potentially extend the service and fault problems in the area for some time into 2014. The extent of flooding is immense in UK terms, and has left areas of the UK with abnormally high groundwater levels and extensive areas of flooding – most notably in the Somerset Levels:

[33] A separate and more detailed case study of the events in the Openreach GM area of Wessex is included at Annex A.




*Some areas of flooding extend for up to 15 or 20 km continuously, damaging Openreach network and impeding its ability to carry out repairs, provisions or in some cases even assess the extent of the damage. Extensive renovation of network will be required in due course when engineers can access plant.*

265. The effects on end-users, CPs and Openreach cannot be overstated. Openreach's ability to service end-users and access its infrastructure is severely disrupted, and extensive damage is caused to infrastructure both above and below ground, causing very high fault intake rates, increased costs, longer travel times and significant health and safety concerns for engineering teams, all of which directly impact on cost.

266. The Wessex scenario is one example of a broader operational challenge and one which Ofcom needs to address sufficiently during the next Control Period. The reality is that much larger areas of the UK are now at risk of flooding. Openreach assets are located in those regions and will be damaged. Obviously where possible Openreach infrastructure is located away from the flood plain however through necessity circa 8% (and growing) of our infrastructure is located in flood risk areas.

267. The risk of substantial flooding is now a reality. Included below are some illustrative pictures of the predicted flood plain data in Cockermouth, Cumbria and a corresponding photograph of the region in flood in 2009. The similarities are striking.



268. As noted we assess the situation in more details for the Wessex region in Annex A.

269. The Government's Climate Change Committee recently found[34] that 13% of new build is now in flood plains – this compares to 11% found by the Chartered Insurance Institute in 2012. The

[34] http://www.independent.co.uk/environment/nature/the-more-the-experts-warn-against-the-more-we-build-on-flood-plains-9101710.html

Chartered Insurance Institute predicts that 23.1% of the homes (5.2m) in the UK are at risk of flooding.

270. The BBC reports[35] that planning applications on flood plains have been going up every year for the last 5 years – suggesting that the pattern in the late 1990/2000s was for an increase in build on flood plain. This is particularly pertinent given the apparent recent acceleration in extreme rainfall trends – i.e. that in the period since 2000 the UK has seen several of the wettest years on record. In effect, a problem exacerbated by the laxity in planning in the 1990/2000s has come home to roost[36] with the increasingly high rainfall years since 2000. In summary:

- this is a systemic problem growing by virtue of increased build on flood plains, combined with increased intensity of rainfall. With circa 13% of new build properties being located on flood plains this is a continuously growing problem in absolute terms.

- we have a historic and enduring problem of a substantial housing stock already located on flood plains and Openreach (as part of BT Group) has enduring obligations to serve those homes and well as new build located on flood plains.

- we are limited to the extent that we can locate assets within the network such that our floodplain exposure is reduced (current estimate is that circa 8% of infrastructure is at risk). The ability to move such network assets (e.g. cabinets, manholes, poles etc.) further away might either not be possible, result in poorer service (line length of copper) or require substantial additional investment.

271. In summary, extreme weather events directly impact on Openreach fault intakes. They drive increased costs into the business and severely impact its ability to respond to customer's needs. MBORC declaration has no impact in reducing the increased engineering and operational costs faced by the business to repair the network and to service the increased levels of faults. This is not a temporary phenomenon, but part of a long term trend backed by extensive scientific theory and research evidence.

**Broadband Usage**

272. Copper lines which are used for broadband services have a significantly higher average fault rate than lines used for voice only. This is clearly reflected in the fault rate analysis carried out by Ofcom/CSMG and it is reflected in the charge control model through the use of higher relative fault rates for both MPF and WLR/SMPF line types. Openreach believes this 'fault premium' to be a significant factor in the costs and challenges over the Control Period.

273. The percentage of customer lines used for broadband services continues to grow – 80% of lines will have broadband by 2016/17. This trend will remain through-out the next Control Period and must be addressed appropriately by Ofcom's costing methodology. In our view Ofcom has not set the 'fault premium' at a sufficiently high level, and hence the movement in product mix accounted for by the Ofcom model will not capture the real level of fault increase experienced by Openreach.

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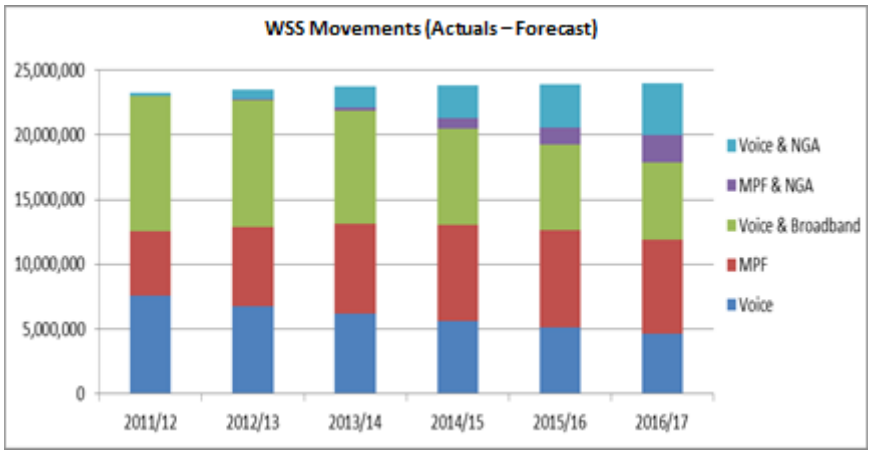
[35] http://news.bbc.co.uk/1/hi/programmes/panorama/archive/1228625.stm

[36] Attached link illustrates how Environment Agency advice on floodplains has been ignored on 197 occasions by local authorities in the 10 years to 2013. See http://www.insidehousing.co.uk/development/homes-built-in-flood-risk-areas-despite-warnings/6525946.article

***Figure 22 – WSS Movements***




274. Broadband services are much more complex to deliver and as such a higher fault rate is associated with them. The major types of fault drivers include:

- **Electronic signalling** – Frequencies used for DSL means that filters are required to protect the signal. Broadband traffic is transmitted over copper pairs at higher frequencies to voice (0 to 4 kHz). DSL Technologies have developed from the original ADSL1, ADSL2+ up to VDSL2, utilising increasing frequencies from 26 khz up to 17 Mhz in order to carry higher data rates over the same copper infrastructure, as demanded by CPs to meet the growing needs of their customers, our industry and Broadband Britain as a whole.

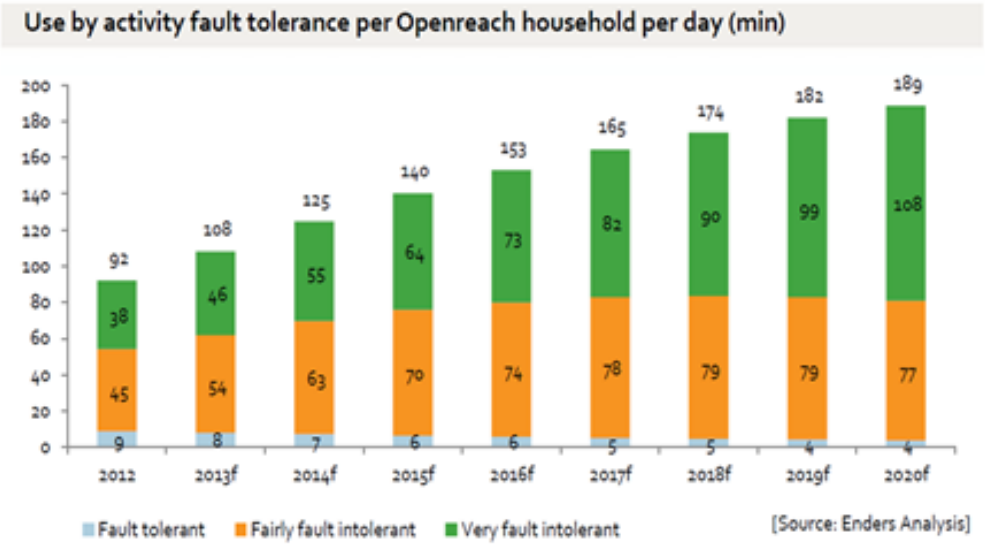
- **Complexity of equipment** – Modems, WiFi and CPE all offer opportunities for perceived broadband faults. Depending on the individual products more network components are involved in the delivery of service, leading to more points of failure. Whilst these components are often CP owned (either at the exchange end or in the premise), inability to isolate root causes can drive additional fault volumes to Openreach. Where these visits result in any external work (from network upgrades, preventative actions or actions beyond SIN349) they are not charged through to CPs.

- **Frames complexity** – Additional jumpers connections mean that all provisions and repairs are more liable to repeats.

- **Susceptibility to interference** – The low power and method of Digital Signal Processing mean broadband is more susceptible to interference. Also the use of higher frequencies will be more heavily impacted by pre-existing line conditions (attenuation) than voice traffic – that is to say pre-existing line conditions (as assessed against SIN349) may not have impacted the quality of voice services to a degree that resulted in end customers raising faults, but would sufficiently affect the more demanding applications now in ever-increasing use and be more likely to result in end customer faults being reported.

275. Customers use broadband services for more hours per day and are much less tolerant of any service degradation. Recent work by Enders categorises future usage profiles into various categories of fault tolerance. Whilst voice usage remains flat – the growth profile for fault intolerant applications is expected to grow rapidly throughout the Control Period.

***Figure 23 – Fault tolerance***




276. This increasing reliance on a broadband line to deliver a more complex service than basic voice line means that users will have a much broader perception of a what is a "fault" in a broadband world. These could typically include:

- Download interruption.
- Pixilation.
- Speed variation.
- Screen freeze on video.
- Application buffering.
- Wi-Fi interference or reduced Wi-Fi range.
- Modem re-training after reset.
- Application speed.
- CPE faults

277. These factors mean that the forecast fault rate trends cannot remain static. Overall users will become less tolerant of 'faults' using broadband applications, there will be greater concurrent use and as broadband becomes an even more central feature in the home it has to be more robust and reliable at all times and for all applications.

278. The move to a more feature rich broadband experience is also substantiated by Ofcom research. There is now a growing trend for increasingly demanding usage of broadband to deliver highly interactive and media rich services. In its 2013 Communications Report, for example, Ofcom looks at the different ways users said they had changed their use of broadband since upgrading to a superfast service, particularly in relation to the streaming of TV programmes and full-length films. 72% of respondents said that they had increased their levels of streaming high-definition content while 64% had increased streaming of standard-definition content (the same proportion that reported increased use of cloud services). Ofcom noted that this increase was likely to be related to the increase in the speed of the broadband service, but also to the increase in the general use of these services since 2011. There were also notable increases in the uploading of video content (cited by 52% of superfast users) and the proportion who said that they worked from home more frequently (51%).

**Demands on the copper network are increasing**

279. In common with any other telecoms companies with copper external networks, our network unfortunately deteriorates and at the same time is being driven harder by the demands of the broadband world. We therefore invest significantly on a regular basis to stem this deterioration, even before the additional pressures caused by the recent extreme weather. Our network operations and underlying copper access fault rates benchmark competitively, with an average time between faults per line of 11.8 years, but we are not complacent. Over recent years, our investment in the network, both through capital expenditure and proactive maintenance activities, has been maintained at significant levels, as shown in Figure 24 below.

***Figure 24 - Investment***

[✂]

280. We are also continually assessing the best ways to target our fault reduction programmes. To partially stem the steady increase in fault rates outlined above over the coming three years, we would need to make major investments to renew parts of our network and our Test & Diagnosis capability. The level of investment required would need to increase significantly to combat the network deterioration combined with the increasing impact of extreme weather and we will need to evaluate what is possible under existing charge control rules. At the same time, we will continue our end-to-end process improvement programmes, working with our industry customers, but a major step-change is also needed here.

**Improved industry collaboration**

281. There is much that needs to be done across the whole industry value-chain to improve the end-customer experience and there needs to be common incentives on all players to prioritise the collaboration needed to make change happen.

282. It is also important to stress that CPs can and should play a vital role in managing fault rates and we need them to make the right decisions, for example in testing and diagnostics policies and service-layer data sharing if we are to make the improvements needed to stem the increase in fault rates. We estimate that 40% of the potential improvement in fault rates from process changes is dependent on CP behaviour.

283. Openreach continues to work with the OTA to support the major CPs in the adoption of best practice to minimise faults, wasted visits and improve end customer fault resolution times. There are observed differences between CPs on, for example, 'Line Test OK' rates and 'same day repeat visits' creating avoidable fault volume when there is no objective difference in service. This is clear evidence of the inconsistent use of broadband fault products and varied success in take-up of industry best practice. The analysis of these issues is included below:

**Variation in Line Test OK Rates**

284. Figure 25 below illustrates the higher "line test ok" (LTOK) rates on MPF, resulting in field visits and driving higher fault rates than necessary.

**Figure 25 – Line Test OK rates**

[✂]

285. MPF rates are consistently higher than WLR3 by c.5 points, when the exchange design of the two should allow MPF to be equal or lower. This is a clear indication of inconsistent use of broadband fault products and varied success in take-up of industry best practice.

**Figure 26 – propensity to test**

[✂]

**Same Day Repeats**

286. The variation in "same day repeats" is far higher for some CPs, creating avoidable fault volume when there is no difference in service or quality of work between different CPs.

***Figure 27 – same day repeats***

[✂]

287. Our experience is that CPs do engage in process improvement activities, but they do so with limited priority and there is little to motivate them to do so. A different level of CP commitment and prioritisation is required for substantial and sustainable results to be achieved. Ofcom's support in this is critical to set the right tone for all of industry to be similarly motivated to improve. Improving service for end-customers is a challenge that has to be owned right across the value chain. We recognise that Ofcom's powers are narrower regarding CPs that have not been found to hold SMP but we would like to see Ofcom setting out clear expectations which can then be followed in industry commercial discussions, including those facilitated by the OTA.

288. Ofcom must not unduly penalise Openreach for differences in CP behaviour. Inconsistent behaviours which result in additional fault reports generated by CPs will have a cost to Openreach and this will need to be fully addressed by the charge control.

**Question 5.1**: Do you agree with our approach to establishing base year costs? Please provide reasoning for your answer.

289. Openreach does not agree with Ofcom's approach to establishing base year costs. Ofcom should be using the latest available cost information and fault data to set its base year for the charge control. Therefore the correct base year would be 2012/13 and not 2011/12.

290. The telecoms market, industry and consumer behaviours have already changed dramatically since 2011/12 with more complex product sets, huge growth in the volume and range of different devices using fixed broadband and ever more advanced applications. All these necessarily mean Ofcom must take account of the most recent evidence and not assume 2011/12 as the base year.

291. Openreach recognises the extensive research that Ofcom has carried out to investigate historical fault rates and to attempt to establish the underlying factors driving them in absolute and relative terms. However despite the extent of the analysis we strongly believe Ofcom has arrived at a series of incorrect conclusions in the consultation and although Ofcom propose that levels and costs associated with fault levels should be based on those 'actually experienced in recent years', the proposals do nothing to address the overriding differences which exist between 2011/12 - the 'base year' chosen by Ofcom for their analysis - and the more recent and representative financial years of 2012/13 and 2013/14.

292. In our view Ofcom would also, by choosing an inappropriate base year, systematically underestimate the higher fault rate on lines which carry broadband services compared to voice only lines, as no attempt is made by Ofcom to take account of increased costs and the increased fault rates evident in absolute terms in the 2012/13 data (i.e. rising fault rates on all line types).

293. Additionally, we have strong concerns that even if the base fault rate analysis is corrected for the errors identified above, these factors are not adequately captured within the charge control cost model – leading to a systematic understatement of the repair costs faced by Openreach in the final charge control year 2016/17.

294. The wrong choice of base year and omission of appropriate corrective mechanisms mean that Openreach will not be correctly funded for repair costs on a forward looking basis, and Ofcom will not have taken account of the most significant factors driving fault volumes and repair costs. We have set out earlier in this chapter of our response a full analysis of fault rates in both absolute and relative terms, as well as what this means for the trends expected to continue throughout the Control Period to 2016/17.

295. With regard to two specific points mentioned in the consultation we agree with Ofcom's findings that adjustments for Openreach's investment profile or NGA roll-out should not be made to the base year costs. As Ofcom and CSMG state there is no clear evidence linking these issues to prevailing fault rates or forward looking trends. In our view, the factors we identify in our analysis described earlier in this chapter are the key drivers which need to be taken into account by Ofcom.

**Question 5.2:** Do you agree that fault rates should remain constant throughout the Charge Control period based on our analysis above? Please provide reasoning for your answer.

296. Openreach does not agree with the analysis of fault rates as set out in Section 5 of the consultation and does not agree that setting a constant fault rate is the correct approach for the Control Period. In this respect we set out earlier in this chapter the adjustments that need to be made to the CSMG and Ofcom analysis to establish the correct historical trend. Consequently, we do not agree with Ofcom's conclusions and the proposals which are drawn from the analysis.

297. In our view there has been a clear upward trend of 6.3% per annum in fault rate which is evident in our analysis of data from the period April 2011 to January 2014 (please see Openreach analysis of 'blended fault rate' in Section 3). It is important that Ofcom give due weight to the historical trend when setting forward looking rates.

298. Our forecast average weekly non-chargeable fault intake for 2013/14 is circa 53k per week[37]. Projecting current fault rate trends combined with our latest product volume forecasts produces a forecast of non-chargeable fault volumes for the next three years that grow to circa 64k per week by the end of the Control Period.

299. A number of actions are possible to stem this continually increasing rise in fault intake over the forthcoming Control Period. Openreach support all of these actions and we look to Ofcom for support in reflecting this in the charge control and driving sustained industry collaboration and progress to make this a reality. Our best estimates indicate that the total weekly intake for 2016/17 could be reduced to 55-57k per week through these actions. Significant additional investment in

[37] This is an adjustment to previous weekly volumes discussed having aligned with Ofcom on the treatment of Exchange equipment faults being covered and their costs accounted for separately in the Charge Control process.

proactive maintenance to cover more areas that are subject to more frequent extreme weather events could address up to 60% of the potential reduction, although the proposed charge control outcome does not cater for these incremental costs. The remaining 40% of the potential reduction is dependent on greater CP adoption of fault and order, qualification and placement best practices; supported by increased investment in Test & Diagnostic capabilities, and sharing of service layer information at fault placement and to support improved targeting of proactive investment. Based on the CP dependency that we understand Ofcom is not able to guarantee, we expect a more realistic outcome from continued work with Industry, via the OTA, to be a weekly average non-chargeable fault intake of 58-60k.

**Question 5.3**: Do you agree with our proposed approach to equalising relative fault rates, with MPF = 1, WLR+SMPF = 1, WLR only = 0.87 and SMPF = 0.13? Please provide reasoning for your answer.

300. As indicated in the analysis shown earlier in this chapter, Openreach has identified a series of adjustments which are required to correct known issues with the analysis carried out by Ofcom and CSMG. In our view absolute fault rates have been underestimated as has the differential rate between lines carrying broadband and voice-only lines. If Ofcom does not model these factors correctly, Openreach will not be sufficiently funded to meet future increases in repair/fault costs.

301. Ofcom should derive the values for relative fault rates from the analysis of actual faults by line type for the full period for which data is available – i.e. April 2011 to January 2014. Ofcom should make an assessment of whether the factors that drove the differences in the measured historic fault rates are likely to persist into the next three years. There is no obvious reason why this should not happen.

302. Openreach believes that the relative fault rates by line type should be set in line with the most recent historic actual data. This shows that compared to MPF (i.e. regard MPF fault rate as 1), the relative fault rate for WLR-only lines is 0.76, for WLR+SMPF lines it is 1.04, and therefore for SMPF is 0.28.

303. These figures are the relative fault rate, for all non-chargeable faults on the copper products, measured over the period April 2011 to January 2014.

304. Although Ofcom is right to make changes to these parameters in their model, compared to previously used ratios, Ofcom is not correct to simply align MPF to be equal to WLR+SMPF. There are a number of quite legitimate factors which explain a difference between fault rates on different products. MPF and SMPF have been and will continue to be used by different customers in different ways, with different approaches to customer service and associated processes, which will give rise to different tendencies to report faults using different Openreach service offerings. The small but significant difference in the historic data for these line types supports that view.

**Separate treatment of MDF costs**

305. Openreach observes that Ofcom uses this relative fault rate in the charge control calculation, applying to all copper line and frames fault costs. Therefore, the above relative rates should be used in the Ofcom model, assuming that remains the scope of costs that are driven by this factor.

306. However, Openreach suggests that Ofcom's calculation could be significantly improved if the treatment of frames costs is separated from those of lines costs. For frames costs, a more robust driver of costs for the different products is simply to count the number of MDF jumpers for each

product. MPF has 2 exchange jumpers per line, SMPF has 1 jumper per line and WLR has 1 jumper per line and therefore the usage factors should reflect these ratios.

307. If Ofcom were to make this improvement to their charge control calculation methodology, then in order to preserve consistency, the historic relative fault rate for line types needs to be adjusted such that frames faults are removed. In this case, compared to MPF relative fault rate of 1.0, the relative fault rate for WLR-only lines is 0.8, for WLR+SMPF lines it is 1.05, and therefore for SMPF is 0.25.

# 4 Key issues for the LLU/WLR Charge Control

308. In addition to consulting on quality of service proposals and their impact on regulated prices, Ofcom has taken the opportunity in this Consultation to consult further on a number of issues raised in the First Charge Control Consultation. We respond to the Consultation questions below, but first highlight and reiterate some key issues in more detail.

## 4.1 Efficiency

309. Best practice dictates that a balance should be struck between the 'carrot' under a price control (making over-achievement possible) and the 'stick' (requiring efficiency improvements to recover costs). The target should be challenging, but the target should not be such that "yet further savings" over and above the target cannot be identified and realised. Ofcom has not got this balance right when proposing to increase the overall efficiency target from 4.5% to 5.0%. Moreover, this target is not substantiated by the evidence Ofcom puts forward in the First Charge Control Consultation.

310. Despite a consensus that the scope for achieving savings is becoming more difficult, Ofcom proposes to increase, rather than decrease, the efficiency target from 4.5% to 5% per annum. We evidenced in our response to the First Charge Control Consultation[38] (the September Response) that:

- Benchmarking analysis of European operators shows BT's network business to be highly efficient compared to a representative group of European operators.
- Although Ofcom asserts that analyst opinion supports its assessment of the scope for future efficiency savings, in reality the consensus view at that time was that Openreach will hold costs approximately flat in nominal terms over the period to 2016/17 i.e. 3%, and that remains the consensus view now.
- The RFS data does not support a rate of 6% achievement historically as Ofcom states it does; 4% would be nearer the mark, and in any case there is a downward trend which suggests that historical rates are unlikely to be achieved in the future.
- Ofcom relies heavily on Openreach's own 'Price Volume Efficiency Other' (PVEO) analysis of actual and forecast efficiencies, but there is effectively double counting of some of the reported savings as a result of Ofcom using an unadjusted reported efficiency as a direct input assumption in its model.

311. Since Ofcom made its original efficiency proposals it has published its service proposals and it is imperative that these proposals, including required service level targets, are aligned with the efficiency targets. We believe that an efficiency target of 5% per annum will make it harder to meet these service targets and negate the benefit of the small cost uplift Ofcom proposes for service delivery.

[38] 30 September 2013, available from: http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/responses/Openreach.pdf

## 4.2 Volumes

312. As we set out in our September Response, Ofcom should reconsider the assumptions underpinning its volume forecast of Openreach copper lines, in particular:

- Ofcom's assumption of the growth in the number of new households is too high (by 360,000 Openreach fixed lines in 2016/17) as it incorrectly uses a government projection that is unconstrained by the future supply of residential properties; and

- Ofcom's assumption regarding the level of substitution to mobile-only homes is too low as it runs counter to past trends and ignores clear evidence that the 4G launch in the UK is likely to increase the number of mobile-only homes during the Control Period.

313. Since our September Response, there have been key developments that Ofcom should take account of, when considering the forecast volume of copper lines. In particular, the following developments support our view that Ofcom's volumes forecast is too high:

- housing supply continues to lag behind demand; and

- mobile operators are deploying and launching 4G services at pace.

**New Household growth**

314. In our September Response, Openreach evidenced that Ofcom's forecast copper lines were overstated because its assessment of household growth was unconstrained by supply. It is clearly the case that commentators recognise the lack of housing supply as a major concern that is unlikely to be addressed by 2017 (the life of the proposed control):

- On 24 September 2013, Ed Miliband[39] said that building levels have fallen to their lowest level for almost 100 years. Labour says the housing shortage is "central" to what they call Britain's "cost of living crisis".

- On 10 October 2013 the BBC[40] said there was widespread agreement that there are not enough homes being built to match demand. The number of new homes being built and finished fell then stalled during the financial crisis (since 2008). Even though there are hints of a revival, fundamental issues remain for the UK housing market that will affect the chances of people being able to buy or sell. Increasing prices create a fresh headache for first-time buyers trying to raise the deposit for a home, even though mortgage rates remain at record low levels.

315. The pace of building means the housing stock is not keeping up with population growth. Ofcom should not use a population based forecast of household growth unconstrained by supply considerations.

**Mobile only homes**

316. In our September Response, Openreach evidenced that Ofcom's assessment of mobile only homes should take account of the impact of 4G launch in the UK. We argued that while 4G is not a mass market substitute for fixed broadband, increasing coverage, better performance and more

[39] http://www.bbc.co.uk/news/uk-politics-24218329

[40] http://www.bbc.co.uk/news/business-24387237

affordable prices are likely to increase mobile only homes over the Control Period. Since the launch of competitive 4G services in the UK it is increasingly clear that this technology will increase the number of mobile only homes.

317. The Sweeney Pinedo report[41] represents the only piece of independent market research put forward as part of the WLR and LLU charge control consultations on 4G adoption and its potential impact on mobile only homes. Its findings are clearly supported by learning from other international markets and the analysis of other leading consultancies (e.g. Plum)[42]. TTG's attempts to undermine this research are spurious[43] and, as an evidence based regulator, Ofcom should come to its decisions based on a balanced view of this most up to date and relevant evidence.

318. Analysts agree about 4G's ability to increase the propensity for consumers to abandon their fixed lines in favour of mobile. With the launch of 4G services from Vodafone, O2, and Three, a 4G battle in the UK is expected. Market analyst Analysys Mason predicts that the UK will be the third largest 4G market in Europe by the end of 2014, with nearly 8 million connections[44]. As competition increases, the cost of 4G services will come down and operators will offer shared data plans that will allow customers to combine all their smartphone and tablet mobile broadband bills on a single contract. The arrival of 4G services in the UK may prompt some people to consider abandoning their fixed-line services. The necessity of a fast and reliable broadband internet connection is the only reason many people pay for a landline, and 4G speeds have the potential to match or even exceed some existing copper fixed-line services. In particular, mobile operators have a fantastic opportunity to replace broadband in areas where fixed-line broadband coverage is poor. "Our 4G footprint will pretty closely match our 2G footprint and, as such, there will be data services brought to parts of rural Britain where people have never had mobile data services before," said Paul Ceely, Head of Network Strategy at EE[45]. During early roll out high data prices and poor headline performance may inhibit switching but once 4G is established, and operators are forced to differentiate on more than just coverage, 4G will increasingly become a viable replacement for fixed-line services.

319. Analysts also now expect the UK 4G adoption rate to be faster than in other countries and that this will be will be among the highest levels in the world within a year[46]. One in five mobile users, about 10 million people, plans to upgrade to 4G in the next 12 months, according to a survey from Deloitte[47]. Expectations are that growth in new users is set to speed up substantially in the short term due to competition and the increasing availability of 4G devices. Take up by UK consumers is one of the most rapid take-ups across EU28 countries.

320. Indeed, Ofcom itself agrees that the mass market roll-out of 4G will see smartphones start to replace fixed lines. According to Ofcom Director of Research James Thickett, "*Smartphones have*

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[41] Openreach Annex A response to "*Fixed access market reviews: Approach to setting LLU and WLR Charge Controls*", available from http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/responses/Openreach_Annex_A.pdf

[42] A report for BT by Plum, "Future evolution of fibre regulation", available from http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-reviews/responses/BT_-_Plum_Consulting_report.pdf

[43] TTG's comments in the main, relate to the research methodology applied by Sweeney Pinedo whereas this is widely accepted and commonly used by market researchers. For example RW Connect note that "…*online has continued to secure its place in the researcher's toolbox, and now accounts for 22% of total market research investment*" - http://rwconnect.esomar.org/a-world-of-difference-esomar-global-market-research-2012/

[44] http://www.telegraph.co.uk/technology/internet/10272292/Can-you-survive-on-4G-alone.html

[45] http://www.telegraph.co.uk/technology/internet/10272292/Can-you-survive-on-4G-alone.html

[46] http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/10316160/One-in-five-plans-to-upgrade-to-4G-within-a-year.html

[47] http://www.deloitte.com/view/en_GB/uk/industries/tmt/b0aa8cf61c131410VgnVCM2000003356f70aRCRD.htm

*not been a substitute for fixed broadband yet, but with 4G coming in, we will start to see this happen*."[48]

## 4.3 Basket structure

321. We are pleased to see that Ofcom has taken steps to address the concerns raised in the September Response about the comingling basket, and in particular adjusting the start prices for calculating the X so that they align with the Openreach price list. The proposals here are a big improvement on Ofcom's previous proposals.

322. That said, the overall basket structure now consists of six baskets. This is complex already and further expansion of the baskets to eight baskets would serve no purpose.

323. Separately, Ofcom proposes in the Consultation to introduce a new clause to the compliance formula such that, should Openreach under-comply in a given year of the charge control, it would be obliged to contemporaneously refund the affected CPs. Ofcom has offered no cogent rationale for why this change is necessary or proportionate (especially as historically the 'carry-forward' of over or under compliance has been tiny[49] in relation to the total basket revenues).

324. The new clause proposed is unworkable and unduly burdensome - even if a refund per affected CP could be worked out, the mechanics of refunding large number of CPs small individual amounts would require considerable effort and cost. Separately, (as explained further in section 4.11 below), it undermines the purpose of existing carry forward provisions and this discriminates against BT because it is asymmetric. It does not operate if Openreach over-complies with the control. Ofcom should not impose such a disproportionate and unnecessary obligation.

## 4.4 Broadband line testing

325. Openreach has argued consistently for the last six years that LLU TAM costs are specific to MPF and should be recovered only against MPF lines and we support Ofcom's proposal to make this adjustment to better reflect cost causality.

## 4.5 Possible one off cost / price adjustments

326. Ofcom appears to have has misunderstood the way that Special Fault Investigation (SFI) costs are calculated in the Regulatory Financial Statements (RFS). Should Ofcom exclude 70% of the DSLAM capital maintenance cost component which relates to SFI, it must also increase at the same time the copper repair costs by the same amount in order for Openreach to recover its costs. We explain this further in response to Question 7.2.

327. Furthermore, at the same time Ofcom proposes to exclude evoTAM costs from the SMPF cost stack as a start-price adjustment on the basis that only downstream BT uses this 21CN facility. The appropriateness of preventing the recovery of these efficiently incurred costs in this adjustment is at least debatable given that evoTAMs could be used by other CPs. In any case Ofcom should remove these costs over the Control Period, analogous to its treatment of the differential between WLR+SMF and MPF where the need for regulatory certainty is cited to justify a glide-path.

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[48] http://www.mobilenewscwp.co.uk/2013/08/13/customers-to-replace-fixed-lines-with-4g-claims-ofcom/

[49] For example, the most significant recent example of under compliance is on the MPF ancillary basket in the 2012/13 control year where due to an error in the prior year revenue calculations, the basket weightings were incorrect. Price changes that Openreach had intended to be fully compliant were not once this error had been corrected. This resulted in too little revenue being given away: the Excess Revenue was only 3% of basket revenues. In this instance, there was a corresponding error in the co-mingling basket that meant Openreach had under-complied.

## 4.6 Deafness provision costs and career transition centre costs

328. Ofcom should allow Openreach to recover the costs of the deafness provision, or at the very least, replace them with a "notional" charge to represent the cost to BT of insuring for its employee health liabilities. Any notional amount (a fair premium that BT would pay) should be related to the expected costs.

329. Ofcom should continue to consider Career Transition Centre costs to be valid costs for the purposes of setting the Charge Control. It is self-evident that career transition centre costs are legitimate costs to do with managing the Openreach workforce, including delivering efficiencies, as such there is no reason why Ofcom should adjust or exclude these costs. Indeed, Ofcom has presented no positive case for excluding them.

## 4.7 Charge control base year and 2012/13

330. Openreach agrees that Ofcom should use the most up to date cost information when setting charges. In this case the appropriate cost information is the 2012/13 RFS. BT's position regarding the 2012/13 RFS is laid out in the BT Group response.

331. Openreach accepts that Ofcom will make decisions about relevant adjustments to 2012/13 costs. Regardless of Ofcom's decision regarding the cost allocation methodology changes in 2012/13 Ofcom should still use the cost base from 2012/13 rather than from 2011/12 in setting the Charge Control.

## 4.8 The price differential between MPF and WLR plus SMPF

332. Ofcom proposes to maintain an artificial LRIC differential of £10 between MPF and WLR rentals at the end of the next Control Period. Openreach should be indifferent as regards the relative pricing of the copper access products on the basis that these prices are properly cost-reflective, but this unnecessary adjustment is likely to send the wrong economic signals and distort buying and investment decisions. It also belies the detailed consideration of cost attributions elsewhere in this review if this large adjustment can be introduced without proper justification.

## 4.9 Caller display

333. Ofcom proposes to reduce the wholesale charge for this service to LRIC; a price reduction of 90% to 95%. Openreach disagrees with Ofcom's assessment that without further investment Openreach could meet the resulting higher demand (even a doubling of demand) at "acceptable service levels" (which Ofcom does not define). In fact it is most likely that, without incremental investment, Caller Display will routinely fail.

334. BT has three exchange types, System X, AXE10 and UXD5; System X accounts for two thirds of the network and AXE10 for most of the rest. We know we can increase capacity for UXD5 and AXE10 to meet an increase in demand but the minimum lead time to deliver the extra capacity is two years.

335. Neither Openreach nor Ofcom have the facts in order to evaluate how much it would cost and how long it would take, to increase capacity for System X. Openreach is working with the equipment vendor (Telent) to understand these issues, but this is a major piece of work which will not be finished until April 2014. Until the costs and the effectiveness of possible upgrades are understood, it is premature and unjustified to consider a radical re-structuring of the wholesale price.

## 4.10 Modelling Issues

336. Openreach has reviewed the Ofcom LLU/WLR Cost Model published on 20 August 2013, and the changes to this set out in Annex 12 to the Consultation. In doing so, the following modelling issues became apparent.

**Quality of Service Resource Uplift**

337. Absolute value of the uplift: The 3.9% uplift is intended to reflect the higher costs of improved service performance in the final year of the control. As we explain in response to question 3.4, Ofcom has failed to adequately provide for the full 3.9% uplift in costs as it has omitted to apply the uplift to a number of cost categories. Whatever uplift Ofcom ultimately decide is appropriate they must apply it to all the relevant cost categories otherwise Ofcom's forecast of costs to deliver minimum service levels will be understated.

338. Internal Volume adjustment: In paragraph A12.15(c), Ofcom explains that part of its approach is to 'reduce the sum of a & b by the proportion of 2011/12 volumes in the Cost Model divided by 2011/12 volumes in the Cost Model plus internal LLU volumes. This reflects the fact that the Cost Model excludes internal LLU volumes'. While in principle this seems reasonable, when applying it in practice Ofcom overstates the reduction. In particular, the reduction to 'a & b' is applied to e-side and d-side copper repair cost by introducing internal SMPF rental volumes. The SMPF rental volumes are at an equal weighting to WLR and MPF rental volumes. However, SMPF has a much lower usage factor of e-side and d-side copper. Therefore, if internal SMPF volumes are to be introduced into the calculation at all, they should have a reduced weighting which reflects their lower usage factor.

339. Capital expenditure uplift: Ofcom calculates capital expenditure uplifts to be applied in rows 7, 8, 9 and 10 of the 'data ref sheet 4b'. However, when applying this uplift to the dropwire capital cost component later in the model, Ofcom erroneously multiplies the uplift by the contents of an empty cell. This has the effect of multiplying the capital expenditure uplifts by zero, thereby reducing it to zero. This can be seen in rows 20 and 56 of the 'capital costs 11-12' sheet. The model therefore understates the capital element of the Quality of Service uplift.

**Aggregated efficiency**

340. In principle, it is more in line with Ofcom's modelling approach that opex and capex efficiency should be separately defined and applied. Ofcom's charge control model assesses charges on an accounting basis but then applies an average efficiency target assessed on a cash basis. The result of this inconsistency is that Ofcom's forecast of costs will be lower than the costs reported in the RFS. This is clearly wrong and forecast costs should be higher than Ofcom estimates. It is particularly important that Ofcom address this issue, as Openreach would expect that the increase in costs required to deliver the proposed minimum service levels is mostly opex. Forecast savings as a percentage of opex are below that for the capex. Because Ofcom has not disaggregated opex and capex efficiency, it will effectively apply a higher target efficiency rate to the service uplift and thereby understate the actual costs required.

341. While the current weighted average figure of 5% may make sense to Ofcom when applied to historic cost trends, as illustrated above, it is not correct to assume the same weighted average rate going forward as the dynamics of opex costs and capex costs vary significantly in future years. This is a fundamental oversight with significant impacts on the modelled costs, and one which would be very simple to correct. We note that Ofcom's model is already designed to allow different

Opex and Capex efficiency targets and therefore adopting the correct approach should be a straightforward exercise.

**Negative Capex**

342. As discussed in the September Response, Openreach fundamentally disagrees with including significant levels of negative capex in the capital cost calculation sheets. This negative capex can be seen in the Total Capital Expenditure sections (rows 703 to 735) of the 'Unit capital costs' and 'Unit capital costs (RAV)' worksheets. At the very least, Openreach would expect any occurrences of negative capex to be reset to zero.

**Simultaneous Migrations Mark-up**

343. Ofcom includes a calculation relating to the cost recovery from simultaneous migrations. In worksheet 'SPM Cost Recovery' Ofcom calculates the mark-ups to be applied to the costs of other LLU and WLR products. Openreach can see how the majority of these mark-ups flow through to costs and prices in the Cost Model, but is unable to see specifically where the mark-ups for SMPF ceases and MPF ceases (rows 101 and 102) are recovered. The values are calculated and do flow through to cells in the worksheet 'X (Hard Ceases)' but those cells are then not used to calculate the value of X for cease products. Openreach believes that Ofcom intended for the costs excluded in simultaneous migration mark up to be recovered across other products, including Hard Ceases.

344. Ofcom has calculated the costs to be recovered from Hard Ceases but has not included this in its calculation of the X. Openreach believes this is an oversight, which must be corrected to ensure costs are fully recovered in the Cost Model.

**Usage Factors**

345. We cover the issue of relative fault rates and the modelling of those in response to Question 5.3 where we propose Ofcom should use alternative usage factors. Notwithstanding our comments in response to Question 5.3, our we outline below the some generic issues regarding Ofcom's modelling approach, regardless of the relative fault rate assumed.

346. Ofcom has calculated some alternative usage factors which have then been applied to 4 repair cost components ('E-side copper current', 'D-side copper current', 'Residential PSTN drop maintenance' and 'Local exchanges general frames current' in the model). The alternative usage factor for 'local exchanges general frames' (also known as MDF repair) has the effect of halving the relevant costs for MPF. In Ofcom's model the MDF repair cost is equally apportioned to MPF, WLR and SMPF. However, MPF has two jumpers, WLR has one jumper and SMPF also has one. So, it follows that MPF should be attributed the same cost as WLR+SMPF for MDF repair.

347. The usage factors of 1 should therefore be applied to WLR and to SMPF separately, and the usage factor of 2 should be applied to MPF for MDF repair costs. These usage factors should then be multiplied up by the relevant care level differential for that service. This is the approach used in the RFS because it is self-evidently cost causal and therefore the correct attribution of these costs.

**Care Level Differentials**

348. The access network has fixed costs. As volumes grow, fixed costs stay constant and therefore the unit incremental cost is less than the average cost before the increment in volumes (i.e. there are economies of scale). Ofcom models this effect by applying CVEs (and AVEs) to any component volume growth where the CVEs are less than 1.

349. While this seems reasonable for absolute volume growth e.g. where the total volume of WLR and MPF copper lines grows, Ofcom's model also applies the same CVEs and AVEs to switching of volumes from WLR to MPF, even where there is no overall growth in copper lines.

350. Ofcom has concluded that there is a 14.1% cost differential between Care Level 2 products, such as MPF and Care Level 1 products, such as WLR Basic. Openreach has laid out in response to Question 4.1, why the differential should be 23%. The comments below apply equally to a 14.1% cost differential and a 23% cost differential but we reference Ofcom's modelled costs for simplicity.

351. Where the absolute volume of copper lines is constant, but there are more MPF lines and correspondingly less WLR lines, it would be expected that the costs would increase by 14.1% in relation to the increase in MPF lines. In fact, Ofcom's model applies a CVE which results in a 7% increase in the key component costs ('E-side copper current' and 'D-side copper current') rather than the expected 14.1%.

352. Ofcom should instead uplift the component costs by 14.1% to account for switching from Care Level 1 to Care Level 2 products in order to correct this anomaly.

## 4.11 Definitions and Legal Instrument(s)

**Delay in the final statement**

353. Openreach recognises that the charge control may not become effective on 1st April 2014. If the control is delayed, for example to 1st July, there are elements of the legal instrument that would need to be revised around the definition of first relevant year.

*Definition of first relevant year*

354. Openreach proposes that

- the definition of the start of the first relevant year of the charge control "(1) the period beginning on 1 April 2014 and ending on 31 March 2015 (the **"First Relevant Year"**); " is changed to "(1) the period beginning on 1 July 2014 and ending on 31 March 2015 (the **"First Relevant Year"**); "

- the definition of the number of days in the first relevant year is reduced from 365 days to 274 days so that the definition in 7A.14 and 7A.3 is redrafted as follows "$\overline{pi,t}$ *is the Relevant Year Weighted Average Charge made by the Dominant Provider* ……..... $wi,j,t$ *is the proportion of the Relevant Year in which each charge,* $pi,j,t$ *is in effect, calculated by the number of days during which the charge is in effect and dividing:*

  *1) for the First Relevant Year, by 274;*

  *2) for the Second Relevant Year, by 366; and*

  *3) for the Third Relevant Year, by 365*. "

355. The change needed in the legal instrument is shown here for the Relevant Year Weighted Average Charge, but the same change, from 365 days to 274, would also need to be made to the Second Relevant Year in the Prior Year Weighted Average Charge definition. We assume that these changes to the legal instrument would equally be made to the corresponding WLR and SMPF schedules.

**Ensuring compliance with the charge controls**

356. Ofcom has amended the wording of the legal instruments for WLR and LLU to ensure consistency with those for ISDN2 and ISDN30. They have taken this consistency further, by incorporating into the legal instruments for each of these a new requirement from the Narrowband Market Review:

> *"For each of the categories of products and/or services specified in condition 7A.1(a) to 7A.1(l)[50], where the Percentage Change in any Relevant Year is more than the Controlling Percentage, the Dominant Provider shall, to the extent reasonably possible, and as soon as reasonably practicable, repay the Relevant Excess Revenue to the relevant Affected Communications Provider. "*

357. This has led to a new concept being introduced that is a significant departure from the legal instruments issued for consultation in July 2013, namely that Openreach will annually rebate any Excess Revenues to CPs.

358. We would strongly resist this new clause in the legal instrument on the following grounds:

- <u>It is impractical to implement</u>: In a basket control it is impossible to say what products in the basket would be subject to price changes that should or would have been implemented in order to comply. Consequently, it is impossible to determine which CPs have been subject to excess charges and therefore how the Excess Revenues rebate is split across CPs. Moreover, given this complexity, the implementation of such a provision is likely to lead to extensive debates and/or disputes with CPs.

- <u>It is disproportionate</u>: Historically, the level of over or under compliance carried forward has been tiny compared with the level of total basket revenues. Accordingly, applying an additional, impractical and difficult to implement provision to such a small issue is disproportionate. Ofcom has offered no cogent rationale for why this change is necessary.

- <u>It is discriminatory:</u> Separately, it undermines the purpose of the existing carry forward provisions which adequately address issues of over and under compliance in a symmetric and non-discriminatory manner. In contrast, Ofcom's proposal discriminates against BT due to its asymmetry: it does not operate if Openreach over-complies with the control.

359. Ofcom should not impose such a disproportionate and unnecessary obligation.

[50] This refers to Schedule 1: Proposed SMP services condition 7A (LLU charge control). The corresponding provisions for WLR, ISDN30 and ISDN2 are respectively: 7C.1(a) -7C.1(d), 7D.1(a) – 7D.1(c) and 7E.2.

# 5 Responses to the Ofcom Charge Control questions

360. This section provides Openreach's responses to the questions raised in the Ofcom consultation.

## 5.1 Charge Control Design

**Question 6.1**: Do you agree with our revised proposals for baskets and SMPF New Provides? Please provide reasoning for your answer.

361. A key driver for Ofcom in expanding the number of baskets and thereby making the control more complicated is a concern that Openreach would use the flexibility of broader baskets to "game" the controls. Ofcom presents no evidence that Openreach has in fact used flexibility in the past for any such gaming activity. Therefore, Openreach does not accept the "gaming" justification presented by Ofcom. Ofcom should not introduce overly complicated and burdensome new regulation to overcome a problem that does not exist.

362. Openreach generally supports broader baskets as they provide greater flexibility to react commercially to changes in demand and the six basket structure proposed by Ofcom is relatively narrow. Therefore we do not consider there to be any additional benefits of moving to an eight basket design; all controls are achieved via the six basket design. That said, subject to our detailed comments on each of the specific proposals below, Openreach acknowledges that the new six basket design structure of the charge control is logical.

363. Ofcom sets some X's which Openreach believes are not aligned to the cost base of certain products; it would be preferable to use an alternative X in these cases in order to set the right pricing signals for CPs while allowing Openreach to recover its costs.

**MPF New Provides**

364. We broadly support this new basket. In our September Response we raised concerns about the inability to price a MPF New Provide and the other new provide items (Stopped Line Provide and Working Line Takeover) sensibly relative to each other. The combined basket will support relative pricing of these products so that efficient CP behaviour is incentivised and unnecessary engineer visits are avoided wherever possible.

365. If SLP and WLTO were to be subject to the same control of CPI-5% as other LLU ancillaries, but MPF New Provides were to be subject to a different control of CPI-1.75%, the price differential between these two sets of products would be reduced to the point that CPs would not understand why there was such a small difference in price when an engineering visit is required for MPF New Provides and not the others. A combined MPF New Provides basket resolves this by giving Openreach the flexibility to set appropriate relative prices for these products.

**Hard Ceases**

366. Ofcom is introducing a further level of complexity in the basket structure by separating out Hard Ceases into their own basket. It is not clear what precise issue this is intended to address. That said, should Ofcom proceed with a separate control for Hard Ceases, given the lack of data from which to calculate an X, it would seem logical that the X in the CPI-X control would reflect the opex efficiency target set by Ofcom in its modelling, provided such a target is achievable.

**LLU ancillaries basket**

367. We support a level of X in line with target efficiency, given the costs for this basket cannot be modelled, and costs are composed of categories that we could expect to be reduced through efficiency gains. However, we disagree with Ofcom as to the appropriate target level of efficiency and we would direct Ofcom to our views on the efficiency rate as detailed explicitly in our September Response, section 7.5 (paras 417-458).

368. As explained above, there is no evidence that Openreach has participated in gaming in the LLU and WLR charge controls in the past. Therefore, we do not believe this should be a key determinant of how Ofcom constructs a basket. That said, combining the remaining LLU ancillaries into a single basket across MPF and SMPF, and the new requirement in the legal instrument to align the price of comparable products seems sensible.

**Expedites**

369. Ofcom is correct to remove MPF, SMPF and WLR Expedites from the respective ancillary baskets and not impose a safeguard cap for these products. Given that these are premium service products, for which Ofcom has no robust cost information[51], it is not appropriate to charge control these items.

**SMPF New provide**

370. We have no strong objection in principle to setting the SMPF New Provide price at FAC. However, Ofcom's proposal to move away from DLRIC creates an inconsistency with the treatment of other potentially substitutable products. We would prefer that Ofcom sets prices so that CPs choose the products which minimise Openreach's costs.

371. We note that Ofcom is lowering the price of SMPF New Provides more than SMPF Connections which will incentivise CPs to cease the previous line and re-provide on a completely new SMPF connection. In order to address this, we suggest that SMPF New Provide charges should be controlled at the proposed levels for SMPF migrations.

372. While there is slightly more jumpering activity involved in executing SMPF single migration than New Provide, the two products are currently priced at the same level. We believe Ofcom intended the pricing to encourage CPs to purchase the lowest cost combination of products in a migration scenario. However, the current disparity in the initial prices of SMPF New Provide and SMPF Single Migration and the controlling CPI-X percentage prevents the pricing of the two products at the (same) level in order to drive appropriate market behaviour. Ofcom's proposal will result in unintended and perverse outcomes.

**Tie Cables basket and Co-mingling New Provides and Rentals basket**

373. We broadly support the separation of the co-mingling basket along these lines. As Ofcom notes, in 2012/13 the Tie Cables average charge was above FAC while MPF Hostel Rentals and MPF Room Build average charges were significantly below FAC. However, it was not possible for Openreach to realign prices with costs when these services fell within a single basket subject to an inertia clause. Breaking these services into two separate baskets with very different levels of X as proposed by Ofcom would allow Openreach to start to realign price with cost over time.

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[51] Consultation, paragraph 6.45.3.

374. We support Ofcom's proposal in 6.62 to change the definition of the Co-Mingling New Provides and Rentals basket in the legal instrument, to include new products and to remove those withdrawn from supply. This is appropriate given the old products are no longer supplied and the new products were not previously referenced as being part of the basket.

375. In our September Response, we noted that the level of X is below the level it should be. Ofcom has now used the correct start prices and this is welcomed. However, Ofcom has not addressed the other two issues we raised, specifically negative capex and the volume parameters for hostel rentals. We remain of the opinion that Ofcom should address our previous response on these two issues.

**WLR Connections Basket**

376. Openreach does not understand Ofcom's reasoning for including the two WLR Connections services in the same basket. WLR Start of a Stopped MPF Line volumes are very small compared with WLR New Provide volumes. Ofcom notes that the current volumes are minimal but they expect them to increase over the course of the Control Period, in part due to the increase in MPF lines[52]. Although it is logical that these volumes will increase, the size of the increase will not be of such a magnitude to warrant the changes to the basket.

377. As it is now, if Openreach needs to make a change to the basket in order to comply with the legal instrument, Openreach would need to change WLR New Provides in order to make a material difference because any change to WLR Start of a Stopped MPF Line would be negligible. This would in effect drive down the price of WLR New Provide and narrow the price gap between the two products, thereby incentivising inefficient CP behaviour to order a New Provide rather than WLR Start of a Stopped MPF Line, even when the latter is clearly more efficient operationally and economically. Openreach recommends keeping these two products as standalone baskets.

378. Furthermore, due to limited management information on WLR Start of a Stopped MPF Line volumes, the data needed to apply a basket control (volumes, prior year revenues) will need to be derived. Currently the only method of determining volumes is to extract billing charges manually and derive the percentage of revenue from WLR Start of a Stopped MPF Line and divide by the price. There is no scheduled release to design, build and test an automated reporting capability for this, however, the necessary systems development should be able to be achieved by April 2015. Accordingly, it would not be possible to comply precisely with the control proposed at this time without a significant amount of manual work.

**Sub Cap at 7.5%**

379. We broadly support a sub cap of 7.5%

380. In our response to the First Charge Control Consultation, Openreach argued for greater pricing flexibility than a sub cap of 7.5% would allow. This was partially due to the misalignment of prices and costs under a single co-mingling basket. Ofcom's proposal to create a separate Tie Cables basket and Co-Mingling New Provides and Rentals basket has resolved this issue.

381. The remaining issue related to the high value of X, which in combination with a sub cap of 7.5%, results in a requirement that every price decreases each year. With the new basket design, the base case level of X is lower, so this is less likely to occur. (However it could still be possible for the Hard Cease basket if CPI fell below 1.75%.) As the proposal to impose a 7.5% sub cap has

[52] Consultation, paragraph 6.71.

reduced the scale of the issue, we consider a 7.5% sub-cap acceptable, although Openreach's preference would still be for a sub cap of 10%.

382. For this reason (forcing price cuts on every item in the basket) we are strongly opposed to a sub cap of 5%.

**Starting Charges**

383. We welcome the move from a notional starting charge to set starting charges based on the latest charges announced on 20 November 2013 for the first year of the control. This will allow items in the LLU ancillaries basket to remain aligned as we move forward into the new control.

384. However we have identified some prices in the Legal Instruments that do not match the published price list. Openreach has corrected these in Figure 28 below.

***Figure 28: Revised start prices***

| Basket | Product | Ofcom initial price | Openreach price list |
|---|---|---|---|
| Tie Cables | Internal Tie Cable (2) Jointing Fixed Charge per External Tie Cable | £143.92 | £175.34[53] |
| WLR Connections | Supply of new basic line | £47.11 | £47.08[54] |
| MPF New Provide Services | MPF Connection Charge – New Provide Standard | £45.53 | £45.43[55] |

385. We also welcome the update to 2012/13 prices for the co-mingling basket in the calculation of X.

**Question 6.2**: Do you agree that we should control (i) WLR Standard Connection when simultaneously provided with SMPF New Provide and (ii) WLR Start of Stopped MPF Line and its simultaneous provision with SMPF New Provide? Please provide reasoning for your answer.

386. Openreach generally supports broader baskets as they provide greater flexibility to react commercially to changes in demand. That said, Openreach has no strong objection in principle to Ofcom controlling:

- WLR Standard Connection when simultaneously provided with SMPF New Provide; and
- WLR Start of Stopped MPF Line and its simultaneous provision with SMPF New Provide.

*387.* The definition in the legal instrument defines "simultaneous provided" as being when the services are **ordered and purchased** together. But, it is self-evident that savings only arise if the services in

[53] Openreach does not recognise the price Ofcom quotes as the initial price. The price of £175.34 is that published in the Openreach pricing list effective from 1 April 2013.

[54] At the time of publication of the consultation document, the initial price was as stated by Ofcom, however a price change has been notified, which became effective on 1 February 2014 and therefore will be the correct initial price at 31 March 2014.

[55] At the time of publication of the consultation document, the initial price was as stated by Ofcom, however a price change has been notified, which will effective on 21 March 2014 and therefore will be the correct initial price at 31 March 2014

(i) and (ii) above, are **provided** at the same time. Where they are not provided at the same time, no savings arise and the prices should not be discounted. It follows that the two products must be provided simultaneously (not just ordered simultaneously) for a cost saving to be made.

388. It is often the case that the delivery of the two orders is misaligned and not in Openreach's control. For example it frequently happens that:

- CPs order the 2 products simultaneously but with different Customer Required by Dates (CRD).
- even when CPs order the two products simultaneously with the same CRD, one of the CRDs is changed by the CP during the provision process.

It would be grossly unfair if Ofcom were to require Openreach to deliver savings when the CRDs requested by the CPs are not the same and preclude simultaneous provision. Therefore, Openreach believes this is a significant issue which needs to be addressed by Ofcom.

389. Openreach propose that the definition in 7C.11(y) (legal instruments) should be changed to:

*"**Simultaneously Provided**" means, in the case of*

- *WLR Conversion;*
- *WLR Start of Stopped MPF Line;*
- *WLR Standard Connection*

*when that service and/or product is **delivered** simultaneously with SMPF New Provide"*

390. In the vast majority of cases when these products are purchased together, the WLR CP, e.g. EE, will purchase WLR from Openreach and a bitstream product from BT Wholesale. Therefore, in most cases simultaneous provision involves separate orders into Openreach from the WLR CP and the bitstream provider. The WLR CP orders the WLR service and the bitstream provider orders the SMPF service. Both orders logically contribute to the savings when simultaneously provided. Ofcom proposes that savings are recognised in the WLR price only.

391. Obviously this arrangement could lead to allegations that Openreach is under recovering its costs against WLR. Openreach would ask that Ofcom explicitly assess this arrangement and confirm they consider the discount to the WLR price to be fair and reasonable.

**WLR conversions and SMPF New provide**

392. Openreach continues to disagree with Ofcom's assumption that the full savings in cost from the development of an automated billing capability can be realised from the start of the Charge Controls. Openreach provided initial cost estimates of £75k - £150k for an automated billing process, based on the assumption that the development would be complete by the end of 2014/15. However, as clearly indicated in our September Response, this development is likely to cost more than anticipated and is expected to be delayed until 2015/16 to address issues in the downstream provisioning process.

393. Ofcom appears to acknowledge this in setting the simultaneous discount on WLR Standard Connection or WLR Start of Stopped MPF Line as a glide over the three years of the control. However, the discount on WLR Conversion and SMPF New Provide is effective from the start of

the control. This inconsistency in approach has not been properly explained or justified in this Consultation.

394. Finally, we note that in the approach it suggests for WLR Standard Connection or WLR Start of Stopped MPF Line Ofcom has not taken on board the comments in our September Response. As the tasks are co-ordinated so that where possible activities are done simultaneously today, some of the cost savings to do with simultaneous provision are already reflected in the costs Ofcom is using for its charge control modelling[56]. Ofcom proposes to reduce the price of a simultaneous provision to reflect the cost savings to do with simultaneous provision i.e. less jumpering activities. However, these cost savings are to a great extent already included in the charge control cost data. Therefore, if the price of a simultaneous provide is brought down specifically to reflect this cost saving, this should be echoed in the total modelled costs with a corresponding increase elsewhere in the control.

**Question 6.3**: Do you agree with our proposal not to set charge controls that require Openreach to provide a discount when WLR Transfer and SMPF Single Migration; WLR Start of Stopped WLR Line and SMPF New Provide; and WLR Working Line Take Over and SMPF New Provide are provided simultaneously? Please provide reasoning for your answer.

395. Openreach agrees that in the case of these simultaneous provisions there is no rationale to support a lower combined charge as there is no cost saving in terms of exchange work associated with providing the activities simultaneously.

**Question 6.4**: Do you agree that we should re-allocate costs between the services that have been attributed the cost savings associated with the WLR+SMPF simultaneous connections and migrations services so that all services involving jumpering at the exchange more accurately reflect their underlying costs? Please provide reasoning for your answer.

396. Whenever possible Openreach's engineers will co-ordinate the jumpering activity for the WLR Conversion and SMPF New Provide. Therefore, the costs that are in BT's RFS will already reflect some of the cost savings from the reduced jumpering activity. Ofcom previously proposed to remove these engineering costs, for example, travel time and jumpering, which are not in the cost base. This proposal would have resulted in an understatement of costs for the simultaneous provision of WLR Conversion and SMPF New Provide. Ofcom now proposes to reduce the price of simultaneous provision of WLR Conversion and SMPF New Provide and to increase the cost of other ancillary products.

397. Openreach agrees Ofcom should reallocate these costs as proposed. As outlined in section 4.10 above, Ofcom has calculated the increased costs to be recovered from Hard Ceases but has not included this in its calculation of costs. Openreach believes this is an oversight, which should be corrected to ensure costs are fully recovered in the Cost Model.

[56] Paragraph 243 of Openreach response to "*Fixed access market reviews: Approach to setting LLU and WLR Charge Controls*", available from http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/responses/Openreach.pdf

**Question 6.5**: Do you agree that we should now charge control the Caller Display service? Please provide reasoning for your answer.

398. Ofcom considers that the charge for Caller Display should reflect LRIC and that common costs should be recovered from the main WLR rental charges. Ofcom is therefore consulting on a range of £0.35 to £0.50 per customer per year using 2011/12 volumes. This equates to a reduction in the charge of Caller Display per WLR line of 90% to 95%. As Ofcom intimates, a price cut of this magnitude (were it to be passed on to retail customers) would likely increase take-up significantly[57].

399. For the reasons set out below, Openreach does not agree with Ofcom's proposal and disagrees that "Openreach's existing systems will be able to supply an increased demand at acceptable service levels without investment in extra capacity being necessary"[58].

**Lowering the wholesale charge for Caller Display may increase demand and thereby the likelihood of failure**

400. Openreach agrees with Ofcom that our trial demonstrated that demand for Caller Display did increase when its price was lowered[59]. Openreach believes that lowering the wholesale charge for Caller Display will increase demand. Ofcom does not "rule out" the possibility that a significant reduction in the wholesale charge for Caller Display could increase demand sufficiently such that users experience the effect of capacity constraints[60]. However, Ofcom is now focussing on the likelihood and/or frequency of this kind of 'failure' in the Caller Display service. Openreach is therefore conducting a further study into the increased likelihood of failure affecting end-user experience in the event of an increase in demand for Caller Display. The findings of this study are not yet available, but Ofcom nevertheless asserts that the likelihood of failure is "very low". We are expecting to have the findings from this study in April 2014.

401. Ofcom goes on to suggest that BT could meet higher demand at "acceptable service levels"[61] (which Ofcom does not define) without extra investment. This is seemingly on the basis that the total number of WLR lines (on which Caller Display is provided) is falling, and the 8% to 10% Instantaneous Failure Rate (IFR) shown in Table 6.6 under a doubling of demand would only arise under what Ofcom describes as "extreme conditions"[62].

402. Openreach has conducted further research into call rates and has observed significant fluctuations in call rates; exceptionally high incoming call rates are regularly experienced by the PSTN network for various reasons. Although BT does not have the capability to monitor all 27,000 concentrator routes, BT has captured incoming call rates at 3cps to 19cps[63]. Table 6.6 in Ofcom's consultation is based on an assumption of the worst possible network conditions at 8cps but we now know that this could be as high as 19cps. A recent example involved 12cps to a single Digital Local

[57] Consultation, paragraph 6.142.
[58] Consultation paragraph, 6.162.
[59] Consultation, paragraph 6.144.
[60] Consultation, paragraph 6.147.
[61] Consultation, paragraph 6.162.
[62] Consultation, paragraph 6.157.
[63] Although limited monitoring of concentrator routes can be put in place if an ongoing problem is identified.

Exchange, which was due to the Environment Agency needing to contact customers to warn them of the risk of flooding.[64]

403. In terms of the number of lines which subscribe to Caller Display, it should be noted that WLR lines are forecast to fall by 11% between 2013/14 to 2016/17[65]. Thus, if there was a doubling of take-up in terms of demand for Caller Display per customer then overall demand would still increase by around 80%[66] (based on constant per customer call volumes)[67]. Such an increase is not unlikely given Ofcom itself observes "*if the charge were to be much lower, more CPs might automatically include it in their retail offers*"[68]. BT does not believe its systems could accommodate such an increase, as there is in an increased likelihood of failure which means Caller Display would fail for some calls. We discuss the reasons behind this below and how BT could mitigate this issue.

**Until the costs and the effectiveness of possible upgrades are known, it is premature to consider a radical re-structuring of the wholesale price**

404. Although new information has become available to suggest that the cost of expanding capacity for Caller Display is potentially less than previously estimated by Openreach, we disagree with Ofcom's current estimate of the costs as being as low as under £10m. As Ofcom itself acknowledges, further work would be required to establish both the technical feasibility of cheaper options and the validity of any lower estimates. It is precisely for this reason that Openreach is conducting a further investigation with its supplier and, until the results of these investigations are known, a radical restructuring of the wholesale price would be both unfounded and unjustified.

405. Openreach's systems will require new investment in order to provide a much larger number of customers with Caller Display and to prevent an increased likelihood of failure. We believe the likelihood of failure is more significant than Ofcom judges and we should take preventative measures now as to do otherwise would result in an unacceptable level of Caller Display failure. All the available information still suggests that the incremental cost of providing Caller Display would not be covered by a 35p-50p price. This is because it is likely that significant incremental investment will be needed to deal with increased demand.

406. We are currently investigating how higher demand could be met by some limited incremental investment. However, in order to understand what might be achieved and at what cost, we need to work with our equipment vendors to understand what solutions are possible in each case, and what timescales are involved. BT stresses that it would be irrational for Ofcom to make any decisions on the incremental cost of Caller Display before this work is completed.

407. It is important to note that BT uses three types of exchange, System X, AXE10 and UXD5:

- System X: this is the most common exchange (it covers about two thirds of the network) and is the only exchange that Ofcom refers to in the Consultation. A FSK sender at the exchange enables Calling Line Identification (CLI) data to be sent down the line to an end-user's telephone (provided they have a suitable handset) or other Caller Display device. While it might be possible to increase capacity on a FSK sender on System X we currently do not have an exact cost for this (as noted above BT is currently investigating

[64] Having more customers with Caller Display may not be beneficial because this might result in important calls, for example ones from the environment agency, being screened more often, and customers therefore not receiving vital messages.

[65] As per Ofcom's model.

[66] 89% x 2 = 178, therefore it is 78% more than the original total.

[67] The increase is circa 50% after 3 years if it is assumed that call volumes continue to fall at about 5% per annum.

[68] Consultation, paragraph 6.146.

this). Telent are constructing a prototype during Q4 2013/14 which will show what level of upgrade is possible, how an upgrade could be implemented in our network, the likely timeline and anticipated costs. Telent have already told us that they believe it is possible to increase capacity on a FSK sender but they have not been able to give us an indication of costs and how long this would take to implement. All indications from this work are that BT would not be able to implement a capacity increase until 2016/17. BT is also performing further testing to establish if other factors will influence the Caller Display service where an increase in calls requiring CLI occurs. We strongly advise Ofcom to wait for the outcome of the Telent study before seeking to determine the future cost of providing Caller Display. Attempting to do this on the basis of partial information would be irrational.

- AXE10: increasing capacity on the AXE10 exchanges (this covers about a third of the network) is difficult as the board is no longer manufactured and it is difficult to obtain spare parts either from our vendor Ericsson or from third parties. Ericsson have indicated that a redesign of the CND board might be possible over an 18 month period, but that manufacturing it would take longer. Ofcom should take into account the timescale and associated costs for increasing AXE10 capacity.

- UXD5: (c.130,000 customers in the remote exchanges mainly Scotland and Wales) We have already informed Ofcom that capacity could be increased on UXD5 exchanges to meet an increase in demand.

408. Until the costs and the effectiveness of possible upgrades are known, it is premature to consider a price reduction to placate stakeholders when the evidence in support of this proposal is clearly flawed.

**BT does not agree that it would be acceptable for Caller Display to fail from time to time.**

409. Ofcom's proposals implicitly assume that it is acceptable for end users to experience a failure in Caller Display from time to time. Indeed, Ofcom explicitly states that *"the potential degradation in quality of services that might result from significantly higher take up of Caller Display is unlikely to be a major concern"*[69]. BT fundamentally disagrees.

410. Without expanding capacity and incurring the necessary investment, the only way increased demand could be met would be if it was deemed acceptable that Caller Display would intermittently fail to be provided to customers who have paid for it. Openreach does not want to degrade the quality of the Caller Display service. Customers would bear the cost of higher take-up in other ways too – those customers who place a high value on the service when the Instantaneous Fault Rate is low (as at present) would find that their service is being crowded out because customers who have a lower value for Caller Display are being supplied instead.

411. If Caller Display does fail repeatedly, customers would be rightly dissatisfied and BT would face a rise in the number of calls to its service centres to report faults. Increased customer dissatisfaction (consumer harm) would lead to extra resource and cost in order to handle the increased customer complaints and is something that Ofcom needs to consider.

[69] Consultation, paragraph 6.159.

**Ofcom need to take into account the importance of Caller Display to different groups of customers and the effect that Caller Display would have if more people used it**

412. BT shares Ofcom's wider policy concerns regarding unwanted or nuisance calls.[70] Please see BT Group response.

413. Ofcom says in its Consultation that it is concerned particularly with "more vulnerable consumers"[71]. Ofcom needs to be cautious that it's proposals don't have the unintended consequence that with much higher demand, Caller Display is likely to fail more often and those customers who place a higher value on Caller Display may not receive the same reliable service that they had before.

**If Ofcom proceed with their proposals it is preferable to keep cost modelling simple**

414. Notwithstanding Openreach's points above, if Ofcom proceed with their proposals we agree that there is huge uncertainty with regard to the cost Openreach will actually incur in the future. As such it would be preferable if Ofcom assumes the constant costs in its cost modelling. A more sophisticated approach would be false precision[72].

**Question 6.6**: Do you agree that we should impose a one-off reduction in the Caller Display charge to LRIC (in 2014/15), with common costs reallocated across WLR and MPF as appropriate? Please provide reasoning for your answer.

415. We disagree with the incremental cost approach, for the reasons set out above.

[70] Consultation, paragraph 6.165.
[71] Consultation, paragraph 6.165.
[72] Consultation, paragraph 6.175.

## 5.2 Charge control cost allocations and modelling

**Question 7.1**: Do you agree with our proposal to change the approach to the recovery of evoTAMs costs so as to exclude evoTAMs costs from the SMPF line rental? Do you agree with our revised assessment of TAMs costs? Please provide reasoning for your answer.

416. Please see response to Question 8.2 in relation to EvoTAMs.

417. We believe Ofcom should use the highest estimate in their range (being £6) as the TAMs costs for 2016/17.

418. Ofcom proposes that a 7 year life would be more appropriate for TAMs, aligning to the asset life used in the Single Jumpered MPF dispute. Our accounting life is 5 years, but for these purposes, we agree with Ofcom's consistent approach.

419. [✂].

***Figure 29: 5 year asset life and 37% overhead rate***[73]

[✂]

420. [✂].

***Figure 30: with 7 year asset life***[74]

[✂]

***Figure 31 - Revised***[75]

[✂]

**Question 7.2**: Do you agree with our proposal to immediately remove 'DSLAM capital/maintenance' costs associated with SFI faults from the Cost Model? Please provide reasoning for your answer.

421. We do not agree that the DSLAM capital/maintenance costs associated with SFI faults should be taken out of the Cost Model. Ofcom should remove these costs from the "DSLAM capital/maintenance" component and re-attribute them across the copper repair components within the Cost Model.

422. The removal of the costs from the DSLAM capital/maintenance component and the reattribution of those costs to the copper repair component should be treated in a consistent manner i.e. if the removal is immediate then the reattribution should also be immediate. Openreach would prefer Ofcom to perform the cost adjustment by amending the base year costs and modelling as normal.

423. Ofcom indicates in the Consultation that it intends to update the model from the 2011/12 RFS to the 2012/13 RFS presented using 2011/12 methodology. Notwithstanding Openreach's views on

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[73] Note the 2005/06 additions is calculated by taking the 2006/07 GBV less the 2006/07 Additions.

[74] Note the 2005/06 additions is calculated by taking the 2006/07 GBV less the 2006/07 Additions.

[75] Note: the 2005/06 additions is calculated by taking the 2006/07 GBV less the 2006/07 Additions.

the inappropriateness of Ofcom's proposed approach, the comments below reference the 2011/12 cost attribution methodology in the RFS.

424. The costs for SFI services were calculated by multiplying the total SFI hours from the Openreach management information by a man-hour rate. These costs were then deducted from the total copper repair costs in the RFS. Therefore, the copper repair costs in Ofcom's base year are already reduced by the total calculated costs for SFI.

425. Ofcom now effectively propose to further reduce the already reduced copper repair costs in its base year by excluding 70% of DSLAM capital maintenance costs. If Ofcom were to exclude these costs as it proposes it would result in the SFI costs being removed twice from Ofcom's base year costs.

426. Below is an illustrative worked example.

***Figure 32: An illustrative worked example of excluding DSLAM capital maintenance costs***

| **Copper Repair Costs prior to SFI calculation (£m)** | |
|---|---|
| Copper repair components | 200 |
| DSLAM Capital Maintenance | 5 |
| Gross repair costs for SFI and other copper | 205 |

| **Copper Repair Costs post SFI calculation (£m)** | |
|---|---|
| SFI costs (based on HMK) | 10 |
| DSLAM Capital Maintenance | 5 |
| Net copper repair costs | 190 |
| Gross repaid costs for SFI and other copper | 205 |

427. For the sake of argument, assume there are two components in the RFS, copper repair and DSLAM capital maintenance. The costs ledgered for SFI and all other copper repair activities is £205m as shown in the above table. Then to calculate a specific cost of SFI work, we estimated £10m, based on kmh from the Openreach management accounts.

428. As can be seen in the table above, the total cost, £205m, is the same pre and post the SFI calculation. The SFI cost at £10m is correct, therefore if Ofcom were to remove 70% of DSLAM Capital Maintenance Costs it would effectively result in a cost for copper repair of £191.5m rather than the correct cost of £195m.

429. It is clearly correct that the 70% of DSLAM capital/maintenance costs post the SFI calculation for the RFS are proper to the copper repair and that they should be attributed to the copper repair components. Therefore, Ofcom should remove these costs from DSLAM capital/maintenance but reattribute them to copper repair.

430. Furthermore, in order to be consistent in its adjustment Ofcom should reattribute and reduce the costs at the same time.

**Question 7.3**: Do you agree with our proposal by 2016/17 to allocate the remaining 'DSLAM capital/maintenance costs on a consistent basis with our treatment of other fault-related costs, by means of a glide path? Please provide reasoning for your answer.

431. Openreach agrees that 30% of DSLAM capital maintenance costs relate to broadband faults on copper lines. We would expect that these costs be treated like any other repair cost i.e. as a common pool of costs that are attributed by Ofcom using volumes and usage factors.

432. Furthermore, in common with our response to Question 7.2, if Ofcom considers it necessary to reattribute these costs then the adjustments should be made consistently for the remaining 30% and the other 70% of DSLAM capital maintenance i.e. if DSLAM capital maintenance costs associated with SFI faults are immediately removed, then the re-attribution to other copper repair components should also take effect immediately.

**Question 7.4**: Do you agree with our approach and estimates of the likely ranges for the WLR/WLR+SMPF minus MPF differentials? Please provide reasoning for your answer.

433. In the First Charge Control Consultation, Ofcom proposed that the price differential(s) between WLR/WLR+SMPF and MPF reflect the differences in LRIC. In doing so, the price that Openreach charged to CPs would then reflect the long run cost differences between the two services. This would enhance productive efficiency as these two different inputs are used to provide voice and broadband services sold to customers. CPs would buy what is the most efficient service for them, thereby minimising the total cost of production. We agreed that this was the right thing to do for consumers.

434. We agree with the calculation approach and broadly agree with Ofcom's ranges. In this answer we do not comment on Ofcom's proposal to ultimately impose an artificial £10 differential – this is addressed in detail in the BT Group response. We limit this answer to only address the quality of Ofcom's cost analysis of the LRIC differentials.

**WLR+SMPF v MPF**

435. Ofcom considers the LRIC values from two perspectives – a top-down service level perspective and a bottom-up component level perspective. The top down service level perspective generates a LRIC differential of £3.41 in 2016/17 by applying LRIC/FAC ratios sourced from BT's LRIC model to the FAC service costs.

436. The bottom up component level analysis considers the components that are different between the services. These are listed below:

- WLR+SMPF includes a PSTN line card, and MPF does not.
- MPF includes a TAM and WLR+SMPF does not.
- MPF is delivered to a higher service standard than WLR.

We agree with Ofcom's assessment of these factors.

437. In four other areas where differences might occur Ofcom proposes to assume the costs are adjusted. We accept the first two of these at face value, namely:

- The fault rate is different between MPF and WLR+SMPF. Ofcom proposes that these are equalised.

- WLR uses pair gain technology to reduce copper line costs. Ofcom has ignored the pair gain difference.

438. We accept the following as it is immaterial to the LRIC analysis:

- Ofcom proposes a 15p differential for Service Assurance costs. In the 2012/13 RFS (at the end of the RFS using 2011/12 methodologies), Service Assurance FAC per line is: MPF £1.60; WLR £0.87; and SMPF £0.31. Ofcom's assessment will not materially impact the analysis and therefore we agree that it is fit for purpose here.

439. With regard to the fourth point:

- SMPF uses an evoTAM for testing. Ofcom has removed these costs from SMPF. Notwithstanding our disagreement to the removal of these costs (see response to Question 8.2), we consider that Ofcom's calculation on this basis is cogent.

440. From the bottom-up component information Ofcom calculates a LRIC differential of £0.25. It then increases the LRIC to FAC ratio on line cards to 92% (the LRIC: FAC ratio in years before 2011/12) rather than stick with 70% (the LRIC:FAC ratio 2011/12) and justifies this choice by asserting the movement in the LRIC:FAC ratio as being due to line cards being fully depreciated; this increases the differential to £3.30. There is no basis for Ofcom's justification and the movement in the ratios should more properly be ascribed to improvements in BT's estimates of the cost volume relationships in the LRIC model. In particular:

- The relevant cost volume relationships updates relate to changes on accommodation (CV800 and CV805), local exchange (CV902) and computing (CV029); in addition

- General Management costs were changed from a direct cost volume relationship (previously CV174) to be dependent on the cost volume relationships of other costs (with the LRIC model, this is known as a dependent relationship).

441. For 2011/12 and 2012/13 the LRIC: FAC ratio is c70% and we would expect it to remain c70% going forward. Ofcom should use the latest information and update the LRIC to FAC ratio. Once this is updated the LRIC differential falls to c£1.

442. Openreach has interpreted Ofcom's view that "there is uncertainty over the FAC for each component" as meaning that costs change and there will be some variation in unit costs over time. We would appreciate clarification of this point so that we can understand Ofcom's approach more fully.

443. We agree that the major differences between what Ofcom had quoted previously as the LRIC differential: £10-£14 and the current differential of £0-4 is mostly driven by Ofcom decisions to exclude evoTAM costs from SMPF and to only attribute TAMs to MPF.

**WLR v MPF**

444. We agree that Ofcom has conducted its analysis of the LRIC differential between WLR v MPF on a consistent basis with its analysis of WLR+SMPF v MPF. Therefore, we have no further comments to make about the quality of this analysis.

**Question 7.5**: Do you agree with our proposal to update the cost model base year information for the most recent 2013 RFS cost information (adjusted as proposed in this Consultation) while retaining the 2012 RFS allocation methodologies (as adjusted as set out in the July 2013 Consultation and this Consultation)? Please provide reasoning for your answer.

445. Please see the BT Group Response.

446. Ofcom's charge control modelling has to date been based on the published 2011/12 RFS data. Ofcom has indicated that it is not currently minded to use the 2012/13 RFS as published by BT as the base year but instead suggests it will update its models with 2012/13 costs using the 2011/12 RFS cost allocation methodologies, but potentially with an adjustment applied to the 2012/13 repair components. Openreach disagrees with Ofcom's decision not to use the most up-to-date methodologies, for the reasons set out in detail in the BT Group response to this consultation, but we would stress the importance of at least using the full 2012/13 cost base. As explained in the service section, 2012/13 is the most appropriate base year for the purposes of considering Openreach service and the full costs of service delivery therefore need to be reflected in Ofcom's modelling.

**Question 7.6**: Do you agree that BT's provision for claims for deafness arising from the use of copper line testing equipment used in the past by engineers should be excluded from the cost base of the Charge Controls? Please provide reasoning for your answer.

447. BT does not agree that BT's provision for claims for deafness arising from the use of copper line testing equipment used in the past by engineers should be excluded from the cost base. BT considers that the hearing conditions experienced by engineers have arisen as a consequence of the copper line testing equipment used. This cost is within BT's statutory accounts, and consequentially flows automatically into BT's RFS. In addition, when BT has to increase or decrease its provision for claims, this change is posted into BT's profit and loss account.

448. The unpredicted increase in claims for noise induced hearing loss is a nationwide issue across many industries and the volumes have far outstretched expectation. This issue has been of increasing concern in recent years and the Institute and Faculty of Actuaries set up working Party to consider the recent rapid increase. It is also noteworthy that the legal process in recent years has encouraged claims, and allowed for enhanced legal costs by way of success fees( not in existence at the time any injury was sustained).Arguably this "claims culture " has been recognised by the recent changes in claims and litigation management brought by the governments " Jackson" reforms. Like many others, BT was not aware of the scale and the cost at the time and therefore did not make a provision. Unlike the pensions deficit debate, this is not a matter of forecasting error but rather a matter of whether a reasonable person would expect BT/Openreach to have anticipated that noise induced deafness claims would have escalated nationwide in this manner.

449. Ofcom should either allow these costs to enable BT to recover its efficiently incurred costs, or at the very least, replace them with a "notional" charge to represent the cost to BT of insuring for its past employee health liabilities. Any notional amount (a fair premium that BT would pay) should be related to the expected costs of settling these past claims.

**Question 7.7**: Do you consider that BT's CTC costs should be included in the cost base of the Charge Controls? Please provide reasoning for your answer.

450. CTC is a unit within BT Group comprising employees in the process of being redeployed within BT. Whilst employees are in the CTC they are actively looking for new jobs and also given short-term assignments to help on projects.

451. Entry into the CTC is usually triggered by BT delivering efficiencies, and as such is driven by the underlying efficiency programme. The cost of the transfer of people into the CTC is far less than having people leave and then having to recruit new employees to work in the areas that we need them. On average the people in the CTC are there for 3 months.

452. The CTC is a legitimate cost incurred in the management of the Openreach workforce and delivering efficiencies. As such, this is an efficiently incurred cost and should be included in the cost base of the Charge Controls. Ofcom has made no positive case as to why these costs should be excluded.

**Question 7.8**: Are you aware of any other specific BT RFS cost items which merit further investigation by Ofcom to establish whether they properly constitute efficiently incurred forward looking costs? Please provide reasoning for your answer.

453. Ofcom has not included a description of the criteria for efficiently incurred costs in the Consultation, but we assume that this means, any costs that Openreach would struggle to avoid if we continued to provide the defined increment (e.g. LLU).

454. On this basis, Openreach is aware of the following specific RFS cost items which should be included in the Ofcom's charge control modelling as they properly constitute efficiently incurred forward looking costs:

- <u>Insurance costs for future employee health claims:</u> Ofcom should be aware that BT has decided to insure for employee health claims going forward, i.e. BT is now insuring for these costs externally. This new policy will cover future claims of the current employees from the date of taking the policy out. This policy will not cover historic claims, or new claims which relate to employee health issues that occurred prior to the policy being taken out and will cost c[✂] Ofcom should include this cost in its charge control modelling. For the avoidance of doubt, this insurance cost is in addition to any provisions that BT might make for employee health related costs, including any events recent or historic arising before the new insurance policy was in place, unknown at the time the policy was taken out and not covered by existing provisions. We estimate that there could be further provisions for health claims of around c[✂] per annum over the Control Period.

- <u>Development costs associated with consumer switching:</u> Ofcom decided to change the consumer switching arrangements which has a significant impact on computer development costs for Openreach during the Control Period. Ofcom must include this cost in its modelling. We estimate this additional cost to be [✂].

455. Ofcom has not treated the costs correctly for the following components and should adjust its proposals accordingly:

- Common costs allocated to FTTC lines: in our September Response we highlighted our concern that Ofcom's approach to calculating the amount of common costs allocated to FTTC lines would result in an understatement of costs. We estimate that Ofcom's approach understates the common costs in the hypothetical all-copper model by around [✂] of fixed common costs as FTTC lines absent more overheads than the SMPF volumes that replace them.

- Negative capex for Room Build: in our response to the First Charge Control Consultation we highlighted our concern that Ofcom's cost analysis of Room Build included negative capex which was illogical

## 5.3 Proposed Charge Controls

**Question 8.1**: Do you agree with our proposal to set the main rental charges such that the differential in charges between WLR+SMPF and MPF is equal to £10 by 2016/17, rather than moving more rapidly to reflect our now lower estimate of the LRIC differential of £0 to £4? Please provide reasoning and information to support your response to this question.

456. In the First Charge Control Consultation, Ofcom proposed that the price differential(s) between WLR/WLR+SMPF and MPF reflect the differences in LRIC. In doing so, the price that Openreach charges to CPs would then reflect the long run cost differences between the two services. This would enhance productive efficiency as these two different inputs are used to provide voice and broadband services sold to customers. CPs would buy what is the most efficient service for them, thereby minimising the total cost of production. Openreach agreed that this was the right thing to do for consumers and was productively efficient.

457. Ofcom's current proposal is to set a price differential in excess of the cost differential. Openreach disagrees with Ofcom's proposal as it will lead to inefficient decisions. It also adds risk to the price control modelling in that Ofcom needs to forecast the relative volumes of MPF, SMPF and WLR lines as these all have very different margins. With cost-based prices, relative volumes would not impact on forecast aggregate revenues and hence a source of regulatory risk would be avoided.

458. Given the importance of this issue to BT Group, as an active participant in downstream markets affected by the differential, a more detailed response has been provided in the BT Group Response.

**Question 8.2**: Do you agree with our proposed approach to making one-off adjustments for the removal of evoTAMs costs and DSLAM capital maintenance costs? Please provide reasoning for your answer

459. Regarding DSLAM capital maintenance, we disagree with Ofcom's approach that there should be a one-off removal of these costs. Costs should be re-attributed such that BT can recover its efficiently incurred costs. See our response to Question 7.2 and Question 7.3 on this.

460. We disagree that Ofcom should exclude evoTAM costs; the appropriateness of preventing the recovery of these efficiently incurred costs in this adjustment is at least debatable given that evoTAMs could be used by other CPs. In other parts of the consultation Ofcom explains the weight it puts on regulatory certainty and avoiding disruption[76]. When Ofcom previously considered evoTAM costs in the current control it said *"We consider that it is appropriate to recover the costs (of evoTAM) from the services that might benefit from them (SMPF)[77] ."* A more balanced response to a wholly new position being adopted by Ofcom would be for changes to be brought in gradually, using a three year glide path.

[76] Consultation, paragraph 8.4.

[77] WLR LLU Charge Control Statement, 7 March 2012, paragraph 6.96 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc-2011/statement/statementMarch12.pdf