



BT's response to Ofcom's consultation document

"Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30"

and comments on key charge control issues, including responses to relevant questions in Ofcom's consultation document

"Fixed access market reviews: Approach to setting LLU and WLR Charge Controls"

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Foreword

The UK has one of the most dynamic and competitive telecoms markets in the world, equalling or beating its counterparts in other advanced economies on a wide range of measures including price, choice and service availability.

Fibre is a particular success story.

BT's commercial deployment of fibre broadband is among the fastest in the world. Roll-out only started in 2010, but our network already passes over 16 million premises. Two thirds of UK homes will be covered by spring 2014, and public funding will help to get this up to 90% in the next three to four years. UK consumers and businesses are benefiting from an increasingly competitive retail market and keenly priced service offerings. BT's wholesale fibre broadband access product is offered on an open and fully equivalent basis.

Not long ago, 8Mbps was the fastest broadband speed consumers could expect. Thanks to superfast broadband, growing numbers can get speeds almost forty times faster – BT Infinity can offer speed up to 300Mbps, and Sky and TalkTalk advertise broadband up to 76Mbps. Virgin Media also offers superfast broadband over its cable network, which passes around half the homes in the country.

Ofcom's current regulatory approach has underpinned the UK's fibre and telecoms success story. In general it has struck the right balance between encouraging investment and ensuring sustainable competition. A change in direction towards more intrusive regulation could stifle further investment and put at risk the growing retail market competition.

There have been significant and profound pro-competitive market developments even over the relatively short period since Ofcom issued its consultation document. CPs are now actively marketing fibre broadband, and public statements show that it is profitable for them to do so. Ofcom should therefore reject calls for a more intrusive ex ante margin squeeze assessment since this is unnecessary and could lead to higher prices and less competition in retail markets.

Although Ofcom has signalled its approach to fibre regulation over the next three years, it will take much longer than this for our fibre investment to pay back. Moreover the exploitation of new technologies such as vectoring and G.fast, which will bring the benefit of even higher speeds and greater reliability, will require further substantial funding: Openreach plans to start deploying vectoring next year and estimates the cost of nationwide roll-out at [§<].

Fixed fibre broadband will face increased competition from mobile networks. 4G is already delivering broadband at speeds up to 30Mbps. We urge Ofcom to consider how it can give us confidence over its approach to fibre regulation beyond the period of this current review.

We also support Ofcom's decision not to intervene further in passive remedies. The resources that went into developing those already in force have been largely wasted given the extremely low levels of take-up. The lesson from this experience is that Ofcom should be very wary of mandating new passive remedies absent very clear commitments to invest.

While fibre is the big new story, copper-based services are still vital. Most consumers will continue to use them for the foreseeable future. In recent years it has become more challenging for Openreach to maintain consistent service levels, especially in the light of growing customer expectations and more volatile weather. Ofcom plans to consult in the autumn on minimum service standards for BT's copper-based wholesale voice and broadband services, WLR and LLU. It is essential that Openreach has the funding to deliver the proposed standards, and it is wholly appropriate that Ofcom will consider this issue in the autumn consultation.

Looking ahead, we believe the industry and Ofcom need to set new ambitions for service quality that reflect changing expectations and allow service levels to be a key differentiator in the market. This will require an end to the longstanding regulatory focus on price and cost reduction, and a new focus on giving Openreach the scope to invest in service. Ofcom also needs to ensure a truly level playing field between retail providers and remove the unfair entry assistance given to MPF operators.

The key themes in this review, then, are investment and sustainable competition. Ofcom needs to set a regulatory framework that supports the investment needed to deliver new networks and services, and investment to deliver the service levels that the industry and its customers need and expect.

Introduction

This document forms the BT Group response to Ofcom's consultations on the Fixed Access Market Reviews and the proposed LLU/WLR Charge Controls.

Following the Executive Summary, Section 2 of this response, 'Market Context', assesses how fixed access markets and technologies have changed since the last review in 2010 and will continue to change over the period of the current review up to 2017. One of the most significant developments will be the further expansion and evolution of BT's fibre network, built and operated by our functionally separate access network business Openreach.

Section 3 then outlines BT's views, in its role as a provider of retail services to consumer and business end-users, on the quality of service issues raised in the market review and charge control consultation documents. The perspective on service issues from Openreach as a provider of wholesale products to communications providers (CPs), including BT's downstream businesses, is given in a separate response provided by Openreach.

Following this, Section 4 provides our answers to Ofcom's questions in the Fixed Access Market Review consultation document. Again, the answers to the questions on service issues are given from the retail perspective, with answers from Openreach set out in the separate Openreach response.

The response also addresses, in Section 5, BT Group-level aspects of pricing and charge control issues spanning both Fixed Access and Wholesale Broadband Access Markets, such as use of CPI as the main inflation index and cost of capital. Our detailed responses on the charge controls are set out in an Openreach response on the LLU/WLR Charge Controls and the BT Group response on the Wholesale Broadband Access Market Review.

Along with this response, we are providing expert reports and research which set out evidence in support of our views.

In this introduction we have referred to other responses that we have submitted to the Fixed Access and Wholesale Access Market Reviews: for ease of reference, the full set of responses is outlined below:

- BT Group response on the Fixed Access Market Reviews and comments on key charge control issues ([this response](#))
- Openreach response on Service
- Openreach response on the approach to setting LLU and WLR Charge Controls
- BT Group response on the Wholesale Broadband Access Market Review.

1. Executive Summary

1.1 The competitive landscape in fixed access markets

1. The UK has one of the most dynamic and competitive telecoms markets in the world, as Ofcom has recognised in its consultation document and recent research¹:
 - Customers enjoy a wide choice of technologies. High bandwidth communications are now available to end-users over a range of technologies including copper, fibre, cable and mobile. The huge take-up of smartphones (45% of the population in 2012), tablets (12%) and Pay TV (57%) is creating a nation of media multi-taskers, transforming homes and offices into digital media hubs, and both superfast and current generation broadband are a central part of this revolution.
 - Substantial investment and take-up in fibre-based services continues. The UK is benefitting from one of the fastest large-scale commercial fibre deployments anywhere in the world. BT's next generation access fibre network now passes over 16 million premises, with over 100,000 added each week. Two thirds of UK homes will be covered by spring 2014, and we believe this can grow to 90% in the next three to four years with the help of public funding. Already, almost two million customers take fibre services over our network from various retail providers. An Ofcom news release 'Average UK broadband continues to rise', issued on 7 August 2013, stated that by May 2013 19% of residential broadband connections were superfast.
 - The UK market delivers for consumers and businesses. Ofcom's international benchmarking² shows that the UK has the lowest retail landline and broadband prices among the largest developed economies and the second highest broadband penetration. The UK average retail monthly charge for standard broadband is around £15 and for superfast broadband £18: the equivalent figures for France are £20 and £31. Uniquely as a former incumbent, BT competes against strong, scale broadband providers with retail market shares comparable to our own. In contrast, our counterparts in France, Germany, Spain and Italy dominate their retail broadband markets, with shares above 40%.
2. There have been significant and profound pro-competitive developments in the market since Ofcom's initial Call for Inputs in November 2012, and even over the relatively short period since the consultation document was published. In particular, competition in fibre is growing.
3. Around 80 CPs are now delivering superfast broadband to their customers over Openreach's fibre infrastructure. 17 of these purchase direct from Openreach, with the rest buying their wholesale inputs from CP customers of Openreach. This environment gives end-users a wide choice of fibre provider. In around half of the UK, customers can also opt for Virgin Media's fibre broadband service.

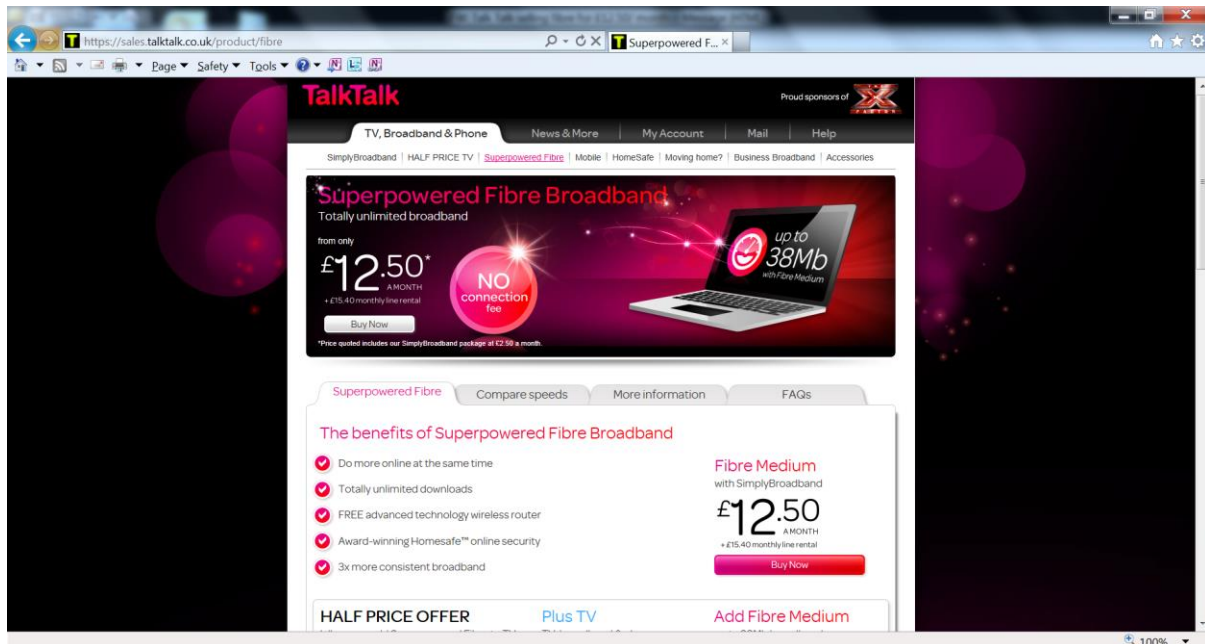
¹ Ofcom, *UK fixed-line broadband performance, May 2013*, 7 August 2013, available at: <http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/broadband-speeds-may2013/> and

Ofcom, *Communications Market Report 2013*, 1 August 2013, available at: <http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr13/telecoms-networks/>

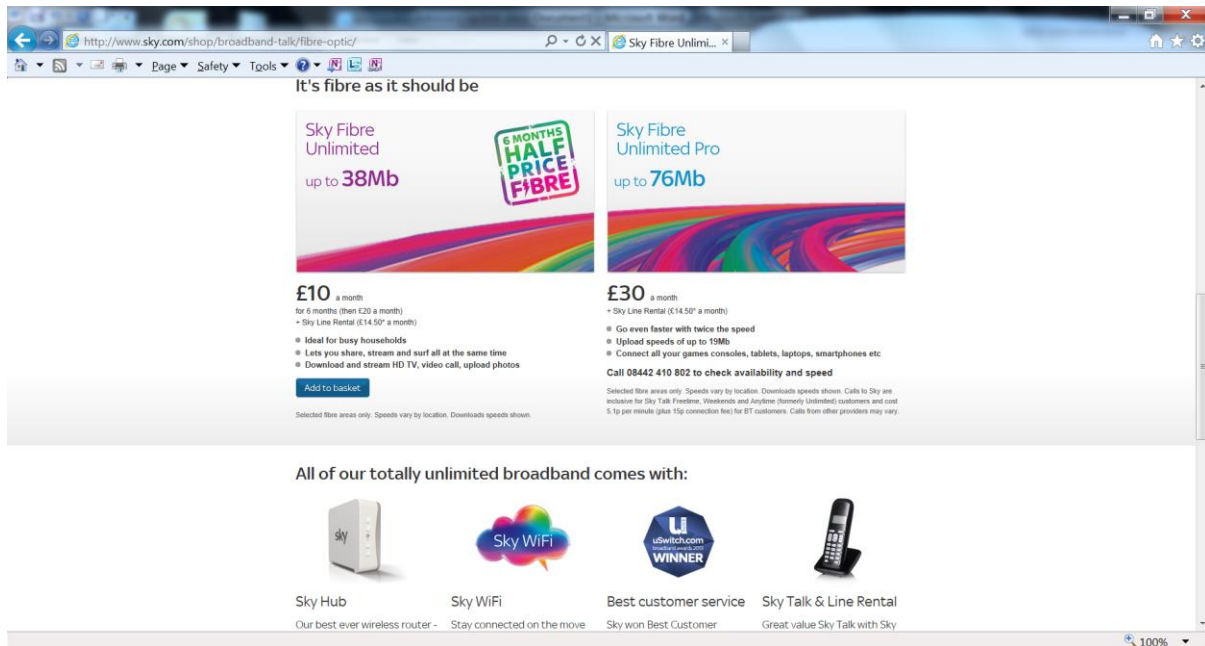
² Ofcom, *International Communications Market Report 2012*, 13 December 2013, available at: <http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr12/international/>

We include further detailed research on this subject in a report Analysys Mason provided alongside this response

4. An increasing proportion of the orders for new fibre connections over the Openreach network are now placed by CPs outside the BT Group. In recent weeks, the percentage of net fibre additions attributable to non-BT CPs has almost reached [X], far higher than the [X] reported as recently as July 2012. We expect CPs to continue to aggressively market fibre-based broadband services and the retail market to be increasingly competitive. Moreover, during 2013/14, CPs will start to use the new 'wires only' version of our wholesale fibre product that Openreach has developed for them, and which allows them to deploy their own equipment on customers' premises. This trend is set to accelerate as TalkTalk and Sky ramp up their active marketing of fibre-based services.
5. TalkTalk now offers 'superpowered fibre broadband' at speeds up to 76Mbps. Its fibre base is growing strongly, going from 15,000 in Q1 2012/13 to 95,000 at Q1 2013/14. TalkTalk has recently (on 25 September) cut its price for standard broadband to £2.50 per month, down from £7.50: customers can upgrade to TalkTalk's 38Mbps fibre product for an additional £10 per month, making the monthly cost of its entry level fibre product just £12.50.



6. Sky also offers its 'Sky Fibre Unlimited' at speeds up to 76Mbps, and its customer base has grown from [X]. Sky has now begun heavy promotion of its fibre offerings via its 'Toy Story' campaign.



7. And any suggestion that CPs are making insufficient margin in providing their fibre offerings completely contradicts public statements to the contrary:

- In its annual results presentation for 2012/13 delivered on 13 May 2013, TalkTalk stated that fibre customers are revenue and EBITDA accretive, that they have reduced churn and cost less to serve, and that fibre customers pay back after 18 months. In an interview with Morgan Stanley available on-line³, TalkTalk CEO Dido Harding has said “*actually, fibre is very profitable for me to sell at current prices*”.
- In Sky’s results presentation for the six months to 31 December 2012, CFO Andrew Griffith highlighted that gross monthly profit from each customer taking Sky’s 38Mbps fibre product was £20, between £2 and £6 higher than gross profit from a customer taking standard broadband; the corresponding figures for customers taking the 76Mbps service were £26 gross profit, between £8 and £12 higher than for a standard broadband customer. Gross margin percentages for these fibre broadband products were cited as 53% and 55% respectively.

8. Using publicly available information from TalkTalk and Sky, reinforced by comments they have made to investors, we estimate that prior to the recent TalkTalk price cut, these CPs’ monthly revenues, gross margins and percentage margins from their fibre customers were as follows:

	TalkTalk	Sky
Revenue	£33.74	£38.00
Gross Margin	£14.85	£20.00
Margin %	44%	53%

³ http://linkback.morganstanley.com/web/sendlink/webapp/BMServlet?file=ikcf4nm4-3on9-g000-bef6-002655211301&store=0&d=1&user=29slc9d0m9sz9-0&_gda_=1499627737_4edd437cf694c96eeec8673dd9dddf37#0021&29slc9d0m9sz9-2&1499627737_2f28a983fa05b73b37228d85ad5b67e7&0011&29slc9d0m9sz9-1&1499627737_0137cf6ca783203033f17e3f42bfc017

9. Overall, therefore, we see that the level of competition in the market for broadband services is being extended into the provision of fibre services. We can expect fibre take-up to accelerate, and a continuation of strong and sustainable competition at the retail level.

1.2 The role and impact of regulation

10. Ofcom's policy set out in the 2010 Wholesale Local Access (WLA) market review has played an important role in fostering progress in the UK fixed access market. Critically, it has helped to support big investments in superfast broadband (SFBB) by BT and others.
11. There are still considerable challenges to be overcome in our commercial fibre deployment as well as in building out fibre in areas where there is public funding. Ofcom's continued flexibility on pricing and product regulation is essential to help underpin those risks. The Broadband Delivery UK (BDUK) framework requires wholesale pricing to be consistent between commercial and funded areas, and such areas will therefore benefit from the price competition and flexibility evident in the most competitive areas.
12. BT's functional separation model, including the creation of Openreach, underpins the regulatory framework ensuring all key services are provided on an Equivalence of Inputs (EOI) basis to support CPs and their end-users. Combined with the highly competitive retail market, this supports Ofcom's presumption against further intervention in the UK, particularly on fibre, which may be appropriate for some other European markets where functional separation - or indeed even effective non-discrimination - does not exist.

1.3 Ofcom's approach to fibre

13. It is important that Ofcom's policy continues to support the evolution of fibre by taking account of the long-term and high risk nature of the underlying infrastructure investments, by allowing product developments to be market-led and by recognising the competitive constraints imposed by other access technologies.

Fibre in the current market review

14. In general, the proposals in this consultation meet this objective by maintaining the current supportive approach that has played a major part in the successful fibre story to date.
 - Continued pricing flexibility for fibre. Wholesale fibre prices are driven by the need to stimulate market growth and penetration. Pricing for current generation access and Virgin Media services constrain the prices that BT can charge for the Generic Ethernet Access (GEA) product, and there is still uncertainty over future demand for fibre-based services and the payback period for BT's investments. We therefore support Ofcom's decision not to regulate the price of GEA in this review.
 - No prescriptive product specifications for GEA. We agree with Ofcom's conclusion that it should not mandate BT to develop specific variants of GEA. The product meets the VULA characteristics that Ofcom specified in the last WLA market review. Openreach is committed to working with its CP customers, including BT's downstream businesses, to develop GEA to meet their evolving needs. One of the main developments requested by CPs, 'wires only' GEA, is close to launch. We believe industry collaboration on fibre product development will deliver far better results than regulatory intervention could achieve.
 - Supportive approach to vectoring. Whilst we welcome Ofcom's guidance set out in the consultation document, further clarity and regulatory certainty is vital in order to prevent end-user and third party CP detriment and wasted investment by BT in vectoring technology. BT now has firm plans to deploy vectoring in its VDSL network. Openreach is committed to introducing vectoring technology into its network. Vectoring will deliver

important benefits to customers, including faster fibre speeds. The cost of rolling out vectoring to all UK fibre cabinets is estimated at [£<], and hence it is crucial that there is regulatory certainty underpinning this investment. Given the incompatibility of Sub-Loop Unbundling (SLU) with vectoring, we support Ofcom's proposed guidance for BT and SLU operators on this issue: this needs to prevent the end-user detriment that could result if BT were obliged to provide SLU at cabinets where vectoring has been deployed or planned.

- Maintenance of current approach to passive remedies. Our Physical Infrastructure Access (PIA) product was developed with industry, but take-up remains very low, and further investment would be inefficient in these circumstances. SLU also has very low take-up, and as Ofcom notes it is questionable whether it is a viable product in the long term.
- Recognition that additional access remedies are not needed. We agree with Ofcom that it would be premature to consider wavelength unbundling as a remedy due to its technical immaturity. We also agree with Ofcom's conclusions that there is no case for other remedies such as physical fibre unbundling. CPs are of course free to submit SORs for new access products, as Sky has done with 'unbundled FTTC' but, given our experience with PIA and SLU, Ofcom should be extremely wary of supporting new passive remedies absent clear and committed demand from CPs.

15. Whilst Ofcom's approach is generally positive for the development of fibre, some of the interventions in fibre now being proposed are unnecessarily intrusive. The prime examples are margin testing and mandated reductions to CP-CP migration charges.

Margin testing:

16. Ofcom's consultation document provides some discussion of how it would apply an ex ante margin squeeze test. We note that competition law prohibits the imposition of an exclusionary margin squeeze by dominant upstream companies. There is an established analytical model for assessing whether undertakings may be abusing a dominant upstream position through the pricing of downstream services. This model considers the margin available between upstream and downstream prices alongside, among other things, an assessment of the likely effect of pricing structures on competition in the relevant, defined downstream market and any objective justification that may exist for adopting the pricing.
17. It would appear that Ofcom's proposed approach of assessing margin squeeze concerns under the "fair and reasonable" SMP requirement would introduce margin tests that could be solely focussed "on the numbers". BT's view is that any simplified approach that departed from the full and proper analytical model by giving little or no weight to effects or objective justifications, runs significant risks of producing "false positives" – i.e. the margin tests may be used in ways that prohibit prices that – on a proper competition law assessment – would actually be seen as pro-competitive and good for consumers. This is clearly not a good development and appears to be at odds with Ofcom's duties to promote the interests of citizens and consumers.
18. Ofcom must therefore have a clear justification for departing from the established analytical model for considering exclusionary margin squeeze under competition law. BT's view is that Ofcom has not established such a justification in the consultation. Competition in the provision of broadband services is strong.
19. We note that certain CPs have raised concerns around their ability to provide fibre-based retail broadband services and, in particular, have suggested that there is insufficient margin available between VULA and downstream retail prices. Ofcom itself notes the relatively high level of VULA consumption by BT Retail to date. However, it leaves open the issue of whether this reflects

problems with fibre profitability at the current level of VULA prices or the different commercial strategies of other CPs.

20. As outlined above, Sky and TalkTalk are now offering (and promoting above the line) fibre services alongside copper services. They are doing so at discounts to BT's prices – TalkTalk have cut the price of their entry level offering to just £12.50 per month – and they are clearly stating that the provision of fibre is profitable. Any observations about the current take up of VULA by other CPs will reflect their chosen commercial strategies in providing services into the broadband market. This should not signal some need for regulatory intervention support the development of competition where this means unduly constraining BT's pricing freedoms. Given this, it is far from clear why Ofcom's objective is to ensure that competitors with "slightly higher costs" than BT can match BT's fibre prices given the current state of competition.
21. Ofcom must minimise the risk of "false positives" arising under its proposed approach by amending and clarifying the draft guidance in key areas and adopting a more clearly targeted use of any simplified margin testing "on the numbers". Among other things, this means Ofcom should not apply such simplistic and inappropriate testing to BT's provision of fibre services in propositions with Pay TV/content. Entry into the provision of such bundles is not solely contingent on BT's provision of VULA, and specific competition/market entry concerns in relation to Pay TV/content markets mean BT's competitors have commercial advantages in relation to those additional services. Any concerns that may be raised about BT's pricing of such propositions should, if at all, be considered under the full analytical model for assessing margin squeeze under competition law. To assess such pricing with limited regard to the full market context and effects/objective justification would be unjustified.

CP-CP migration charges:

22. We also believe Ofcom should rethink its proposal to cut the charges that CPs pay to Openreach for migrating fibre customers. In our view, this proposal is premature. At this stage, we believe Ofcom should be focusing on supporting increased take-up of fibre rather than measures which would simply increase the churn of existing customers between providers. If Ofcom does mandate a reduction in these charges, we propose that the charge should be set at a level at least equal to Fully Allocated Cost (FAC). A charge below this level is likely to signal a high risk that Ofcom will act to reduce first mover advantage in other nascent markets in the future.

The long-term approach to fibre beyond this review

23. Although Ofcom has signalled its approach over the next three years, it will take much longer for our fibre investment to pay back. We note, however, that Ofcom states "*...we consider it likely...that at some point in the future it will be appropriate to impose a form of price control on VULA.*" We believe it will remain premature to regulate VULA prices for some time and certainly Ofcom should not intervene until BT has at least achieved payback of its investments in fibre.
24. Even then, any consideration of the appropriateness of price regulation would need to take account of a number of factors, including the uncertainty in place around demand and supply at the time of the initial wave of investment. In future reviews, Ofcom would need to act in accordance with the 'fair bet' principle – i.e. ensuring regulation is not introduced that effectively claws back perceived 'overachievement' against BT's fibre case assessed after the risky investment has been undertaken. In addition, fibre will continue to be a risky investment far into the future – as we evidence in this response, we have a forward-looking fibre investment roadmap, including vectoring and other developments, for which regulatory certainty supporting pricing flexibility is still a prerequisite. The market will also evolve: for example, competition from mobile will grow, with 4G already delivering broadband at speeds up to 30Mbps.

25. We provide with this response a report by Plum Consulting which considers these issues in more detail and, among other things, highlights the benefits of Ofcom clarifying at this stage that it would not intervene prematurely to regulate fibre prices. Plum concludes *“Signalling that a price control is unlikely to be required and that alternatives exist if concern regarding possible abuse of market power grows would appear more prudent.”*

1.4 Market definition and SMP analysis

26. In general, we believe Ofcom is right to maintain the market definitions and SMP findings from the last review. In particular, we support Ofcom's decision that there is a single wholesale local access market covering copper, cable and fibre. In our view it is far too early to consider the possibility that there may be separate retail or wholesale markets for SFBB. Fibre prices are clearly constrained by prices for copper and cable-based services.

ISDN2 and ISDN30

27. We support Ofcom's proposal that BT no longer has SMP in ISDN2 at the retail level. This product is in terminal decline and has already been completely superseded by broadband in the residential segment. BT's share in retail ISDN2 has fallen significantly since Ofcom's last review of this market, and we estimate it now stands at around [3%] in volume terms. Both of these trends are expected to accelerate during the period of this review.
28. At the wholesale level, Ofcom proposes that BT still has SMP in both ISDN2 and ISDN30. Again, these markets are in decline, with increased switching to IP alternatives. The strength of this migration is evidenced by the increase of over 70% in volumes of SIP trunks, one of the main substitutes, in just one year from June 2011 to June 2012. Ofcom should reconsider, if not now then in the next review, whether it is still right to define separate markets for these products and to find that BT has SMP.

1.5 Remedies

29. Our detailed comments on remedies are set out in Section 4 of this response. Here we focus on the key changes to remedies proposed in this review.

The Statement of Requirements process

30. Ofcom proposes to change the SMP condition on requests for new network access to require Openreach to provide greater transparency over our Statement of Requirements (SoR) process, particularly with regard to the reasons for rejecting any request. Ofcom suggests that any confidential information relevant to such rejections could be safeguarded by being shared with the Office of the Telecommunications Adjudicator (OTA2) or third party consultants engaged by the relevant CP, rather than the requesting CP itself. We disagree with the proposals for a number of reasons as set out below.
- We support the principle of transparency, but a new SMP obligation is not needed. Openreach aims to provide sufficient information to customers when it considers SoRs, and it has worked extensively in the past with industry to improve the process. Openreach remains committed to the principle of transparency and continues to work with its customers to achieve an appropriate level of information. Openreach holds monthly reviews of SoRs including the reasons for rejections with CPs, OTA2 and the Equality of Access

Office⁴ (EAO). Whilst further guidance from Ofcom may be appropriate, we do not believe a formal SMP obligation is the correct approach at this stage.

- OTA2 or third party consultant involvement would not resolve tensions over SoRs. In our view, involvement by the OTA2 or third party consultants would not do anything to resolve the tension that exists where Openreach rejects an SoR. Indeed, it may add a further layer of cost or complexity. It is not clear what the status of outputs from this new stage in the process would have, and we believe that it would not reduce the risk of disputes being referred to Ofcom for determination.

31. Rather than regulatory intervention, in our view a better way to forward would be for Openreach to review recent SoR rejections and develop guidelines and processes to ensure that its product managers provide clarity and appropriate information and reasoning to CPs.

Quality of Service regulation

32. In the consultation, Ofcom puts forward a number of measures to address quality of service issues that have arisen in recent years. These focus on the regime surrounding Service Level Agreements (SLAs) and Service Level Guarantees (SLGs), publication of Key Performance Indicators (KPIs) for current generation access products, and mandated minimum service standards for LLU and WLR. Ofcom intends to consult on the levels at which these standards should be set in the autumn, and the consultation will consider whether changes are necessary to the LLU and WLR charge controls to ensure proper funding of the proposed standards. Ofcom does not plan to modify any existing new SLA/SLGs, although it proposes a new SLA for GEA appointment availability (which we believe should be best left to industry agreement consistent with the equivalent copper SLA) and suggests that the OTA2 could play an enhanced role in industry SLA/SLG negotiations.
33. As set out in more detail in Section 3, as a provider of services to end-users, we are acutely aware of the impact that service levels have on customers' satisfaction and advocacy, both in residential and business markets. The speed of line installation and repair is now more important than ever for residential customers who rely on their line for their broadband and TV services, and business customers demand certainty of delivery against a firm commitment. Whilst we believe that SLAs should continue to be negotiated by industry rather than imposed by regulation, we would like to see improvements to provision SLAs to meet our customers' expectations, subject to cost considerations, and sufficient flexibility to offer basic and premium provision and repair service options to take account of customers' differing needs and willingness to pay.
34. We agree in principle that it is appropriate to set minimum standards for Openreach services, as this would enable us to set appropriate customer expectations. However, Ofcom must ensure that the LLU and WLR charge controls allow Openreach to maintain a level of service that is an acceptable minimum standard for the industry, and that standards are applied equally across WLR and MPF. We are pleased that Ofcom has recognised the linkage between service and cost, and that it will address in the autumn consultation how to ensure that a consistent, acceptable level of service delivery is to be defined and adequately funded.
35. Differential fault repair care levels for LLU and WLR create an unlevel playing field. In our view, Ofcom should not dismiss this issue as simply a question of getting the cost differential right. The knock-on impacts on Openreach resource costs resulting from the growth of MPF volumes and

⁴ Set up to support the Equality of Access Board (EAB), which monitors BT's compliance with its Undertakings accepted by Ofcom in 2005

the challenges of the end-of-next working day fault repair target mean that any extra demand for improved care levels on WLR are unlikely to be achievable without a big step change. Ofcom should undertake further analysis of this issue as part of its further consultation on minimum service standards and the cost/service trade-off.

- The OTA2's role should continue to focus on facilitation. The remit of OTA2 is to facilitate industry discussion on an informal basis. It should not be expected to be an active player in negotiations, to set policy or resolve disputes: we have some concerns that Ofcom's proposals could see it stray into this territory. In our view, industry should be expected to negotiate SLAs and SLGs itself.

36. We have a number of other concerns over other aspects of Ofcom's proposals on service. These are set out below:

- Ofcom should not mandate a new SLA for GEA appointment availability. Given the growing importance of GEA, such an SLA is likely to be needed ultimately. However this should be industry-negotiated, as with copper products, rather than mandated by Ofcom. In addition, the timing of the introduction of a new SLA should reflect the product life-cycle, and a reasonable time should be allowed for the bedding down of operational processes.
- The proposed publication of quality of service information would create complexity and duplication. We support transparency on quality of service, but in our view it is already provided through the regular Openreach service pack and the KPIs published by the EAB under the BT Undertakings framework. In addition, consumers are likely to find any reports on Openreach service confusing, especially as the data in them would only relate to the Openreach inputs and not the retail services that consumers use.

Time Related Charges (TRCs) and Special Fault Investigations (SFIs)

37. Ofcom proposes to impose a fully allocated (FAC) cost orientation standard for TRCs and SFIs. BT does not agree with these proposals:

- Ofcom should only regulate TRCs and SFIs in so far as they are "reasonably necessary" for the provision of LLU and WLR;
- to the extent Ofcom does regulate TRCs and SFIs, it should not require these services to be cost-orientated where this means pricing at, or only just above FAC; and
- to the extent Ofcom regulates TRCs and SFIs, it should only do so in a way that enables BT to earn a margin, in order to provide BT with the right economic incentive to provide these services and drive efficient CP choices.

38. Ofcom has not given enough weight to the fact that these services are supplied over and above our contracted terms and that the regulated service conforms to the line testing standard (SIN349). Therefore, it seems perverse that Ofcom would seek to intervene, especially given the highly contestable nature of most of these services. Moreover, Ofcom's proposals provide no incentive for Openreach to prioritise these services.

39. That said, if Ofcom decides intervention is required, BT proposes a safeguard cap as a practical and more proportionate alternative for TRCs and SFIs in so far as they are "reasonably necessary" for the provision of LLU and WLR services. This would encourage competition for the vast majority of services (which are contestable), protect CPs from above inflation price increases, preserve the principle of regulatory consistency and still provide an incentive for Openreach to innovate and invest in these services.

1.6 Charge control issues

Adjusting the model to reflect BT's 2012/13 Regulatory Financial Statements (RFS)

40. Ofcom's charge control proposals are based on BT's RFS for 2011/12, and Ofcom is undecided as to whether it will update its model to reflect the RFS for 2012/13. In our view, to ensure accuracy and as a matter of principle, it is essential that Ofcom should always use the most recent up-to-date information when taking regulatory decisions. If Ofcom decides not to do this, then it should explain why it has departed from established best practice and seek stakeholders' views through a separate consultation.
41. BT has introduced some changes to cost allocation methodologies in the 2012/13 RFS. We note that changes are made to the basis of the RFS in most years to reflect things such as improvements in data or cost allocation methodologies, revisions to product and market definitions, changes to accounting standards, and correction of errors. Ofcom needs to properly reflect such changes in its charge control calculations (as is its standard practice) or fully consult with stakeholders where it proposes not to take such changes into account. We note that we have undertaken to provide Ofcom with a report identifying these changes and setting out how they differ from the previous methodologies. We also plan to share with Ofcom a separate document explaining why we believe each of the new methodologies is an improvement on the one it has replaced and why it should be used in setting the next LLU and WLR charge controls.

Proposed use of CPI as the main inflation index

42. Ofcom has decided to replace RPI with the consumer price index (CPI) in the charge control formula. We think that there is little justification for a move to CPI as the inflation index. RPI continues to be published by the ONS and has many different uses. BT notes that Ofcom also proposes to use the RPI index as an inflation index in the Network Charge Control commencing on 1 October 2013. This is consistent with Ofcom's position in the Leased Lines Charge Control consultation document published in July 2012. Ofcom has failed to adequately explain its reasons for departing from this approach in its current proposals.
43. Ofcom states in the LLU/WLR Charge Control consultation document that "*in principle the choice of an RPI-X or a CPI-X glide path should not matter in terms of the end point for nominal charges*". In our view, this is a good reason not to make the proposed change: it would add complication for no benefit. If Ofcom considers the choice of index makes a difference to nominal charges in practice, it should clarify what this is and explain the impact on the charge control.

Weighted Average Cost of Capital (WACC)

44. Overall, Ofcom is proposing to estimate the BT WACC in way that is broadly consistent in approach with previous regulatory decisions. BT is broadly supportive of this consistency, subject to the following:
- Ofcom must adjust the RPI inflation assumption of 2.8% used to set the nominal WACC to ensure consistency with RPI inflation assumptions used elsewhere in the charge control models – in particular in determining asset inflation which drives final year holding gains.
 - Consistency of approach with earlier decisions means that the disaggregated WACCs estimated for Openreach copper and the Rest of BT should reflect up to date data on Mean Capital Employed within Openreach relative to the Rest of BT.
 - In considering the latest spot data ahead of issuing final Statements in early 2014, Ofcom should, in particular, reassess the data on the risk free rate and on equity beta where we believe more recent trends may support higher estimates.

Immediate removal of directory costs from WLR rental

45. We understand Ofcom's reasons for removing printed directory costs from WLR rental, but we do not think this should be done immediately. An abrupt removal of the directories charge would have a significant impact on how the directories industry works and a potentially harmful effect on consumers. All parties concerned need time to assess the impact and put alternative supply arrangements in place. We strongly recommend that Ofcom delay removal of the charge until 1 April 2016. If this "sunset clause" is in place, we will continue with blanket distribution until alternative commercial arrangements are established.

1.7 Conclusion

46. Ofcom's current regulatory approach to fibre has been successful in terms of both ensuring investment in the deployment of services and in establishing an increasingly vibrant and competitive retail market. Whilst the broad thrust of Ofcom's proposals would see this approach continue, we are concerned that some aspects of them would lead to unnecessarily intrusive intervention. Our particular concerns relate to the proposed approach to *ex ante* assessment of fibre margins, CP-CP migration charges, and the regulatory treatment of fibre services beyond this market review. As set out above, the future development of fibre-based services will require additional investment in the face of significant uncertainty. Ofcom should therefore maintain its current regulatory approach.
47. Copper services are still vital for consumers and businesses, but they have become more challenging for Openreach to acceptable standards. Ofcom needs to use this review to achieve an outcome that recognises the trade-off between services and cost, ensures Openreach has the funding to deliver any mandated standards, and gives Openreach the flexibility to reflect end customers' differing needs and willingness to pay.
48. Finally, Ofcom should recognise the big shift to MPF that has taken place since the last review by removing any measures introduced earlier to support market entry. CPs should not have the playing field tilted in their favour or against them because they chose a particular access product to serve their customers. Among other things, this means looking at differential care levels for LLU and WLR and their effect on competition. Ofcom should undertake further analysis of this issue as part of its consultation on minimum service standards in the autumn.

2. Market Context

2.1 Strategic context for these market reviews

49. There have been significant changes in the markets for fixed access services since Ofcom's previous Wholesale Local Access (WLA) market review in 2010. The regulatory framework set out by Ofcom in 2010 has supported major investment by BT and others in the UK's NGA infrastructure and competition based on unbundled copper lines has continued to develop even more rapidly than was foreseen at the time. We cover the statistics and changes in market dynamics in more detail in Section 2.2 below.
50. However, although advances in SFBB coverage, performance and take-up over the period have been the single most dramatic change from the previous review it is still fair to describe that element of the overall broadband market as nascent. Although Ofcom's recently published research estimates the proportion of broadband connections classed as superfast (i.e. offering headline speeds of 30Mbps or more) as 19% of residential connections, more than double that reported in 2012⁵, there have been and remain considerable commercial and operational challenges to be overcome to continue to deploy and sustain NGA investment in both the commercial footprint and to publically funded intervention areas.
51. In the light of these increasing demands on funding and investment, Ofcom's continued flexibility on NGA pricing and product regulation is essential, as is BT's functional separation model. This model continues to be a significant contributor to the successful outcome in the UK (see Section 2.2 below) ensuring all key services are provided on an Equivalence of Inputs (EOI) basis at a sustainable and fully open access layer of the value chain. This enables CPs to compete on a level playing field with a wide choice of regulated wholesale products covering many different technologies; and supports highly competitive UK retail markets in both fibre and copper, providing end-users with a very wide choice of CP and relative ease of switching.
52. Openreach's open access copper and fibre infrastructure now supports over 400 CPs providing services on copper and over eighty using fibre directly or through a wholesale provider. This allows an extensive choice of CP for end-users, permits choice of different CPs for voice and broadband and also facilitates ease of switching both between providers and between fibre and copper based services.
53. Even at this early stage in the product life cycle the competitive market in fibre and superfast products is now developing very rapidly and is expected to see very high growth over the coming year. Currently Openreach's GEA fibre product is being purchased directly and in significant volumes from Openreach by seventeen CPs⁶ serving both consumer and business markets and over seventy CPs who offer SFBB services based on BT Wholesale connectivity. Monthly orders are now significantly in excess of 100k per month and recent weeks have seen the percentage of net fibre additions attributable to non-BT CPs approach [3<]. This a huge increase over the [3<] reported as recently as July 2012. Further very high growth is also expected during 2013/14 as CPs move to a 'wires-only' deployment⁷ model using their own Customer Premises Equipment (CPE) later in 2013 and early 2014.

⁵ <http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/broadband-speeds-may2013/>

⁶ <http://www.superfast-openreach.co.uk/at-home/buy-it-now.aspx>

⁷ 'Wires-only' is a generic term used to cover several major underlying developments to the GEA product including 'Self-Install', 'Primary Connection Point (PCP) only' installation and Customer Premises Equipment (CPE) enablement. This is covered in detail in Section 2.3 of this response.

54. This consultation, therefore, has major implications for continued investment in a *pro-competitive* infrastructure model and on how wholesale and retail competition will develop over the next review period; underpinning the future of broadband for UK plc and hence raising major public policy as well as regulatory issues. It is therefore critical that Ofcom gets the balance right, maintaining incentives for efficient investment whilst facilitating competition at an appropriate and sustainable level in the value chain so as, overall, to maximise potential consumer benefits.
55. BT believes the key themes for this review are investment and sustainable competition, with the underlying drivers being:
- to continue to promote an open and competitive framework allowing equivalent access to BT's NGA network;
 - to maintain access remedies which enable *additional* NGA infrastructure investment by parties other than BT to take place;
 - to maintain the successful competitive framework for current generation voice and broadband; and
 - to achieve the correct balance between service quality targets and the correct funding required to maintain and indeed provide incentives to improve on those targets in the long term.
56. It is important to bear these drivers in mind when considering the nature (and detail) of the remedies mandated, Remedies are not 'ends in themselves', they need to support policy objectives and be viable and effective solutions over the next review period. A key test must be whether the remedies introduced in respect of NGA actually stimulate new, incremental investment by other parties on an open access basis without reducing BT's ability and incentive to continue to invest in new long term infrastructure projects such as NGA. In light of this we set out our strategic view of how the Openreach fibre network will evolve in Section 2.3 below.
57. Copper-based infrastructure remains a fundamentally important element of the UK network and needs to be maintained with appropriate levels of investment whilst also allowing sufficient flexibility, both operational and commercial, to consider the major challenges of an eventual transition to fibre.
58. This is the first market review where fibre infrastructure forms a major part of the UK network. Hence it is important that Ofcom's conclusions from this and future reviews show continuity with previous decisions, as the magnitude and timescale for infrastructure investment require regulatory certainty. BT has taken the decision to invest significantly in the future ahead of known demand. As Ofcom recognises, considerable uncertainty remains regarding the range of services that will be provided over super-fast broadband and customers willingness to pay for them and hence the extent to which demand will eventually materialise. BT will also continue to roll out NGA to large parts of the country (both commercially and with public funding) with uncertain network topologies, so significant supply-side risks also exist.
59. As part of its general duties under section 3 of the Communications Act, Ofcom should have regard to "*the desirability of encouraging investment and innovation in relevant markets*" and "*the desirability of promoting competition in relevant markets*". Therefore, it is important that regulation helps rather than hinders investment as far as possible, with contestability introduced to the degree that it both facilitates scale NGA deployment and effective and sustainable competition. It is also important that the new infrastructure is designed to support a competitive and vibrant downstream market and is capable of supporting consumer choice and ease of switching as the market evolves and take-up grows.

60. It is important that Openreach continues to work with its customers to develop its NGA product set both in terms of performance and functionality over the next and future review periods. The flexibility permitted by the existing framework has supported this cooperative approach with several major product changes having already been launched since the last review, such as the introduction of the 80/20Mbps product, Fibre Voice Access (FVA) and Multicasting; and the imminent introduction of other major developments such as 'wires-only' GEA variants. Further details on these developments and others are given in Section 2.3 in this response and our answer to Ofcom's Question 11.1. However looking forward, future developments need to be strategically coherent and long term both for Openreach (see Section 2.3) and a wide range of alternative CPs in order to support a pro-competitive regulatory framework. This is particularly so, if they risk distorting the competitive framework for all by increasing investment risk for the infrastructure provider, undermining 'shared' economies of scale and scope between CPs and potentially permitting leverage of SMP from adjacent markets (such as audio visual markets) thus diminishing the choice and ability of end-users to switch CP.
61. As it stands, Ofcom's proposed approach on fibre regulation is proportionate and sends the correct signals to the market. A more intrusive regulatory regime would carry the risk of distorting investment incentives and damaging the development of a vibrant and competitive market. Ofcom's current approach allows CPs and end-users to benefit from the 'shared' economies of scale and scope inherent in the design of the Openreach NGA infrastructure⁸, the flexibility in product specifications, pricing, propositions and contractual terms, and supports migration to new technologies and between providers. It is essential this framework is protected by the current review.

2.2 Market developments since the 2010 WLA market review

62. As noted above the UK market for fixed access has changed significantly over the past three years. There has been a massive expansion in high bandwidth communications using copper, fibre, cable and mobile with an associated high take-up of smartphones, tablets and on-demand TV using both superfast and current generation fixed and mobile broadband technologies. Underpinning this is the investment in connectivity at the wholesale layer where there has continued to be rapid growth in unbundled copper lines, and a major acceleration in investment in NGA infrastructure in terms of commercial footprint and in the scope and extent of publically funded intervention areas in the UK. We address these points in more detail below.

Technology

63. Ofcom's decision to combine its review of WLA, wholesale analogue (WLR) and digital exchange lines (ISDN) into a single review reflects the rapidly changing nature of the market and the associated technologies. It recognises the major overlap and substitutability between these services as well as other alternative technologies including IP based solutions such as SIP Trunking⁹. Therefore it is important that in reaching conclusion in the review Ofcom continue to recognise these factors and other important changes taking place in the market. In particular Ofcom should:

- Give due weight to competitive pricing constraints resulting from CGA, Virgin Media, and the growth in mobile voice and broadband (including 4G);

⁸ We note these shared benefits are not available on the Virgin Media network.

⁹ SIP Trunking enables enterprises to utilise a single internet or data connection for making and receiving multiple concurrent telephone calls.

- Fully consider the regulatory implications of the shifting focus of competition towards the “bundling” of voice, broadband and content services¹⁰. In particular, we believe all products contained in a bundle should be subject to a consistent regulatory approach to ensure a level playing field. We explore this topic more fully in answer to Question 11.5.

Superfast Broadband

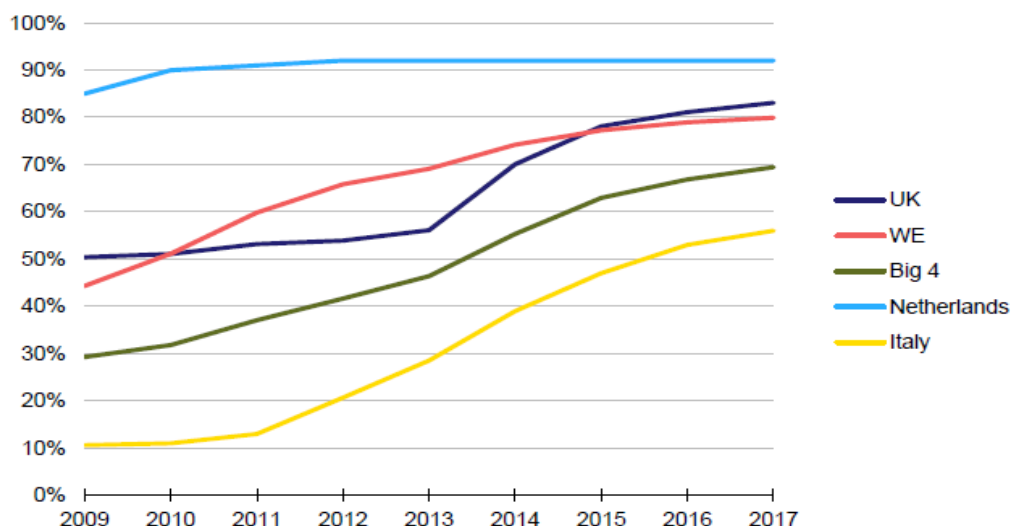
64. The regulatory framework set out by Ofcom in the Wholesale Local Access market review (WLA) in 2010 has supported major investment by BT and others in the UK’s NGA infrastructure and the increasing demand for SFBB services from consumers.
65. Indeed Ofcom’s most recent broadband speeds research from May 2013¹¹ highlights the very positive outcomes since the last market review, citing approximately one in five broadband connections now being superfast across the UK, average broadband speeds rising rapidly to 14.7Mbps, an increase of nearly 100% from the 7.5Mbps recorded in 2011, and an average speed of existing SFBB connections of 45.3Mbps.
66. There have also been significant changes to the competitiveness of the market since 2010. Competition is developing very rapidly and is expected to change significantly over the coming year. Openreach’s GEA fibre product is being purchased directly and in significant volumes from Openreach by seventeen CPs¹² serving both consumer and business markets and over seventy CPs who offer SFBB services based on BT Wholesale connectivity. Monthly orders are now significantly in excess of 100,000 per month and data for recent weeks shows the percentage of net fibre additions attributable to non-BT CPs approaching [X%]. This represents over a rise of over [X%] from the circa [X%] reported in July 2012. Further very high growth is also expected during 2013/14 as CPs move to a ‘wires-only’ deployment model using their own customer premises equipment (CPE) later in 2013 and into early 2014.
67. Coverage has also increased dramatically. In their report provided with this response, Analysys Mason predict that including all CPs’ SFBB coverage, the UK will exceed the Western Europe average by 2015 (see Figure 2.12 from the report, reproduced below). It is important that the current review builds on and maintains this success.

¹⁰ According to an Ofcom survey, about one half of UK households have purchased their fixed voice access as part of a bundle with at least one other service, predominantly in a bundle with a broadband connection, but increasingly also in a bundle together with a TV connection (Ofcom Communications Market Report 2012).

¹¹ Ofcom, ‘UK fixed-line broadband performance – May 2013’ available from:
http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/may2013/Fixed_bb_speeds_May_2013.pdf

¹² <http://www.superfast-openreach.co.uk/at-home/buy-it-now.aspx>

Figure 2.12: Premises passed by superfast broadband as a percentage of total premises, all operators, Western Europe [Source: Analysys Mason, 2013]



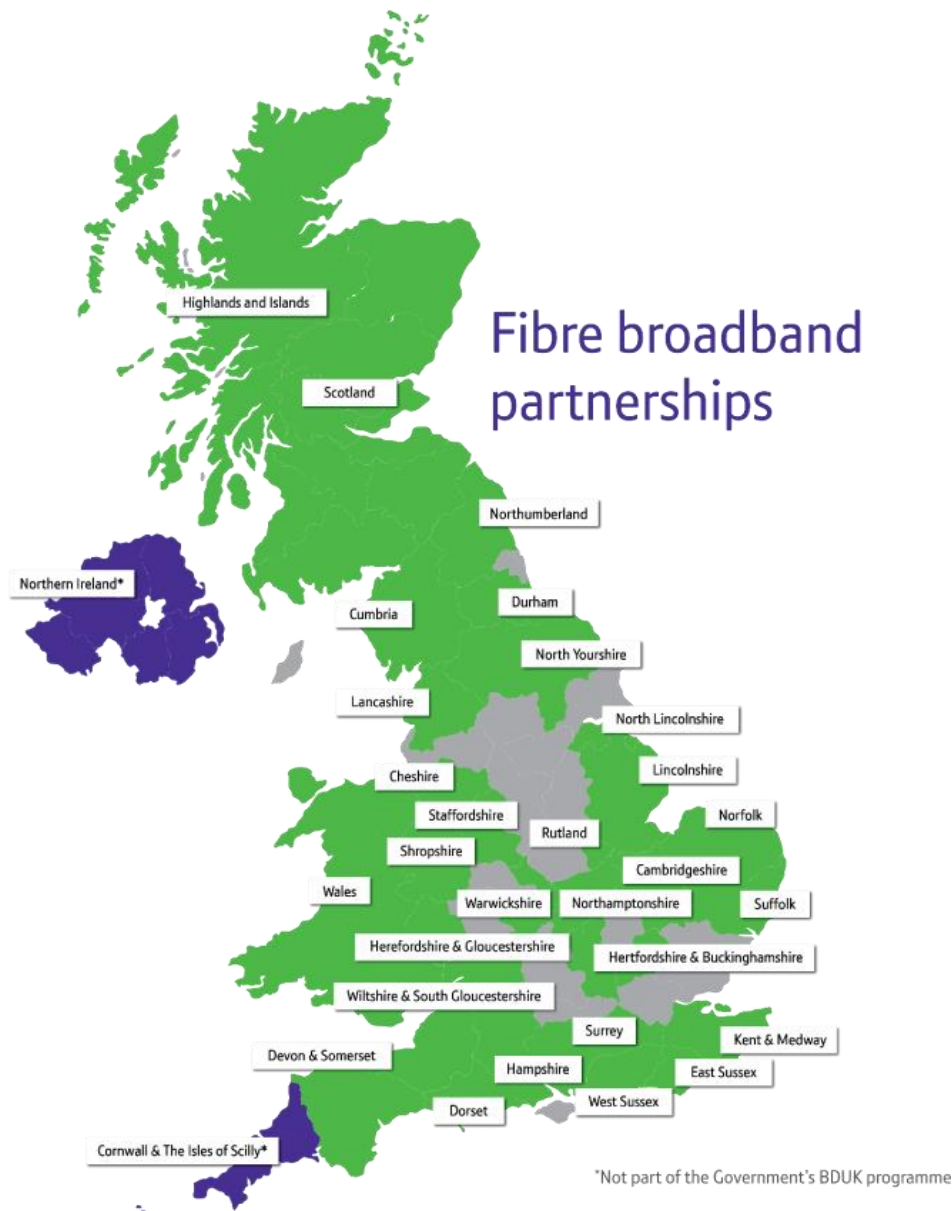
Public Funding and the 'Final Third'

68. Major changes have also taken place since Ofcom's last market review with regard to public funding of SFBB coverage in the UK. Following the General Election in May 2010 the incoming Government replaced existing proposals for a 'broadband levy'¹³ with a new approach. In December 2010, the Government launched their amended strategy entitled "Britain's Superfast Broadband Future"¹⁴. The aim was twofold; to ensure that the UK had the "best broadband network in Europe by 2015" but also to minimise the 'digital divide' between rural and urban areas as far as possible through the use of carefully targeted public interventions where the market was not delivering or not delivering effectively (the so called 'final third'). In due course, a nationwide framework scheme was developed referred to as BDUK to channel public funding in a coordinated way in order to achieve the objectives of the national broadband strategy.
69. BDUK has had a significant effect on both the level of funding and the extent to which new broadband infrastructure is being built in the UK. The aim of the intervention to (i) provide access to NGA develop infrastructure capable of delivering SFBB speeds to as many homes and businesses as possible in each local authority area in the UK; and to (ii) ensure that everyone in the remaining areas in the UK has access to minimum broadband speeds of at least 2 Mbps (the universal service commitment) is now taking effect. Broadband projects are being progressed at two levels: local (regional) broadband projects (approximately 40 in number); and community broadband projects (current expectations are that these projects will be of a much smaller scale and about 100 in number). The map below show the bids awarded up to July 2013.

¹³ At the time and in parallel to the Ofcom process there was significant political debate on a proposed funding mechanism for universal broadband (the 'broadband levy') which was to be introduced as part of the Digital Economy Act 2010.

¹⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/78096/10-1320-britains-superfast-broadband-future.pdf

Fig 1: BDUK bids awarded up to July 2013



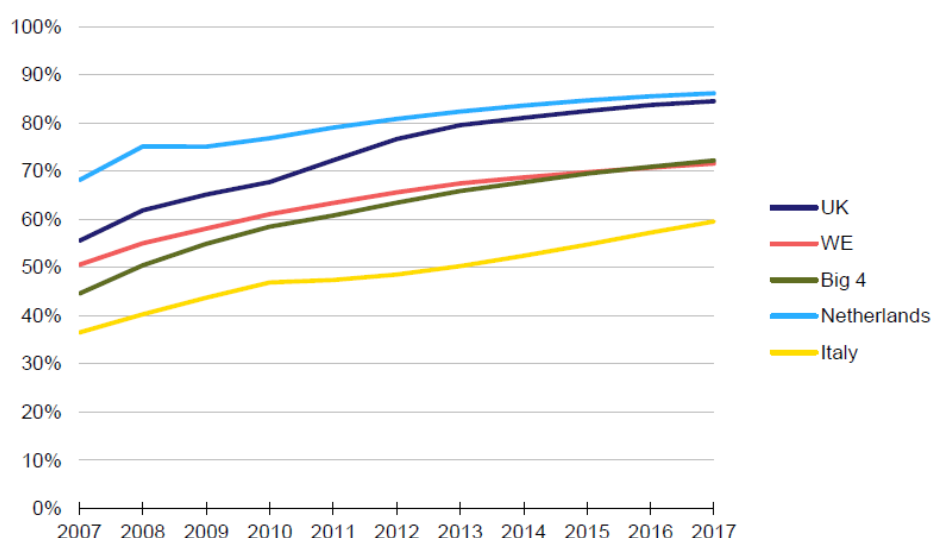
70. Taken in conjunction with the commercial roll-out of BT Group and other CPs this additional funding will see overall coverage in the UK rise to circa 90%, a major increase from the 40% coverage first mooted at the time of the WLA consultation in March 2010.
71. BT has been successful in winning BDUK bids. Our bids are based on fully disclosed bid models that are consistent with each other and consistent with the economics of our own commercial deployment. Our bids are priced to achieve a pay-back in 15 years at the Openreach level, which is longer than the Group case in our commercial deployment (indeed the pay-back period in the Group case in BDUK areas would be longer than in the Group case in the commercial footprint). Our actual costs will be fully evidenced and audited by the terms of the contract. We have volunteered to apply all Ofcom's regulations to the wholesale products being produced for BDUK, even though it is arguable that the market conditions are quite different. In particular we are

contractually committed to the same GEA price as in the rest of the country. Moreover, the provision of GEA on an open and equivalent basis will enhance competition in those areas. Consequently, Ofcom need have no concerns over the impact of BDUK subsidies in the context of the FAMR, because the costs and pay-back are longer than in the commercial case, the wholesales prices are the same and the full set of regulations apply.

Copper based voice and data services

72. In addition to the developments in fibre, competition based on copper lines has also continued to develop rapidly since 2010. MPF lines now stand at circa 7 million lines¹⁵ up from circa 3 million lines at the start of 2010/11¹⁶. This is a further clear indication of the highly competitive nature of the UK market. There has been a huge expansion of services delivered over fixed lines due to the growth of broadband which has been underpinned by the unprecedented take up of LLU which has in turn been facilitated by the national availability of high quality equivalent wholesale products (both MPF and SMPF) from Openreach. As Figure 2.1 from the Analysys Mason report reproduced below shows, in 2012 only France and the Netherlands had a higher penetration of fixed broadband than the UK.

Figure 2.1: Residential fixed broadband connections as a percentage of total residential premises, Western Europe [Source: Analysys Mason, 2013]



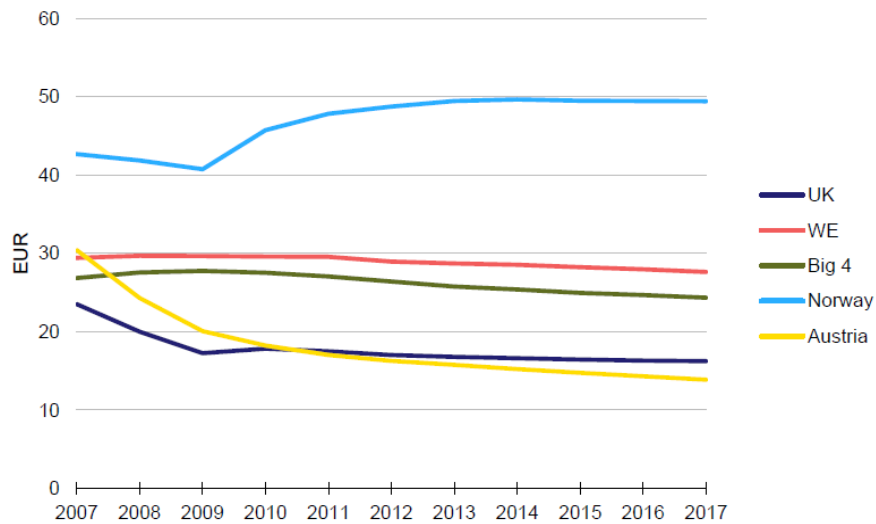
International benchmarking

73. Openreach's access prices and its provision of services on an EOI basis underpin a broadband market where prices are among the lowest in Europe further illustrating the strength and competitive nature of the UK broadband market. Figure 2.2 from the Analysys Mason report, reproduced below, shows comparative data. In 2012, only in one country, Austria, did consumers pay less for fixed broadband than in the UK. Developments in the retail market have led to industry consolidation resulting in fewer but larger CPs accounting for the majority of LLU demand, however we still see smaller CPs continuing to offer consumers important benefits in terms of innovation and choice.

¹⁵ BT's Quarterly Results, 30 June 2013.

¹⁶ BT's Quarterly Results, 31 March 2010.

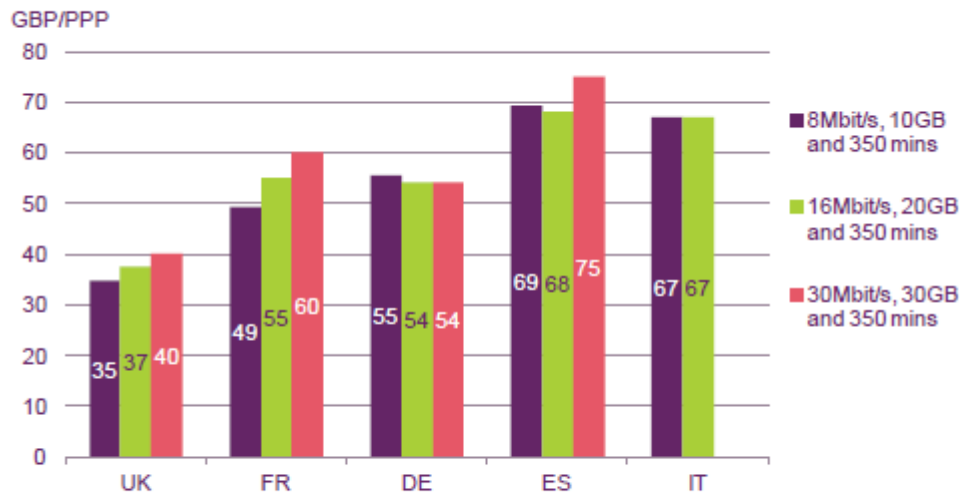
Figure 2.2: Average monthly retail revenue per fixed broadband connection (EUR), Western Europe [Source: Analysys Mason, 2013]



74. Further benchmarking of UK prices against major European countries also shows how competitive they are in comparison. The average of the lowest available prices for standalone fixed broadband and fixed voice services, weighted by the relevant provider's market share, was lower in the UK than in any other EU 'Big 5' country for all three baskets analysed. The highest weighted average standalone prices for all three baskets were found in Spain. This is shown in the chart below from Ofcom's report 'The European Broadband Scorecard' published on 5 March 2013¹⁷.

¹⁷ <http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/scorecard.pdf>

Figure 20 Weighted average single-service pricing for fixed broadband and fixed voice services

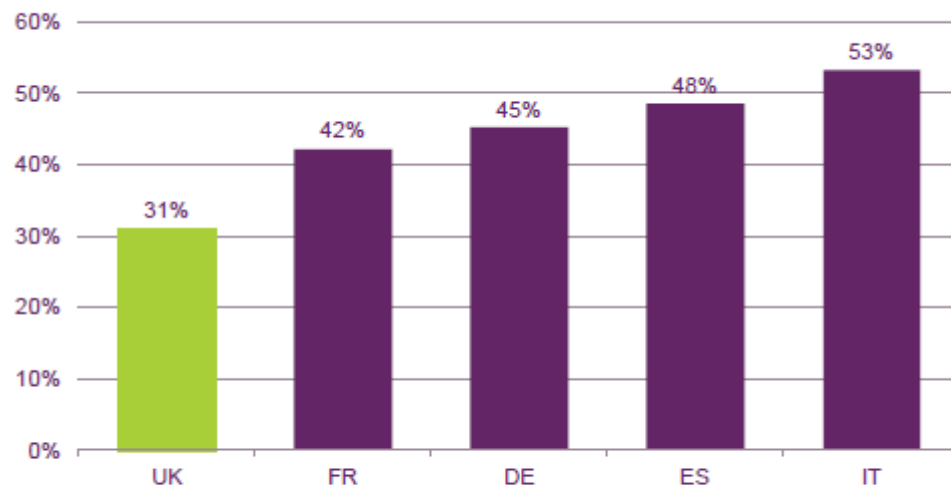


Source: Ofcom, using data supplied by Teligen.

Note: (1) Average of three lowest single-service tariffs available in each country, weighted by market share. (2) Data refer to July 2012. (3) In Italy no provider included in the Teligen model offered fixed broadband with a headline download speeds of 30Mbit/s or higher in July 2012. (4) PPP adjusted.

75. Additionally, as Ofcom indicates in the consultation, since the last WLA market review Virgin Media has continued to establish its position in both CGA and NGA broadband markets through its 'doubling of speeds' programme. We believe this growing market power is generally underestimated by Ofcom in its approach to the analysis of SMP, and is also not taken into account by major UK CPs in the way they interact and place demands on Openreach. The strength of competition in the UK market is clearly reflected in recent European wide benchmarking studies including Ofcom's European Broadband Scorecard report:

Figure 24 Percentage of fixed broadband lines operated by incumbent



Source: Cocom, EC, Digital Agenda Scoreboard 2012.

Note: (1) Data refer to January 2012. (2) These data refer to all forms of fixed line broadband, including standard and superfast connections.

76. In summary, a wide range of independent metrics confirm that the UK market is highly competitive, and that UK consumers enjoy some of the lowest telephony and broadband prices in the world combined with high take-up rates and rapidly increasing performance. There is an

increasingly wide choice of technologies available and there continues to be substantial investment and take-up in fibre-based services both in terms of commercial footprint and through public intervention. All major UK CPs are now actively selling fibre based services and end-users now have wide choice of CP for SFBB and are directly benefiting from BT's large scale investment in an open access next generation infrastructure.

2.3 Forward looking market developments

2.3.1 Regulatory remedies need to be sustainable

77. This consultation underpins both current and NGA and hence can shape future investment incentives and the future development of the UK telecoms infrastructure in a major way. Regulatory policy needs to recognise the scale of BT Group's investment, the long term nature of the business case and the financial and operational risks faced by BT in its implementation¹⁸. We provide a short summary of the network evolution plans for Openreach in this section.
78. As part of its long term planning BT has developed a view on how its network infrastructure can continue to evolve to meet the needs of CPs and end-users for many years into the future in an inherently open access and equivalent way. Hence it is important that Ofcom factors such important strategic developments into its policy and decision making. Through Openreach the regulatory framework already provides a number of layers of competition in the value chain which have been carefully constructed to allow different choices to be made by CPs in economically sustainable ways which will maintain investment incentives at the base infrastructure layer but also allow for fair and sustainable competition. This has been implemented by reference to:
 - The importance of the VULA product as the basis for wholesale competition over fibre;
 - The role that alternative PIA and SLU may play in relation to NGA roll-out;
 - The importance of continuing to support LLU (both MPF and SMPF) as the basis for competition in copper-based broadband services.
79. We believe a key regulatory issue for fibre concerns the nature of the wholesale products to be offered to allow effective competition to develop. What is important is that the wholesale remedy is offered at the deepest, economically-sustainable point in the network; supports downstream competition and hence consumer choice; and offers sufficient scope for innovation and differentiation by CPs.
80. BT already supports wholesale competition at a number of different levels but for investment in infrastructure to be viable, strategic, long term and pro-competitive there are key principles which need to be supported. On this basis, BT agrees with Ofcom that VULA should be considered the primary upstream fibre remedy in the WLA market. Ofcom's choice of the term VULA - Virtual Unbundled Local Access - underlines the fact that the active product is the fibre equivalent of LLU in terms of the economics of reach and handover and the scope for downstream innovation and differentiation.
81. Moreover, as Ofcom indicates, the VULA product will evolve over time enabled by new technologies and Ofcom's VULA characteristics support this evolution. GEA is already available to industry on a fully-equivalent basis and Openreach is committed to continuing to work with its customers on future requirements and on a transparent development process and publication of the regularly updated product roadmaps. The track record on development since the last review is

¹⁸ See the Plum Consulting report provided with this response for further details.

substantial and this also includes the two most significant additions to the portfolio proposed in the 2010 WLA market review ('wires-only' and FVA).

Wires-only

82. This required a series of significant developments which were discussed in depth in the last WLA market review. Ofcom's view was that the GEA product needed to be enhanced in line with the proposed VULA characteristics to allow for interworking between GEA and third party Customer Premises Equipment (CPE) to allow CPs a greater choice of equipment for use with their retail services. Openreach adopted a two-strand approach:

- Initial trialling of a self-install variant during 2012 followed by a large scale trial in 2013, now nearing completion;
- Development of standards to allow Customer Premises Equipment (CPE) enablement, which will allow CPs to use their own modem/set-top boxes to connect to the Openreach GEA service.

83. Wires-only is now on track for launch in autumn 2013, and an Openreach announcement on pricing and the early market deployment launch date is now imminent. This is covered in detail later in our response.

Fibre Voice Access (FVA)

84. This is a voice connectivity solution for FTTP deployments. It was referred to as 'open ATA'¹⁹ in the last Wholesale Local Access market review and was seen as an essential element of the regulatory framework to enable voice competition over FTTP. The key requirement was to give interconnecting CPs a greater degree of control over the voice services that could be provided using GEA and the ability to control call quality and functionality through the use of their own telephony call servers. FVA was launched in spring 2012.

Other product developments

85. Other significant examples of collaborative developments since the last market review have included:

- The introduction of the 80/20Mbps FTTC product - implementation of a new Access Network Frequency Plan (ANFP) which has enabled a dramatic increase in GEA performance;
- Multicasting - the ability to convey multiple and duplicated traffic streams through the GEA access network in an economic and efficient way;
- FTTP on Demand (FoD), a new service which is currently in the early market deployment launch phase which will enable FTTP based GEA services to be ordered in FTTC areas;
- An extensive range of new FTTP products with wide-ranging speed capabilities, including a 330/30Mbps product, have been developed and are available in FTTP.

¹⁹ Analogue Telephony Adaptor (ATA) – an interface which allows a standard telephone to be connected to an FTTP network terminating point. The term 'open' referred to its functionality being capable of use by any CP owned 'call server' and not just BT's chosen vendor.

2.3.2 Regulatory certainty is still required for future fibre investments to be made

86. Although significant investment has already been made in the UK's fibre network by BT, the next phases of infrastructure development will also require significant capital investment to support them. Over the next market review period and beyond such investments will run to hundreds of millions of pounds and hence regulatory certainty remains a critical aspect of the regulatory framework. Investments such as vectoring and other performance enhancing technologies will have long pay back periods commensurate with the existing fibre case and we look to Ofcom to create a stable regulatory environment for such long term infrastructure investments to be made with confidence.

Vectoring

87. As a first significant step in its plans to increase the capability of its FTTC product to 100Mbps and above, Openreach commenced its vectoring trial during 2013. Initial results are very positive with circa 80% of lines showing significant performance increases. Openreach will also begin roll-out of vectoring compatible DSLAMs in 2013 and initial plans are now in place to install vector ready technology in the network during 2014.

88. Openreach is committed to introducing vectoring technology into its network, and vectoring will deliver important benefits to customers, including faster fibre speeds. Our initial field trial results have demonstrated this. However, the cost of rolling out vectoring to all fibre cabinets is [£] and hence it is crucial that there is regulatory certainty underpinning this investment. Given the incompatibility of Sub-Loop Unbundling (SLU) with vectoring, we support Ofcom's proposed guidance for BT and SLU operators on this issue and look to it to provide protection against end-user detriment that could result if BT were obliged to provide SLU at cabinets where vectoring has been deployed or is planned.

Network Evolution

89. As with vectoring, further significant capital investment is likely to be required to implement other fibre technologies as they mature and hence regulatory certainty will also be a key factor in supporting those investments in due course. Openreach is continuing to look at the potential for further trials of new technologies such as XG PON, FTTdp, G.fast and other VDSL acceleration technologies which will mature further and become more standardised during the next review period, forming part of the future development roadmap. A number of these are already being assessed in detail as possible upgrade paths for the Openreach NGA platform and are covered further in this section of this response.

90. However not all possible product developments or variants will necessarily be a good fit with Ofcom's 'virtual unbundling' based regulatory framework or with the existing NGA infrastructure and architecture in which BT has already invested very heavily to develop and implement the VULA concept²⁰.

91. BT has made its existing investment and is proceeding with further substantial NGA investment (both commercially and with public funded partnerships) over an extended time period on the basis that VULA is Ofcom's preferred form of NGA access, and hence regulatory certainty and consistency is essential in such circumstances. Hence fundamental changes to the regulatory model at this stage may be unreasonable if they remove regulatory certainty, undermine BT's

²⁰ We are not referring to BT 'foreclosing' on any design options and understand that BT is required to ensure that it does not develop its network in a way that restricts competition, however the existing regulatory model and BT's network investment plans are currently aligned and based on VULA being the prime regulatory mechanism and not lower levels of 'unbundling'.

incentive to make efficient investments in fibre and substantially increase investment risk to the original case to such an extent that the NGA investment would never have been made.

92. Therefore in assessing individual cases for new forms of network access we would propose that there are some underlying principles/questions which need to be considered/taken into account when considering 'reasonableness' of the request, and whether the new access undermines the existing regulatory framework for NGA and economies of scale and scope inherent in the VULA concept. For example:
 - Is it viable to provide the new access to multiple smaller CPs in an 'equivalent' way and/or is scalable to serve several very large CPs (i.e. can the access be provided in an efficient way to say four or more large national scale CPs on an equivalent basis)?
 - Does the new access support ease and low cost of end-user switching between CPs, or does it 'reintegrate' a currently 'open access' service (such as VULA) back into a vertically integrated CP supply chain?
 - Is it compatible with the strategic design of the 'shared' open access NGA platform and its likely and efficient long term upgrade path?
 - Does it promote the leveraging of market power in downstream or adjacent markets such as audio visual services?
 - Does the proposed access offer material and additional end-user benefits above the existing forms of network access (i.e. what is the cost/benefit analysis), and is there benefit to end-users as a whole (i.e. a 'distribution of benefits')?
93. At minimum, a full assessment of these factors is important to establish whether regulatory certainty and consistency is in fact being maintained or whether the new access is undermining the original business case and commitment by BT to invest on the basis of a clear and established regulatory framework.
94. Ofcom has already in this review defined the ease and costs of switching between CPs as a key focus. Hence strategic product design principles need to take this into account. The GEA product is already designed to support a multi-CP model, facilitating downstream competition and consumer choice, similar to that which exists today on voice and broadband. Ultimately, it is the impact on the end-user which must be given due consideration in evaluating the desirable characteristics of wholesale remedies.
95. Openreach already offers virtual unbundling with its GEA product, supplied on an EOI basis. Pricing flexibility for VULA is both appropriate and desirable whilst fibre is deployed as an overlay to existing copper, and Ofcom's generally pragmatic approach to the pricing and specification of VULA is therefore helpful. Whilst supporting the active product as the primary regulatory remedy for NGA, Ofcom also considers in detail the role that passive remedies could play to complement this. BT is happy to support the combination of VULA and PIA, together with Functional Separation, which we believe fully addresses competition issues for NGA while providing BT and others with the basis for continued efficient investment leading to maximum consumer benefits. BT is fully committed to playing its part in supporting investment in improved service provision in the 'Final Third' both directly through involvement in BDUK initiatives and more broadly through PIA.

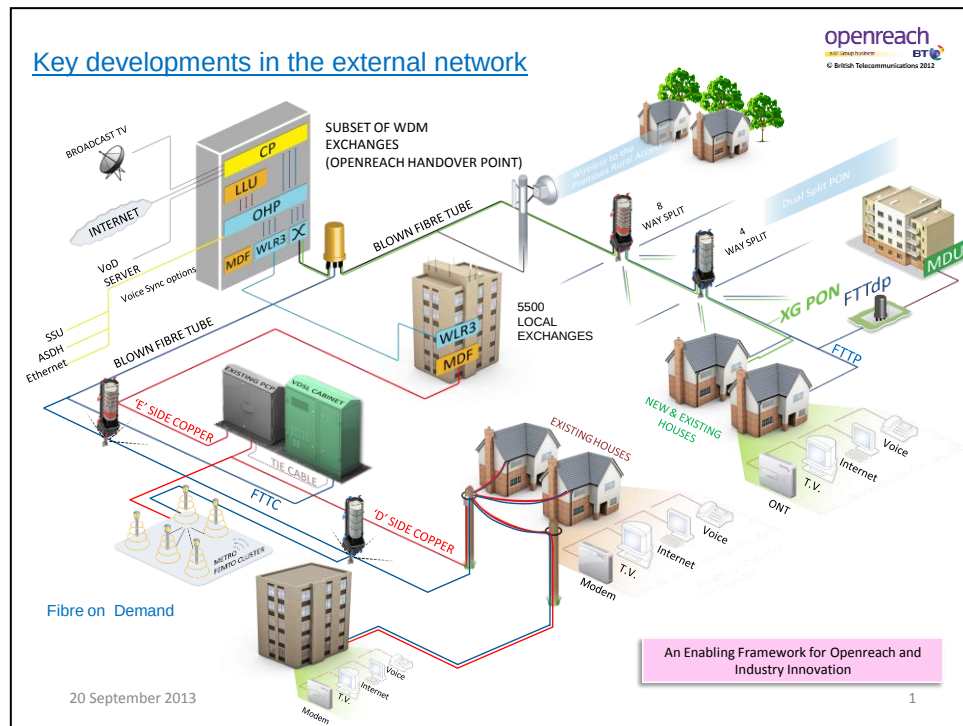
2.3.3 BT's strategic network plans will support continued product evolution

96. In response to the increasing coverage of the Openreach NGA infrastructure, the rapidly growing take-up, emergence of new demanding end-user applications and expectation of increasing bandwidth options, Openreach has developed plans for the strategic evolution of its 'mixed economy' copper and fibre SFBB network. In this section of the response we provide a brief overview of that likely evolution looking at the external network and at the innovation required to support coverage of the 'final third'. These will form part of an additional major long term investment programme on top of the original fibre business case and it is essential that there is regulatory certainty in the Ofcom framework to enable such investments to proceed.

Overview

97. Openreach's NGA architecture consists of two platform technologies - Fibre to the Premises (FTTP) and Fibre to the Cabinet (FTTC). We have continued to innovate both FTTC and FTTP since our first deployment of FTTP in 2007 and FTTC in 2009.
98. Our approach will be to reinforce the benefits of GEA which addresses the VULA requirement and provide an open access Ethernet bitstream proposition to CPs at Openreach Handover Nodes and within customer premises. We anticipate that future products will be consistent within that style. GEA allows Openreach innovation in the creation of new wholesale products often based on physical layer innovation to enhance service rates, support higher take-up and to broaden coverage. Our approach separates the concerns of CPs from Openreach and enables them to innovate above the Openreach 'connectivity' layer with confidence.
99. Figure 2 highlights the key innovations that are deployed, in trial or under investigation.

Figure 2: NGA Network Vision



100. FTTC key innovations are 17MHz bandplan, CPE Enablement, retransmission and vectoring:

- Introduced in 2012, the 17MHz bandplan increased the capability of the VDSL transmission on the D side to support a doubling of the maximum attainable transmission speeds of up to 40Mbps to 80Mbps.
- Introduced in 2013, CPE Enablement allowed the use of CP VDSL modem terminations in end users premises, supporting further innovation and service differentiation.
- Retransmission, currently under investigation, will support stable and reduced error transmission of TV applications.
- Vectoring is undergoing a field trial and will enable high bit rates to be maintained as higher take up of FTTC occurs in the future, offsetting the effects of crosstalk from lines sharing the same copper cables. This is achieved through the continuous monitoring of crosstalk coupling within a cable, and the real-time generation of “anti-noise” that cancels out this crosstalk between all pairs. As a result, much higher bit rates can be achieved. Vectoring also makes bit rates more predictable because vectoring enables lines, whether heavily impacted by crosstalk or not, to perform in a similar way as if it were the only active line in the cable, that is, without crosstalk.

101. FTTP key innovations are Fibre Voice Access, Fibre on Demand, XGPON:

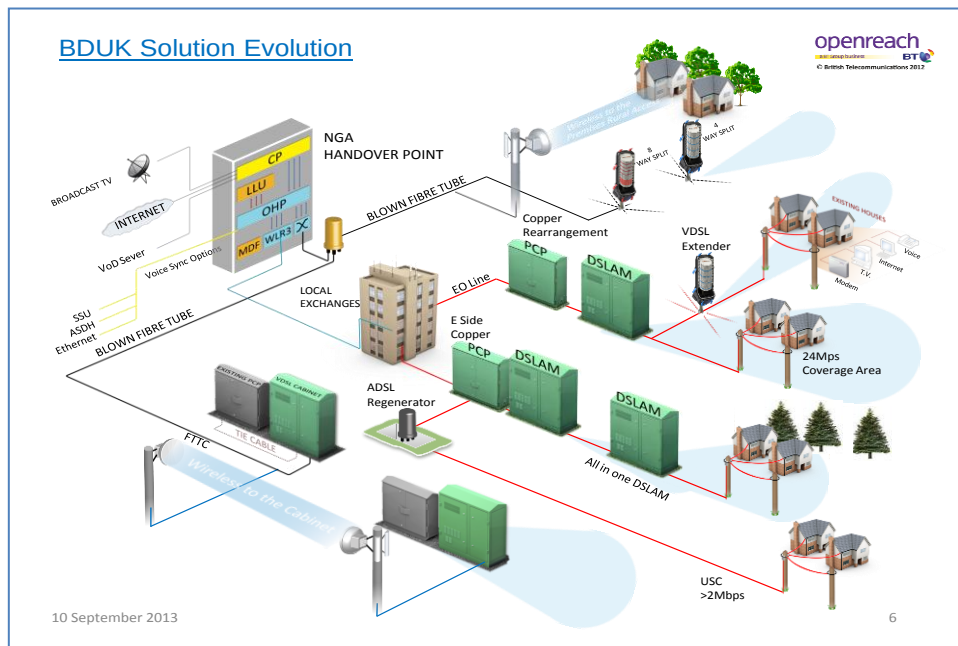
- Fibre Voice Access supports voice calls from remotely sited CP voice servers to end users on the FTTP platform. CPs have a standard interface at the Openreach handover node and end users connect existing voice CPE to the FTTP ONT in their premises
- Fibre on Demand to be launched in 2014 will allow FTTP to be delivered on demand to a customer premises in the existing FTTC footprint. It will enable customers requiring premium bandwidths to request the service from their CPs.
- XGPON is under investigation and will support higher bandwidths on the FTTP infrastructure. We have ensured the existing deployed infrastructure can be re-used.

102. FTTdp is an innovation which is a hybrid of FTTP and FTTC whereby active electronics are moved closer to the end user than FTTC (the DP) and either VDSL or G.fast technology exploits the shorter copper final drop. Use of G.fast technology at the DP is still being standardised but could enable 300Mbps to 1Gbps connections. Alternatively use of VDSL at the DP could enable FTTC cabinets experiencing capacity issues to grow further. The backhaul to the Openreach handover nodes would be primarily over GPON or XGPON.

Innovation to support increased footprint and BDUK

103. We have investigated a number of technical solutions to allow economic delivery of 24Mbps to as wide a geography as possible. In addition we have investigated a range of solutions to deliver at least 2Mbps to those areas where it is uneconomical to deploy NGA. Figure 3 shows the range of technology solutions investigated.

Figure 3: NGA Network Vision



104. The key extension solutions under investigation are Copper Re-arrangement, All in One Cab, ADSL Regenerator, VDSL extender, Wireless to the Cab, Wireless to the Premises.

- Copper Re-arrangement re clusters remote or exchange outlet lines and places a new PCP/FTTC cabinet pair close enough to the end users to allow NGA service to be delivered.
- All in One Cab, in trial now, combines both the PCP and FTTC cab into a single unit allowing economical delivery of copper re-arrangement to small sites.
- ADSL regenerator, in trial now, intercepts long ADSL lines with less than 2Mbps performance, regenerates the ADSL signal and ensures lines exceed the performance threshold.
- VDSL extender intercepts long D side lines (>1km) from FTTC where VDSL performance drops below the minimum threshold for NGA and amplifies the signal to extend the reach of the NGA footprint.
- Wireless to the cabinet, in trial now, addresses remote locations where fibre backhaul to the cabinet is uneconomical due to difficult terrain. End users are delivered NGA FTTC service locally, but with the backhaul being a section of wireless before being connected to fibre.
- Wireless to the premises is a solution to address spare and remote premises with a wireless link supporting broadband data connection. Various technologies are being investigated and trialled.

Innovation Pipeline

105. Innovation continues to be used to address the economic deployment challenges in remote areas, high take up and demands of higher bandwidth from applications such as TV. The solutions described above are just some of the range of solutions under investigation, trial and deployment by Openreach to meet the needs of CPs, extend coverage throughout the UK, and to continue the development of the VULA concept into far higher performance 'equivalent' products for both FTTC and FTTP networks.

Innovation will also take place at the customer premises with the launch of wires-only

106. In terms of major developments at the customer premises, the key innovations currently in large scale pilot are 'self-install' and Customer Premises Equipment (CPE) enablement, both known collectively as 'wires-only'. This was the most significant addition to the portfolio proposed in the 2010 WLA market review. Ofcom's view was that the GEA product needed to be enhanced in line with the proposed VULA characteristics to allow for interworking between GEA and third party Customer Premises Equipment (CPE) to allow CPs a greater choice of equipment for use with their retail services.
107. Development of 'wires-only' variants were not possible at the time of the last market review as standards for VDSL interoperability were not fully mature, hence Openreach adopted a two strand approach:
- We began trialling of a self-install variant during 2012. This followed the model used for ADSL in that 'micro-filters' would be used in the home environment. CPs would be enabled to send micro-filters and an Openreach VDSL modem to end-users (and their own branded CPE) and hence an engineering visit would not be required. After the initial trial Openreach launched a large scale pilot in 2013 which is now nearing completion. Results have shown a deterioration in speeds for some users but indications are that some CPs will choose this option for large scale deployment in 2013/14;
 - Development of standards to allow Customer Premises Equipment (CPE) enablement, which will allow CPs to use their own modem/set-top boxes to connect to the Openreach GEA service. Again significant progress has been made in this area. Working with industry Openreach has developed an NGA network interoperability standard to which CPs can build and source their own CPE devices. The testing process has been active since early 2013 and despite some initial interworking problems several CPs devices are now ready to be used in a live environment.
108. At the time of the last WLA market review in 2010, some respondents argued that VDSL standards were sufficiently mature for a wires-only product to be developed and that interworking between equipment supplied by different vendors was possible. In contrast, both Ofcom and BT considered that such standards were not sufficiently mature in 2010. Our recent experience since then in developing the wires-only options and working through a large scale pilot in 2013 has proven our assumption to be correct. As noted above, despite the best intentions of CPs and their suppliers many devices failed interoperability testing several times, and in some cases in ways which would have had serious operational consequences for Openreach and CPs and poor customer experience for end-users. These problems have now largely been overcome and launch is due imminently. However, the process has highlighted the problems associated with immature standards and the importance of following a formal conformance testing process for this type of product development.
109. The launch of wires-only is now imminent and announcements for the early market deployment phase both launch date and pricing are anticipated over the coming month. This is a major step in the development of the fibre market and directly supports the multi-CP competitive framework for SFBB that Ofcom set out in the WLA review in 2010.

3. Service – BT’s perspective as a provider of retail services to consumers and businesses

110. BT serves both residential consumers and business customers in its capacity as a retailer of voice services. Like any other service provider, BT Retail relies on Openreach to allow us to remain competitive and to provide our end customers with an acceptable level of service. We are very conscious that if service is not quick or reliable enough, our customers can choose to move their service to Virgin’s cable network, or to use mobile voice and data services instead. Openreach and its retailing CPs need to work together to prevent this churn and remain competitive by providing unbeatable service.
111. Whilst consumers and businesses have different needs and expectations for quality of service, in both cases, from BT Retail’s perspective, the level of service that Openreach provides is generally of a high standard. However there have been times when it has not always been acceptable to us or to our customers. This has been evidenced by an increase in customers’ propensity to contact us about service delivery, and by the complaints we have received.
112. Analysis by BT Business of customer “advocacy” scores (which measure customers’ response to the question “How likely would you be to recommend BT to business colleagues or associates?”), set out in a report produced by the BT Business Insight team in December 2012 provided with this response, has shown that periods of low scoring closely correlate with periods where there have been Openreach service issues. In November 2012, for example, [redacted] of “negative advocacy” from corporate customers came from those who had experienced a service event (installation or fault repair) in the previous three months. Dissatisfaction was more prevalent when the service event required an engineering visit.
113. Amongst residential customers, line installation and repair times are more important than they have ever been as a result of the growth of dual- and triple-play bundles of voice, broadband and TV. [redacted] of triple play customers cite poor service as a reason to switch provider. As well as installing and repairing service quickly, keeping customers informed of progress is vital to minimise customer dissatisfaction and intention to switch, and as a retailer we are reliant on Openreach to help us achieve this.
114. Our concerns about service have primarily arisen as Openreach, and BT Retail as a CP, have come under significant pressure from increased fault volumes as the network infrastructure has struggled to cope with increasingly volatile weather patterns and the demand placed upon it by the growth of broadband and video based services. This in turn has impacted overall service performance across both provision and repair.
115. GfK has carried out research for BT Retail amongst its residential customers on their attitudes to installation and repair timescales: this is set out in a report which we have provided with this response. The research has highlighted that the current SLAs should only be a backstop, and that customers have much higher expectations. [redacted]²¹. [redacted] our research has also shown that most customers [redacted] would not pay extra to have their service installed faster; so the trade-off between cost and service requires further examination. Openreach should be given the flexibility to offer a range of different service levels to reflect end customers’ differing needs and willingness to pay. A quicker lead time is likely to be much more critical when a customer has no current service, for example.

²¹ [redacted]

116. Business customers are equally or more demanding than residential customers, but with a different area of focus. Certainty of delivery against a firm commitment, within a reasonable timescale, is the most significant issue. Businesses plan on the basis of the timescales they are originally given and do not want these to change at short notice due to the impact this has on their businesses or on other dependent suppliers. Business customers are also dissatisfied if inappropriately skilled engineers are assigned to their project, or if appropriate equipment to deal with the physical conditions of some business sites is not scheduled in advance. Ofcom must ensure that Openreach has the necessary funding to meet these demands going forward.
117. Although we want to see improvements, we believe that any changes to SLAs should be achieved through industry negotiation, rather than being imposed by Ofcom through SMP regulation. This allows for more flexibility and agility when changes are needed.
118. For repairs to the lines of residential customers, we are concerned that as a basic WLR provider we suffer slower repair times than those of Openreach's customers who use MPF, as MPF lines are repaired by the end of the next working day (Care Level 2), whilst WLR lines are repaired by the next working day plus one (Care Level 1). This is a key issue for us, as we mentioned in our Call for Inputs response, as this puts us at a competitive disadvantage. Our residential customer research referred to earlier in this section shows that the timeframe of next working day doubles satisfaction levels versus the current next working day plus one for basic WLR, and although the latter timescale is generally acceptable it drives dissatisfaction up from [3<].
119. We understand Ofcom's position that we could choose to pay for Care Level 2 and that this comes down to a question of whether the cost differential between the two care levels is properly reflected in the cost stacks for the products - i.e. a charge control issue. However, we feel the issue is more nuanced than that. We do not believe that the cost uplift allowed for Care Level 2 is sufficiently high, or reflective of the huge impact on Openreach of increased MPF volumes and the challenges of 'end of next day working day' repair targets. Unless this cost uplift is increased dramatically, it appears Openreach is unlikely to be able to resource itself sufficiently to cope with the demand from all CPs within the timescales required by current SLAs, let alone to make improvements or to cope with any new demand for Care Level 2 from WLR CPs; and the unfair advantage enjoyed by the MPF providers will be perpetuated. Ofcom should not dismiss this issue but should undertake further analysis as part of its October consultation on minimum service standards and the cost/service trade-off.
120. Generally we see quality of service as a shared responsibility between Openreach and its customers. It is of particular concern to BT Retail that if other CPs do not optimise their use of Openreach resources (e.g. by adopting the Working Line Takeover process or otherwise minimising appointed visits), or do not forecast their demand accurately, BT Retail (and other WLR CPs) bear the brunt of the knock-on impact on Openreach lead times and missed appointments, due to the priority given to MPF over WLR. This must be fully recognised, both in the cost uplift for MPF in the charge control review, and in the obligations placed on CPs through SLA/SLG negotiations and new regulations around Consumer Switching.
121. Looking beyond the current service issues, BT Retail believes that there is a need for industry and Ofcom to set new ambitions for service quality that reflect the changing expectations of our customers and allow service levels to become a key differentiator in the market.
122. Openreach needs to be given the scope to invest in areas such as:
- A proactive approach to CP and customer engagement when provision orders or fault repairs deviate from the expected path. Most orders and faults are successful in submission and processing to expected dates, but when orders or faults deviate from the

'happy path' – for example, when dates need to change, planning problems arise, orders are rejected or cancelled or an engineer cannot arrive to complete the job – the experience in these instances is reactive today, resulting in some instances when customers are not informed of an issue and contact their CP to chase or complain before we have been made aware of the problem by Openreach. We would like to see Openreach adopt a proactive approach, that involves monitoring and managing the experience around all orders and faults that deviate from the happy path on behalf of the CP. This would reduce customer frustration from having to inform the CP when something has not happened as expected and the CP needing to contact Openreach for information or updates.

- A more flexible and agile appointing system. The appointing product needs development to meet the needs of today's communications market. The offering of only 'am' or 'pm' slots is not consistent with third party engineering companies offering similar services, or the delivery experience customers are used to from other industries, such as internet food shopping. Whilst appreciating that the duration of time in home/premises is more unpredictable than in other industries, our consumer customers are asking for and expect shorter appointment slots (for example, two hours) that are more flexible around the standard working day (e.g. early morning, late evening covering 7-9pm, and weekends – both Saturdays and Sundays).

We also need to expect that customers' plans change, as well as Openreach's supply profile, and to react to this. We are missing a capability to move appointments forwards as slots become available when customers want to amend, or more capacity is injected in the books. We also have no way to 'signal' to Openreach that a customer who has no service today needs to have priority over a customer switching between providers. We are doing a great disservice, as an industry, to customers moving home/premises by not having this capability.

- Innovating for the customer. Whilst there are many positive examples of engineers or contact centre agents 'going the extra mile' to help our customers, it can be difficult to introduce improvements to service that will create cost or that do not have a clear business case, but that are the right thing to do for the end customer. Innovations such as doorstep reappointing when jobs require further work, or when it is no longer convenient for the customer, is one such example, as is proactive communication to end customers during common faults, such as those created by cable thefts. Business customers want to access premium services and are willing to pay extra and do not understand why these cannot be made available at short notice.

123. The extra costs that Openreach would incur as a result of such developments need to be taken into account by Ofcom when setting charge controls, allowing improvements to base levels of service and the development of premium service options for those willing to pay the additional costs. The relentless focus on price (and cost) reduction created by the current regulatory regime will not deliver the levels of service that our customers require.

4. Responses to questions in Ofcom's consultation document "Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30"

4.1 Market definition and SMP analysis: WFAEL

Question 3.1 Do you agree with our provisional view that, during the period covered by this market review, BT and KCOM will have SMP in the WFAEL markets we define above? Please provide reasons in support of your views.

124. We do not see a strong case to fundamentally redefine existing WFAEL market definitions at this point and hence Ofcom's designation that BT has SMP in the WFAEL is not unreasonable.

125. However, we do consider that the market conditions specific to analogue exchange lines have changed significantly since the last WFAEL review in 2010. The absolute volumes and relative proportions of MPF and WLR lines used to serve end-users have shifted dramatically. Table A8.1 in the LLU/WLR Charge Control consultation shows that Ofcom anticipates there will be 9.1m MPF lines in 2016/17. This demonstrates a rapidly evolving wholesale market and one where the competitive effect of MPF has become highly significant in its own right and acts as a powerful constraint on WLR pricing. This is a major change, and at minimum it signifies that Ofcom will need to look more closely at the proportionate level of regulation to be applied to WLR products and pricing in future reviews. Competition between services based on fully unbundled lines (MPF) and shared unbundling (WLR/SMPF) has now reached maturity and any previous incentives to support MPF market entry should now be removed.

126. In addition to the impact of MPF there are a number of other factors continuing to drive changes in the market and acting to reduce the power of BT in the WFAEL market:

- A significant proportion of households are now 'mobile-only'. This currently stands at circa 15% overall for all households and 30% amongst the 16-24 year old age group²².
- There is also considerable and accelerating activity with regard to 4G services, increasing the power of the mobile sector in both voice and mobile broadband markets (i.e. WFAEL and WLA). In early September EE announced their one millionth customer four months ahead of schedule²³, and Vodafone and O2 have now also commenced roll-out. All of the UK networks have pledged to widen their 4G offering within the next couple of years. O2 are reported as planning to roll-out 4G in a further 10 cities by the end of the year, while Vodafone plans to be in a further 12. Three anticipate its 4G services will be available in 50 UK cities by the end of 2014²⁴. This amounts to a significant forward looking competitive challenge to BT's existing broadband base and a material constraint on pricing.
- As in the WLA market, the very strong vertically integrated presence of Virgin Media in many sub-national segments of the UK market (plus their presence and other third parties who own infrastructure on individual new build sites) is a significant competitive constraint on BT and Openreach services. Virgin also has the ability to offer bundled voice, SFBB and TV services without any wholesale obligations.

²² <http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr13/>

²³ <http://www.telegraph.co.uk/technology/news/10295522/EE-hits-one-million-4G-customer-milestone-ahead-of-schedule.html>

²⁴ <http://www.bbc.co.uk/news/technology-23868082>

- The presence of large firms with significant market power in audio visual services and the shifting focus of competition towards the “bundling” of voice, broadband and content services²⁵;
- The deployment of NGA technologies²⁶, and the potential future impacts on demand for current generation voice and data products.

127. Going forward, these factors will increasingly impact the demand for WLR Analogue services and should be fully assessed in future reviews of market definitions and SMP assessments.

128. Additionally, research set out in Ofcom’s Communications Market Report 2013 suggests that the proportion of adults currently using VoIP services stood at 28% in Q1 2013, and clearly VOIP is therefore becoming a more significant competitive constraint in the market. Developments such as this and “over the top” voice particularly using SFBB type access are again very likely to diminish the importance of the WLR analogue regulatory remedy in future analysis.

4.2 Market definition and SMP analysis: ISDN30

Question 4.1 Do you agree with our provisional view that, during the period covered by this market review, BT and KCOM will have SMP in the wholesale ISDN30 markets we define above? Please provide reasons in support of your views.

129. In our view the imposition of a charge control has almost certainly resulted in an extension of the ISDN30 product life and a slowing of the natural process of technology migration. We do not see a strong case to fundamentally redefine the existing wholesale ISDN30 market definition at this point, and hence Ofcom’s designation that BT has SMP broadly does not appear to be unreasonable. However, given the market changes, ISDN30 will eventually be subsumed/superseded in a broader market. As this is a market in terminal decline and customers can and do switch to alternatives, Ofcom should consider whether there is justification for continuing with SMP at a wholesale level.

130. Since the last review, demand for ISDN30 channels has continued to decline and we expect the rate of decline to increase. ISDN30 is a service which is under strong competitive pressure from new substitute services (most notably IP based technologies such as SIP Trunking²⁷ but also including other technologies such as Hosted VoIP and Centrex).

131. Both the wholesale and retail markets are now highly competitive. At the wholesale level there has been considerable activity, and most notably CWW and Virgin Media now have substantial wholesale ISDN30 businesses supplying their own downstream retail businesses. CPs are able to source the access element of the network from Openreach and hence this provides great scope to supply the market at far lower risk than if self-build was required.

132. The market has seen more aggressive competition with CPs strongly promoting a switch from ISDN30 to IP Voice services as a way to reduce costs without compromising quality. There is

²⁵ According to an Ofcom survey, about one half of UK households have purchased their fixed voice access as part of a bundle with at least one other service, predominantly in a bundle with a broadband connection, but increasingly also in a bundle together with a TV connection (Ofcom Communications Market Report 2012).

²⁶ At this stage we do not anticipate Fibre to the Premises (FTTP) playing a significant part in changing the WFAEL market during the next control period. Openreach’s development of Fibre Voice Access (FVA) is progressing well and the early market deployment launch of FVA for FTTP services in Bradwell Abbey and Highams Park has taken place with BT Retail in 2012 – however total FTTP volumes in the UK are expected to remain very low during the next control period.

²⁷ SIP Trunking enables enterprises to utilise a single internet or data connection for making and receiving multiple concurrent telephone calls.

highly aggressive targeting of ISDN30 end customers supporting increased switching from ISDN30 to IP alternatives and this should be reflected in market shares over the short to medium term.

133. In addition, BT itself has reacted to increased demand for IP alternatives and the targeting of ISDN30 customers by developing and launching scale SIP offerings and placing increased focus on marketing these offerings to existing ISDN30 end customers.
134. We expect the rate of decline to increase. Voice services are a critical business service, and companies moving to IP alternatives typically adopt a 'testing the water' approach before a full implementation. We believe a large and growing number of customers are considering their options in this way. Customers tend to be reluctant to initially terminate all of their ISDN30 services, but once they are able to gain confidence that IP voice services are technically a good alternative for their business and offer financial savings, then a sharper decline in ISDN30 volumes and rapid growth in substitute volumes would be expected. Independent analysis in the public domain by Illume Consulting indicates a substantial growth from 331k SIP trunks at June 2011 to 570k at June 2012, an increase of circa 72%²⁸. This is a trend which has been established for some time now, and it is forecast to continue strongly into the next control period²⁹.

4.3 Market definition and SMP analysis: ISDN2

Question 5.1 Do you agree with our provisional view that, during the period covered by this market review, BT and KCOM will have SMP in the wholesale ISDN2 markets we define above? Please provide reasons in support of your views.

135. We do not see a strong case to fundamentally redefine the existing wholesale ISDN2 market definition at this point, and hence Ofcom's designation that BT has SMP broadly does not appear to be unreasonable.
136. However, given the market changes, ISDN2 will eventually be subsumed/superseded in a broader market. As this is a market in terminal decline and customers can and do switch to alternatives, Ofcom should consider whether there is justification for continuing with SMP at a wholesale level.
137. ISDN2 volumes have continued to decline steadily since the last market review as alternatives, including SIP Trunking, NGA, WBC ADSL2+ and further broadband penetration, provide opportunities for substitution. Broadband has completely superseded ISDN2 in the residential segment and, where internet access is the primary requirement, broadband has also replaced ISDN2 in the business segment.³⁰

²⁸ <http://matttownend.wordpress.com/tag/sip-trunking/>

²⁹ We have additional market research which supports this trend, but are seeking further permission from the author to make it publically available.

³⁰ Fixed Narrowband Retail Services Market Review, Ofcom, September 2009

Question 5.2 Do you agree with our provisional view that, during the period covered by this market review, BT does not possess SMP in the retail ISDN2 market we define above? Please provide reasons in support of your views.

138. BT agrees that there is significant competition at the retail level for ISDN2. This is evidenced by BT Retail's market share declining significantly since the last review³¹. There is every reason to believe that this trend will continue.
139. BT Business continues to experience decline in terms of volume and value of the business ISDN2 market as customers migrate to IP based alternatives. We have seen the ISDN2 business market decline by around 6% year on year between 2010/11 and 2012/13. We calculate our volume share to be just over [X] in 2012/13 and just under [X] by value. We forecast that both volume and value of the ISDN2 category for BT Business will continue to decline by between 5% and 6% year on year through to 2016/17.
140. These declines are driven by customers moving to IP based alternatives, and they are likely to accelerate as customers become reassured about the ability of IP solutions to provide the required certainty on key parameters such as delay, jitter and synchronisation. At present ISDN2 continues to provide uncontended bandwidth and assured service on these parameters for applications such as high quality voice, as used by voice-over artists, and for outside broadcasts. However, broadband based IP solutions are increasingly replacing ISDN2 for applications such as Internet access, file transfer, EPOS (retail credit card terminals), voice and video conferencing (especially now higher BB speeds with QoS are available) and telemetry including traffic lights/bus stops. The pace of customer migrations away from these applications being run over ISDN2 to broadband is constrained more by economic conditions than the availability of alternative products.
141. ISDN2 is no longer a growth product in the BT Business portfolio, with product and pricing actions now aligned to those of a mature and declining product. BT Business will continue to support ISDN2 for the foreseeable future but customer demand for IP based solutions will mean it will no longer be actively promoted. Pricing will continue to be heavily constrained by the IP based access alternatives, especially as fibre becomes more ubiquitous, but rising costs from aging infrastructure will need to be addressed over time.
142. Similarly, in the two years from August 2011 to August 2013, BT Global Services' volumes of ISDN2 channels for large corporate business customers dropped by [X].
143. Moreover, Broadband has completely superseded ISDN2 in the residential segment. IDC's latest UK forecasts (April 2013) evidence ISDN2 decline and growth in other access technologies, as the extracts below show:
- ISDN 2 business channels compound annual growth rate (CAGR) -6% in 2012-17
 - DSL business connections CAGR +1% in 2012-17
 - FTTP business connections CAGR +117% in 2012-17
 - Ethernet connections CAGR +10% in 2012-17
144. Therefore BT supports Ofcom's proposal that BT does not possess SMP in the retail ISDN2 market as defined by Ofcom.

³¹ Fixed Access Market Reviews consultation document, paragraph 5.93

4.4 Market definition and SMP analysis: Retail markets in the Hull Area

Question 6.1 Do you agree with our provisional view that, during the period covered by this market review, it is not appropriate to impose retail regulation in the RFAEL markets in the Hull Area that we define above? Please provide reasons in support of your views.

145. We have no comments on matters relating to fixed access connectivity in the Hull area.

Question 6.2 Do you agree with our provisional view that, during the period covered by this market review, it is not appropriate to impose retail regulation in the retail ISDN30 market in the Hull Area that we define above? Please provide reasons in support of your views.

146. We have no comments on matters relating to fixed access connectivity in the Hull area.

Question 6.3 Do you agree with our provisional view that, during the period covered by this market review, it is not appropriate to impose retail regulation in the retail ISDN2 market in the Hull Area that we define above? Please provide reasons in support of your views.

147. We have no comments on matters relating to fixed access connectivity in the Hull area.

4.5 Market definition and SMP analysis: WLA

Question 7.1 Do you agree with our provisional view that, during the period covered by this market review, BT and KCOM will have SMP in the WLA markets we define above? Please provide reasons in support of your views.

148. We do not see a strong case to fundamentally redefine existing WLA market definitions at this point, and hence Ofcom's designation that BT has SMP in the market is not unreasonable.

149. Since the last WLA market review, there have been significant technological advances, shifting end-user demands and blurring of boundaries between different products and their regulatory remedies, as evidenced by Ofcom's decision to combine WLA, WLR and ISDN reviews into a single Fixed Access Market Reviews process. We draw attention to some of these trends relating to NGA below, and further discussion of MPF and WLR is provided in our answer to Question 3.1. While we do not see a strong case to fundamentally redefine existing WLA market definitions at this stage, we do expect Ofcom to fully reconsider these aspects in the next review in 2016/17.

150. By far the most significant change in the fixed access market place is the large scale and ongoing commercial investment by BT and others in NGA infrastructure and SFBB services. Added to this, the UK Government has an ambition for the whole country to have the best SFBB network in the EU by 2015. BT's original commitment to invest £2.5 billion to cover two-thirds of the UK by 2015 has played a major part in achieving this goal, with over 16 million homes now able to access SFBB using the Openreach network alone. In addition, Openreach has recently connected over one and a half million fibre customers and is on track to complete its commercial roll out programme one year early by 2014. Taking public funding opportunities into account the next control period could see coverage reaching over 90% of the UK.

151. In our view Ofcom's last WLA review helped create the conditions required to support our investment, but regulatory certainty and consistency of approach is required over multiple review periods, to enable investors in large scale long payback infrastructure projects a fair chance to earn a fair return.

152. Three years on from Ofcom's 2010 statement that 'competition in the provision of SFBB services remains in its infancy' the situation is now changing. We have not only witnessed strong growth in the take-up of fibre, albeit still on a comparatively small absolute level, but we are now seeing a significant ramp-up in volumes by other major CPs³² and further growth is expected. Recent growth in volumes has been very strong but more significantly TalkTalk Group (TalkTalk), Sky and Everything Everywhere (EE) are now actively marketing retail fibre services based on the Openreach GEA input³³.
153. At this stage we do not see these developments in SFBB fundamentally altering existing market definitions and/or SMP assessments for fixed access markets. However, the recent developments and launch of 4G services signals a major increase in broadband capabilities in the mobile market³⁴. Mobile players are also able to use leverage of new technologies such as 4G to attract customers to bundled mobile/fixed offers when fixed players cannot.
154. With the introduction of 4G there may also be further moves away from broadband to 'mobile only' households. In Ofcom's Communications Market Report 2012, it was stated 'The proportion of 16-24s who live in homes where mobile is the sole form of telephony is more than double the UK average.' This increasing trend and the economic climate may see households relying solely on their smart phones and tablets working across 3G and 4G networks, therefore increasing the competitive position of mobile with regard to the WLA market. It is essential that the possible substitutional effects of such services are researched and understood as part of future market reviews although the reality is that but these services are already likely to be playing a significant competitive role in the market, with EE recently announcing its one millionth 4G customer four months ahead of schedule.
155. The presence and competitiveness of Virgin Media in major areas of the UK and particularly its strength in SFBB markets is also a very important factor to consider in this market review. There is a *prima facie* case to look into both the potential existence of sub-national geographic markets where Virgin Media is present and hence significantly alters local competitive conditions, as well as to understand the competitive effects of its relative strength in the SFBB portion of the wider broadband market³⁵. BT is severely constrained at both the Openreach layer and retail layer by the vertically integrated presence of Virgin Media, in addition to the full and extensive range of regulated copper products used by LLU and WLR based CPs.
156. In future, when considering the issues of potential sub-national geographic markets, Ofcom must also look at its policy with respect to new build sites and the resulting impact on end-user choice. In such sites infrastructure may be provided by a CP other than Openreach, and this could justify defining a sub-national (i.e. local) market with a subsequent finding of SMP for the CP in question and/or removal of regulatory obligations applying to BT.

³² Further details are given in Section 2.1 of this response.

³³ In relation to Sky, see: <http://www.sky.com/shop/broadband-talk/fibre-optic/> ; in relation to TTG, see <https://sales.talktalk.co.uk/product/fibre> ; in relation to EE, see <https://explore.ee.co.uk/our-company/newsroom/ee-launches-superfast-4g-and-fibre-for-uk-consumers-and-businesses-today>.

³⁴ EE has recently launched a marketing campaign focussed around 'Get superfast 4GEE and fibre broadband with EE', relying on the fact that they are currently the only provider able to bundle these products together.

³⁵ Virgin Media is already part way through its "doubling of broadband speeds" programme which will see large numbers of its customers upgraded to SFFB levels in 2013. See: <http://mediacentre.virginmedia.com/Stories/Virgin-Media-s-speed-doubling-starts-2380.aspx>

157. We also note the growing competition based on triple play bundles of voice, broadband and content³⁶. We consider it very important that Ofcom fully consider the regulatory implications of this trend in this market review. In particular, we believe all products contained in a bundle should be subject to a consistent regulatory approach to ensure a level playing field.

4.6 Remedies: General Remedies for wholesale fixed access markets

Question 10.1 Do you agree with our proposals regarding requirements on BT and KCOM to provide network access on reasonable request? Please provide reasons in support of your views.

158. We agree that Ofcom's decision to impose a network access condition on BT for a 'reasonable request' and on 'fair and reasonable' terms remains appropriate given it is the continuation of a regulation that has been in place for some time in wholesale markets where BT has been found to have SMP.

159. We also support the guidance set out by Ofcom that the '...requirements for BT to meet only reasonable network access requests also ensure that due account is taken of the feasibility of the proposed network access, and of the investment made by BT ... initially in providing the network'. Hence there is an important distinction which needs to be drawn between how reasonableness might be assessed for different sub-elements of the fixed access market, and this distinction is particularly important between legacy and NGA infrastructure.

160. Whether a network access request is reasonable or not depends on the context in which it is made. For legacy assets, the assessment is broadly based on whether such access is commercially and operationally viable for BT and a range of CPs. This has largely worked well to date and is treated very much as 'business as usual' in the relevant industry forums and working groups.

161. However, the situation is not as straightforward for newly created assets such as the NGA platform, in which it will be necessary for BT to continue to make substantial new investment in future review periods to meet the needs of the market and to take account of the regulatory framework. BT has made its existing investment and has planned further substantial NGA investment (both commercially and with public funded partnerships) over an extended time period on the basis that VULA is Ofcom's preferred form of NGA access, and regulatory certainty and consistency is essential in such circumstances.

162. BT has also developed a strategic view of how its fibre network can evolve to meet future requirements for further coverage, speed and functionality³⁷, and these form an essential element of the business case supporting future investment. Hence fundamental changes to the regulatory model (driven by certain specific forms of network access) can be unreasonable if they remove the regulatory certainty for investment and substantially increase investment risk to the original case to such an extent that the NGA investment would never have been made.

163. We debate these issues in more detail in Section 2.3.2 of this response, where we have set out some key principles and questions which we believe need to be considered when assessing whether new forms of network access are reasonable. In our view, premature unbundling of new assets in the early stage of their life cycle before any investment return has been earned and

³⁶ According to an Ofcom survey, about one half of UK households have purchased their fixed voice access as part of a bundle with at least one other service, predominantly in a bundle with a broadband connection, but increasingly also in a bundle together with a TV connection (Ofcom Communications Market Report 2012).

³⁷ See Section 2.3.1 of this response.

which undermine strategic development of the network³⁸ can lead to significantly increased risk for the investor, may undermine the overall downstream competitive framework, and may reduce the choice and ability of end-users to switch providers. Examples such as the current Sky SoR for unbundled FTTC³⁹ fall squarely into this category and need to be considered in the light of these principles.

Question 10.2 Do you agree with our conclusion not to seek to modify SLAs or SLGs as a mechanism for quality of service improvement? If not, how would you modify the SLAs and or SLGs and on what basis and how would you ensure that such changes did not have unintended incentive consequences? Specifically do you consider that the existing SLA for provisioning appointments (12 days from next year) is adequate? Please provide reasons in support of your views.

164. In its capacity as a retailer to end users, BT Retail is strongly of the view that SLAs (and associated SLGs) should only ever be a backstop, and we would much prefer that service issues did not arise in the first place, rather than receiving compensation for failure. Any framework for dealing with service quality must be based on the principle that end customers should see the benefits, rather than an arrangement that results only in compensatory payments being passed around within the industry, which customers do not necessarily see. We want the service to improve for our customers so that they do not choose Virgin's cable network or a 4G service instead, and if SLGs are too harsh, investment in service improvements will suffer. Ofcom should ensure that the regulations it imposes, including charge controls, give sufficient scope and support for investment in service.
165. We agree that SLGs should not be modified by Ofcom, as these should be subject to industry negotiation based on a reasonable pre-estimate of CPs' losses. The SLA that is required to be achieved must, of course, be reflected in the cost envelope allowed by the charge control, which must give scope for sufficient investment to be able to deal with peaks and troughs, including a certain level of unpredictable events such as unusually bad weather. An overly-challenging SLA, with a charge control that does not allow for sufficient investment, would risk incentivising the wrong behaviours.
166. It should be noted that industry has a big part to play in enabling Openreach to meet its SLA. There is a shared responsibility between Openreach and its CP customers for good service, which relies heavily on accurate demand forecasting and optimum use of Openreach resources (such as use of the Working Line Takeover process and minimising appointed visits).
167. Whilst we do not see a need for regulatory intervention to impose a change to SLAs, BT Retail would like lead times for provisions (where engineering work is required) to continue to decrease [38]. However our research also showed that [39], most consumers ([39]) said they would not be prepared to pay extra to have a faster installation time. So the trade-off between service and cost needs careful consideration and we welcome Ofcom's planned further consultation on this issue.
168. We would also like the freedom to be able to negotiate better SLAs in respect of certain customer groups with specific needs, where an engineering visit is required. For example, a potential

³⁸ We are not referring to foreclosure here. We are discussing the design of an open access network which is constructed on the basis of an existing regulatory framework and which will continue to be open access and provide all products on an EOI basis.

³⁹ Openreach and Sky are in ongoing discussions on the technical and commercial details underpinning the request and reviewing further information needs to fully assess all product options.

solution might be to make the commitment more nuanced, with 12 working days maintained for switchers in the market and first-time broadband users, but with home moves (where customers are without a working line) accelerated so that they can be delivered within a week.

169. Overall the most important aspect (especially for business end customers) is certainty, rather than speed of delivery, and we want to be able to meet our committed timescales as close to 100% of the time as is feasible (whilst recognising the inevitable cost/service trade-off).

Question 10.3 Do you agree with our proposals regarding requirements on BT and KCOM in relation to handling requests for new network access? Please provide reasons in support of your views.

170. The existing SMP framework for assessing requests for new network access remains appropriate for the WLA, WLR and ISDN markets. It is important that SORs are ultimately assessed not only by whether it is commercially viable for Openreach and technically feasible, but also by whether they align with Ofcom's regulatory framework and policy on which industry, including BT, have made significant investment decisions.

171. While BT agrees that appropriate transparency is important as part of the broader SOR process, we do not agree with Ofcom's proposal to impose a new transparency obligation as part of an SMP condition around the reasons for the rejection of any SOR:

- Openreach is already transparent, sharing appropriate information with OTA2, Ofcom, the EAO and CPs, including in relation to SORs that are rejected and the rationale for rejection.
- In our view, transparency is not the primary issue driving the referral of disputes to Ofcom. The issues are typically differences of opinion between Openreach and CPs as to the commercial viability (most cases) and/or technical feasibility of the access request. For example, BT provided detailed and transparent feedback on the reasons for rejecting the TalkTalk Single Jumper MPF (SJ-MPF) SOR, which nevertheless led to a dispute referral (currently under consideration by Ofcom);
- Protection of commercial confidentiality is important within the SOR process. Imposing a transparency obligation via an SMP condition without recognition of the practical issues this presents does nothing to mitigate the likelihood of disputes being referred (we deal separately with Ofcom's proposals for using the OTA2 or third party consultants below); and
- We believe that further enhancements to the SOR process, including discussions around transparency, are best agreed industry discussion.

The existing SMP framework remains appropriate

172. In line with Ofcom's comments in paragraph 10.68, we consider the existing SOR process⁴⁰ (in tandem with other obligations in BT's Undertakings such as EOI and information sharing rules) has worked well and already mitigates against the risk of Openreach discriminating in favour of downstream BT businesses.

173. BT also agrees with Ofcom in paragraph 10.71 that the process and timescales by which Openreach handles SORs should be clear, transparent and reasonable. We set out below the processes that are already in place for handling SORs and engagement with third parties.

⁴⁰ <http://www.openreach.co.uk/orpg/customerzone/products/newproducts/newproducts.do>

The current approach to transparency

174. BT already has a number of processes in place which we believe address the concerns Ofcom outlines in the consultation. These are:

- We hold a monthly review of SORs and any reasons for rejection in order to validate them, with participation by representatives from OTA2 and the EAO. All SOR changes (rejected, in development etc.) are reviewed as part of this meeting to ensure an agreed set of data on which discussions are held;
- A monthly report is issued based on updated SORs to Industry chairs, OTA2 and the EAO;
- Any amendments made on the SOR tool are transparent and accessible by all CPs via the Openreach portal;
- Any issues concerning SOR response times (or any other concerns) are also open for review in a monthly review held with OTA2, the EAO and Ofcom; and
- All meetings and discussions are minuted and the notes are issued to the EAO, OTA2 and Ofcom.

175. In addition to this, we have recently been trialling (with the Copper forum, and have extended to the Ethernet forum) the use of a programme plan view which provides a simple view of all CP and shared Openreach SOR status, which we believe has been well received.

176. As an example, in the case of the SJ-MPF SOR, Openreach engaged in extensive discussions with TalkTalk (in addition to Ofcom and the OTA2) regarding the assessment of the request prior to rejection of that SOR.

Classification of SORs as reasonable

177. BT disagrees strongly with the views expressed by some CPs that any SOR should be capable of being classified as reasonable in circumstances where there might not be a commercially viable case for Openreach.

178. We welcome Ofcom's comments in response to this suggestion in paragraph 10.73 of the consultation that, at a minimum, any request should be operationally and commercially viable for Openreach. However, these two factors alone must not become rigid criteria, which, if met, result in automatic acceptance of an SOR. Rather, they are a necessary minimum requirement rather than an exhaustive list of relevant considerations. Ofcom should be cautious of CPs requesting developments which run counter to the regulatory policy pursued by Ofcom and on which industry, including BT, have made substantial investment decisions. We discuss these points further in Section 2 and our response to Question 10.1.

Transparency is not the issue causing dispute referrals

179. Ofcom notes in paragraph 10.74 that "*Openreach may consider itself constrained from providing its reasons for rejecting a request for new network access due to commercial confidentiality*", but then goes on to propose a transparency SMP obligation on the basis that "BT should be clear and transparent as to its reasons for rejecting requests for new network access and that it should make every reasonable effort in this regard" in paragraph 10.75. However, Ofcom does not provide details of the perceived (or alleged) shortcomings in the Openreach SOR process that have given rise to the concerns why there is a need for a specific transparency SMP condition.

180. It is not clear from Ofcom's consultation what the specific rationale is for the imposition of transparency via an SMP condition. This is distinct from the issue of why transparency is seen by

Ofcom as advantageous in the SOR process. As explained above, Openreach already provides a significant degree of transparency via the OTA2, Ofcom, the EAO and industry.

181. BT agrees that transparency has a key role to play in the SOR process. However, achieving this via an SMP condition could lead CPs using it to force disclosure of confidential information (belonging either to BT and/or third parties) by threatening dispute referrals to Ofcom where they perceive that Openreach has not been sufficiently “transparent”.
182. In light of the above, we do not believe that Ofcom’s new transparency proposals will resolve the core problem of CPs dissatisfaction at an SOR rejection. When Openreach rejects an SOR it will always have had objectively justifiable reasons for doing so, just as we would expect that the requesting CP will have had credible reasons to submit the request in the first instance. Hence, for some SORs, there is an inevitable tension between these interests, and formal transparency obligations would not resolve this.

Balancing the protection of commercial confidentiality in the SOR process

Protection of commercial confidentiality is a legitimate concern

183. The protection of commercial confidentiality in the SOR process is essential. BT must comply with competition law, the General Conditions and BT’s Undertakings with regard to how it handles its own and third party information. This balance is also something that Ofcom must strike with regard to how it consults and engages with stakeholders in relation to section 393 of the Communications Act 2003.
184. Ofcom’s suggestion in paragraphs 10.74 that Openreach “*may consider itself constrained*” from providing its reasons for rejecting an SOR on the grounds of commercial confidentiality is not the central point:
- Volume forecasts from CPs are a key issue in many SORs (as is the case with the SJ-MPF SOR). Therefore the provision of forecasts is often fundamental to the assessment of the commercial viability of an SOR. It is essential that CPs are confident that sensitive information is properly protected, and that any transparency obligations do not force Openreach to disclose sensitive CP information regarding their future plans to their competitors. There have been recent examples where CPs have been unwilling to share volume forecasts with Openreach as part of the assessment process, preferring instead to seek Openreach’s view of what their take-up should look like, which does not allow for a credible assessment of the request.
 - BT’s commercial confidentiality must also be protected. Openreach must be able to obtain CPs’ best view of their expected consumption of a development. The degree of transparency that Openreach is required to provide in a given instance must not undermine CP incentives to provide realistic SOR submissions. For example, there is a real risk that CPs could misuse an overly-onerous transparency obligation in order to enable “goal-seeking”, particularly with regard to future demand forecasts associated with their SOR request, all the while being under no obligation to consume the development in question.
185. However, if a transparency obligation via an SMP condition were to be imposed, Ofcom must expressly recognise that commercial confidentiality is a legitimate concern and that, in certain circumstances, it will not be possible to disclose certain specific data as part of an explanation of any SOR rejection, and that this is a reasonable thing for BT to do.

No formal role for the OTA2 or third party consultants in the SOR process

186. BT already shares information around SORs with the OTA2, and the relevant chairs of the product commercial groups, on a voluntary basis. We envisage that this process will continue.
187. However, BT would not agree with any suggestion of a formal role for either the OTA2 or external consultants to address confidentiality concerns.
188. The additional step of introducing a third party with access to confidential data will not in BT's view resolve the fundamental tension that exists between CPs and Openreach where there is a difference of opinion as to whether the SOR should progress or not. There are also a number of practical and non-trivial issues regarding the choice of external consultants, including their remit, who would appoint them, who would pay for them and how, given this, all parties could be confident that their review would be truly independent.
189. The status of any outputs and processes for challenge are equally uncertain, and thus do not appear to BT to reduce the risk of disputes arising in the future. Neither the OTA2 nor external consultants should be making commercial decisions on behalf of Openreach.

Conclusion: BT's proposals on how to develop the SOR process collaboratively with industry

190. BT already works closely with CPs and other relevant stakeholders to ensure that the SOR is well-run. We already have the appropriate platform to make further enhancements to the process as needed.
191. In view of CP comments to Ofcom, the appropriate and proportionate course of action is for Openreach and industry to work together to:
- Develop criteria to support the submission by CPs of good quality and commercially compelling SORs (for example, on the basis of the aide memoire shared with them in 2012); and
 - Reviewing the criteria against which Openreach assesses any SOR, and clarifying the type of information and level of explanation that Openreach would be expected to share in any rejection.
 - Finally, BT would be happy to undertake a review of recent SOR rejections and develop guidelines to ensure our product teams consistently provide clarity and appropriate reasons for any rejection as part of the response back to industry. As ever we remain open to specific feedback and examples of where our communications with our customers can be enhanced.

Question 10.4 Do you agree with our proposals regarding requirements on BT and KCOM in relation to remedying discriminatory conduct? Please provide reasons in support of your views.

192. Ofcom proposes to introduce a tighter form of non-discrimination remedy in the form of Equivalence of Inputs (EOI) for WLR, LLU, ISDN2 and ISDN30. Ofcom states that this remedy is proportionate given that BT already provides these products on an EOI basis under BT's Undertakings.
193. We disagree with Ofcom's position. BT's contention is that that Ofcom should rely on the "conventional" discrimination remedy in its current form. Ofcom's proposal to also impose a complete prohibition of discrimination as an SMP remedy in relation to the Fixed Access markets is unjustified and disproportionate and therefore does not meet the criteria set out in section 47(2) of the Communications Act 2003. Furthermore, Ofcom has failed to follow the Commission's

Recommendation on the consistent application of the non-discrimination obligation (“the Commission Recommendation”) which, in essence, requires Ofcom to provide positive justification for an EOI remedy over and above a conventional discrimination remedy. In particular:

- Ofcom’s proposal is not objectively justified. Ofcom proposes to introduce the strictest form of non-discrimination on the basis of the same competition concerns and evidence that justified imposing the requirement not to unduly discriminate as a SMP obligation. Ofcom has failed to provide adequate justification for a more onerous remedy on BT and this is inconsistent with the Commission’s requirement to specifically justify why EOI should be imposed over and above the non-discrimination obligation.
- EOI as an SMP remedy is disproportionate. Ofcom needs to ensure that regulation imposed on BT is proportionate: i.e. it should consider whether “any lesser measure will suffice”. Ofcom has not demonstrated the need for an obligation that is more onerous than the current obligation, or that the current regulatory obligation has in any way been inadequate to address Ofcom’s concerns.

194. If, notwithstanding our submissions above, Ofcom is still minded to so impose an SMP EOI remedy, then we request that Ofcom amends its current proposals to ensure that the SMP EOI obligation is indeed no more onerous than the Undertakings EOI obligation. That is not the case and the SMP EOI obligation proposed would potentially prohibit behaviours that are currently permitted by the Undertakings. There are two alternative ways to remedy this:

- Ofcom can amend the definition of EOI in Condition 5 so as to expressly allow for differences that are permitted by the Undertakings; or alternatively
- Ofcom can build in a provision for Ofcom to grant BT consent (at the time the SMP condition comes into effect) to any differences that are allowed by BT’s Undertakings.

195. We have set out our position on these issues in more detail in Annex 2 to this response. We invite Ofcom to note that our submissions in relation to changes to the EOI condition are made without prejudice to our view that no SMP EOI condition should be imposed.

196. Finally, Ofcom proposes (at para. 10.118) to retain the condition on BT not to unduly discriminate in relation to the provision of network where BT is also subject to EOI as an SMP remedy. BT disagrees with this approach and would prefer a more proportionate approach whereby once the need for some form of non-discrimination obligation is properly identified, a product is subject to either an SMP obligation not to unduly discriminate or an EOI SMP obligation, but not both. We also note that Ofcom’s draft legal instrument (Condition 4.2) does not align with Ofcom’s stated rationale for the imposition of this remedy at para. 10.106 (and we also question whether Ofcom has actually obtained confirmation from BT about the example cited in support of this proposal). This should be reviewed by Ofcom in the interests of clarity.

Question 10.5 Do you agree with our proposals regarding requirements on BT and KCOM in relation to accounting separation? Please provide reasons in support of your views.

197. Ofcom has explained that they believe that continuing with this obligation is appropriate to monitor BT’s non-discrimination obligations. Given Ofcom’s finding of SMP, Ofcom’s conclusion is not unreasonable. However, we draw Ofcom’s attention to the following:

- One of the key conditions for Ofcom is that regulation needs to be proportionate. The continued imposition of accounting separation obligation continues to impose costs on BT’s business. The Deloitte report found that “The requirements of BT’s annual regulatory

financial submissions are among the most detailed and onerous in Europe⁴¹, Ofcom should take fullest account of this and impose a “lighter” touch accounting separation obligation that enables BT to comply in ways that result in reducing the volumes of information that BT has to produce and enables BT to focus upon providing information that can be more easily understood.

- In particular, with the ongoing decline of the ISDN2 and ISDN30 products, Ofcom needs to consider whether the imposition of this obligation remains proportionate over the three year market review timescale.

198. We do not have an opinion on Ofcom’s proposals in relation to KCOM.

Question 10.6 Do you agree with our proposals regarding requirements on BT and KCOM to publish a reference offer? Please provide reasons in support of your views.

199. From its perspective as a retailer, BT broadly agrees with Ofcom’s proposal to require the publication of a reference offer (RO).

200. We agree that in addition to existing requirements to publish a RO, the RO should include the applicable SLAs and SLGs, to promote transparency across the Openreach portfolio.

Question 10.7 Do you agree with the proposal to specify the services for which BT is to provide SLA/SLGs? Also do you consider that we have identified all appropriate services that should be subject to an SLA/SLG requirement at this time? If not, please set out what services should be included and provide reasons in support of your views.

201. From BT Retail’s perspective, we agree that for the sake of transparency and to avoid ambiguity, Ofcom should specify the services for which BT is to provide SLAs/SLGs, although the SLAs themselves should be subject to commercial negotiation. SLAs should cover each of the major stages of provision and repair to ensure that there are no points during these processes that are not fully monitored. Currently some provision orders require planning, and there are no clear SLAs for this transaction, so we would like to see this included in the list.

202. The majority of BT Retail’s sales to consumers are now bundles of line and broadband. Whilst we do not believe a regulatory obligation is necessary, it is important to monitor and set performance standards in relation to the provision of bundles, and this is another topic for commercial negotiation with Openreach.

Question 10.8 What are your views on whether you consider a need for Ofcom to require BT to offer an SLA in relation to GEA appointment availability? Please provide reasons in support of your views.

203. Data and TV services supported by fibre-based broadband are an increasingly vital part of the portfolio for BT Retail, and we have invested heavily in them. For this reason we would ultimately like to see a formal SLA in relation to GEA appointment availability. However, for consistency with copper products, this should be industry-negotiated rather than Ofcom-imposed. The timing of any regulatory imposition, were it to be needed, should reflect the product life-cycle, and a reasonable period of time should be allowed for the bedding down of operational processes. Our priority at this time is in ensuring the GEA product continues to develop to meet CP requirements.

⁴¹ <http://stakeholders.ofcom.org.uk/binaries/consultations/reg-financial-report/annexes/deloitte.pdf> (section 3.4 page 11).

Question 10.9 What are your views on the principles for negotiations on SLA/SLGs? Please provide reasons in support of your views.

204. In our capacity as a retail CP, we believe that industry should negotiate SLAs and SLGs directly with suppliers, including Openreach, without intervention from OTA2. We do not feel that OTA2 would generally be able to add any value to commercial negotiations, and this is not their role or remit. That said, they may be able to act as a facilitator and/or mediator in the negotiation process, but it must be clear that they do not have any actual or quasi-decision making role. Whilst we can see that it might be useful to have an OTA2 representative present so that they can report back to Ofcom on how they perceive CPs have participated in and conducted themselves during any negotiations, it is essential that Ofcom retains the final judgement and the OTA2's involvement cannot be a substitute for Ofcom's formal powers in relation to any dispute.

205. We agree with the proposed Principles 3 and 4 – i.e. that no negotiations should extend beyond 6 months (after which Ofcom should become involved), and that provision should continue according to pre-existing SLAs/SLGs whilst any new ones are being negotiated.

Question 10.10 Do you agree with our proposals regarding requirements on BT and KCOM to notify changes to charges? Please provide reasons in support of your views.

Summary

206. BT agrees there should be a requirement to notify charges / terms and conditions, but notice periods must be aligned and should not lead to distortions. BT therefore:

- agrees with the 28 day notice period for existing WLA product price reductions and seeks extension of same to all products and services in the WFAEL market;
- agrees with Ofcom's proposals for a 28 day notice period for ISDN2/ISDN30; and
- requests Ofcom considers a shorter period for price changes on the core rental products (from 90 to 60 days), with the longer fall-back period only applying in the case of a reasoned CP or stakeholder objection.

WLA and WFAEL

207. BT agrees with Ofcom's proposal for a 28 day notice period for the introduction of new products and services in the WLA and WFAEL markets.

208. Ofcom's relaxation of price decreases for existing products in the WLA market (from 90 to 28 days) is welcome. However, Ofcom must apply a consistent approach to the WLR rental charge (which is subject to 90 days' notice for any changes, whereas other existing WLR products are subject to only 28 days). If this is not done, Openreach would be prevented from structuring special offers for CPs using WLR/WLR+SMP and MPF on similar timescales⁴².

⁴² In the draft legal instrument, draft Condition 9.4B could be amended by Ofcom as follows:

An Access Charge Change Notice must—

- (a) in the case of an Access Charge Change relating to an increase to the Wholesale Line Rental Charge, be sent not less than 90 days before any such amendment comes into effect;
- (b) in the case of an Access Charge Change relating to a reduction to the Wholesale Line Rental Charge, (including, for the avoidance of doubt, a Special Offer), be sent not less than 28 days before any such amendment comes into effect;

209. However, BT disagrees with Ofcom's differing proposals for price increases for existing WLA and WLR products (90 days and 28 days respectively). This would result in changes to existing prices of product functionality common to both WLR and WLA products (e.g. Service Harmonisation service maintenance levels, the WLR conversion charge which Ofcom has proposed aligning with LLU migrations) needing to be notified using the longer WLA notification period to ensure compliance with the proposed notice obligation. Ideally Ofcom would reduce notice periods currently at 90 days down to 60 days.

ISDN30 and ISDN2

210. In relation to ISDN30 and ISDN2, BT agrees with Ofcom's proposal for a for a 28 day notice period in all cases.

Consistency between GEA migrations and ISDN2 Transfer Services

211. In relation to the GEA migration charge control, Ofcom proposes in draft Condition 7B.2 that BT must comply with the requirement within 28 days of the condition coming into force. BT does not object to this notice period, although our position with regard to whether Ofcom should regulate GEA migrations is set out in response to Question 11.3.

212. However, Ofcom must be consistent. A similar requirement must be extended into draft Condition 7E.1 in respect of Wholesale ISDN2. Ofcom proposes capping ISDN2 Transfer Services at £10 per channel. The current draft legal instrument does not make a provision for the implementation of this charge. For the sake of clarity, BT proposes the addition of the following text into draft Condition 7E.1: "*The Dominant Provider must comply with the requirement in Condition 7E.1 within 28 days of condition 7E coming into force*".

Implementation of charge controls

213. Finally, as part of any LLU and WLR charge controls, Ofcom must enable BT to make any necessary price changes by the stipulated deadline. For example, ahead of the first year of the LLU/WLR charge control, Ofcom should allow BT a sufficient period to follow proper internal governance to implement more than a hundred price increases in time to be effective from 1 April 2014 (i.e. a minimum of at least 28 days, but ideally a longer period ahead of the First Year). In particular, Ofcom must provide consent for BT to implement any necessary price changes without the need to provide either 28 or 90 days' notice as would be required under draft Condition 9 in the First Year.

214. Ofcom should also consider whether, in the second and third years of the control, it would be more appropriate to allow BT to notify revised LLU and WLR charges with 28 days' notice given that such price changes will be made pursuant to regulation.

(c) in the case of an Access Charge Change relating to the end of a temporary price reduction to the Wholesale Line Rental Charge in accordance with the terms of the Special Offer, be sent not less than 28 days before any such amendment comes into effect; and

(d) in the case of any other Access Charge Change, not less than 28 days before any such amendment comes into effect.

Question 10.11 Do you agree with our proposals regarding requirements on BT and KCOM to notify technical information? Please provide reasons in support of your views.

215. BT broadly agrees with Ofcom's proposal to notify technical information in respect of products in the wholesale fixed access markets.

216. It is in BT's commercial interest to ensure that its customers have the requisite technical information to enable them to make effective use of its wholesale products. Where it is necessary for BT to make changes to technical aspects of its products, it is essential that BT is not precluded from implementing such changes in a timely manner (subject to adequate notice being given to CPs).

Question 10.12 Do you agree with our proposal to impose conditions on BT for the provision of information for quality of service purposes in each of the WLA, WFAEL, ISDN30 and ISDN2 markets excluding the Hull Area? Please provide reasons in support of your views.

217. From a BT Retail perspective, we welcome anything which brings transparency, and publication of service KPIs to industry (as already happens) is valuable to understand performance. We agree that it is important to have a consistent minimum set of high level KPIs across all access services that can act as alternatives (e.g. WLR and SMPF, MPF and GEA), so that relative standards of service can be compared over time, and industry can be assured that BT Retail is receiving equivalent service to other CPs (and vice versa). So we have no issue with Ofcom's proposal to impose an obligation to provide KPIs across all these markets, including WLA.

Question 10.13 Do you agree with our proposal to extend the direction for specific KPIs to LLU and GEA services? Please provide reasons in support of your views.

218. From the perspective of a retail CP, whilst we have no objection to Ofcom mandating the provision of a set of KPIs across the relevant markets, we are not convinced of the need for any additional regulatory requirements with respect to publication of *specific* KPIs. Given that KPIs are already published by Openreach, we are unclear what the precise problem is that Ofcom is trying to address here, or why an extension to the direction is necessary. Since July 2012, the Ofcom- and OTA-agreed industry service pack has been published, which already provides a consistent set of KPIs across Openreach copper products. If there is a need for more consistency, or for extension to GEA, this should continue to be addressed through industry discussion, rather than through the imposition of an SMP condition that could disrupt what is already provided. The KPIs published should reflect what is useful to industry, and the current framework would allow for changes to be made in response to CP needs in a more flexible (rapid) manner than if this were moved into SMP regulation.

Question 10.14 Do you agree that it is appropriate to include a common core set of KPIs across WLR analogue, LLU and GEA given the competition between these services? Please provide reasons in support of your views.

219. From a BT Retail perspective, in principle we agree that there should be a common core set of KPIs across all these services. However for comparison purposes, WLR+SMPF should be compared with MPF, and fibre should be shown with and without provision of a WLR line.

220. As above, we believe that the specific content of KPIs should continue to be industry-negotiated since there does not appear to be a problem with this at present.

Question 10.15 Do you agree with our proposals to include a record of the number of services affected by MBORC in the KPIs? Please provide reasons in support of your views.

221. BT Retail would support the inclusion of the volumes of provisions and repairs impacted by MBORC in these KPIs. The declaration of MBORC should be a last resort and the criteria for declaration should be clear to industry. These criteria should ensure that the geographic area is limited to those areas where operations are clearly not feasible, and that declarations only last for the time they are necessary.

Question 10.16 Do you agree that it is appropriate to require Openreach to prepare some of these KPIs for presentation in the public domain? Do you consider that there are any issues with this publication that we should be aware of? Do you agree that the OTA website is the best location for such publication? Please provide reasons in support of your views.

222. Whilst from the perspective of a retailer BT is, in principle, very much in favour of transparency for end customers, we believe that publication of Openreach KPIs would be confusing and potentially misleading if presented in the public domain. It is not clear why Ofcom believe that this is necessary. Openreach's products and services are input products for CPs, and form only part of the overall service delivery and operation as far as end customers are concerned. Openreach Service Maintenance Levels, for example, would be meaningless to end customers, who would not easily be able to understand the difference between WLR and MPF or be able to compare them properly. On repairs for residential customers, BT Retail adds an additional day to the completion timescale given to the customer, to cover the extra activity needed at the front end in addition to Openreach's activity, and therefore sharing Openreach KPIs with the public would make the managing of customers' expectations even more challenging than it is now.

223. Collection and publication of KPIs to end customers would have an ongoing cost, for no real benefit, and it is unclear where this cost would fall. Openreach service KPIs are of importance to CPs rather than end customers and should be published on the Openreach website, accessible only to CPs.

224. Ofcom should also bear in mind the failure of the previous TopComm scheme, under which CPs were required to provide certain QoS KPIs for publication on the TopComm website so that residential customers could, in theory, make comparisons between providers. In practice the main problem with this scheme was that consumers did not understand or value these KPIs, so the website was little used and CPs incurred data collection costs unnecessarily. Ofcom's current proposal runs the same risks.

Question 10.17 Do you agree that it is appropriate to set minimum standards for Openreach services? Please provide reasons in support of your views.

225. In principle BT Retail agrees that it is appropriate to set a minimum standard for Openreach service, as this will enable us to set appropriate end-customer expectations. However Ofcom must ensure that the charge control allows Openreach to maintain a level of service that is an acceptable minimum standard for industry. Any minimum standard must be achievable to an equal extent across WLR and MPF, and the difference in resourcing costs required to meet that minimum standard for each care level must be fully reflected in MPF and WLR charges. In other words, the extra resource required to achieve the higher care level for MPF on a minimum percentage of occasions must be fully reflected in the MPF price, and the charge control must allow for this. We believe current prices do not properly reflect the significant advantage resulting

from the prioritisation of MPF repairs, and the knock-on impact this has on WLR repair performance slippage.

226. We are also concerned that, given the impact of the growth in volumes of MPF, unless the cost uplift for the higher care level on MPF is increased significantly, Openreach may not have sufficient resources at its disposal to be able to cope with the demand from all CPs within the timescales required by current SLAs – let alone to make improvements or to cope with any new demand for Care Level 2 from WLR CPs.

Question 10.18 Do you agree that the minimum standards should only be applied to WLR and MPF provisioning appointment and fault repair? If not what else should be included and why? Please provide reasons in support of your views.

227. BT Retail would ultimately like to see minimum service standards defined for all access products, including GEA, to ensure controls are appropriate and service levels are adequately funded. However, as explained in our response to Question 10.8 above, we recognise that the operational processes for provision and repair of the GEA product may not yet be sufficiently bedded down, and therefore intervention via an SMP condition at this stage would be premature.

228. As mentioned in 10.17 above, our key requirement is that minimum performance standards are applied equally across MPF and WLR provision and repair, to ensure a level playing field.

Question 10.19 Do you agree that we should incorporate force majeure affected services in the standards? Please provide reasons in support of your views.

229. Although force majeure is by definition outside normal control, it is valuable to define the conditions under which MBORCs are declared and removed, together with aims in terms of actions that will be taken to limit the impact of MBORCs and hasten their removal. These may not be definitive and more aspirational in terminology, but would provide reassurances regarding what actions would be taken to resolve the situation speedily.

Question 10.20 How should we determine the appropriate standard? How would you assess the trade off of service level and charge increase?

230. We agree that achievement measured as percentage success against SLAs is a sensible approach. As to what the appropriate percentage should be, we will await Ofcom's further consultation in order to see what the trade-offs between cost and service levels would look like. Clearly it is vital that the charge control makes sufficient allowance for any changes in resourcing levels required to meet the minimum standard.

Question 10.21 Do you agree with the structure of the standard – yearly, forecast region targets? Please provide reasons in support of your views.

231. From our perspective as a retail provider and also as the only provider with a Universal Service Obligation in most of the UK, we agree that regional targets would be best, with uniform standards for all regions to ensure that the varying costs and complexities of serving different geographies do not result in more rural regions suffering poorer service at the expense of urban regions.

232. However we are concerned that since BT is most likely to serve the end customers living in remote rural areas within any one region, the cases where Openreach fails to meet a minimum

service standard may be most likely to affect BT Retail customers (with the regional standard still being met overall through quicker service in more urban parts of the region served by our competitors). We would not like to see regional standards set which result in BT's customers being disadvantaged further in terms of speed of provision or repair. Therefore the size and geography of the regions will need careful consideration – recognising that the smaller the region, the more costly it would be to achieve a uniform minimum standard.

233. We would prefer quarterly rather than annual targets, to provide more consistency through the year, although we recognise that there would be an extra level of resource required to cope with any peaks in service-affecting incidents in a particular region or at a particular time of year. An alternative way to deal with the seasonal variations would be to measure the percentage of time achieving the performance standard e.g. achieve 80% success 95% of the time measured across a year, or at least 80% on a rolling 12 month basis. As above, we recognise there will be a cost/service trade-off, which will be addressed in response to Ofcom's forthcoming service consultation.

Question 10.22 Do you agree with our proposals regarding requirements on BT in relation to cost accounting and not to impose cost accounting requirements on KCOM? Please provide reasons in support of your views.

234. We note the imposition of cost accounting in each of the fixed access markets is consistent with Ofcom's approach in other recent change controls. The way in which the obligation is implemented must however be proportionate to value of the services concerned and clearly linked to other remedies imposed. We have concerns around the proposals for how this obligation would be implemented in practice, in particular:

- the proposals for the maintenance of DSAC and DLRIC information where no basis of changes obligation is imposed; and
- the usefulness of cost accounting information for ISDN2 and ISDN30 services.

235. We address these concerns further in our answers to Ofcom's questions on product-specific cost accounting obligations later in this response.

4.7 Remedies: WLA next generation access

Question 11.1 Do you agree with our proposal to require BT to offer VULA and with the five key characteristics identified? Please provide reasons in support of your views, including, if you think alternative or additional characteristics are required, evidence of how you would use them to offer services to your customers.

236. We agree with the Ofcom proposal to require BT to offer VULA. We also agree that the five high level characteristics identified are appropriate at this stage of market development.

237. Ofcom's choice of the term VULA underlines the fact that VULA is the fibre equivalent of LLU in terms of the economics of reach and handover, and the scope for downstream innovation and differentiation. Moreover, as Ofcom anticipated in the last market review VULA based products have evolved over time driven by new technology and demand (e.g. "wires-only" and Fibre Voice Access) and hence the use of high-level characteristics which enabled innovation, rather than a specific product specification which would have been restrictive was the right approach to adopt for the previous WLA market review and continues to be appropriate for this and future reviews. The application of regulation based on 'characteristics' supports product evolution by permitting

sufficient flexibility in GEA product design whilst guiding the appropriate minimum features required and the direction of product change.

238. Given that the SFBB market is still nascent BT believes that GEA will continue to evolve further over the next and subsequent review periods, and therefore detailed product specifications at this early stage are still likely to impede such change and not be able to correctly anticipate and support the next technological steps (e.g. vectoring, DSL acceleration technologies).

239. Openreach develops GEA in an open and consultative way with its customers through the use of the Statement of Requirements (SoR) process, the NGA Industry Working Group, the NGA In-life monthly audios, plus various specific product, systems and technical workshops. The track record on development since the last review is substantial and this also includes the two most significant additions to the portfolio proposed in the 2010 WLA market review ('wires-only' and FVA).

Wires-only

240. This required a series of significant developments which were discussed in depth in the last WLA market review. Ofcom's view was that the GEA product needed to be enhanced in line with the proposed VULA characteristics to allow for interworking between GEA and third party Customer Premises Equipment (CPE) to allow CPs a greater choice of equipment for use with their retail services. Openreach adopted a two strand approach:

- Openreach began trialling of a self-install variant during 2012 and also launched a large scale trial in 2013 which is now nearing completion with an expected launch in late 2013;
- Development of standards to allow Customer Premises Equipment (CPE) enablement, which will allow CPs to use their own modem/set-top boxes to connect to the Openreach GEA service;

241. This development is now on track for launch in autumn 2013 and the announcement by Openreach on pricing and the early market deployment launch date is now imminent.

Fibre Voice Access (FVA)

242. This is a voice connectivity solution for FTTP deployments. It was referred to as 'open ATA' in the last market review and was seen as an essential element of the regulatory framework to enable voice competition over FTTP. The key requirement was to give interconnecting CPs a greater degree of control over the voice services that could be provided using GEA and the ability to control call quality and functionality through the use of their own telephony call servers;

Other product developments

243. Other significant examples of collaborative developments since the last market review have included:

- The introduction of the 80/20Mbit/s FTTC product - implementation of a new Access Network Frequency Plan (ANFP) which has enabled a dramatic increase in GEA performance;
- Multicasting - the ability to convey multiple and duplicated traffic streams through the GEA access network in an economic and efficient way;
- FTTP on Demand (FoD), a new service which is currently in the early market deployment launch phase which will enable FTTP based GEA services to be ordered in FTTC areas;
- An extensive range of new FTTP products with wide ranging speed capabilities including a 330/30Mbit/s product have also been developed and are available in FTTP areas.

- In addition the vectoring trial which is now in progress and the imminent roll-out of vectoring compatible DSLAMs will begin in 2013 with vector ready technology being deployed in the network from 2014.

244. Openreach is also continuing to assess the potential for further trials of new technologies such as FTTdp, G.fast and other VDSL acceleration technologies. These are covered further in Section 2.3 of this response.

245. With regard to the use of VULA based products for business services we are confident that the wide variety of options offered by the current GEA portfolio will meet the growing demands of business and residential customers alike. In particular the higher bandwidths delivered by 80/20 FTTC, FTTP and FoD products, coupled with the wide range of services and high speed performance are characteristics that we feel are highly suitable for meeting the broadband, data and voice needs of the business market. CPs can of course raise additional requirements through the existing industry forums and SoR process.

246. Openreach's view is that its GEA product is already well matched with the VULA characteristics, but in addition to that Openreach remains committed to continuing to work with its customers on future requirements; on a transparent development process; and publication of future product roadmaps to bring about changes they are seeking and which are in line with our strategic investment plans.

247. We have a challenging and long term business case which means that all major NGA product developments at the Openreach level need to be assessed for their impact on the investment case, the potential to increase investment risk, extend payback and undermine the opportunity to achieve a reasonable return over the lifetime of the assets.

Question 11.2 Do you agree that BT should continue to be allowed general pricing flexibility on VULA, subject to a fair and reasonable charges obligation? Please provide reasons in support of your views.

248. We agree with Ofcom's proposal to allow general pricing flexibility on VULA and that Ofcom's approach to the pricing of VULA remains appropriate and no changes are required.

249. We also note that the very recently adopted European Commission Recommendation⁴³ on 'non-discrimination' which is intended to enhance conditions for European broadband investment is also very supportive of the Ofcom approach. In our view the current policy is the right one and it is essential that it is maintained for this and future reviews. Regulatory certainty and consistency of approach was key to BTs initial investment decision and this remains so through the next immediate phases of the product life-cycle where significant uncertainty still remains on both the supply side (for example in terms of remaining costs to deliver in the commercial and publically funded footprint) and also for the true level of demand for SFFB.

250. BT provides NGA wholesale products on an EOI basis and there should be no pricing regulation until BT has achieved pay back on its highly risky investments. Openreach's GEA product is competing in a very competitive broadband market against both current generation access (CGA) broadband products (built on tightly price regulated copper products) and SFBB products provided by Virgin Media and others. The roll-out and launch of 4G networks over the past year is now also a real competitive constraint. The reality is that products based on NGA infrastructure are still in the early stages of their life-cycle, and by its very nature the investment case is very

⁴³ <https://ec.europa.eu/digital-agenda/en/news/commission-recommendation-consistent-non-discrimination-obligations-and-costing-methodologies> was adopted on 11 September 2013.

long term with highly uncertain demand. Hence product pricing needs to be very flexible to stimulate demand, deal with customer acquisition, and meet customer expectations in terms of special offers, discounts and overall price levels.

251. Ofcom's current approach gives that flexibility in setting charges, whilst imposing a "fair and reasonable" condition via FAA11.2. A strict 'cost-based' approach using LRIC for example, would prove highly inflexible and would be likely to restrict investment incentives at this still early stage of market development; potentially restricting demand given the uncertain levels of take-up and the need to compete for new customers in a fast evolving market. Such an approach could also result in an increase in the charge for the wholesale product if an insufficiently long term view was applied to price regulation. We agree with the conclusion expressed in the consultation that competitive pressures from CGA services exert a significant market constraint on the pricing of GEA products. For these reasons, BT considers that it would be disproportionate for this review and any future reviews to impose price regulation on GEA when such constraints remain in place.
252. The existence of the current EOI obligation is also very important in the context of VULA pricing and is now also a key feature of the European recommendation. This is the strongest form of non-discrimination regulation that can be applied to BT products at the wholesale layer and ensures that Openreach's strong incentive to generate new volumes is equally shared between all downstream players entering the SFBB market. In addition the history of Openreach price initiatives demonstrates a clear incentive to drive take-up on a CP agnostic basis⁴⁴ and competitive constraints present in the retail market from market prices for existing copper products, cable and mobile act to constrain wholesale price levels for VULA benefitting all CPs.
253. The presence and competitiveness of Virgin Media in major areas of the UK and particularly its strength in SFBB markets is a very important factor to consider as part of any pricing debate in this or future reviews. There is a prima facie case to look into both the potential existence of sub-national geographic markets where Virgin Media is present and hence significantly alters local competitive conditions; and also to understand the competitive effects of their relative strength in the SFBB portion of the wider broadband market⁴⁵. BT is severely constrained in its pricing at both the Openreach layer and retail layer by the vertically integrated presence of Virgin Media, in addition to the full and extensive range of regulated copper products used by LLU and WLR based CPs. This strongly supports the presumption that the starting point for this review is that BT's fibre products do not require pricing regulation.
254. Additionally we are now seeing the emergence of new mobile broadband technologies such as 4G, and these signal a major increase in broadband capabilities in the mobile market. As noted previously in this document the level of roll-out activity has accelerated rapidly through-out 2013 and 4G coverage is now expected to reach 98%⁴⁶ by the end of 2014 the first year of the next review period. Earlier in the year EE ran a marketing campaign centred on "Get superfast 4GEE and fibre broadband with EE" relying on the fact that it was the only provider able to bundle these products together. Mobile players are also able to use leverage of new technologies such as 4G to attract customers to bundled mobile/fixed offers when fixed players cannot.

⁴⁴ For example the exchange enablement programme, free connection offers, and the volume discount scheme for 80/20Mbit/s services. Details of Openreach initiatives are available via www.openreach.co.uk.

⁴⁵ Virgin Media is already part way through their "doubling of broadband speeds" programme which will see large numbers of its customers upgraded to SFBB levels in 2013. <http://mediacentre.virginmedia.com/Stories/Virgin-Media-s-speed-doubling-starts-2380.aspx>

⁴⁶ <http://www.telegraph.co.uk/technology/mobile-phones/9959416/4G-mobile-broadband-coverage-extends-to-50pc-of-UK.html>

255. It is important to recognise that explicit price regulation of fibre would be a major reversal of policy now or even at future reviews⁴⁷. The introduction of such regulation could be strongly criticised as not allowing BT's investment a 'fair bet'. Had the investment failed all risk would have been carried by BT's investors and only if the investment is successful is it subject to regulatory intervention.

256. It would also be in effect setting a regulated margin between fibre and copper based services when so many factors are currently highly uncertain and unknown. In particular, and as mentioned in response to earlier questions, this would be at a time when it is expected that mass consumption of GEA will take place by large and small CPs alike in the next year, and product evolution (both technically and commercially) is still on-going. Price regulation of fibre would reduce the existing flexibility that supported the launch in 2012, with special offer, of the 80/20Mbit/s product, and would constrain pricing developments for new product options such as self-install and CPE enablement.

Question 11.3 Do you agree that the charge for a GEA migration should be subject to a charge control at some point in the range of £10 to £15? If so, please indicate where in that range the charge should be, supported by evidence. If not, please state the reasons why.

257. We believe Ofcom should rethink this proposal, which in our view is premature: at this stage in the development of fibre services, Ofcom should be focusing on supporting increased take-up of fibre rather than measures which would simply increase the churn of existing customers between providers.

258. We would agree with the principle that it is appropriate to set a low 'cost based' price for transfers/migrations in a mature market our view is that a different approach is required in an immature market. To support a large scale and risky investment Openreach needs to incentivise CPs to create new incremental demand for NGA services. In our view Ofcom's proposal may in fact create an incentive which increases churn in the short to medium term without stimulating overall market growth and take-up, both key drivers which could bring down unit costs and benefit all fibre customers. However, should Ofcom choose to implement the proposal we believe the new charge should be set on the basis of Fully Allocated Cost (FAC). This would mean a charge at the top end of the range that Ofcom proposes.

259. In our view, a charge below this level would be likely to signal a high risk that Ofcom will act to reduce first mover advantage in other nascent markets in the future.

Question 11.4 Do you agree with our proposal that BT offer a minimum contract term of no more than one month following a GEA migration? Please provide reasons in support of your views.

260. This proposal relates to end-user switching of their GEA-based broadband service from one CP to another. It will mean that when such a switch takes place, the maximum fixed term of the contract between the new CP and Openreach cannot be longer than one month.

261. Ofcom notes that minimum term contracts can add beneficial pricing flexibility to the market as wholesale layer upfront costs can be recovered over the minimum period, rather than as a connection charge, and that this may be important in driving VULA take-up. Ofcom also notes there is nothing inherently 'non-equivalent' in such terms and conditions.

⁴⁷ See the Plum Consulting report provided with this response.

262. We note Ofcom's concern over the 12 month minimum term applied to migrations, and understand why Ofcom view this differently to a new connection. However we have two issues to raise:

- Firstly, we believe Ofcom's proposal is unlikely to be of direct benefit to end-users as retail providers are still likely to impose a minimum term of circa 12 months when they win a customer from another network.
- Secondly, the change is not simple or costless for Openreach. Openreach is currently assessing the potential systems changes required to carry out the necessary billing adjustments, and its initial view is that they are prohibitively expensive given the low estimate of transactions likely to fall into this category.

263. In view of this, we believe Openreach would need to implement a manual process at least initially. This would require discussion and agreement with Openreach's CP customers. In view of this, we would like to hold detailed discussions with Ofcom before it takes its final decision on this remedy: this is to ensure that the requirements in the proposed direction are viable operationally and that this is reflected in the final wording of the obligation.

Question 11.5 Do you agree with our proposed approach to regulating the margin between the VULA price and BT's downstream prices? In particular:

- (a) Do you agree that our objective should be to ensure that BT sets a VULA margin that allows an operator with slightly higher costs than BT (or some other slight commercial drawback relative to BT) to profitably match BT's retail superfast broadband prices?
- (b) Do you agree that we should achieve this objective by requiring BT to set fair and reasonable terms, conditions and charges and setting out guidance on how we would interpret this requirement?
- (c) Do you agree with our draft guidance? In particular, do you agree with our benchmark operator and the ways in which such an operator differs from BT?

Please provide reasons in support of your views.

Summary

264. As set out in BT's response to the Call for Inputs, we continue to believe that concerns that BT may adopt pricing strategies for upstream and/or downstream services that exclude others from downstream markets can adequately be addressed via the application of competition law.

265. However, Ofcom proposes to continue to supplement competition law prohibitions on exclusionary margin squeeze with the use of SMP regulation of the margin between the VULA charge and downstream BT's prices for fibre propositions.

266. Ofcom has rightly rejected the more extreme calls from CPs for regulation to ensure a particular pre-defined level of margin is available between the prices of VULA services and retail fibre broadband to allow others to undercut BT. Introducing such rigid rules would not reflect the current state of competition in the market and would unduly and inefficiently constrain BT's retail pricing freedom and dilute the benefits of overall competition and customer choice.

267. Nevertheless, BT has a number of concerns with Ofcom's proposals to use the requirement to provide VULA on "fair and reasonable" terms to assess BT's margins. In particular:

- Ofcom has set a broadly framed policy objective of ensuring competitors with "slightly higher costs" can match BT's fibre prices. However, Ofcom has not properly identified the competition problem in the provision of broadband and fibre services that underpins this

objective. We believe competition in the provision of broadband services, including fibre, will be strong throughout this market review period on the basis of BT's provision of VULA and other regulated upstream inputs.

- Ofcom's proposed approach to addressing margin squeeze concerns via the "fair and reasonable" SMP remedy is set out in draft guidance which appears to be framed to apply margin tests across the full range of fibre propositions – potentially including those where BT may supply fibre broadband with Pay TV/content. BT's concern is that these tests – which would be conducted within the four month dispute resolution window – would solely be focussed on an analysis of "the numbers" and would not give specific consideration to effects on properly defined downstream markets. This would be particularly concerning where there was a compliance failure on an analysis of "the numbers" alone which, whilst in and of itself is likely to be able to confirm compliance, may not be sufficient to prove non-compliance given that in such circumstances a full market analysis should be conducted to assess compliance taking into account other factors (as is the case under any competition law analysis).
- We also note that CPs' ability to provide Pay TV/content services alongside fibre broadband ("triple play offerings") has not been considered within this market review framework, so that competition/market entry problems here have not been identified at all, but that these triple play offerings could nevertheless be impacted by Ofcom's proposals. BT does not believe that an analysis on "the numbers" alone is appropriate for such offerings given that no market review assessment has been carried out to ascertain if SMP regulation is appropriate in the first place.
- Ofcom must recognise the risk that margin tests applied in such a way could give rise to "false positives" which would prohibit pricing at levels which would be pro-competitive and in consumers' interests.

268. Given the risk of "false positives" and over-regulation, Ofcom must ensure that to the extent that any use of margin tests "on the numbers" is used under SMP regulation to support non-compliance it is focussed on the properly identified competition/market entry problems relating to BT's supply of VULA and concerns with downstream competition. At most, BT would suggest that any market analysis relates to CPs' ability to purchase VULA (and other BT upstream inputs) to provide fibre "dual-play" (phone and broadband) bundles (i.e. with narrowband services) on competitive terms. Guidance should be drafted in a way that reflects market conditions and does not overly-constrain BT's pricing flexibility and ability to deliver compelling consumer propositions into a competitive, highly innovative and rapidly evolving downstream market space.

269. Crucially, Ofcom should not seek to constrain BT's pricing of fibre propositions that include Pay TV/content via margin tests on "the numbers". Competition in the provision in these services is not driven by BT's supply of VULA, and distinct market entry issues exist in relation to Sky's position in the Pay TV market which are not considered within the scope of this review. Should specific concerns arise in relation to the terms on which BT bundles Pay TV/content with fibre broadband, this would need to be fully assessed within the proper market context with full consideration given to likely exclusionary effects and any objective justifications for pricing. It would clearly, therefore, be more appropriate to assess such concerns within the framework for considering compliance with competition law.

Context for Ofcom's consideration of VULA margin

270. Before considering Ofcom's proposed approach to assessing VULA margin, BT has considered a number of contextual issues. Namely:

- a. the role of competition law in preventing margin squeeze and the importance of having a clear rationale for departing from the established analytical model for considering margin squeeze issues on a case by case basis;
- b. the approach taken by Ofcom in the 2010 Wholesale Local Access market review;
- c. regulatory activity in relation to concerns with available VULA margins since 2010; and
- d. Ofcom's overall assessment of the state of competition in the provision of fibre broadband services over the coming review period.

Role of competition law in preventing margin squeeze

271. Regardless of the SMP remedies introduced in this market review, BT's pricing of fibre must at all times comply with competition law. Among other things, under the abuse of dominance prohibition, pricing strategies that amount to exclusionary margin squeeze are not permitted.

272. BT considers that the correct analytical model for assessing margin squeeze under competition law is as follows:

- a. Are the following jurisdictional elements fulfilled:
 - i. the undertaking in question is vertically integrated (i.e. it is present on both an upstream and downstream market); and
 - ii. the undertaking in question is dominant in the upstream market?
- b. Are the following necessary conditions satisfied:
 - i. there is an inadequate spread between upstream and downstream prices so that an equally efficient competitor (EEO) to the dominant company downstream would not be able to trade profitably on the downstream market on a lasting basis;
 - ii. the abusive conduct is likely to have an exclusionary effect on the downstream market; and
 - iii. there is no objective justification for the conduct in question?

273. Competition law assessments of margin squeeze therefore require clear definition of upstream and downstream markets and a full assessment of the effects that are likely to arise in relevant downstream markets from the pricing under investigation. In common with other forms of exclusionary conduct, the overarching principle applying to margin squeeze intervention is the protection of the competitive process, not competitors.

274. At present, margin squeeze concerns arising in relation to BT's pricing of most retail services in markets downstream of upstream SMP inputs, including copper broadband propositions, would primarily be assessed under competition law and the analytical model set out above. The 2010 Wholesale Local Access market review Statement indicated that Ofcom may also consider margin squeeze concerns in relation to fibre broadband services by reference to BT's requirement to provide VULA on "fair and reasonable" terms. This is considered further below. The issue in this market review is whether additional SMP safeguards in relation to the pricing of upstream and downstream fibre services continue to be required and, if so, what specific form they should take.

275. BT's starting position is that competition law provides the appropriate analytical model to address any specific margin squeeze concerns that should arise in the supply for retail fibre propositions. It follows that to the extent that an approach is taken to consider margin squeeze issues via SMP remedies which departs from the analytical model for margin squeeze assessments under competition law, there should be a clear rationale for doing so.

The regulatory position on margin squeeze under the 2010 Market Review

276. In the 2010 Wholesale Local Access market review Statement, Ofcom concluded that the acknowledged constraints on VULA pricing from the regulation of CGA and from Virgin Media may not be sufficient to prevent BT engaging in margin squeeze. Ofcom also concluded that relying solely on ex post competition law “may be insufficient” to prevent behaviour “that could undermine the development of a competitive market” (emphasis added). Ofcom indicated that it would assess whether BT was providing VULA on “fair and reasonable” terms by reference to whether “...*the current price differential was above the current long-run incremental cost of the downstream activities of a reasonably efficient operator, including an allowance for subscriber acquisition costs...*”
277. In the 2010 Wholesale Local Access market review Statement, Ofcom did not provide detailed guidance on how it would conduct such assessments and – beyond the reference to the costs of a “reasonably efficient operator” rather than an “equally efficient operator” – the extent to which it may therefore depart from the analytical model for conducting margin squeeze assessments under competition law.
278. Among other things, Ofcom did not consider how it would define markets and consider effects of particular pricing on downstream markets as part of its consideration of whether VULA was being provided on fair and reasonable terms. Furthermore:
- a. reference was only made to the price differential between VULA and retail fibre prices and there was no explanation of how Ofcom would consider prices for bundles of fibre and services;
 - b. there was no explicit discussion of how prices would be assessed across the portfolio of retail fibre offerings based on different VULA inputs;
 - c. there was no discussion of the time period across which the price differential would need to exceed the LRIC differential including subscriber acquisition costs; and
 - d. there was only limited reference to how Ofcom would define a “reasonably efficient operator” and assess the level of costs that needed to be recovered.
279. The implication, however, was that if margin squeeze complaints were received, Ofcom would need to consider the evidence before it on a case by case basis and essentially ask the question: “at current prices, could a reasonably efficient competitor to BT purchase VULA inputs and compete effectively against BT in the provision of fibre services in downstream retail markets?” Answering such a question would have to involve an assessment of the overall costs of a reasonably efficient operator providing fibre services (including acquisition costs) and revenues that would be earned taking full account of the market context in which fibre services were being supplied into the relevant market – i.e. how BT and its competitors were providing copper and fibre services to customers to meet their broadband needs: at what range of headline upload and download speeds; in what bundles, etc.
280. Therefore, while the points above and other issues relevant to how Ofcom would carry out assessments were not explicitly set out in the 2010 Wholesale Local Access market review Statement, it was implicit that any subsequent investigation into BT’s pricing of VULA/retail services would need to adopt an approach that was consistent with the specific competition/market entry concerns identified. This would, BT contends, have needed to involve a set of considerations broadly similar to those required under the analytical model for assessing margin squeeze under competition law.

Regulatory activity on margin squeeze since the 2010 market review

281. Since 2010, no disputes or complaints have been raised by CPs alleging that prices for VULA were not “fair and reasonable” due to an inadequate margins between VULA prices and prices of services on relevant downstream markets. Ofcom has not therefore had to consider any of the issues set out above within the context of an investigation or dispute resolution. This is despite the claims made by TalkTalk and other CPs in the Call for Inputs about BT’s retail pricing activity and the difficulties they claimed to face in competing with BT in the provision of fibre services.
282. However, since the Call for Inputs responses were submitted, TalkTalk has submitted a complaint under Chapter II of Competition Act 1998, that BT was abusing a dominant position by imposing a price/margin squeeze in “the supply of superfast broadband services”. That complaint is currently being investigated by Ofcom under its competition law powers. BT maintains that the complaint is without merit and, amongst other things, particularly disagrees with TalkTalk’s central allegation about poor fibre profitability which clearly contradicts public statements made by TalkTalk in relation to fibre (on which BT has provided evidence to Ofcom).

Current competition in the supply of broadband services and the supply of fibre

283. BT’s position – as demonstrated in Section 2 above – is that competition in the supply of broadband services in the UK is effective with an array of stand-alone and bundled offers available to consumers based on both copper and fibre inputs from a number of suppliers. Competitors to BT are differentiating their propositions in this space to reflect their strategic aims and, in relation to “triple play” bundles, of their own technical advantages and commercial agreements to provide access to content to their customers.
284. BT notes that a number of CPs have raised concerns about their ability to compete in the provision of fibre services. As a result, in its Consultation Ofcom queries whether, regardless of competition in the supply of broadband services in the overall market as defined, competition in the supply of fibre broadband services can be viewed as “vibrant”. Ofcom observes that there are four major providers of broadband services overall – BT, Virgin, Sky and TalkTalk – and notes that Sky and TalkTalk have, to date, provided only limited fibre services to their retail base.
285. Ofcom states that it has not taken a view on whether these observed levels of VULA take-up, reflected CP concerns with the level of margin available or CPs’ strategic choices. However, the level of VULA consumption, and rate at which this might change over the current review period, is clearly regarded as an important point of reference supporting Ofcom’s proposals in relation to the need for regulation of BT’s fibre margins. As in 2010, Ofcom’s key concern is clearly that issues with the level of VULA margin available could undermine the development of competition in the provision of fibre broadband services.
286. In this regard, Ofcom also references concerns with customer ‘inertia’, suggesting that (i) if BT ends this market review period with a high share of VULA connections, this will take some time to erode as fibre customers would not switch to alternative providers at a fast enough pace; and (ii) that competition to supply those customers considering the switch from copper to fibre broadband was particularly important, as these customers are by definition engaged. Ofcom links this concern to the potential emergence of a separate fibre/SFBB market in the future.
287. BT does not, however, accept Ofcom’s assessment of the state of competition in the relevant downstream market or the implications for future competition. In particular:
- a. the market for the supply of broadband is indisputably competitive with four major players with significant market shares;
 - b. both Virgin Media and BT have clearly been active in providing fibre connections to their customers;

- c. since publication of Ofcom's consultation in July 2013, Sky is now heavily promoting its fibre-based offerings and TalkTalk is promoting its fibre "Bolt-on" above the line as cheaper than BT;
- d. over the last twelve months, Sky and TalkTalk have made clear statements about fibre profitability that contradict any suggestion that the level of take-up of VULA reflects existing concerns with the margin available; and
- e. Ofcom's own evidence shows that over 50% of broadband customers are "interested" or "engaged" and it is not clear why this should be presented as 'inertia' or should raise a particular concern in the context of fibre broadband when the overall broadband market to which the data relates is clearly competitive – there is no reason to believe that the fibre broadband market will not develop in an equally competitive fashion.

288. The evidence strongly suggests that Sky and TalkTalk can profitably migrate their existing customers onto fibre services using VULA inputs from BT, and that they can be expected to increasingly do so. Given Sky's strategic focus on supply of Pay TV/content and TalkTalk's focus on being the value provider of communications services (including, now, Pay TV/content via its YouView offering over copper-broadband), it should be no surprise to observe differences in the pace to date at which CPs have sought to upgrade their existing customer base or promote fibre – over and above copper – to new customers.

289. The fact that BT has a larger fibre base today than Sky and TalkTalk, should not, of itself, raise regulatory concerns. Ofcom can observe that, if a Sky or TalkTalk customer wanted to upgrade their broadband service to fibre, they could do so without moving provider, and that customer would still be profitable – they would not need to switch to BT. The pace at which Sky and TalkTalk migrate their base can be expected to increase if their customers signal a clear demand for increased bandwidth. Sky's heavy promotion of fibre would suggest, it is now at that point where it will expect to see a significant uplift in the percentage of its base taking fibre.

290. Levels of VULA take-up to date do not therefore indicate a clear current, let alone ongoing, competition problem in the supply of VULA or the development of competition in the supply of fibre services. Ofcom's reference point in considering its role in regulating margins on fibre should be the status of competition in the overall broadband market and whether there are obvious and clear barriers to CPs choosing to supply fibre services. BT does not believe such barriers exist.

Ofcom's proposed approach to VULA margin within this market review period

Ofcom's proposed policy objective

291. Ofcom proposes to adopt a policy objective in relation to VULA margin ("Potential Competition Concern 2") to ensure that competitors with "slightly higher costs" or other commercial disadvantages to BT can profitably match BT's fibre pricing.

292. Established in this broad way, this policy objective sets a higher threshold for compliance than competition law, i.e. compliance with competition law would "only" ensure that equally efficient operators would be unlikely to be excluded from relevant downstream markets, but would not guarantee that competitors with "slightly higher costs" would be profitable in matching BT's fibre prices.

293. BT has significant reservations with Ofcom's rationale for proposing to establish such a broadly defined policy objective given the apparent lack of context, and BT would argue market analysis, to justify the approach. Put simply, is not clear what the detrimental effect on competition would be if competitors with "slightly high costs" could not match BT's prices. This is particularly true given Ofcom's subsequent suggestion within the proposed guidance, that the relevant reference point for assessment would potentially be the prices BT charges across a wide range of fibre broadband propositions – i.e. including bundles with Pay TV/content.

294. As set out above, BT faces a number of significantly sized competitors in the provision of broadband services. Each of these competitors has strategic advantages of their own in relation to either costs, range of propositions offered, or both. Ofcom has not fully assessed this market context in proposing this policy objective. This is clearly vital not only because it supports the view that competition law is “insufficient” but also because it then frames the detail of the proposed approach to addressing margin squeeze concerns under the SMP framework.

Proposed margin tests under the “fair and reasonable” SMP remedy on VULA

295. To ensure the proposed policy objective is met, Ofcom proposes to continue to use the “fair and reasonable” SMP remedy to assess VULA margin within the upcoming review period. However, unlike in the 2010 WLA market review Statement, Ofcom has set out further detail and guidance on how it would conduct such assessments.

296. Essentially, Ofcom proposes to conduct “margin tests” under the dispute resolution framework over a potentially broad range of BT’s fibre broadband propositions, which may include propositions with Pay TV/content (Ofcom indicates that it is giving further consideration to the treatment of the costs of “audio-visual” services). In conducting those tests, Ofcom proposes to adjust BT’s reported costs upwards in a number of areas to capture cost and other perceived commercial disadvantages faced by BT’s competitors. Ofcom also proposes to assess costs by reference to a “LRIC+” measure, including a contribution to the recovery of common costs.

297. Guidance on how Ofcom expects to interpret SMP remedies is generally helpful. However, BT is concerned that, as drafted, the guidance departs significantly from the analytical model for considering margin squeeze under competition law, without a considered and reasonable justification for such departure.

The risk of “false positives” if margin tests are conducted solely “on the numbers”

298. BT is concerned that the margin tests proposed will be solely conducted “on the numbers”. This is especially true given the absence of any reference to broader considerations in the draft guidance, and the practicalities Ofcom may face in assessing margin squeeze concerns within the four month dispute resolution window. Putting aside, for now, important issues related to the cost measures used in assessing the level of margin in constructing tests “on the numbers”, this means that margin tests under the SMP framework may not be conducted with any specific reference to defined markets, the likelihood of exclusionary effects in such markets, or any objective justification that may exist for pricing that otherwise failed a test “on the numbers”.

299. BT welcomes the fact that Ofcom has rejected calls from CPs for an even more interventionist approach to regulating BT’s retail level margin (Options 2 and 3), but any assessment of margins that departs from the established analytical model under a competition law assessment will inevitably be something of a ‘blunt instrument’. BT accepts that at various times regulation (or voluntary commitments alongside regulatory remedies), has been used to control the level of retail margin BT can make in order to actively promote and support market entry. But the competitive context to those historic arrangements was very different – i.e. they applied at times when there was only limited market entry at the retail level in competition with BT. In the current market context, properly assessed, the risks of introducing simplified assessments of margin squeeze based solely “on the numbers” may be significant.

300. Whilst an assessment “on the numbers” could possibly be an effective way of establishing compliance if the test was passed (a ‘first order’ type test), it should not be used alone to establish non-compliance. Put simply, conducting margin tests in the way proposed by Ofcom, runs a significant risk of producing “false positives” – i.e. suggesting VULA charges were not fair and

reasonable where prices for BT's retail fibre propositions were set at levels that would be pro-competitive and good for consumers.

301. These risks are compounded by the proposed approach to conducting margin tests in the draft guidance. Notably, the ability of CPs to provide "triple play" bundles of fibre broadband with Pay TV/content raises a number of issues in relation to access to content that are unrelated to BT's provision of VULA. BT is, in fact, at a clear disadvantage to Sky, Virgin and TalkTalk in relation to the range of Sky Sports channels it can provide given the commercial arrangements in place between BT and Sky. BT's ability to set prices for triple play services which have negative effects on competition in downstream markets is therefore limited. But a margin test "on the numbers" may simply avoid consideration of such matters or potentially objectively justifiable reasons for setting prices at a certain level. BT contends that it would indeed be wrong for Ofcom to apply the proposed margin squeeze analysis to "triple play" offerings given that Ofcom's market review has not considered pay TV specifically and it would therefore not be appropriate to apply a margin squeeze test to "triple play" offerings when it has not been properly established that SMP regulation is appropriate across "triple play" bundles in the first place.

Further concerns with the detail of Ofcom's draft guidance

The benchmark operator: "adjusted EEO"

302. In proposing to assess prices by reference to 'adjusted EEO' costs, Ofcom appears to suggest that overall adjustments may be small. But in a number of areas, Ofcom's guidance is vague about when and how such adjustments should be applied - e.g. Ofcom suggests that some increase to BT's advertising costs may be warranted to allow for the strength of BT's brand relative to its competitors. Ofcom also appears to propose an inconsistent approach such that adjustments to BT's costs will always be upwards. For instance, Ofcom has proposed that the 'benchmark operator' uses WLR as its copper access input, even though of BT's three main competitors: one use WLR as an input as Virgin Media self-supply; and Sky and TalkTalk use MPF.
303. Adjusting BT's costs in this way will again increase the risk of "false positives" – BT could be constrained from offering retail prices based on the margins earned on an inflated cost base even though BT's competitors can earn a reasonable margin at lower prices.
304. Ofcom states that the benchmark operator will provide a range of fibre services together with other services with reference made to narrowband lines and calls and to "audio-visual services". As noted, BT considers that the risk of "false positives" will be very high if tests are conducted "on the numbers" in relation to "triple play" propositions (and does not consider the application of the margin squeeze test to be appropriate to "triple play" offerings in any event). In relation to "dual play" propositions, it is not made clear whether Ofcom would assess BT's margins across the portfolio of fibre services or against individual prices for propositions. We would suggest that the risk of "false positives" would be minimised by assessing only BT's margins across the fibre product mix rather than against any individual proposition.

The use of LRIC+

305. Ofcom is proposing to assess BT's margin on the basis of long-run incremental costs plus a proportion of common costs (LRIC+). This is a departure from the competition law standard of using LRIC alone as the appropriate cost standard in margin squeeze cases.
306. In an ex ante margin squeeze context, inclusion of common costs is typically justified on the basis that the benchmark operator may not have the same scope economies as the incumbent. Therefore, competitors may be considered to face a commercial disadvantage as they need to recover overheads and common costs from a smaller number of services. At the extreme, a

single-product operator would need to recover all costs from just one product—a margin based on LRIC would not allow this operator to break even.

307. However, this issue does not arise when the benchmark operator already offers a wider range of services, as is the case with BT's main rivals in the broadband market (Sky, Virgin and TalkTalk). Recognising this point, Ofcom justifies the inclusion of common costs on the basis of a looser 'allocative efficiency' argument, claiming that "it is likely to be more efficient to recover a contribution of fixed and common costs from SFBB". However, it is not clear what level of contribution above zero would be considered efficient.

308. The commercial decision on where to recover common costs has far-reaching implications which go beyond 'allocative efficiency' considerations; for example, it seems reasonable that fibre prices will be set at levels which CPs consider appropriate to manage migration from copper to fibre products at their desired pace. Prices are therefore set by reference to wider productive and dynamic efficiency considerations. Reflecting this, the approach of using LRIC as a cost standard in competition law cases is grounded on well-established principles of economic efficiency, which take account not only of allocative efficiency considerations, but also on other types of efficiency, as well as the impact on competition.

309. BT would therefore argue strongly that assessments of the level of contribution to common cost recovery should, at most, be carried out at the level of the fibre portfolio not by reference to individual fibre propositions. If an individual price is set close to LRIC, but common costs are recovered from the overall portfolio it is not clear why this would raise concerns. To set a blanket requirement to recover a fixed value or percentage contribution from each proposition would over-constrain pricing freedoms and conflict with efficiency considerations. Even at the level of the fibre portfolio, it is arguable that LRIC should be the test so long as common costs were recovered elsewhere – e.g. from copper broadband bundles – given the points made above about the services offered by BT's competitors and the short-term objective of migrating customers from copper to fibre. Ofcom needs to at least consider the increased risk of "false positives" that arise by establishing tests that require recovery of certain levels of common cost with no reference to effects on competition.

BT's suggested changes to Ofcom's proposals

310. In light of the analysis above and BT's assessment of Ofcom's proposals, BT makes a number of proposals for how Ofcom should amend its approach to assessing VULA margins under the VULA SMP condition.

311. First, Ofcom must revisit its proposed policy objective by proper reference to competition within the relevant broadband market taking full and explicit account of developments in the market since the consultation document was published:

- a. Ofcom must assess the comments from Sky and TalkTalk on fibre profitability and the fact that both companies, especially Sky, are now promoting fibre "above the line" and consider the impact this has on its previous analysis. BT's position is that all major players in the broadband market are clearly able to provide fibre services profitably in competition with BT as part of their wider portfolio of customer broadband propositions.
- b. Reflecting this, Ofcom should clarify and reconsider its wider policy objective that CPs with "slightly higher costs" or other commercial disadvantages should be profitably able to match BT's prices, taking full account of the position of other players in the broadband markets and their own commercial/strategic advantages.
- c. Ofcom should clarify whether any aspect of BT's provision of VULA services gives rise to specific market entry problems in relation to the provision of Pay TV/content services provided alongside fibre broadband. To the extent that Ofcom considers that there are any such

problems, it should invite full representations on its analysis and rationale as this is not an issue that was covered in the July consultation. Alternatively, Ofcom could adopt BT's proposal to limit its assessment under the VULA SMP conditions to margins in relation to relevant downstream broadband markets, excluding Pay TV/content services.

312. Second, Ofcom should clarify its rationale for introducing any form of margin testing under the "fair and reasonable" SMP remedy which departs from the analytical model for assessing margin squeeze under competition law.

- a. In so doing, and reflecting its assessment of competition in the provision of fibre services, Ofcom should draw a distinction between:
 - i. any identified concerns that BT as the SMP supplier of upstream inputs from the Fixed Access markets could exclude retail competition in the provision of services directly based on those inputs (i.e. fibre broadband propositions provided with narrowband line access and calls – "dual play"); and
 - ii. any identified concerns related to CPs' ability to provide Pay TV/content alongside fibre services - "triple play".
- b. BT's position is that competition law should be sufficient to address both concerns. However, Ofcom must at least conclude that margin tests under the SMP remedy should be limited to addressing concerns about the pricing of "dual play" propositions, not "triple play" propositions. This would reflect the more complex nature of competition and market entry in relation to the provision of bundles with Pay TV/content and the higher risk of "false positives" arising if no – or limited – regard is given to identifying likely negative effects on competition in defined markets and/or objective justification for pricing.

313. Third, to the extent that Ofcom continues to believe that there is any role for margin testing under the SMP remedy, supporting guidance must position and formulate any margin tests in ways that will minimise the risk of "false positives" arising:

- a. Tests should be focussed on the ability of equally efficient CPs to offer "dual-play" fibre propositions as part of their overall broadband portfolio.
- b. Any margin tests should be carried out across BT's portfolio of "dual play" fibre propositions and not against prices for individual propositions and/or offers within the fibre portfolio .
- c. Tests should be conducted by reference to an equally efficient operator's LRIC with, at most, sensitivity analysis produced around certain costs to assess on a case by case basis whether issues may arise in relation to the ability of BT's broadband competitors to compete effectively and/or recover common costs across the wider broadband portfolio.
- d. Ofcom should signal that any margin tests will be applied with consideration of likely detrimental effects on competition and objective justifications.

Question 11.6 Do you agree that we should continue to require SLU and that it should be offered subject to a Basis of charges requirement? Please provide reasons in support of your views.

314. Although we understand Ofcom's reasons for continuing to require the provision of SLU at this time, we have significant concerns whether SLU is a viable long term remedy. Current evidence suggests it is not, and hence in our view Ofcom will need to reconsider in some depth at the time of the next review whether it is appropriate to continue the obligation. The recent German regulatory decision may offer a pragmatic model for consideration by Ofcom.

315. SLU is a product which has now been offered by BT since 2001 but take-up remains minimal with little or no forecast growth. Ofcom also note in the consultation that no CPs responded with any indications of future plans to use SLU. Further to this, and perhaps the most significant fact is that in August 2013 the single largest SLU based project in the UK, the publically funded 'South

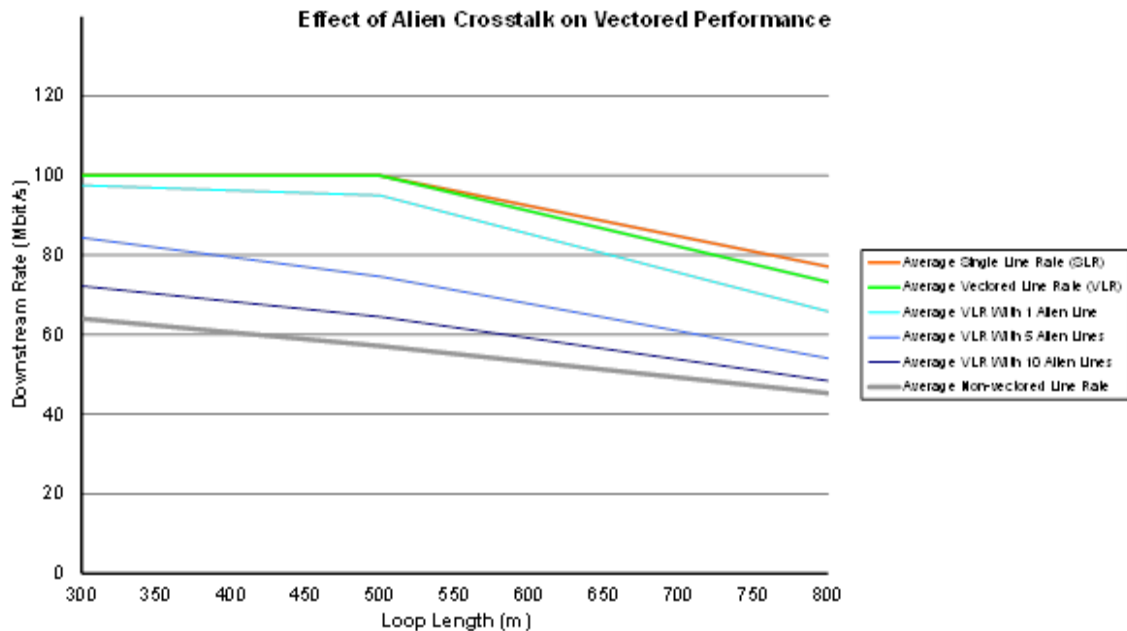
Yorkshire Digital Region' (SYDR) announced it was closing down and that it is now looking to carry out a managed migration of existing SYDR customers to alternative networks as the most cost-effective deal for the public. The SYDR project accounted for greater than 95% of the SLU cabinets deployed in the UK. Our view, along with many other stakeholders, is that business cases for SLU based projects can only be made to work in certain very specific circumstances, and the economics for using it in larger infrastructure cases especially in less populated areas will remain very challenging.

316. However, we agree that it is not unreasonable to maintain the existing regulation for SLU for the next review period, and also note that SLU pricing has been the subject to a formal investigation by Ofcom since the last WLA market review. Hence we do not support any significant change in approach or price levels between the two reviews, and it is therefore appropriate that SLU remains subject to a basis of charges obligation.

Question 11.7 Do you agree with our proposed approach on the issue of SLU and vectoring? Please provide reasons in support of your views, including, if you disagree with our approach, evidence as to why an alternative approach is more appropriate (e.g. in the form of business plans).

317. Whilst we welcome Ofcom's guidance set out in the consultation document on, further clarity and regulatory certainty is vital in order to prevent end-user and third party CP detriment and wasted investment by BT in vectoring technology. BT now has firm plans to deploy vectoring in its VDSL network.
318. Openreach is committed to introducing vectoring technology into its network, and vectoring will deliver important benefits to customers, including faster fibre speeds. Our initial field trial results have demonstrated this. However, the cost of rolling out vectoring to all fibre cabinets is [£<] and hence it is crucial that there is regulatory certainty underpinning this investment. Given the incompatibility of Sub-Loop Unbundling (SLU) with vectoring, we support Ofcom's proposed guidance for BT and SLU operators on this issue, and look to it to provide initial protection against end-user detriment that could result if BT were obliged to provide SLU at cabinets where vectoring has been deployed or is planned, however in our view it needs to go further. We look to Ofcom to support the end-user benefits that vectoring will bring and to clarify how the new and incremental large scale investment required by BT can be given sufficient regulatory certainty to proceed.
319. Vectoring offers great benefits for end-users enabling higher speeds over copper by cancelling crosstalk between VDSL2 lines in a telephony cable. This is achieved through the continuous monitoring of crosstalk coupling within a cable, and the real-time generation of "anti-noise" that cancels out this crosstalk between pairs. As a result, much higher bit rates can be achieved. Vectoring also makes bit rates more predictable because vectoring enables lines, whether heavily impacted by crosstalk or not, to perform in a similar way as if were the only active line in the cable, that is, without crosstalk.
320. For best results, the vectoring system must be able to monitor and control all VDSL2 lines in the cable. In addition, these lines all need to operate in vectoring mode or in vectoring-friendly mode. The crosstalk from any uncontrolled VDSL2 lines, (such as SLU lines) referred to as "alien" lines, will not be cancelled, reducing vectoring gain. The more alien lines there are in a cable, the lower the gain. The graph below illustrates the significant improvement that can be gained by vectoring (ie the pure vectored line performance maps maximum performance of the line very closely), however increasing numbers of alien lines has a very detrimental impact of performance which would feed directly through to end-users.

Fig 4:



321. As a first significant step in its plans to increase the capability of its FTTC product to 100Mb/s and above Openreach commenced its vectoring⁴⁸ trial during 2013. Initial results are very positive with circa 80% of lines showing significant performance increases. Openreach will also begin roll-out of vectoring compatible DSLAMs in 2013 and initial plans are now in place to install vector ready technology in the network during 2014.

322. The eventual business case for widespread deployment will require significant investment throughout the next review period and beyond and hence it is important that Ofcom give clarity on the regulatory position. We have not argued for the national SLU obligation to be removed at this stage but believe it is right to be able to refuse SLU at a vectored cabinet (or one that is planned for activation) as it will materially affect end-users' line performance and nullify BT's vectoring investment. In this respect we note the recent decision of the German telecoms regulator⁴⁹ to allow Telekom Deutschland to refuse access to SLU under certain conditions: this may offer a pragmatic way forward for SLU regulation in future reviews.

323. We will also look to Ofcom to support their position on reasonableness should CPs raise unreasonable requests. We believe there may be instances where CP might 'test' the dispute process, at a very low cost i.e. by raising a prospective request for SLU with no firm view of deployment but which would have a very high risk of disruption for Openreach, downstream CPs and most importantly end-users already using vectored products. It would be important for such disputes to be approached in the light of the Ofcom guidance.

324. As noted in response to Question 11.6 Ofcom will need to assess the long term future of SLU and the potential impact of new technological developments such as vectoring are a very

⁴⁸ Vectoring is covered in more detail in Section 2.3.

⁴⁹ http://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2013/130829_DecisionVectoring.html

significant consideration. We support Ofcom recognition that the next review will be significant for SLU and whether the regulated product has a long term future. There is already precedent in other European countries for its withdrawal⁵⁰, and it is important that Ofcom fully explore the potential to withdraw the product.

Question 11.8 Do you agree that we should continue to require PIA and that it should be offered subject to a Basis of charges requirement? Please provide reasons in support of your views.

325. We agree that it is reasonable to maintain the existing regulation for PIA for the next review period and that it is appropriate it remains subject to a basis of charges obligation.

326. Openreach worked pro-actively with Ofcom, the OTA and CPs to formally introduce PIA in November 2011, following significant negotiation and development over an eighteen month period from mid-2010. After initial trials, no strong interest was expressed in the product and no demand has materialised in circa two years. The reality is that the availability of PIA in itself does not radically transform business cases for less populated rural areas. Infrastructure business cases are challenging for all operators including Openreach.

327. BT is not specifically seeking removal of this obligation as part of the FAMR as we understand it may yet play a part in future CP deployments, but in our view it will be necessary in future reviews for Ofcom to fully consider whether it remains appropriate as a national level regulatory remedy for the whole of the UK market given its current level of take-up is *de minimis*. The economics of deployment will remain extremely challenging and PIA adds an additional and potentially unsustainable layer of intervention in areas where BT or others are already investing heavily to build new infrastructure.

Question 11.9 Do you agree that PIA should continue on the same bases as it is currently applied? Please provide reasons in support of your views, including, if you disagree with our approach, evidence of specific business plans or intentions to invest in deploying NGA networks that are currently unviable, but would become viable with your suggested changes.

328. We agree that PIA should continue to be provided on the same basis as the previous review period. Market conditions remain very similar although arguably there is now significantly less chance of demand materialising for the product. Openreach worked pro-actively with Ofcom, OTA and CPs for some eighteen months prior to formally introducing PIA in November 2011. Openreach then took active steps to progress an inclusive trial involving four CPs which ran until early 2012. The trial was useful in testing processes and identifying potential product development points, but none were so significant that they would have radically changed the case for widespread investment by CPs. After the initial trials, no significant interest materialised for the product and the situation has remained that way for the past two years. Any additional investment in the PIA product should only be made in line with clear and proven new demand and not ahead of such demand materialising.

329. We believe the current regulated product is fit for purpose, but of course remain open to discussing potential changes with customers, government and other stakeholders going forward.

⁵⁰ Most notably in Belgium.

We do not support significant prescriptive changes to the product specification and pricing at this stage prior to any large scale demand for it. At the time of launch, the derivation of the prices was fully explained to Ofcom and extensive benchmarking was carried out which showed the prices to be very favourable compared to European averages⁵¹; and we believe this remains the case, as BT has since made substantial reductions in price following the conclusion of the 2012 LLU/WLR charge control appeal. The reality is that the availability of PIA in itself does not radically transform business cases for less populated rural areas.

330. We note that the issue of extending the usage of PIA was also raised as part of Ofcom's most recent Business Connectivity Market Review (BCMR) consultation⁵² where extension of its usage to BCMR services was rejected. We support Ofcom's decision in that review and believe the logic remains consistent and relevant for the FAMR and hence that no further extension of use is required.

331. We also note the on-going appeal⁵³ of the BCMR decision by COLT Technology Services and supporting CPs. In our view, Ofcom's analysis in the BCMR was very thorough and resulted in a detailed set of product and geographic market definitions with a matrix of regulatory remedies to be applied to both stimulate competition and preserve the basis of the existing regulatory framework and incentives for investment in infrastructure and business services. Mandating passive remedies on top of these already very complex and extensive active remedies would add a significant layer of complexity, which we do not believe would be warranted given the likely benefits of passive remedies. It should also be noted that the current set of BCMR remedies reflect a set of markets where the level of competition is evolving over time, both by product and geography, and Ofcom has had to take a finely-judged approach in these circumstances.

Question 11.10 Do you agree that we should not require BT to offer any other access remedies? Please provide reasons in support of your views provide reasons to support your views, including, if you disagree with our approach, evidence of your likely demand (e.g. in the form of business cases or specific intention to invest) for any suggested alternative forms of network access.

332. We agree that BT should not be required to offer any further access remedies as part of this market review. We assess various areas of technology in summary below:

Wavelength Unbundling

333. We see no significant changes since the last review which dictate a change of policy for Ofcom on wavelength unbundling. It is still far too early in the technology life cycle and there is no clear path to wholesale productisation which would enable it to become a local access solution and to be considered as a viable remedy in the forthcoming review period.

334. Our internal reviews of the potential for wavelength unbundling have concluded that although there is ongoing interest by manufacturers and standards bodies in the evolution of the technology there is still no clear path or timeline as to how it could be deployed as an access remedy. Significant technological breakthroughs (most significantly low cost tuneable laser and filter technology) are still required to bring these new technologies to maturity and enable

⁵¹ The Ovum study carried out at the time quoted prices "up to 38% below the European average".

⁵² <http://stakeholders.ofcom.org.uk/consultations/business-connectivity-mr/>

⁵³ Competition Appeal Tribunal Case No 1212/3/3/13

wavelength unbundling. In our view, even if these were overcome, then it would still not be technically viable to consider deploying systems until circa 2016 at the earliest.

335. Additionally, early systems would be likely to be prohibitively expensive in advance of any mass deployment. Such deployments would need to be very large scale and supranational in nature, for example covering Europe or the Far East, to significantly lower unit costs. In addition to the basic costs of the technologies there are also likely to be further costs associated with the implementation of unbundling on those technologies (for example optimising systems for unbundling, and added extra capex and opex). In summary our view is that although there are many claimed benefits for wavelength unbundling, these are not currently realisable.
336. BT and more specifically Openreach currently have no plans for the use of wavelength unbundling using FTTP technology for the next review period, although we remain open minded on its use in the future. As stated above we view the optical access technologies which are potentially capable of being wavelength unbundled as still being in the early standardisation and research phase of their life cycle, and as such there is still no clear roadmap to wholesale productisation for the foreseeable future. There would still be major operational and fundamental technological hurdles to be addressed before such technologies could be implemented in a large scale deployment. We will however continue to monitor the technological developments and the standards for optical access technologies as we do with all communications technologies.
337. Looking beyond the next review period, wavelength unbundling (if viable at any point) would represent an additional intervention in the wholesale value chain and Ofcom would need to consider carefully how it relates to the VULA remedy. Multiple interventions could cause regulatory arbitrage and hence potentially undermine already very risky and long term investment in fibre.
338. As indicated in this response we expect FTTP roll-out to be very low volume for the next control period and hence the potential use of wavelength unbundling is further constrained by the available footprint as well as technological immaturity.
339. There is already a full suite of access remedies in place to cover all aspects of the fixed access market covering analogue and digital voice (WLR, ISDN2 and ISDN30), current generation broadband (MPF, SMPF), next generation broadband (VULA) and self-build (PIA and SLU). These are available nationally and are all provided from the functionally separate Openreach organisation on an EOI basis with extensive additional safeguards in place such as strict information sharing rules.
340. This situation is unique amongst the major European markets and provides UK CPs with certainty of non-discrimination in product performance and pricing, whilst providing options at all levels of the value chain. In considering calls for any new access product remedies Ofcom needs to carefully weigh up their potential economic viability. For example the lack of demand for SLU and PIA (as anticipated in Ofcom's own cost modelling) shows that rhetoric can often overshadow market realities and result in a focus of resource and development spend away from primary wholesale access remedies. It is essential that Ofcom do not undermine the success of the Openreach model through adding further unsustainable access remedies.

Physical Fibre Unbundling (Dark Fibre)

341. We agree with Ofcom's analysis and rejection of the need for dark fibre in this market review. The situation remains largely as identified at the time of the last WLA market review. BT's plans for FTTP roll-out are still based on a GPON architecture which is not easily compatible with options for fibre unbundling and this is in a context where the overall footprint of FTTP infrastructure is likely to be significantly lower than that anticipated at the time of the last review.

As noted by Ofcom and further explored in previous research carried out by Analysys Mason in their report 'Competitive models in GPON' commissioned by Ofcom at the time of the last review, the only viable point for physical unbundling in a GPON infrastructure is at the passive optical splitter. However, there are only 32 connections at an individual splitter location and splitter locations are now likely to be even more highly dispersed than anticipated. The level of manual intervention involved also makes the process prone to fault generation, costly and impractical. It is not compatible with the VULA concept and is not a viable remedy at this time.

Other remedies

342. We also agree with Ofcom's findings for the other access remedies considered. Over time new technological options will become available and it is appropriate that in the first instance potential new product requests are dealt with through the SoR process. BT will continue to monitor progress on technology, standards and future product requirements and look to trial at an appropriate stage where there is reasonable demand and where options are operationally and commercially viable. Such options will also need to consider and take account of the proposed strategic upgrade plans for our network which are outlined in Section 2.3.3.

4.8 Remedies: WLA current generation access

Question 12.1 Do you agree with our proposal to continue to require BT to provide LLU? Please provide reasons in support of your views.

343. LLU will to be significant in ensuring continued competition for broadband service in downstream markets. There are no market developments that would suggest a change to this remedy is required.

Question 12.2 Do you agree with our proposal to continue to apply a charge control on LLU? Please provide reasons in support of your views. (Comments on the specifics of the charge control should be made in response to the forthcoming 2013 LLU/WLR Charge Control Consultation.)

344. There are important considerations affecting LLU relating to the next set of charge controls. It is important at the outset, though, to stress the importance of a charge control formula that allows Openreach to fully recover its efficiently-incurred costs and sends the correct signals for investment and the migration to new technologies. It is essential that Ofcom puts in place appropriate measures that continue to bring prices into line with cost, with cost reflective pricing being achieved.

Question 12.3 Do you agree with our proposed approach, including on pricing, to LLU TRCs and SFIs? Please provide reasons in support of your views.

345. Ofcom proposes that all Time Related Charges (TRCs) and Special Fault Investigations (SFIs) should be subject to pricing protection (at paragraph 12.72), specifically a cost orientation

obligation and that, in line with their new guidelines⁵⁴, the cost standard for compliance purposes should be Fully Allocated Costs (FAC) (at paragraphs 12.76 and 12.77).

346. BT does not agree with these proposals:

- Ofcom should only regulate TRCs and SFI in so far as they are “reasonably necessary” for the provision of LLU and WLR;
- To the extent Ofcom does regulate TRCs and SFIs, they should not require these services to be cost-orientated where this means pricing at, or only just above, Fully Allocated Cost (FAC); and
- To the extent Ofcom regulates TRCs and SFIs, they should only do so in a way that enables BT to earn a margin in order to provide BT with the right economic incentives to provide these services.

347. Ofcom’s approach is theoretical. It is not explained by reference to relevant evidence or appropriate analysis. Ofcom must identify specific concerns⁵⁵ before seeking to intervene (aligning with Ofcom’s General Duties and Regulatory Principles and in particular the bias against intervention unless required).

348. There are clearly other less interventionist and more proportionate options which Ofcom does not appear to have considered in forming its proposals. BT considers that a more appropriate and proportionate remedy for TRCs and SFIs would be the introduction of a safeguard cap. This would address Ofcom’s policy concerns while mitigating some of the downsides of the current proposed remedy. This solution would encourage competition for the vast majority of services (which are contestable), protect CPs from real price increases, preserve the principle of regulatory consistency and still provide an incentive for Openreach to efficiency improvement.

349. BT therefore proposes a safeguard cap as a practical and more proportionate alternative for TRCs and SFIs in so far as they are “reasonably necessary” for the provision of LLU and WLR services.

Ofcom should only regulate TRCs and SFIs in so far as they are “reasonably necessary” for the provision of LLU and WLR

350. Ofcom’s approach to regulating all TRCs and SFIs is based on a misconception about these services. The following considerations have not been addressed:

- TRCs and SFIs refer to a broad range of activities including competitive services;
- Overly-intrusive regulation will have unintended negative consequences; and
- Ofcom’s proposal is neither proportionate nor supported by evidence;

351. Openreach’s contractual terms for LLU and WLR services cover provision of a line and the repair of that line to the stipulated contractual standard (SIN349). However, Openreach additionally offers to undertake work which is not covered under the terms of the relevant contract⁵⁶. TRCs relate to these supplementary activities when they concern the functioning of the copper line,

⁵⁴ Ofcom, Cost Orientation Guidelines, 2013

⁵⁵ Under the European Framework, all forms of price regulation must be based on the nature of the problem identified, proportionate and properly justified (Access Directive, Article 8(4)).

⁵⁶ For example, where the end user is experiencing service disruption which is not due to a fault on the Openreach network i.e. the copper line conforms to SIN349 or in the minority of cases the end user has damaged the Openreach network

while SFI charges relate to these supplementary activities when they concern the functioning of the broadband element.

Ofcom has ignored that TRCs and SFIs are in a competitive market

352. Ofcom make the following statement in support of their conclusion that there is a market failure that requires regulatory intervention:

“...that while in theory many of these services can be provided by any telecoms engineer and do not have to be provided by Openreach, Openreach’s TRCs are unlikely to be constrained sufficiently by competition because in reality it is unlikely to be economic to use non-Openreach engineers in most cases.”

353. This bold conclusion is simplistic and does not recognise the competitive nature of this market.

354. The correct approach is to identify which TRCs and SFIs are “reasonably necessary” for the provision of LLU/WLR services, and then to focus any regulatory intervention on addressing the issues that could arise in respect of those services. Openreach data confirms that this analysis is possible, and highlights the extent to which the market is competitive:

- Roughly one-third of TRCs are from volume deals (such as internal wiring on campus sites or multi-tenant buildings). These services are unrelated to service issues and are fully contestable. Many firms supply such management services, e.g. NG Bailey, Data Techniques et al. and bid for this business before it is awarded. These services are generally provided following a competitive tendering process and there are a number of cases where we have lost bids [3X].
- Roughly two-thirds of TRCs are charged in relation to reported end user issues. TRCs are levied when the CP requests an engineering visit even though the copper line conforms to SIN349 i.e. it is working to the agreed contractual standard but there is either a problem on the customer side of the network (customer wiring) or the customer has damaged the Openreach network e.g. the customer’s builder cuts the line. The vast majority (c.80%) of TRCs (non-bid related) arise when, on the engineering visit, it is found that either:
 - there is fault no on the Openreach network (no action taken); or
 - there is a problem on the customer side of the network (e.g. customer wiring).

355. Thus the activities and fixes necessary to resolve issues on the “two-thirds” can be performed by any provider e.g. Qube, Geek Squad, Scooter Computer, local providers (often ex-Openreach engineers).

356. It is self-evident that work that is not on the Openreach network can be undertaken by any engineer. Such services are competitive and cannot be properly described as “reasonably necessary” for the provision of LLU services. BT should not therefore be under any obligation to provide them. In order to ensure that any intervention is proportionate, BT proposes that Ofcom exclude all activities where the activities can be performed by an organisation other than Openreach and in particular:

- For TRC scenarios, 87% of activities, comprising:
 - Fault proved off Openreach network – no action taken – c. 47%
 - Fault on end user wiring or equipment – repaired – [3X]
 - Provision work – E.g. for extension sockets and Out of Hours work – [3X]
 - Volume Deals and Events and Exhibitions – c. 31%

- For SFI modules which do not necessitate work on the Openreach network or at the frames (e.g. end user wiring, end user equipment and 'co-op calls' not associated with frames work) – [3<].

357. SFIs are charged where, even though the copper line conforms to SIN349 and therefore is working to the agreed contractual standard, the CP requests BT to investigate as the end customer is having problems with the broadband service provided by the ISP over that line. In the majority of cases ([3<]) the work required to resolve the broadband issue does not require any work on the Openreach network i.e. the fix is on the customer or CP side of the network.

358. However, BT recognises the practicalities of disaggregating TRCs and SFIs in order to focus regulation only where they are reasonably necessary for the provision of LLU and WLR services. A simpler option for the duration of this market review would be to apply a safeguard cap.

Overly-intrusive regulation will have unintended negative consequences

359. Ofcom consider how to regulate to promote efficiency under three headings: allocative, productive and dynamic efficiency. Ofcom have recognised that these considerations do not always align, and when they are in conflict then Ofcom may use its judgement to decide how the balance between them should be struck and which ought to have priority in any given situation.

360. In this instance Ofcom have not attached enough weight to promoting an efficient outcome. Most TRC/SFI work involves:

- (a) diagnosing the problem, then either:
- (b) solving a problem off the Openreach network (e.g. a customer wiring issue); or
- (c) solving a problem on the Openreach network.

361. Of these issues, only item (c), the solving of problems on the Openreach network, can be categorised as “reasonably necessary” for the provision of LLU/WLR services. Therefore Openreach is under no regulatory obligation to provide (a) and (b). It should generally be possible for the problem to be diagnosed remotely by the CP, in which case tasks (a) and (b) are fully contestable. If the problem cannot be diagnosed remotely, then there may well be economies of scope in doing (a) & (b) or (a) & (c) together. Therefore it makes sense for Openreach to be incentivised to do that.

362. However, Ofcom’s proposal would destroy that incentive. It would remove not only the incentive to innovate in the way it does (a) and (c), but also the incentive to do (b) at all, see paragraphs 371 to 379 below. That would not be in the consumer’s interests. Therefore the key reason why Ofcom should allow Openreach a margin in excess of FAC is that this will incentivise an efficient outcome.

363. Stakeholders agree that checks should be carried out with the end customer to avoid unnecessary engineering visits. Openreach has developed and published a Best Practice Diagnosis guideline that CPs can use in order to determine the nature of the fault and avoid unnecessary engineering visits that result in a TRC charge⁵⁷. In reaching its conclusions to intervene, Ofcom rely heavily on their assessment that CPs cannot use third party engineers because it would often result in a double visit i.e. a visit by the third party engineer followed by a

⁵⁷ Openreach, WLR 3 Structured Questions and Report code (29 November 2010) is available at:

<http://www.internal.openreach.co.uk/orpg/home/products/wlr3/faultreportingandrepairprocess/faultreportingandrepairprocess.do>
<https://www.internal.openreach.co.uk/orpg/customerzone/products/wlr3/pstn/description/pstntrainingpack.do> and
<https://www.internal.openreach.co.uk/orpg/customerzone/products/llu/mpf/businessprocess/processdescription.do>

visit by an Openreach engineer as the third party cannot carry out repairs on the Openreach network. Ofcom conclude that *“in reality it is unlikely to be economic to use non-Openreach engineers in most cases”*⁵⁸.

364. Ofcom’s assessment is factually incorrect and CPs can generally anticipate in advance, by adopting best practice, when a double visit might result and only involve Openreach when there is a likelihood that the work to resolve the issue can only be undertaken by an Openreach engineer. This would be limited to situations where damage has been caused to the Openreach network by the customer (which can be ascertained in advance by the CP from the customer): we estimate this occurs in about [3%] of non-bid (about [3%] of all) TRCs⁵⁹.
365. The only situation where the CP truly cannot anticipate if a visit might be made by a CP (or its representative) and subsequently followed by an Openreach engineering visit is where a fault is later found on the Openreach network. This occurs in less than 5% of cases and in any way Openreach makes no charge for the work to remedy the fault.
366. CPs are increasingly using third parties to fix internal customer wiring problems, for example TalkTalk use Qube. This is regardless of whether an Openreach engineer has been dispatched and flies in the face of Ofcom’s assertion that it is necessarily uneconomic to use a non-Openreach engineer in most cases.
367. Not only has Ofcom concluded erroneously that it is *“...unlikely to be economic to use non-Openreach engineers in most cases”* but Ofcom have failed to give sufficient weight to the real resource cost for Openreach in requiring engineers to spend time on resolving service issues outside the terms of the contracted LLU and WLR service(s).
368. In the alternative, the Openreach engineer would otherwise be dealing with Openreach network or service provision activities. In fixing faults that are not on the Openreach network, Openreach is going beyond what its regulatory obligations require. Under Ofcom’s proposal, it would no longer have an incentive to do this, because it would not make any margin. Taking away this incentive goes against the consumer interest, because Openreach will in some cases be best placed to do the work. The provision of these services is contestable, and Openreach should be allowed to earn a positive margin, so it has an appropriate incentives to provide these services.

Ofcom’s proposal is neither proportionate nor supported by evidence

369. In light of the above, BT finds it surprising that Ofcom’s proposal here to regulate all TRC and SFI activities, which is a departure from their findings in the 2012 LLU/WLR Charge Control⁶⁰ where Ofcom imposed a cost orientation obligation only on those TRC and SFI services which were “reasonably necessary” for the provision of LLU services. This apparent shift in approach is not supported with any research or evidence.
370. Indeed, the vast majority of activities currently offered by Openreach as TRCs and SFIs are not “reasonably necessary” for the provision of LLU and WLR services and can be carried out by

⁵⁸ Fixed Access Market Reviews consultation document, paragraph 12.68

⁵⁹ Typical examples would be where a decorator carries out external painting of a house and damages the dropwire, or where the end-user attempts to move the NTE. Most customers know if there were recent events that would potentially result in damage to the Openreach network and CPs can therefore easily ascertain if such damage has occurred. At fault acceptance the CP is able to ascertain from the customer if damage has occurred in majority of cases before deciding whether to send out its engineer or an Openreach engineer i.e. by asking the customer questions about the nature of the service issue and all relevant circumstances. Therefore, the number of occasions when a CP dispatches a third party engineer, and then subsequently also has to dispatch an Openreach engineer, ought to be very low i.e. only those cases where the customer has damaged Openreach’s network, but has not realised this

⁶⁰ 2012 LLU/WLR Charge Control, paragraphs 4.322 – 4.369

organisations other than Openreach and charges could be avoided if CPs followed best practice. Openreach disagrees that Ofcom has shown that there is a market failure to be addressed in the way proposed by Ofcom.

FAC should not be used as a benchmark for assessing cost orientation

371. BT disagrees that FAC should be used at all as a benchmark for assessing cost orientation because it is inconsistent with the constraints that would apply in a competitive market. Under a strict FAC approach, there would be very limited incentive for Openreach to offer new TRC/SFI services, or to improve the procedures and the technical methods it uses in TRC/SFI cases. In other words, it would undermine any incentive for innovation or efficiency improvement. Those weaknesses are important in the present case because, as explained below, there has been a significant amount of recent innovation in TRC/SFI service provision.

372. Moreover, Ofcom's proposal is inconsistent with the approach it has adopted in some other markets earlier this year. For example, in its approach to pricing Royal Mail services Ofcom has said that it considers a margin in excess of FAC to be appropriate⁶¹.

Ofcom should allow for a margin

373. In order to provide BT with the correct incentives around the provision of TRCs and SFIs, it is appropriate for Ofcom to allow BT to earn a margin from the provision of these services.

Ofcom has previously found TRCs to be in line with normal expectations for Openreach services

374. In the 2012 LLU/WLR Charge Control final statement⁶², Ofcom stated that returns for TRCs were in line with normal expectations for such services, suggesting that there was no overcharging for TRCs by Openreach.

375. Openreach has therefore maintained its pricing approach to TRCs and SFIs since last year's assessment by Ofcom of returns were assessed as reasonable. The implication of Ofcom's new proposal is that TRCs and SFIs would earn no margin in excess of costs as the capital employed in the services is so low as to be immaterial. This highlights an important issue of regulatory consistency which Ofcom should consider before making its final decision.

Ofcom should maintain BT's incentives to provide TRCs and SFIs

376. Openreach is continually seeking to improve its processes and thereby enhancing the TRC and SFI services in response to industry requests. SFI, for example, represents a significant product innovation developed, in 2007, as a new service in response to CP customers' requirement to investigate broadband service issues where the Openreach copper line conformed to SIN349. Before the development of the SFI product there was no direct liaison between the Openreach engineer on-site and a CP's technical helpdesk.

377. In the interim period, Openreach has developed a whole new suite of SFI services (SFI2) to address perceived commercial and process issues around the original SFI portfolio. Further enhancements to TRCs and SFIs are under consideration and being trialled which would, for example, entail investment in new software and devices to allow Openreach engineers to pass on and collect customer / CP information in real time. This data capture could include information about the performance of CP products and services or capture customer feedback and signatures, all of which would assist CPs in managing their relationships with their own customers.

⁶¹ Ofcom, End-to-end competition in the postal sector, Statement, 27 March 2013.

⁶² 2012 LLU/WLR charge control statement, paragraph 4.337.

378. Were Openreach to receive requests to expand the scope of these services, so as to improve overall efficiency or improve the end customer experience, Ofcom's proposals need to be assessed in the context of limited engineering resource. Should Ofcom's proposal stand, Openreach would receive no benefit from increasing its resources to, for example, support the development of additional on-site services, such as the emerging opportunity for third party equipment installation and configuration (e.g. routers and set-top boxes).

379. Ofcom's proposals largely remove the incentives for BT to improve the efficiency and value of TRC and SFI services or expand the scope of these services, as Openreach would not ultimately benefit. Therefore its proposals are likely to completely undermine Openreach's incentives to innovate resulting in less efficient processes and a lack of product development.

Question 12.4 Do you agree with our proposed approach, including on pricing, for electricity? Please provide reasons in support of your views.

380. We agree with Ofcom that it is inappropriate to put a charge control upon electricity prices, given the volatile nature of these costs and the undue risk of regulatory failure. It is in BT's interest to secure an efficient level of electricity price and the same price will be passed onto external CPs. In this instance, there is no need to charge control the electricity price.

381. We also agree that BT should be allowed to recover its efficiently incurred costs in the provision of electricity on top of the electricity price and that these costs should include all of BT's fully allocated costs (including ROCE).

Question 12.5 Do you agree with our proposed approach to cost accounting for LLU? Please provide reasons in support of your views.

382. We welcome Ofcom's proposals (in paragraphs 12.100 to 12.102) to remove the obligation to publish DLRIC and DSAC information, consistent with its decisions in other market reviews such as the 2013 BCMR Statement and 2013 Narrowband Market Review Statement (2013 NMR statement). However, we question the proposed requirement to maintain such data.

383. Although this requirement would be consistent with previous market reviews, we do not believe that Ofcom has sufficiently justified its reasoning for the preparation and supply of such information in the absence of a basis of charges obligation and would welcome further clarification.

384. In Ofcom's most recently completed Market Review Statement the (2013 NMR statement) Ofcom has expressed the view that: "...such cost data informs our market reviews, in particular our assessment of SMP and our analysis of appropriate remedies where such SMP is present" (2013 NMR Statement Paragraph 5.404) but did not provide further detail as to exactly how such data would be used. Ofcom must explain clearly how such DLRIC and DSAC data will be used.

385. We agree that it would not be proportionate to require the publication of FAC for individual TRC services. We are however uncertain why "aggregated figures for specific cost categories" would be useful to stakeholders and would welcome clarification as to the proposal, which appears to differ from the current approach to reporting FAC for services where the basis of charges obligation applies. We are concerned that public reporting of labour rate services at a granular detail will share commercially confidential information and believe it is only appropriate to share

such information with Ofcom as appropriate. For publication, we believe it is only appropriate to report at a total FAC level.

386. We agree that purchase costs underpinning the electricity charge are confidential and commercially sensitive and welcome Ofcom's proposals that these would not be published. However we are uncertain as to what other information could be published in respect of these which would not be sensitive. We should expect any such information to be provided to Ofcom only and not be made available to other stakeholders. As such, we agree that we should provide Ofcom with our methodology for calculating charges and agree that we should submit to Ofcom a statement that we have complied with that methodology. A statement to that effect could be presented in the RFS; however, to retain commercial confidentiality, no figures should be included within that statement.

4.9 Remedies: WFAEL

14.1 Do you agree with our proposal to continue to require BT to provide WLR? Please provide reasons in support of your views.

387. We agree that is reasonable for BT to be required to provide a regulated WLR product for the next review period. However, Openreach does consider that the market conditions specific to analogue exchange lines have changed significantly since the last WFAEL review in 2010. The absolute volumes and relative proportions of MPF and WLR lines used to serve end-users have shifted dramatically. Using Ofcom data published in its recent 2013 charge control statement MPF lines are now anticipated to move to 9.1 million in 2016/17⁶³. This demonstrates a rapidly evolving wholesale market and one where the competitive effect of MPF has become highly significant in its own right and acts as a powerful constraint on WLR pricing. This is a major change and at minimum signifies that Ofcom will need to look more closely at the proportionate level of regulation to be applied to WLR products and pricing in future reviews. Competition between services based on fully unbundled lines (MPF) and shared unbundling (WLR/SMPF) has now reached maturity and any previous incentives to support MPF market entry should now be removed.

388. We also have strong reservations on the differential Care Levels applied by Ofcom to the base regulated products. In our view there is now no strong justification for the MPF product to have a higher default service level.

Question 14.2 Do you agree with our proposal to continue to apply a charge control on WLR? Please provide reasons in support of your views. (Comments on the specifics of the charge control should be made in response to the forthcoming 2013 LLU WLR Charge Control Consultation.)

389. Our comments upon the details of the charge control are made in our response to the 2013 LLU WLR Charge Control Consultation.

390. We agree that Ofcom should not impose a basis of charges obligation alongside a charge control. We welcome this as a positive step towards simpler and clearer regulation with benefits for all. Having two such remedies operating alongside each other results would drive

⁶³ We have used Ofcom's charge control numbers as they are already in the public domain and there is no issue of confidentiality.

unnecessary regulatory complexity into these markets with no obvious benefits for any stakeholder. We also recognise that this decision is consistent with that adopted for other market reviews (such as the BCMR 2013) and is in line with Ofcom's approach for as little regulation as required to address the relevant concern.

391. In addition, for WLR Basic Rental, Ofcom's proposes to adjust the WLR asset base for the purposes of setting prices under the WLR Charge Control. As such the price for WLR will not be set with reference to the published RFS costs, or published DSAC cost ceiling. BT could find itself complying the charge control, but with prices above DSAC as a consequence of prices being set upon a higher asset base. This is another example why it is clearly sensible to remove the basis of charges obligation.

392. For these reasons, we agree with Ofcom that a basis of charges obligation should be removed from WLR services.

Question 14.3 Do you agree with our proposed approach to pricing for WLR, including our proposals for a Basis of charges obligation on TRCs and for Caller ID? Please provide reasons in support of your views.

393. BT agrees with Ofcom that the treatment of LLU TRCs applies equally to WLR TRCs. Please refer to Question 12.3 for BT's response to Ofcom's proposals for TRCs.

394. As confirmed by Ofcom, the question above wrongly references Caller ID, since Ofcom does not propose a basis of charges obligation for Caller ID. Our response to Ofcom's proposals for Caller ID is set out in our answer to Question 14.4.

Question 14.4 Do you agree with our proposed approach to pricing for WLR calling and network features (including revenues for Caller ID)? Please provide reasons in support of your views.

395. In summary, BT:

- agrees that Ofcom's proposed approach to WLR calling and network features pricing is correct; and
- agrees that Ofcom should not allocate revenue from WLR network and calling features into account to reduce the price of other services, as doing otherwise would run counter to the principle of cost causality.

Ofcom's proposed approach to WLR calling and network features pricing is correct

396. In April 2013 BT Technology Service and Operations (TSO) conducted a feasibility study across the various types of exchanges to assess the costs and timescales necessary to increase capacity. That review found current demand was near to full capacity for Caller Display, Three Way Calling and Call Waiting. We estimated the cost of upgrading the current infrastructure to be [3<].

397. If Ofcom forced BT to lower its price then BT would expect to see an increase in demand⁶⁴. It would not be efficient for BT to reduce its current charges as we would not be able to redeem the cost of the investment in the infrastructure. Openreach therefore agrees with Ofcom's proposal to remove the basis of charges obligation from Network and Calling Features as the efficient price for some of these features might be above forward-looking incremental cost. We welcome Ofcom's proposed guidance (at paragraph 14) about the circumstances in which it is likely that current charges are fair and reasonable.

398. We also agree with Ofcom that it is not appropriate to regulate BT's charges for BT Voicemail (available from BT Wholesale) as the pricing is constrained by the alternate products available in the competitive market.

Ofcom should not allocate revenue from Caller ID (Caller Display) to other services

399. BT supports Ofcom's proposal not to take the revenue BT earns from Caller ID into account when setting charges for other services. As Ofcom note, this is "consistent with the approach in previous reviews" and provides an appropriate degree of regulatory certainty to BT and CPs.

400. Under the European Framework, all forms of price regulation must be based on the nature of the problem identified, proportionate and properly justified (Access Directive, Article 8(4)). Ofcom have identified a potential issue and say:

*"...it could be argued that the difference between the revenue earned and the forward looking costs for Caller ID should be used to reduce charges for other services which, if this were efficient, could be in consumers' interests. There would then be a question of which charges to reduce. For example, if there was an argument that this revenue should be used to reduce common costs, it might be appropriate to reduce all charges (for example, including WLR and MPF charges). There might also be an argument that as Caller ID is a WLR service, it is appropriate to reduce other WLR services even though only some WLR lines take Caller ID"*⁶⁵

401. However, Ofcom are not clear about precisely which charges (specific product or mix of products) they might consider reducing and note:

"Our current position is not to take this revenue into account, however, we would welcome stakeholders' views on this issue. In particular, we would welcome views on the implications for efficiency of different approaches, including on BT's investment incentives, on long term consumption signals for end users/CPs, on whether there might be any unintended consequences if we were to take the Caller ID revenue into account, and on what would be the rationale for using the revenue to reduce some charges and not others."

Allocation of revenues to other services could have distortive effects

402. In general, Ofcom's preferred approach, not to take into account the revenue BT earns from Caller ID when setting charges for other services, is better as to do otherwise would artificially constrain prices for those other services below their replacement cost. Artificially setting a lower price for other services is likely to reduce BT's incentives to invest in other services and distort competition.

⁶⁴ Ofcom, Charge Control for Wholesale Line Rental and related services – statement and consultation, 26 October 2009, paragraph 6.75.

⁶⁵ Fixed Access Market Reviews consultation document, paragraph 14.69.

403. However, if Ofcom were to adopt this approach it would first have to consider how to assess the forward-looking, incremental cost of supplying the Caller ID service. Clearly, efficient price signals should not be determined by accounting costs determined retrospectively by the depreciation and amortisation policies applied to date. Ofcom have dealt with a similar issue when considering charges for ISDN30 and inflated historic asset costs for pricing purposes.

404. If Ofcom were to estimate the forward-looking, incremental cost of supplying the Caller ID service, such an assessment would result in much reduced, or even zero revenue, to be used to reduce other charges. This is because one might expect these efficient costs to reflect the opportunity cost of the service and, as Ofcom acknowledge the current costs probably do this:

“Therefore, we do not consider that it would be efficient for BT to reduce its current charges. The current charges can be thought of as reflecting the opportunity cost of the service.”⁶⁶

There is no obvious way to allocate revenues to other services

405. Were Ofcom to change its position and allocate revenues to other services, BT would expect Ofcom to consult specifically on such proposals. As Ofcom is not proposing to undertake this allocation, and hence has not put forward alternatives for consideration, BT is not in a position to respond to any specific proposal from Ofcom.

406. That said, we have sought to provide our views on a range of potential scenarios in response to Ofcom’s request for views. As set out below, in each case there are good reasons why it is not a viable option and should not be pursued.

407. Ofcom has not explained which products or mix of products could be reduced by any reallocation. BT has therefore considered three likely hypothetical scenarios (but it should be noted that other scenarios could be considered, and if this were the case, we would expect Ofcom to consult on such alternative proposals):

408. Ofcom are not precise about the products or mix of products they might consider reducing. Therefore to provide inputs as requested by Ofcom, per paragraph 401 above, BT has considered three hypothetical scenarios:

- Reduce WLR rental regardless of whether Caller ID is purchased on that line.
- Reduce WLR rental where Caller ID is purchased on that line.
- Reduce MPF and WLR rental regardless of whether Caller ID is purchased on that line

Reduce WLR rental regardless of whether Caller ID is purchased on that line

409. In this scenario, WLR CPs without Caller ID would experience an artificially lower price for that service. If prices are to provide signals for economically efficient decisions by consumers, it is the forward-looking, incremental cost of supplying those services that should be considered. Consider a simple example of a CP deciding whether to buy WLR or some alternate service to supply its end user. For this decision to be efficient, the WLR price needs to reflect the forward looking cost. The costs of providing services which it does not intend supplying (such as Caller ID) and the costs of providing services in the past are irrelevant to this decision.

410. It might be argued that most WLR CPs consume some Caller ID and that therefore reducing the WLR rental charge will not be distortionary. However, there is great variation in the relative

⁶⁶ Fixed Access Market Reviews consultation document, paragraph 14.64.

proportions of Caller ID to each CP's WLR demand. Therefore CPs with lower proportions of Caller ID overall will experience a benefit in excess of their use of the Caller ID service, i.e. an externality. More importantly, for incremental supply of WLR lines the same signalling effects as described above will apply to these purchasing decisions.

Reduce WLR rental where Caller ID is purchased on that line

411. In this scenario Ofcom would target any price reduction to the users of the Caller ID service. The benefit of this approach is that it would at least distribute the benefit of any reduction to the users of the Caller ID service. However, a key problem with this approach is that it would lead to the very same inefficient effects that Ofcom is seeking to avoid i.e. a price (even though in a bundle) that would generate extra demand that would exceed existing capacity. For this reason this is not a viable option.

Reduce MPF and WLR rental regardless of whether Caller ID is purchased on that line

412. In this scenario, all revenues (including those without Caller ID) could not reasonably be considered costs that are common to LLU services given that Caller ID is not a service that is available, or will become available, as part of the MPF service. Therefore this scenario introduces an additional externality in that the MPF CPs benefit from the Caller ID subsidy but would be a completely uninvolved party who did not choose to incur that benefit (or any cost). This will have a distortionary impact on competition as MPF CPs receives a wholly unwarranted advantage compared to WLR CPs.

413. In common with the previous example, this scenario also has the same effect of distorting economically efficient decision making for the purchase of both MPF and WLR.

Allocation of revenue from Caller ID (Caller Display) to other services requires re-consultation

414. As explained above, the allocation of revenue from Caller ID (Caller Display) to other services would have negative consequences that make Ofcom's current proposals a reasonable course of action. If Ofcom were to entertain changing its position, Ofcom must re-consult on this issue.

Question 14.5 Do you agree with our proposed approach to cost accounting for WLR? Please provide reasons in support of your views.

415. We welcome Ofcom's proposals (in paragraphs 14.75 to 14.78) to remove the obligation to publish DLRIC and DSAC information, consistent with its decisions in other market reviews such as the 2013 BCMR Statement and 2013 NMR Statement.

416. However, we question the proposed requirement to maintain such data.

417. Although this requirement would be consistent with other market reviews, we do not believe that Ofcom has sufficiently justified its reasoning for the preparation and supply of such information in the absence of a basis of charges obligation and would welcome further clarification. In the 2013 NMR statement Ofcom has expressed the view that: "...such cost data informs our market reviews, in particular our assessment of SMP and our analysis of appropriate remedies where such SMP is present" (2013 NMR Statement Paragraph 5.404) but did not provide further detail as to exactly how such data would be used.

418. In Ofcom's most recently completed Market Review Statement (2013 NMR statement) Ofcom has expressed the view that: "...such cost data informs our market reviews, in particular our assessment of SMP and our analysis of appropriate remedies where such SMP is present" (2013 NMR Statement Paragraph 5.404) but did not provide further detail as to exactly how such data would be used. Ofcom must explain clearly how such DLRIC and DSAC data will be used.
419. We agree that it would not be proportionate to require the publication of FAC for individual TRC services. We are however uncertain why "*aggregated figures for specific cost categories*" would be useful to stakeholders and would welcome clarification as to the proposal, which appears to differ from the current approach to reporting FAC for services where the basis of charges obligation applies.
420. We are concerned that public reporting of labour rate services at a granular detail will share commercially confidential information and believe it is only appropriate to share such information with Ofcom as appropriate. For publication, we believe it is only appropriate to report at a total FAC level.

4.10 Remedies: ISDN30 and ISDN2

Question 15.1 Do you agree with our proposal to continue to require BT to provide wholesale ISDN30? Please provide reasons in support of your views.

421. BT agrees that Ofcom policy should be to set a framework in place that would avoid inefficient investment in BT's ISDN30 switch assets.
422. Therefore, should BT be required to provide wholesale ISDN30 it should be on the understanding that that such supply should not require BT to further invest in ISDN30 capacity.

Question 15.2 Do you agree with our charge control proposals for ISDN30? Please provide reasons in support of your views.

423. BT maintains its position that Ofcom should remove pricing regulation as strong market constraints exist and the current pricing approach has caused, and could continue to cause, unintended consequences, in particular delays in efficient migration to alternate products and too little / inefficient investment in those new alternatives. That said, BT supports Ofcom's proposal that any regulation of ISDN30 should ensure that charges encourage both efficient migration and encourage efficient investment in new technologies.
424. Ofcom recognises that ISDN30 is expected to decline over the period of the market review but is uncertain about the rate⁶⁷. BT would normally expect a charge control on a steady state basis coupled with a declining ISDN30 base to lead to price rises. Given Ofcom's concerns about the uncertainty of the rate of ISDN30 decline, and in the absence of Ofcom removing price regulation, BT does not disagree that maintaining charges consistent with the current level is a reasonable proposal. However, in the next market review Ofcom should examine whether there is still a need for price regulation.

⁶⁷ Fixed Access Market Reviews consultation document, paragraph 4.44.

425. Ofcom proposes a basket of ISDN30 rentals, connections and enhanced care services, with a cap on average charges based on their current levels. Openreach would prefer a simple approach balanced with commercial flexibility to allow Openreach to react to commercial developments as they arise such as FVAdp⁶⁸ and IP-ISDN⁶⁹ in addition to SIP substitution, while meeting Ofcom's objective of protecting existing customers. Ofcom propose two options for the structure of the proposed control. Both options are simple but option 2 provides a small amount of extra flexibility as the basket structure is broader, therefore, BT prefers option 2.
426. Ofcom proposes a sub cap on of +5% on connection services and +0% on enhanced care services, we note that these are actually set out as sub basket controls in the legal instrument, to give the flexibility that Ofcom describe in paragraph 15.64. We would appreciate if Ofcom resolve this inconsistency in the final statement. The approach in the legal instruments of having sub baskets for connection services and enhanced care services does give some additional flexibility in terms of carrying forward over compliance, which we consider appropriate.
427. We also note that the legal instrument has a formula to allow for over compliance in one year to be carried forward to adjust the controlling percentage for the following year. For consistency and to remove any confusion, we think it would be useful to use the same formula and language across both the FAMR legal instrument and the LLU WLR Charge Control legal instrument.
428. The new approach requires BT to demonstrating compliance by reference to a weighted annual average price (weighted by the time it was in effect). This means that, in order for prices to stay flat, they may actually need to increase on 1 April 2014. For example, the connection per channel was reduced from £5.50 to £3.50 on 1 August 2013, creating a weighted average price for 2013/14 of £4.17. In order to hold weighted average prices constant this will actually mean a price rise is required on 1 April 2014 to £4.17 (assuming this price change would then be in effect for the full year). This may confuse the market given Ofcom's suggestion that prices will not increase in real terms: this is true in weighted average prices but not from 31 March 2014 to 1 April 2014. Ofcom could instead make the P0 value for the first year of the control the same as the price in effect at 31 March 2014. For different reasons, in the response to the LLU/WLR charge control consultation we also recommend that the starting price for the basket control for SMPF and MPF ancillary should also be the price in effect at 1 April 2014.

Question 15.3 Do you agree with our proposed approach for cost accounting for ISDN30? Please provide reasons in support of your views.

429. BT agrees with Ofcom's proposals (in paragraphs 15.77 to 15.79) not to impose the publication of FAC, DLRIC and DSAC information at service level, consistent with its decisions in other recent market reviews. However, BT questions the proposed requirement to maintain such data and the imposition of a new requirement to maintain DLRIC and DSAC data. Ofcom has not sufficiently justified its reasoning for the preparation and supply of such information in the absence of a basis of charges obligation.
430. Accordingly, we propose that Ofcom should not introduce the requirement to maintain FAC, DLRIC and DSAC information for ISDN30.

⁶⁸ FVAdp : FVA is designed to provide a prioritised path for voice running on NGA – its consumer variant has launched on FTTP and its business version is proposed to be the NGA replacement for ISDN (FVAdp)

⁶⁹ IP-ISDN: TalkTalk Business are launching a new IP-ISDN30 product with a headline of market disruptive to BTW ISDN30e and promising 40% saving on competitor ISDN products

Question 15.4 Do you agree with our proposal to continue to require BT to provide wholesale ISDN2? Please provide reasons in support of your views.

431. BT agrees that Ofcom's policy should be to set a framework in place that would avoid inefficient investment in BT's ISDN2 switch assets.
432. Therefore, should BT be required to provide wholesale ISDN2 it should be on the understanding that such supply should not require BT to further invest in ISDN2 capacity.

Question 15.5 Do you agree with our charge control proposals for ISDN2? Please provide reasons in support of your views.

433. As indicated in BT's response to Question 5.1, BT does not believe that there are now any significant barriers to customers switching, given the availability of very strong substitutes. These substitutes place competitive constraints on ISDN2 pricing. That said, Ofcom's proposal of maintaining flat nominal prices for ISDN2 is not unreasonable in the circumstances, as any charge control proposals that would result a nominal price decrease over the period would be disproportionate. As a result of the continued decline in ISDN2 volumes, this approach would result in returns, on a steady state basis, by the end of the control period in line with BT's cost of capital.
434. Ofcom proposes a starting price adjustment for ISDN2 transfers, with a stated (theoretical) aim of bringing the price in line with LRIC, but with no adjustment to allow the difference between LRIC and FAC to be recovered elsewhere. Ofcom note that a glidepath would be more usual to achieve this, but that the low revenues involved and the benefits of switching outweigh the downside. BT does not agree that Ofcom has adequately justified this proposal to the requisite standard. Indeed, BT notes that there appears to be a pattern across the FAMR and LLU/WLR Charge Control: start price adjustments are proposed where they reduce prices (e.g. ISDN2 transfers, removal of directories, WLR conversions etc.), but are not proposed where they would increase prices (e.g. WLR transfers). Ofcom should be consistent in their approach to start price adjustments.
435. BT notes that the draft legal instrument does not include a description of the notification or implementation timing for the ISDN2 transfer price change. In condition 7B.2 (GEA Migration Charge control) it is clear the price must be in effect within 28 days. Ofcom should include equivalent wording in Condition 7E to provide clarity for BT.
436. BT agrees that to set a charge control on the DDI features for ISDN2 would be disproportionate given their scale.

Question 15.6 Do you agree with our proposed approach for cost accounting for ISDN2? Please provide reasons in support of your views.

437. BT agrees with Ofcom's proposals (in paragraphs 15.137 to 15.139) not to impose the publication of FAC, DLRIC and DSAC information at service level, consistent with its decisions in other recent market reviews. However, BT questions the proposed requirement to maintain such data and the imposition of a new requirement to maintain DLRIC and DSAC data. Ofcom has not sufficiently justified its reasoning for the preparation and supply of such information in the absence of a basis of charges obligation.

438. Accordingly, we propose that Ofcom remove the requirement to maintain FAC, DLRIC and DSAC information for ISDN2.

5. Comments on key charge control issues, including responses to relevant questions in Ofcom's consultation document "Fixed access market reviews: Approach to setting LLU and WLR Charge Controls"

5.1 Adjusting the model to reflect BT's 2012/13 Regulatory Financial Statements

439. Ofcom's proposed approach to cost modelling in the LLU/WLR Charge Control consultation differs from that used in previous WLR and LLU charge controls. The proposed approach consulted on here is a model based on cost components contained in BT's published RFS, which are then forecast forward using Asset Volume Elasticities (AVEs) and Cost Volume Elasticities (CVEs) applied to Ofcom's forecast of service volumes.

440. The key benefits that Ofcom cites in support of this approach arise specifically because the model is based on BT's RFS: this reduces the need for complex reconciliation, allows a greater level of disclosure, and crucially involves the use of audited cost information capturing recent movements in costs and efficiencies.

441. Ofcom has used the 2011/12 RFS as the base year for its cost model in the consultation as, at the time of publication, that was the most recent year for which the published RFS was available. BT has since published the 2012/13 RFS.

442. Ofcom has said that it will consider using the 2012/13 RFS as the base year for its cost modelling, but says "*to the extent that changes in the 2012/13 RFS reflect changes in accounting methodologies (such as cost allocation rules) rather than the underlying costs*" it will need to consider "*if and how it is appropriate to reflect these changes in our base year costs*".

443. This is a matter of very significant concern to BT. In particular, having decided to adopt a modelling approach based on the RFS in significant part because of the particular benefits of using RFS data, including the process of audit, it would not be fair, logical or coherent for Ofcom to use an out of date set of RFS data as the base year for the WLR and LLU charge controls.

444. First, BT cannot see the justification for using cost data which relates to the year 2011/12 rather than 2012/13. The 2012/13 data is more recent and will be more representative of the position during the Control Period. That is particularly so given that changing weather patterns and customer demands are expected to mean that future costs are more likely to reflect the position in 2012/13 than previous years.

445. In addition if Ofcom adopts 2011/12 as the base year, it will inevitably be necessary to forecast the base year data forward through 2012/13 even though actual cost data are available for that latter year. This approach is illogical and introduces an unnecessary margin for error.

446. BT also notes that the caveat made by Ofcom in paragraph 6.21 of the consultation relates only to cost allocation rules. This recognises that, as far as the underlying cost data are concerned, the 2011/12 RFS are plainly not the appropriate starting point for setting the charge controls.

447. Secondly, the caveat made by Ofcom in relation such cost allocation rules is unwarranted. BT takes due care and diligence to prepare its RFS in accordance with the relevant cost accounting and accounting separation framework imposed by Ofcom, and the independent auditors to BT and Ofcom (PricewaterhouseCoopers, PwC) are required to confirm whether this has been done.

448. As part of its preparation of the RFS, BT reviews and up-dates attribution and valuation methodologies and non-financial data sources on an on-going basis, improving them where necessary, in order to ensure that they are appropriate.

449. As part of its audit of the RFS, PwC conducts a detailed assessment of the appropriateness of the methodologies' robustness, objectivity and granularity, considering the selection of cost driver/valuation method, key modelling assumptions and level of disaggregation of analysis.
450. PwC provided an unqualified audit report on the 2012/13 RFS, providing assurance in respect of the WLA and WFAEL markets to the highest "fairly presents in accordance with" or "FPIA" standard, which requires extensive audit work and wide-ranging application of expert professional judgment.
451. This is the very process of audit which Ofcom has relied on in support of its decision to adopt a cost model based on the RFS. It is correct to say that the cost allocation rules in the RFS may change from year to year, but such changes are made where they are justified as improvements to the RFS, and only where they withstand the high level of scrutiny described above. The mere fact that there have been changes to the cost allocation rules is not therefore a reason not to use the 2012/13 RFS. Indeed, the fact that changes have been considered appropriate is a positive reason to use them in preference to older data which has been superseded.
452. Notwithstanding these general points, BT considers that there are compelling reasons for the particular changes in cost allocation methodology which have been adopted in the 2012/13 RFS. BT will provide to Ofcom (and publish) a separate report setting out the reasons for, and effects of, all material methodology changes made in the 2012/13 RFS. Production of such a report will provide Ofcom and all stakeholders with additional visibility of the nature and effect of the changes made, and additional assurance that the improvements made to the RFS this year are warranted.
453. In summary, an approach which uses superseded rather than most recent data cannot give proper effect to Ofcom's statutory duties, nor will it achieve the benefits which Ofcom seeks to achieve by moving to a new RFS-based cost model. It will be a significant departure from established best practice. Ofcom will be provided with an itemised explanation of the nature and effect of the methodological changes which are reflected in the up to date RFS. In those circumstances, there can be no proper justification for Ofcom departing from the most recent audited data. If Ofcom is nevertheless considering doing so, it will be incumbent on Ofcom to consult further and subsequently give detailed reasons, on an item by item basis, why the most recent, audited cost allocation rules should not be adopted as the basis for the forthcoming charge controls.

5.2 Use of CPI as the main inflation index

454. This section of our response answers a number of questions in the LLU/WLR Charge Control consultation and the Wholesale Broadband Access Market Review consultation.

LLU/WLR Charge Control consultation:

Question 3.1 Do you agree with our proposal to impose an inflation indexed price cap? Please provide reasons to support your views.

Question 3.12 Do you agree that CPI and RPI are the main indices to consider for the LLU and WLR charge controls proposed in this consultation? Please provide reasons to support your views.

Question 3.13 Do you consider that we should use CPI to index the LLU and WLR charge controls proposed in this consultation? If not please explain.

Wholesale Broadband Access Market Review consultation:

Question 7.1 Do you agree that an Inflation-X type of control is the appropriate form of charge control?

Question 7.2 Do you agree that CPI is the most appropriate inflation index?

455. Ofcom makes a number of arguments about why CPI should replace RPI. We consider these in the Section below, alongside other considerations which Ofcom does not mention. We also explain what we understand the effect of the choice ought to be on nominal prices, and why prices ought to be higher under CPI (due to the impact on capital costs). These various factors are summarised in the table below, together with BT's assessment of these criteria.

Table 1: Considerations relating to the replacement of RPI by CPI

Consideration	Assessment – does this justify change in approach?	Reference
1) Availability of independent forecasts	Available for both indices – No	FAMR CC 3.185
2) Exogeneity	Both indices meet this requirement – No	FAMR CC 3.184
3) Consistency with WACC	Suggests continued use of RPI – No	FAMR CC 3.182
4) Impact on nominal prices	Ought to be neutral; or higher if applied to CCA adjustments – No	BT (F) below
5) “Cost causality”	No direct link from either index to costs, but over the forecast period input opex costs more likely to follow RPI than CPI – No	BT (H) below
6) Additional complexity	Suggests continued use of RPI - No	BT (I) below
7) Index most likely to fulfil specific purpose of an inflation link to prices	No reason given by Ofcom to support one index over the other – No	BT (B) below

456. As the Table demonstrates, there is little justification for a move to CPI as the inflation index. RPI continues to be published by the ONS and has many different uses. BT notes that Ofcom also proposes to use the RPI index as an inflation index in the NCC commencing 1 October 2013 – as set out in the draft statement Review of the fixed narrowband services market dated 20 August 2013. Ofcom's conclusion there was that “*we do not believe that it would be appropriate*

to switch from using the RPI to an alternative index” and “We have therefore decided to continue to use the RPI” (discussion on inflation index is in statement para 11.41 to 11.43 and 11.74 to 11.80).

457. This was also the position explained by Ofcom in the Leased Lines Charge Control Consultation in July 2012, that RPI continues to be the price inflation measure used in price controls.

458. Given this history, we have to question why there is a need for a change.

459. We also explain below, in Section D, why Ofcom needs to be consistent in using the same inflation forecast in its cost modelling as in the calibration of X once the modelling has been completed.

Detailed assessment of the issues

A). Does the index matter?

460. We note first that Ofcom state that (emphasis added):

‘Before considering the choice between RPI and CPI, we note that in principle the choice of an RPI-X or a CPI-X glide path should not matter in terms of the end point for nominal charges. In expected terms either an RPI-X or a CPI-X cap should move charges from the starting level (in this case prices in 2013/14) to the final year level (in this case prices in 2016/17), where the latter are based on forecast costs. The end charges would be the same in both cases, but the X would vary depending on the measure of inflation.’⁷⁰

461. It is not clear, though, why Ofcom considers this to be “in principle”. The choice of index should not change at all the output of the modelling in terms of the allowed nominal charges. If Ofcom does consider there to be a difference, and that the nominal price forecast would change depending on whether RPI or CPI is used, Ofcom should clarify why this is and what its impact would be on the charge control.

462. BT nevertheless considers that Ofcom should take into account the following factors when choosing between RPI and CPI to index the WLR and LLU charge controls, and when using its chosen index in the charge control modelling.

B.) Role of the index in the control

463. As indicated in response to FAMR question 3.12 above, the role of the index in the charge control is to correct for forecast errors. Ofcom does not explain which index would provide better protection against the forecasting error that justifies the use of an ‘index – X’ control, however, BT cannot see any reason why either index should be preferred in this regard.

464. BT does not see that the rate at which input costs change ought to have a bearing on the choice as this is primarily a matter about the input assumptions to use. Clearly if CPI is used then the assumed real price change must be altered as a real change of X% is not the same as a real change of X% measured against RPI if the two indices are changing at different rates.

C.) Choice of index should impact X but not nominal forecast

465. Given that the RPI is generally higher than the CPI, setting the same nominal target for regulated prices will imply a lower X where the CPI is used in the price control formula. For example, were nominal prices to be required to fall by 2% and CPI expected to be 2.3% and RPI 3.3% over the

⁷⁰ Fixed Access Market Reviews consultation document, paragraph 3.168

period, then X would be 4.20% under a CPI control and 5.13% under an RPI control.⁷¹ Different X's are required under different indices to give the same nominal target.

D.) Importance of consistency

466. There are 2 stages in Ofcom's modelling approach where the index is used:

- 'Stage 1': assessing the appropriate nominal cost of inputs; and
- 'Stage 2': calibrating the X for transferring the nominal charges from the model into a CPI-X formula.

467. Ofcom has a view of general inflationary pressure assumed in Stage 1, but not that assumed in Stage 2. It is vital that, under the use either of CPI or RPI, that the assumed level of general inflationary pressure used in 'Stage 1' is the same as that used in 'Stage 2'. BT expects Ofcom to be consistent in the level of inflation used in Stages 1 and 2 of the modelling, otherwise it would be building into its process the very same kind of forecast error that the RPI-X or CPI-X formula is designed to avoid⁷².

468. This problem is illustrated in the simplified example below which assumes prices start in line with costs, volumes are fixed and Pay is the only input. In this example, at Stage 1 Pay cost increases are assessed to be 2.8% based on a view of CPI inflation of 2.3%, and the control would be CPI+0.49%. If the same CPI inflation rate of 2.3% is not used in Stage 2, but rather a rate of 2% is used instead, then the effect is to inadvertently increase the real Pay input viewed against CPI from + 0.5% to + 0.8%. In this example, X in stage 2 would be set at CPI+0.78%.

Table 2 – Illustrative effect of using inconsistent inflation assumptions

Stage 1 - Financial Modelling Stage				
		Year 1	Year 2	Year 3
CPI	2.30%	102.30	104.65	107.06
Pay / Prices	2.80%	102.80	105.68	108.64
Costs/CPI		100.49	100.98	101.47
		Implied X =		(+) 0.49%
Stage 2 – Calibrating the price control X				
		Year 1	Year 2	Year 3
CPI	2.00%	102.00	104.04	106.12
Costs / Prices	2.80%	102.80	105.68	108.64
Costs / CPI		100.78	101.57	102.37
		Implied X =		(+) 0.78%

⁷¹ Calculated on a Compound Annual Growth Rate (CAGR) basis.

- A 2% nominal price reduction over 3 years implies prices of 100 reduce to 94.12 at the end of the period.
- 100 times (1+CPI) times (1-4.20%) for three years = 94.12
- 100 times (1+RPI) times (1-5.13%) for three years = 94.12

⁷² Fixed Access Market Reviews consultation document , paragraph 3.157. The difference here is simply that rather than forecast and outturn being different, Ofcom is imputing different forecasts.

E.) Capital costs

469. Regarding capital costs, the inflation index changes the time profile of cost recovery, although when used consistently over time it should not change the Net Present Value of allowed costs. Using a lower index, say CPI rather than RPI, would increase the rate of allowed depreciation in the short term but lower it in the long term⁷³. The choice of index should not matter in the fullness of time, although it does determine *when* costs are allowed.

F.) Effect of index on allowed costs

470. The combination of the points above means that nominal prices should be higher under CPI applied to both operating and capital costs than under RPI, as operating costs will not change but capital costs increase in the short term⁷⁴. Alternatively if, as Ofcom proposes in its consultation, RPI is being used for capital costs anyway, and operating costs are the same whether CPI or RPI is used, then nominal prices should not depend on the choice of index.

471. This is why we ask that Ofcom why the choice of index will impact prices. As long as there is consistency in terms of inflation forecasts across all those aspects of the model then nominal prices ought not depend on the choice of index.

G.) WACC

472. Another factor to consider is the WACC. The nominal WACC should not depend on the index, however the 'real' WACC does depend on CPI or RPI. For example, a real WACC of 0% against RPI will be equivalent to a real WACC of more than 0% using CPI if RPI is expected to be higher than CPI. BT understands that this would be captured by the deflating approach which Ofcom refers to in the Consultation:

*'the real cost of capital can be obtained from this nominal cost of capital by either deflating the nominal WACC by RPI (for an RPI real terms model) or by CPI (for a CPI real terms model).'*⁷⁵

H.) Input costs

473. BT does not consider that the movement in input costs points towards CPI. The linkage between pay and inflation can be seen by examining wage settlements agreed between BT and the Communications Workers Union (CWU). As shown in the Table below, pay settlements in the past have typically been very close to the rate of RPI at the time the agreement was reached. This has all been in the context of a very weak labour market as the UK has been either in recession, or in a period of very weak economic growth.

⁷³ That is, the shape of the cost recovery curve over time is flatter using CPI than under RPI. A lower index makes the CCA curve more like the HCA curve, which in this context might be thought of as the curve when the index is set to zero.

⁷⁴ In the longer term, prices will be lower under CPI used consistently for operating and capital costs due to the CCA effect noted in the paragraph above.

⁷⁵ Fixed Access Market Reviews consultation document, paragraph 3.182

Table 3: Wage settlements between BT and the CWU, 2008 to 2013

Year	Pay Settlement	RPI in Previous March
April 2008	4.3%	3.8%
April 2009	0.0%	-0.4%
April 2010 (3 year deal)	3.0% + 3 month backdate	4.4%
April 2011	3.0% (part of 3 year deal)	
April 2012	3.0% (part of 3 year deal)	
April 2013	2.8% + £200 lump sum	3.3%

474. As the economy recovers, future pay deals are expected to increase by more than RPI and we note that the OBR forecasts that Wages and salaries will exceed CPI by 0.7% in 2014, 2.2% in 2015 and 2.8% in 2016.⁷⁶ This provides no argument for using CPI.

Table 4: extract from Table 3.5 in Office of Budgetary Responsibility publication *Economic and Fiscal Outlook*, March 2012

	Percentage change on a year earlier, unless otherwise stated						
	Outturn	Forecast					
	2011	2012	2013	2014	2015	2016	2017
CPI	4.5	2.8	2.8	2.4	2.1	2.0	2.0
RPI	5.2	3.2	3.2	2.8	3.2	3.6	3.9
Wages and salaries	2.7	2.8	2.4	3.1	4.3	4.8	4.8

475. BT also expects accommodation costs (including power consumed) to increase at close to RPI. Accommodation rental costs are expected to increase at 3% per annum, a rate below RPI but above CPI. However, BT is one of the largest users of electricity and power costs are expected to increase at considerably more than RPI.⁷⁷

Table 5: Forecast electricity costs – in real terms

	2012	2013	2014	2015	2016	2017
Industrial electricity p/kWh	7.5	8.6	9.7	10.2	11.1	11.0
Percentage increase		15%	13%	5%	9%	-1%

Source: Department of Energy & Climate Change

476. Overall, accommodation costs (including power consumed) will overall track RPI more closely than CPI. over the next three years.

⁷⁶ Office for Budget Responsibility. (March 2013). *Economic and fiscal outlook*, page 82
<http://budgetresponsibility.independent.gov.uk/category/topics/economic-forecasts/>

⁷⁷ Department of Energy and Climate Change. (15 October 2012). 2012 energy and emissions projections. Annex F:
<https://www.gov.uk/government/publications/2012-energy-and-emissions-projections>

1.) Use of nominal assumptions, RPI assumptions and CPI assumptions

477. Ofcom is using *nominal* cost changes, *RPI* for capital costs and then appears to intend to frame the control in *CPI-X* terms. BT's view it would be simpler and aid transparency for Ofcom to use only one method i.e. to use a nominal model and control; or an RPI-based model and control; or a CPI-based model and control. If one method is not deemed possible, or is considered to be inappropriate, using two of the three approaches would still be a significant simplification.

5.3 Weighted Average Cost of Capital (WACC)

478. This section of our response includes our answers to Question 15.1 in the LLU/WLR Charge Control consultation and Question 7.12 in the Wholesale Broadband Access Market Review consultation.

Question A15.1 Do you agree with our proposed approach to estimating the cost of capital for BT Group, Openreach and Rest of BT? Please provide reasons to support your views.

Question 7.12 Do you agree to the use of the "rest of BT" rate for the cost of capital assumption?

Summary

479. In Annex 15 of the LLU/WLR Charge Control consultation, Ofcom sets out its proposed approach for estimating BT's Weighted Average Cost of Capital in setting charge controls. Ofcom considers three main issues:

- Whether it should depart from the use of CAPM in estimating the WACC in setting regulatory charge controls.
- Whether recent data supports changes to the previous estimates of individual parameters within the WACC calculation as used in setting the Leased Line Charge Controls in March 2013.
- Whether it should change the approach to disaggregating the BT Group WACC for Openreach and Rest of BT.

480. Overall, Ofcom is proposing to take a consistent approach although it indicates that it will revisit its estimate of WACC ahead of any final Statement on these charge controls taking account of up the latest available spot data. BT broadly supports the consistent approach Ofcom is proposing to take with regard to each of the above issues, subject to the following:

481. As a matter of clear principle, Ofcom must adjust the RPI inflation assumption of 2.8% used to set the nominal WACC to ensure consistency with RPI inflation assumptions used elsewhere in the charge control (frequent reference is made to a figure of 3.3% as representing a consensus forecast). In particular, Ofcom has to use a consistent RPI figure in deriving the WACC calculation and in determining the final year asset inflation which drives final year holding gains and cost allowances.

- Ofcom must update its estimate of disaggregated WACCs for the Rest of BT to reflect up to date data on Mean Capital Employed within Openreach relative to the Rest of BT. This would change the weightings used in calculating the disaggregate WACCs from any given estimate of BT Group WACC.

- In considering the latest spot data ahead of issuing final Statements in early 2014, Ofcom should reassess the data on the risk free rate and on equity beta where we believe more recent evidence on trends and volatility may support higher estimates.

The use of CAPM to estimate BT's WACC

482. BT agrees with Ofcom's proposal to continue to use the CAPM approach to estimating BT's WACC. The CAPM approach has been used for some time to estimate the WACC in setting charge controls in the UK. As noted, the Competition Commission has also endorsed this approach on several occasions. Furthermore, investors in BT's debt and equity will make assumptions around Ofcom's approach to estimating the WACC in regulating prices and they will inevitably place considerable weight on consistency of approach over time. As a result, any move to change the approach to estimating the WACC could itself risk increasing the WACC over time as investors factor in greater regulatory uncertainty.

483. BT notes the issues raised by Europe Economics about potential changes to the use of CAPM to reflect "skewness" but agrees with Ofcom's provisional conclusion that there is unlikely to be a material impact on the Openreach WACC as a result of "positive skewness".

Ofcom's review of the cost of capital parameters

484. Ofcom has carried out a fairly wide-ranging review of the parameters within the cost of capital calculation. BT's main concerns with the approach taken to this review are in the two areas which have the greatest effect on the cost of capital, i.e.:

- the risk-free rate which has been extremely volatile in recent years; and
- BT's equity beta which has been consistently increasing over the last 2 years

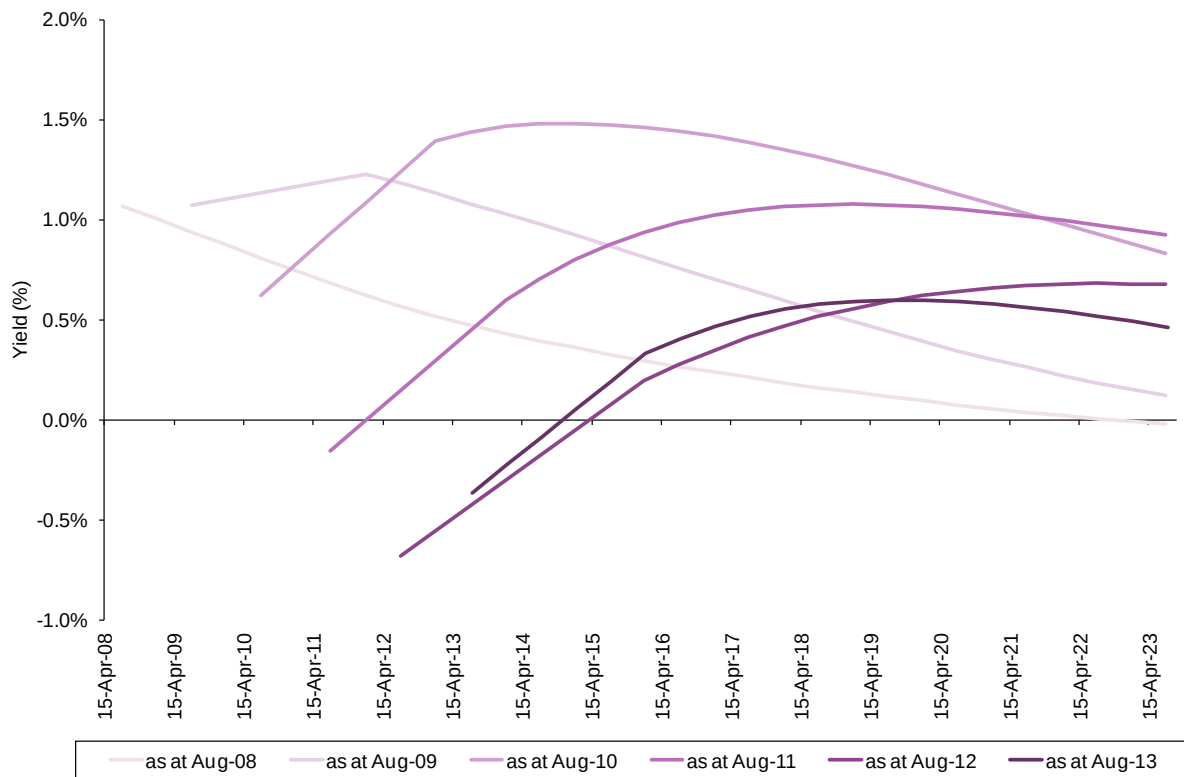
Real risk-free rate

485. Ofcom proposes to continue to estimate the WACC using historical averages of the yields on indexed linked gilts and estimates of forward yields. In that context, Ofcom reviews evidence provided by stakeholders in response to the CFI, and concludes that there is limited evidence to support any change compared to the rate of 1.3% used in estimating the WACC in the March 2013 Leased Line Charge Control.

486. In Table A15.3, Ofcom notes that data from June 2013 shows that some downward trend in yields on gilts has continued, but that longer-term rates are not materially different to those estimated in March 2013 based on December 2012 data.

487. However, BT would note that forward yields have been highly volatile in recent years. Figure 5 shows the fluctuations in the forward rate curve for ten-year risk free rates as observed over the last five years, showing that while spot rates have generally declined, forward rates have been highly volatile.

Fig 5: Ten-year real risk-free forward rates: current levels and comparable levels observed in recent years



Source: Analysis based on data from the Bank of England

488. In addition, the current trends, and specifically those observed over the last six months, are that rates are both increasing and highly volatile. Forward rates have increased in recent months and are around 1% higher than at March 2013, which is largely the cut-off date for Ofcom's analysis:

Figure 6: Real risk-free forward rates: recent market volatility



Source: Analysis based on data from the Bank of England

489. Whilst these rates may still be below historic averages, the analysis illustrates:

- rates are rising, and on current trends could be above Ofcom's assumptions during the LLU/WLR Charge Control period; and
- rates are highly volatile, and any point estimates must be treated with caution

490. In summary, BT agrees that caution should be taken in giving excessive weight to historical averages, and would argue that any change from 2013 Leased Line Charge Control estimates at the moment should be to increase the rate to reflect increased market volatility.

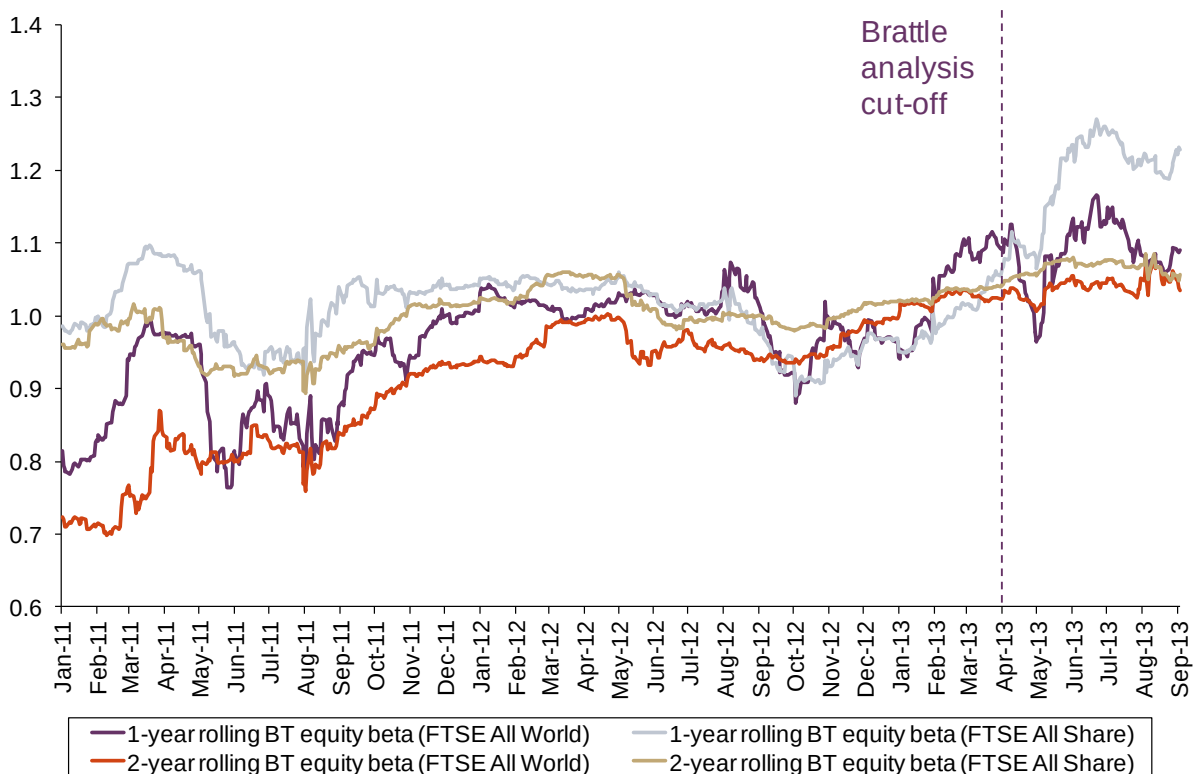
Equity beta

491. Ofcom has considered a range of new evidence, including detailed assessments from Brattle, in coming to a view on the equity beta. Ofcom proposes to give most weight to the 2 year equity beta, although it states: "...we recognise that in periods of unusual market conditions, this may introduce greater volatility into our WACC estimates."

492. In its summary of the Brattle analysis, largely within the section on beta disaggregation, Ofcom provides an explanation of the approach it has taken to evaluating the relevant beta estimates, and, specifically, provides analysis of trends in asset betas. These show that the actual beta for BT has increased significantly over the last two years, with the 2 year asset beta rising from 0.5 to 0.7. However, Ofcom makes no change to the asset beta used in setting the WACC in the March 2013 Leased Line Charge Control.

493. BT has reviewed and has sought to replicate the Brattle analysis and then considered the implications of rolling this data forward. The analysis shows that it is likely that the underlying trend will continue. Given that betas have been steadily increasing, the level of the rolling average can be expected to increase. The evidence also indicates that 1-year equity betas are currently significantly higher than in the past, in particular against the preferred measure of the UK All Share index, and therefore this is likely to translate into higher 2-year equity betas over the next year, as illustrated in the graph below.

Figure 7: Evolution of BT 1-year and 2-year rolling equity beta

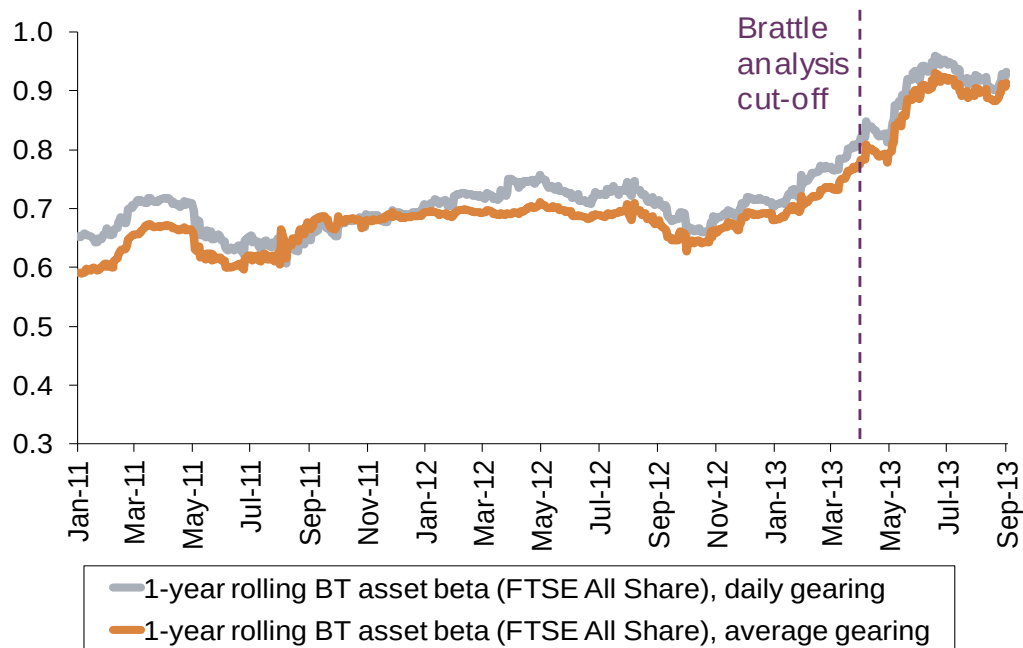


Source: Analysis based on data from Datastream

494. Given BT's gearing has also been falling (on a market value basis), the implications for asset betas are even clearer, as shown in the two graphs below, which illustrate trends in asset betas for alternative measures of gearing⁷⁸.

⁷⁸ The graphs consider equity beta adjusted for average gearing over the period, or asset beta calculated based on daily actual gearing taking into account equity market fluctuations.

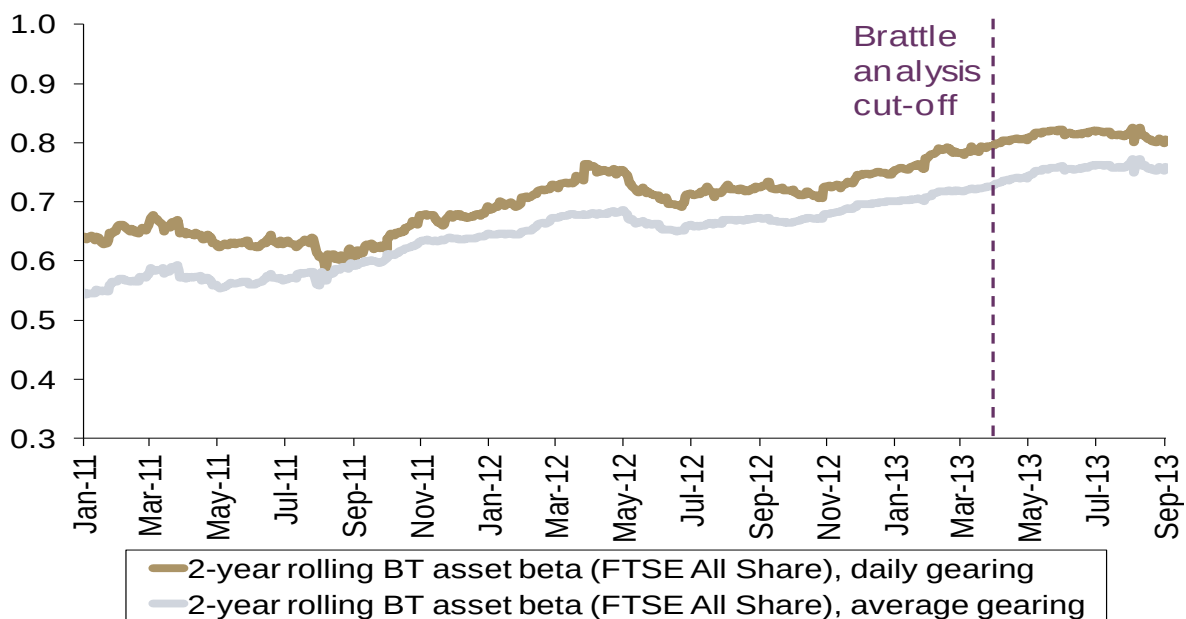
Fig 8: Evolution of BT 1-year rolling asset beta



495. Note: Gearing estimated as $\text{net debt} \div (\text{net debt} + \text{market value of equity})$. The daily gearing estimate is based on a daily estimate of the market value of equity; however an estimate of net debt is only available on an annual basis. Average gearing refers to a 1-year average in delevering the 1-year equity beta, and 2-year average in delevering the 2-year equity beta.

Source: Analysis based on data from Datastream

Fig 9: Evolution of BT 2-year rolling asset beta



Note: Gearing estimated as $\text{net debt} \div (\text{net debt} + \text{market value of equity})$. The daily gearing estimate is based on a daily estimate of the market value of equity; however an estimate of net debt is only available on an annual

basis. Average gearing refers to a 1-year average in delevering the 1-year equity beta, and 2-year average in delevering the 2-year equity beta.

Source: Analysis for BT based on data from Datastream

496. Therefore, all the analysis of the current trends in the asset beta points to Ofcom's assumption of a 0.7 beta being conservative against current market evidence. Ofcom should therefore reassess its approach in estimating beta as part of its overall assessment of the WACC.

Disaggregation of BT Group WACC

497. In the consultation, Ofcom discusses its approach to disaggregating the BT Group WACC, with references to past decisions and recent correspondence with stakeholders.

Estimates of the Openreach asset beta

498. BT has significant reservations with the principle of disaggregating the BT Group WACC: disaggregating then BT Group asset beta to estimate an Openreach asset beta based on a range of utility comparators places an unreasonable reliance on indirect data sources, when a direct data source (the observed BT Group asset beta) is clearly preferable.

499. CAPM provides a means by which the preferences of investors can be revealed, using market evidence. The value of such an approach is where it can translate direct evidence from financial markets into readily-understood metrics. So in the case of BT Group, the observed equity beta, derived from BT Group share price movements compared to the movements of the general market, provides direct evidence of how investors perceive the riskiness of the BT Group. This can then be used to derive the asset beta of the BT Group, again revealing the perceived underlying riskiness of the operating business. Any attempt to alter the asset beta or equity beta that is not based on direct market evidence necessarily weakens the predictive usefulness of the beta factors in question.

500. Indirect beta estimation will be arbitrary in comparison. BT notes Ofcom's comments in the consultation document that the increment has been set at 10% of the value of the BT Group asset beta, although the rationale for that percentage is opaque.

501. In this context, BT rejects calls from Europe Economics that the "wedge should be increased further" between the estimate of the Openreach asset beta and that for the Rest of BT:

- Europe Economics suggests the use of "fundamental beta analysis", using available accounting data, and Ofcom rightly rejects this approach, questioning whether it would produce superior outcomes given the level of judgement that would be required in assessing data. Ofcom also notes that it is not aware of any sector regulators having used this approach to support the calculation of the WACC for regulatory purposes.
- Ofcom also considers the points made by Europe Economics in relation to the systematic risk associated with BT's "new innovations". While there is a danger of reading too much into Virgin Media's asset beta in assessing the risks associated with NGA, BT agrees with Ofcom that there is no clear evidence to support the assertions made Europe Economics and any adjustments would be necessarily subjective in nature.

502. Overall, therefore, Ofcom must acknowledge the imperfect nature of the exercise it is trying to undertake in disaggregating asset betas at all. While regulatory consistency alone may support continuation of the previous approach to estimating the Openreach asset beta, BT would stress that any proposal to "increase the wedge" would need to return to first principles with Ofcom giving full consideration to the basis on which any disaggregation of the WACC is carried out.

Estimate of the disaggregated WACCs based on MCE weightings

503. Notwithstanding the above, Ofcom's current approach of disaggregating the Openreach and Rest of BT asset betas is also based on an assumed split of assets. However, this fails to recognise the increasing proportion of capital employed in the Openreach business, as set out in BT's Regulatory Financial Statements.

504. In previous cost of capital assessments in 2005, 2009 and 2011, the weight afforded to the Openreach business has been based on the MCE split from the previous year's RFS. In 2005, the exact split was used to determine the Rest of BT beta. In 2009 and 2011, when the prior year Openreach MCEs were 48% and 52% respectively, a 50:50 split seemed reasonable.

505. However, in the 2013 LLCC, when the 2011/12 Openreach MCE had increased to 58%⁷⁹ of the total MCE, a 50:50 split looks less reasonable, and we would advocate using the actual MCE figures to disaggregate the Rest of BT asset beta. The principle of regulatory consistency would dictate that the appropriate MCE should be used for disaggregating the asset betas.

506. By way of example, assuming all other estimates from the LLCC statement to be static, the impact on the Rest of BT WACC of using a 58% weight for Openreach's capital assets can be calculated:

- a. The BT Group asset beta remains the same (i.e. 0.67), as does the Openreach asset beta (0.60). We can then use the following equation to determine the Rest of BT asset beta:

$$\beta_{Group} = (\beta_{RoBT} * Weighting_{RoBT}) + (\beta_{Openreach} * Weighting_{Openreach})$$

- b. With an assumed weighting of 50:50 between Openreach and the Rest of BT, the asset beta of the Rest of BT is 0.74, as estimated by Ofcom in the LLCC. This resulted in a Rest of BT WACC of 10.0%.
- c. Changing the weighting to 58% for Openreach, the Rest of BT asset beta becomes 0.77. This would increase the Rest of BT WACC to 10.3%.

507. In the consultation, Ofcom asks whether it might be appropriate to consider other ways to disaggregate the BT Group asset beta. Ofcom suggests an alternative approach could be to increase the weight ascribed to the Rest of BT, if it were thought that the economic value of the assets were higher than the book value. However, it dismisses this idea on the basis that the evidence associated with the new approach would be uncertain, and therefore stability of approach is deemed more conducive to providing a stable climate for investment.

508. On this basis, an MCE approach to disaggregating the asset beta seems most appropriate. The evidence associated with this approach is taken directly from the audited regulatory financial statements, and is therefore a strong evidence base on which to estimate disaggregated asset betas.

⁷⁹ This figure was 57% in the March 2013 RFS. Using this percentage rather than 58% does not change the analysis materially.

5.4 Immediate removal of directory costs from WLR rental

509. This section represents our response to Question 3.9 in the LLU/WLR Charge Control consultation document.

Question 3.9 Do you agree with our proposal to remove printed directory costs from WLR rental, and to do so immediately? Please provide reasons to support your views for ISDN30? Please provide reasons in support of your views.

510. We understand Ofcom's reasons for removing printed directory costs from WLR rental. However we do not think this should be done immediately. An abrupt removal of the directories charge will have a significant impact on how the directories industry works, and all parties concerned need time to assess the impact and put alternative arrangements in place.

Why a delay is necessary

511. Under the Universal Service Directive Ofcom have an obligation to make sure that "*at least one comprehensive directory is available to end-users in a form approved by the relevant authority, whether printed or electronic, or both, and is updated on a regular basis, and at least once a year*". This is currently discharged by default due to BT's blanket Phone Book distribution policy. Whilst the obligation on CPs under General Condition 8 (GC8) is only to provide a printed directory on request, we believe a delayed change is better than a sudden, immediate one to avoid consumer harm. We suggest that delaying removal of the WLR charge by two years would reduce the risk that consumers are left without the access to directories that they are entitled to. This is for a number of reasons:

- It would allow BT time to adjust/modify our existing long term contracts for production and distribution of the Phone Book. These are planned months in advance and as the final statement is not due to be published until January 2014 this would not give much time to change these arrangements.
- It would allow other CPs time to weigh up their options and put alternative arrangements in place to meet GC8, including:
 - Continued compliance via BT: this would require new commercial arrangements to be put in place;
 - New ways in which CPs could comply with GC8 on their own: this would require them to establish their own production and distribution process.
- If Ofcom's proposal of an immediate cease of funding from WLR went ahead, the financial consequences might lead BT to stop blanket distribution of Phone Books and only deliver to our own retail customers. This would potentially leave large numbers of vulnerable consumers and communities without access to the directory products to which they are entitled.
- If BT Retail did only deliver to our own customers then it could leave other CPs in breach of their obligations under GC8 for their customers who wanted a Phone Book.

Alternative arrangements will take time to put in place

512. It is possible that other CPs are not aware of the complexities of producing and distributing their own printed directories. The necessary steps would include:

1. Content Management

- a. Geographic edition and scope planning to determine number of UK editions and align AZ content
- b. Devise publishing schedule in line with 1a to determine key activities and seasonal publishing dates to meet customer demand
- c. Negotiation of licences to obtain AZ Data content feed
- d. Page layout and design decisions including editorial content, typography, page furniture and any other advertising or information content
- e. Cover design and branding decisions
- f. Agree and implement data security controls in line with prevailing legislation

2. Commercial Planning

- a. Decide on book size and format (e.g. A4, A5 or bespoke, perfect bound and any other quality must haves)
- b. Paper and cover board
 - i. supply sourcing and contract negotiation with paper supplier(s)
 - ii. consumption planning and management
 - iii. lead-time planning, shipping, storage
- c. Demand forecasting – volumetric modelling to establish customer demand plus pagination and print volumes for selected printer
- d. BCM process and key date planning to avert risk of process breakage
- e. Resource planning and recruitment of necessary knowledge and experience
- f. P&L modelling, cost planning and price point decisions

3. Compilation & Pre Press

- a. Sourcing and purchase of pagination software to convert data feeds into print ready pages, or development of in-house bespoke software
- b. Provision of hardware, networks and security procedures
- c. Design and implement quality checking and proofing procedures to ensure content accuracy
- d. Establish secure data transfer process and protocols with selected printer

4. Production & Publishing

- a. Sourcing and contract negotiation with UK or overseas printer with manufacturing capability for chosen format, paginations and print run volumes
- b. Negotiation of print contract and implementation lead-times
- c. Capacity planning and production schedule negotiations
- d. Specification of packaging requirements for transportation to distribution or storage sites
- e. Set up and implementation of quality control procedures and issue resolution

5. Distribution

- a. Sourcing and contract negotiation with haulage and storage suppliers
- b. Transportation planning for storage or distribution sites
- c. Sourcing and contract negotiation with distribution service suppliers for targeted delivery to residential or business customers in single or multiple volumes

6. Customer Service & Complaints Team

- a. Source and implement CRM database to manage opt ins, volumes and VIP requirements
- b. Design and implement customer order and fulfilment systems
- c. Set up process for recording and resolution for content, quality or distribution complaints

- d. Establish referral process for customers of other CPs

7. Customer Communications Activity

- a. Communications strategy for informing customers about change to opt-in and how to obtain their local Phone Book
- b. Implementation of communications strategy including notice period for customers and transition from BT service

8. BCM & Contingency Planning to avert breach of GC8

- a. Consideration of impact of production delays on GC8

513. If, instead, CPs decide that they wish to continue sourcing Phone Books from BT, there would be the following considerations:

1. CP Order Pre BT Print Deadline

- a. More cost effective for CP as they can benefit from BT economy of scale – price will be volume based
- b. BT requires firm orders for each of BT's 168 editions in advance of each print deadline (NB order deadline for first 2014/15 book is around mid-March 2014)
- c. BT will offer collection ex works or delivery to CP address at additional cost

2. CP Order Post BT Print Deadline

- a. Less cost effective for CP as BT will arrange print to order with no economy of scale – price will be volume based
- b. BT requires firm orders for any of BT's 168 editions at any time
- c. Order fulfilment likely to be 4-6 weeks in off-peak periods, longer in peak periods
- d. BT will offer collection ex works or delivery to CP address at additional cost

3. CP Order from BT Own Stocks

- a. Not available for other CPs unless BT assesses no risk to BT's own customers
- b. BT requires firm orders for any of BT's 168 editions at any time, with order acceptance strictly subject to availability

4. Option for CP to have own-branded covers

- a. As (i) or (ii) above but will additional cost for production change to accommodate own-branded cover
- b. CP must adhere to BT format and specifications

514. We would suggest this will all take time to agree.

Potential consumer harm

515. Whilst many customers now use online methods to get directory data, Ofcom's research has shown that 30% of the population has used the phone book in the last 12 months. We have carried out our own independent research, through ICM, who conducted 1,000 telephone interviews during May 2013 with adults representative of the online and offline population. This research has shown the proportion of people who have used the BT Phone Book in the last year to be 39%, rising to 47% for the particularly vulnerable 65+ category. In addition:

- 1. 51% of adults use a printed directory to help them find a local business (rising to 70% in the 65+ category)
- 2. When asked "Which of these [options listed] might you use to find a local business?", 72% of those aged 65+ mentioned the BT Phone Book.
- 3. £33m of revenues for businesses were generated via the Phone Book.
- 4. The average spend was £562 on products & services found via the Phone Book, rising to £917 for the 65+ category.

5. 59% of adults said they would opt to continue receiving their BT Phone Book and/or value receiving it.

516. This research shows that customers, especially older customers, still value a printed directory.

Conclusion

517. Therefore we strongly recommend delaying removal of the charge until 1 April 2016. If this “sunset clause” is in place, we will continue with blanket distribution until alternative commercial arrangements are established.

5.5 Use of glide paths

518. In the LLU/WLR Charge Control consultation, Ofcom asks the following question:

Question 3.11 Do you agree with our proposal to use glide paths to align charges with costs for these charge controls? Please provide reasons to support your views.

519. BT understands the reason for Ofcom’s general preference for glide paths and is generally supportive of its approach. As Ofcom states in the consultation, such an approach avoids discontinuities in prices over time and leads to a more stable and predictable regime for investors and for purchasers⁸⁰. Crucially, it will also maintain efficiency incentives for cost reduction⁸¹.

⁸⁰ Fixed Access Market Reviews consultation document, paragraph 3.143

⁸¹ Fixed Access Market Reviews consultation document, paragraph 3.144

Annex – Equivalence of Inputs as an SMP remedy

1. As highlighted in our answer to Question 10.4, we disagree with Ofcom's proposal to impose an Equivalence of Inputs (EOI) remedy on WLR, LLU and wholesale ISDN12 and ISDN30. This annex sets out our position in further detail.

Ofcom's proposal is not objectively justified

2. Ofcom proposes to depart from the current formulation of the undue discrimination remedy and impose a stricter form of non-discrimination on WLR, LLU, ISDN2 and ISDN30 without clear and robust justification of the competition problems Ofcom seeks to address and that cannot be addressed without imposing on BT a more onerous remedy given Ofcom's experience of BT's behaviour in the preceding market review and the efficacy of the Undertakings and hence its expectations of BT's behaviour in the coming market review period.
3. In paragraphs 10.97 to 10.100, Ofcom describes the competition problems that serve as the justification to impose a stricter remedy on BT. Ofcom's focus is on BT's incentives to treat its downstream divisions more favourably for example in terms of prices, quality or product functionality. It is striking that this is not a new concern. These have been highlighted as concerns in the previous reviews. There is nothing new in conceptually that did not form part of the justification for the remedy of no undue discrimination that is currently imposed on BT. Ofcom now finds that the most onerous form of non-discrimination is necessary on the basis of the same competition concerns without additional justification why this is the case. BT contends that in the absence of any further identified problems, or a clear explanation of why the existing remedy is insufficient to address its potential concerns, Ofcom has no justification for an increase in the intensity of the remedy imposed on BT.
4. Similarly, Ofcom has not provided any evidence about the issues that the existing remedy on WLR, LLU, ISDN2 and ISDN30 failed to address and hence to demonstrate that it is justified to impose on BT the strictest form of the non-discrimination. BT is not aware of any CP's complaints that BT has engaged in discriminatory behaviour in the wholesale broadband access market and there have certainly been no Ofcom investigations or adverse findings so far. Absent specific problems that have arisen during the current market review, BT finds that the most onerous form of non-discrimination remedy is unjustified.
5. Ofcom has also failed to meet the justification standard set out in Article 7 of the Commission Recommendation. Article 7 says that the NRA must first establish that it is appropriate, proportionate and justified to impose non-discrimination as a SMP remedy to address the nature of the problem identified in the relevant market as Article 8(4) of the Access Directive requires. The NRA should then examine as a second step whether it would be proportionate to require SMP operators to provide services on an EOI basis taking it account all relevant factors including a number of factors expressly set out in Article 7. Ofcom has not taken that second step of showing why EOI is needed over and above a conventional non-discrimination remedy.

EOI as an SMP remedy is disproportionate

6. It would be disproportionate for Ofcom to impose EOI as an SMP remedy on WLR, LLU, ISDN2 and ISDN30 as currently proposed for the following reasons.
7. Firstly, building on our comments in the paragraphs above, Ofcom has not shown that no lesser measure will suffice. BT's contention is that in the absence of an identifiable "problem" that cannot be addressed by a conventional non-discrimination remedy, it is disproportionate to impose an obligation which is more onerous.

8. Secondly, Ofcom also make the argument that the obligation will not be disproportionate because it is no more onerous than the Undertakings obligation which has already been imposed. BT makes two points in response to this:
 - It is inappropriate for Ofcom simply to argue that because EOI is an Undertakings obligation, it is automatically not disproportionate as an SMP remedy on WLR, LLU, ISDN2 and ISDN30. It is for Ofcom to demonstrate, in the context of the market review, that it is a proportionate SMP remedy. For the reasons given above, it has not made out that case.
 - BT disagrees with Ofcom's contention that, as currently drafted, the current obligation is no more onerous than the Undertakings EOI obligation on WLR, LLU, ISDN2 and ISDN30. The definition of the SMP conditions does not align with that of the Undertakings. There is a very real risk that some activities that may be allowed by the Undertakings could be seen as a breach of the SMP obligation.
9. The Undertakings contain a panoply of rules that create a complex, balanced and intertwined system where EOI is one provision amongst numerous other. The EOI SMP obligation however does not contain any of the checks and balances found in the Undertakings: for example, special provisions about systems, processes and information sharing. Similarly, it does not afford BT the protection in circumstances where Exceptional Incidents occur, which is provided for in the Undertakings. Nor does it contain the safeguard built into the Undertakings which allows BT to apply for Exemptions from EOI where this may be appropriate.
10. In conclusion, in a market where the economic evidence shows that competition is increasing, the introduction of an additional layer of regulation such as an EOI obligation on WLR, LLU, ISDN2 and ISDN30 is neither justified nor proportionate and contrary to Ofcom's principles to operate with a bias against intervention.

Ensuring a consistent and coherent approach to EOI

11. We now turn to the approach Ofcom should take, if despite BT's submissions above, it is minded to impose EOI as an SMP remedy. The first part highlights some examples of obvious differences between the two regimes that could lead to diverging outcomes. The second part deals with possible alternatives to address the risk of inconsistent interpretation of EOI between the Undertakings and SMP requirements.
12. The first and key difference lies in the wording of the EOI definition in the two legal instruments. In particular, the explicit prohibition in the SMP remedy that the Undertakings are not an objective justification for differences in the provision of an EOI service absent Ofcom's consent.
13. Whereas the definition of EOI in Part 2 of Schedule 1 mirrors the definition of EOI in the Undertakings (bar some minor differences), there is a striking omission. The EOI SMP definition does not include point (d) of the Undertakings definition which provides that in the context of EOI in the Undertakings "the same" means exactly the same subject only to:

"(d) such other differences as are specified elsewhere in these Undertakings, including where Commercial Information is provided in accordance with these Undertakings to any of the nominated individuals occupying the roles and functions areas (and their relevant external advisers, subcontractors and agents) listed in Annex 2."
14. The differences between the two texts raise the obvious question of whether the EOI SMP remedy prohibits "differences" that the Undertakings allow. Our understanding is that Ofcom does not intend that SMP EOI should be any more onerous than Undertakings EOI. So, if that is indeed the case, the Condition will need to be modified to ensure parity. If on the other hand Ofcom does intend the SMP condition to be prohibit differences that are permitted by the

Undertakings, then this totally undermines Ofcom's argument that the SMP condition is not a disproportionate remedy because it does not require us to do anything more than we do at present.

15. By way of example, the Undertakings permit in clearly defined instances individuals performing certain roles need to share information in order for the company to fulfil its statutory duties (like the annual finance accounts) or perform legitimate business needs (strategic steer and management). The SMP condition as is currently drafted does not mention such differences permitted by the Undertakings. If the intention is that it does, then this should be made explicit. If that is not the intention, then the SMP condition is more onerous than the Undertakings, and hence Ofcom's contention that the SMP EOI condition is no more onerous than the current situation would fall.
16. As a further example, does the SMP condition prohibit the differences that are allowed by means of an exception, exemption or a variation to the Undertakings? Again, BT would contend that if the SMP obligation is to be no more onerous than the Undertakings obligation, the SMP obligation should recognise these. We note paragraph 10.102 of the consultation document states that it is not Ofcom's intention that EOI as an SMP condition would require BT to reengineer existing systems and processes in order to comply with the proposed condition. We stress however BT's processes and systems did change following the Undertakings and among others accommodate the Annex 2 provisions of the Undertakings. Does BT need now to review and change those systems and processes because the SMP definition does not make clear that differences permitted under the Undertakings are also permitted under the SMP condition? If we need to do this, the SMP condition is more onerous than the Undertakings.
17. If Ofcom is minded to impose EOI as an SMP condition on WLR, LLU, ISDN2 and ISDN30, but will stand by its assertion that the SMP EOI condition should be no more onerous than the Undertakings, then the wording of the EOI SMP definition should mirror that of the Undertakings and acknowledge that differences permitted under the Undertakings are not a breach of the SMP condition.
18. Alternatively, BT requests that Ofcom at the time Ofcom publishes its final statement, Ofcom grants its consent that any existing differences that are specified in the Undertakings including their exemptions and variations as relevant to the existing BT products that fall within the fixed access markets and are presently subject to an EOI Undertakings obligation.