Combined Response of Everything Everywhere, and MBNL

Business Connectivity Market Review and Leased Lines Charge Control

Non-Confidential version

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Table of contents

1 Executive summary

We welcome Ofcom's proposals to continue regulating the very important business connectivity markets. The proposed charge controls are rigorous and should be challenging but eminently achievable for British Telecommunications plc (BT). However, in order to ensure that the benefits of these charge controls flow through to the provision of mobile backhaul (and hence assist in promoting investment in next generation mobile networks, innovation in mobile markets, maintaining competitive mobile markets and ultimately benefit mobile consumers) we propose that a number of key adjustments need to be made to Ofcom's proposals.

Mobile networks are carrying ever increasing volumes of traffic. This is being driven by an explosion in demand for mobile data, which is forecast to continue, as consumers increasingly use mobile broadband and especially smartphones. As a result, mobile network operators need to plan significant increases in capacity. The next generation of mobile (4G LTE) in the UK will both enable and fuel these trends. A key implication of this is that demand for backhaul services from radio base station sites back to the mobile core networks will increase significantly over the course of the next few years.

Against this background of increasing needs for backhaul capacity, BT is an unavoidable trading partner for UK mobile networks. As is described in detail below, the needs of mobile backhaul mean that it is efficiently purchased for bulk numbers of sites and provided (for example, using the BT MEAS product) from multiple sites providing connectivity back to the mobile core networks. The unique position of BT, resulting from the ubiquity of its network, means that a significant proportion of such backhaul requirements will inevitably be purchased from BT. In many cases, BT will be the only option for the provision of this essential link in the network.

Ofcom's approach in the BCMR and LLCC consultations fails to take account of the way mobile backhaul is efficiently provided and purchased in practice. The assessment should take account of the needs of mobile network operators to purchase a managed service linking multiple sites on a national basis. The key adjustments to Ofcom's proposals we believe are required are:

- We consider that the conditions of competition relating to mobile backhaul are distinguishable from those for the provision of other types of circuits, given the way in which they are purchased. Arguably this could lead to the delineation of a separate relevant market, but an alternative reasonable approach would be to recognise these differences in the way remedies are set. The practical implications are largely equivalent.
- Removal of the cost orientation remedies is not appropriate. The proposed sub-caps will not provide sufficient protection to ensure that individual charges are not adjusted to inappropriate levels. There are no specific changes of circumstances which warrant this de-regulatory change. Cost orientation has worked alongside charge controls and, whilst it may not be perfect, these remedies should continue to complement each other. What is more, Ofcom's assessment of the benefits of cost orientation ignores some of the benefits it brings over and above those provided by a charge control. Understanding the cost basis of inputs into a managed service is an important element of being able to assess whether the prices for that managed service are appropriate and to enable negotiation with BT given its enduring market power.
- We disagree with the proposed larger geographic market in London. In relation to mobile backhaul products in particular, we consider that the definition of any specific London market is not appropriate given the requirements for a ubiquitous service, and the unique advantages that BT has in being able to offers such a service.
- Ofcom should revisit its decision not to require passive remedies to be provided. BT's strong market position in relation to its MEAS product can only be addressed in the long term by actively promoting greater competition. We think Ofcom has over stated the risks

associated with this approach, all of which could be adequately addressed through appropriate regulation. Ofcom has also underplayed the potential benefits which greater competition in these markets could bring – greater competition which is only realistically achievable through allowing other operators access to dark fibre or BT's physical infrastructure so that they can provide truly competing products.

2 Introduction

This document provides a combined response to Ofcom's proposals with respect to the Business Connectivity Market Review (BCMR) and the associated Leased Line charge control proposals (LLCC), collectively "the Consultations".[1] Everything Everywhere (EE) and Hutchison 3G UK (Three) jointly purchase products related to these markets through their joint venture Mobile Broadband Network Limited (MBNL). MBNL operates a shared radio access network (RAN) for its shareholders (EE and Three operate their own core networks, retain their own spectrum licences and compete at a retail level). As such, MBNL is a significant purchaser of mobile backhaul services for the shared RAN to link radio base station sites to the respective core networks. BT is a major supplier of such backhaul services. EE also purchases products in markets relevant to the Consultations directly on its own account (for example, in relation to its legacy Orange UK network which is still in the process of being integrated into the MBNL combined networks).

This response is on behalf of EE and MBNL. EE has some additional comments in relation to the impact of the current market review on its business not related to MBNL, which are being provided in a separate letter.

EE was formed in July 2010 through a joint venture of Deutsche Telekom and France Telecom combining their subsidiaries Orange UK and T-Mobile UK. It operates those brands in the UK and has over 27 million mobile and fixed broadband customers. EE continues to invest heavily in its network and customer service, and plans to invest over £1.5 billion in the next three years further to improve its network and introduce fourth generation (4G) Long Term Evolution (LTE) mobile broadband services. Ofcom's decision of 21 August 2012 to liberalise its 1800 MHz spectrum licences will enable more rapid roll out of 4G services.

MBNL, [CONFIDENTIAL] Upgrading backhaul capacity and capability is therefore a key element of the network investment required in the coming years – and especially over the period of the charge controls proposed in the Consultations.

Data traffic carried over mobile networks is increasing significantly, as Ofcom is well aware. Forecasts of future mobile traffic suggest this trend will continue over the coming years. For example, the well known "Visual Networking Index" (VNI) produced by CISCO forecasts that global mobile data traffic will grow over the period 2011 to 2016 at a compound annual growth rate (CAGR) of 78% (resulting in an eighteen-fold increase over that five year period). CISCO forecasts for the UK are that mobile data traffic will grow twelve-fold from 2011 to 2016, a CAGR of 65%, which is based on the average mobile connection generating 4,595 megabytes of mobile data traffic per month in 2016, up 983% from 424 megabytes per month in 2011, a CAGR of 61%.[2] Such increases in the capacity requirements of mobile network operators naturally lead to significant increases in the capacity required to backhaul this traffic from radio sites to the core networks.

Indeed, backhaul capacity needs are likely to be understated by such bald forecasts of the aggregate traffic carried. First, such forecasts do not consider the implications of mobility of

[1] Set out respectively in "Business Connectivity Market Review: review of the retail leased lines, wholesale symmetric broadband origination and wholesale trunk segments markets: Consultation" published on 18 June 2012 and "Leased Lines Charge Control: proposals for a new charge control framework for certain leased lines services: Consultation" published on 5 July 2012.

[2] See http://www.cisco.com/web/solutions/sp/vni/vni_mobile_forecast_highlights/index.html#~Country

capacity requirements. The very nature of mobile networks means that traffic will vary in particular geographical areas over time, meaning that backhaul needs to be dimensioned to support the peak traffic requirements in any particular area. Central urban business districts will see such peaks during the day whilst traffic peaks in more suburban areas are likely to be at different times of day. Backhaul capacity needs to be sufficient to service the peaks in both types of area leading to an overall requirement for greater capacity than the simple aggregate figures suggest.

Second, mobile networks have significant overheads to carry traffic over a backhaul network which also need to be accommodated. As well as the standard addressing and framing information and authentication and encryption information which IP traffic requires, mobile specific overheads include additional signalling and data flows required for network administration and control. For example, W-CDMA networks support "soft" handover which greatly improves customer experience in any particular data session but effectively means that data needs to be backhauled from two different cells for the same data session.

Third, Ethernet differs from Traditional Interface (TI) products such as Time Division Multiplex (TDM) based services in the way traffic is loaded onto the line, which results in a direct correlation between performance and loading once a certain threshold is achieved. To achieve low latency backhaul requires line loading to around [CONFIDENTIAL] of total throughput capability. This means that, with the addition of an upgrade threshold to ensure performance constraints are not reached, upgrades in capacity are often required when backhaul lines are only at around a [CONFIDENTIAL] loading.

All of these factors combined therefore mean that mobile networks will face greatly increasing backhaul requirements over the coming years. Microwave links self supplied by mobile networks can provide some of this capacity. However, as noted in the Consultations, microwave does have some limitations, most notably resulting from the fact it can only deliver traffic over line of sight. In order to provide the capacity required at a very large number of radio sites, there will therefore be an increasing need for fibre used to provide Ethernet connectivity. In many geographical locations BT is the only provider with the necessary network infrastructure to provide such backhaul. As discussed further in section 3, the practicalities of operating an effective backhaul network mean that in the UK BT is effectively an unavoidable trading partner for a mobile radio network operator.

Proportionate and effective regulation of the products which BT sells to provide such mobile backhaul services is therefore important to ensure that mobile networks can develop and invest efficiently over the coming years. This will be a period when mobile data is increasing and mobile networks will also be a key part of delivering the government's aspirations for UK broadband.[3] The development of the next generation of 4G mobile will not only provide greater mobile connectivity, for example over the rapidly increasing number of smartphones, but also provide broadband to customers currently unable to receive it.

4G is now a proven technology for providing broadband to remote rural areas. EE, for example, has already run trials delivering broadband to rural communities using LTE technology in both Cornwall[4] and Cumbria.[5] This will only be possible with the appropriate backhaul arrangements being in place, which in practice will often mean use of BT infrastructure.

There is much to welcome in the Consultations: it is entirely appropriate that Ofcom is continuing to set charge controls in markets vitally important to the wider communications industry. The

[3] See http://www.culture.gov.uk/what_we_do/telecommunications_and_online/7763.aspx. The Government's stated ambition is for superfast broadband (download speeds greater than 24MBps) to be provided to at least 90% of UK premises and for universal access to standard broadband with speeds of at least 2MBps. LTE based networks could contribute to achieving these goals.

[4] See http://everythingeverywhere.com/2012/01/25/everything-everywhere-and-bt-wholesale-extend-successful-4g-lte-trial/ and http://everythingeverywhere.com/2012/06/22/everything-everywhere-trials-4g-in-cumbria-video/

[5] See http://everythingeverywhere.com/2012/06/26/everything-everywhere-4g-lte-trial-in-cumbria-benefits-local-businesses/ and http://everythingeverywhere.com/2012/08/20/the-4g-cumbria-trial-what-4g-means-for-me-2/

concern on migration to higher bandwidth and newer services - broadly seen in the shift from Traditional Interface (TI) to Alternative Interface (AI) products - and focus in relation to appropriate incentives on all parties is also clearly justified. This response focuses on the key areas from a mobile perspective where we are concerned that the outcome of the BCMR will not support the greater competition, innovation and development of the communications sector.

This response therefore focuses on a number of key points covered in the following sections:

- Section 3 considers Ofcom's market analysis (market definition and assessment of market power), focusing on the extent to which it is appropriate for mobile backhaul services and the proposed geographic market definition;
- Section 4 addresses the proposed SMP conditions and in particular sets out why we consider that Ofcom's approach of not imposing any requirements in relation to either cost orientation and dark fibre / physical infrastructure access are inappropriate; and
- Section 5 sets out our comments on the proposed charge controls.

Section 6 sets out our responses to the specific consultation questions in both of the Consultations, covering more detailed implementation issues which are not addressed by the headline points in the main body of this response.

3 Market definition and findings of significant market power

As was set out in the response to the call for inputs,[6] we consider that the competitive landscape has not significantly changed since the previous BCMR. BT had and has a commanding position in supplying products in most of the markets under consideration. We therefore broadly welcome Ofcom's broad continuity in how markets have been defined since the previous market review. The broad wholesale product market split into TI services and AI services (essentially Ethernet based services) continues to make sense. We also welcome the definition of an additional Multiple Interface (MI) market for high bandwidth connectivity and the finding of BT's SMP in this market (outside of the Western, Eastern and Central London Area or WECLA). This is consistent with our view that there will be an increasing need to purchase greater bandwidth connectivity and that there will be little choice in many cases but to source this from BT (as described in the previous section of this response).

As such, we agree with much of the proposed market analysis in the Consultations.

We have two specific areas of concern about the market analysis in the BCMR consultation. First, and most fundamentally from our perspective, Ofcom's approach fails to recognise the specific nature of mobile backhaul. This is inevitably purchased from BT as an "end to end" service (what we mean by this is explained in more detail below) and BT is effectively an unavoidable trading partner for UK mobile network operators.

Second, the proposed extension of the London area which is considered "more competitive" (or at least, in the case of the lower bandwidth AISBO markets to have a greater prospect of competition), is not robustly based. We therefore do not believe that Ofcom has adequately made the case for expanding the Central, and Eastern London Area (CELA) into the larger WECLA.

The remainder of this section therefore:

- provides a more detailed description of mobile backhaul arrangements in the MBNL network for carrying traffic from radio sites to the respective core networks of the parent companies using BT inputs;

[6] See MBNL and Everything Everywhere Consultation response to Ofcom Business Connectivity Market Review Call for Inputs, especially the fourth bullet of the Executive Summary.

- having set this backdrop, the next sub-section provides our views on the appropriate market analysis of mobile backhaul services purchased from BT through MBNL; and
- provides our more detailed views on why we disagree with the proposed geographic market definition in the London area.

3.1 Current MBNL backhaul arrangements and the products purchased from BT

MBNL purchases a managed service backhaul product from BT. In common, we understand, with other mobile networks this is provided through the BT Managed Ethernet Access Service (MEAS) which is the mobile specific product variant of wholesale Ethernet.[7] This product provides connectivity from individual radio sites to the respective network cores of MBNL's shareholders. Given the number and diversity of radio sites involved, it is an important feature of the product that this enables connectivity to be purchased on an aggregated basis from multiple (thousands) of radio sites to the core network sites (typically mobile switching sites or MSCs).

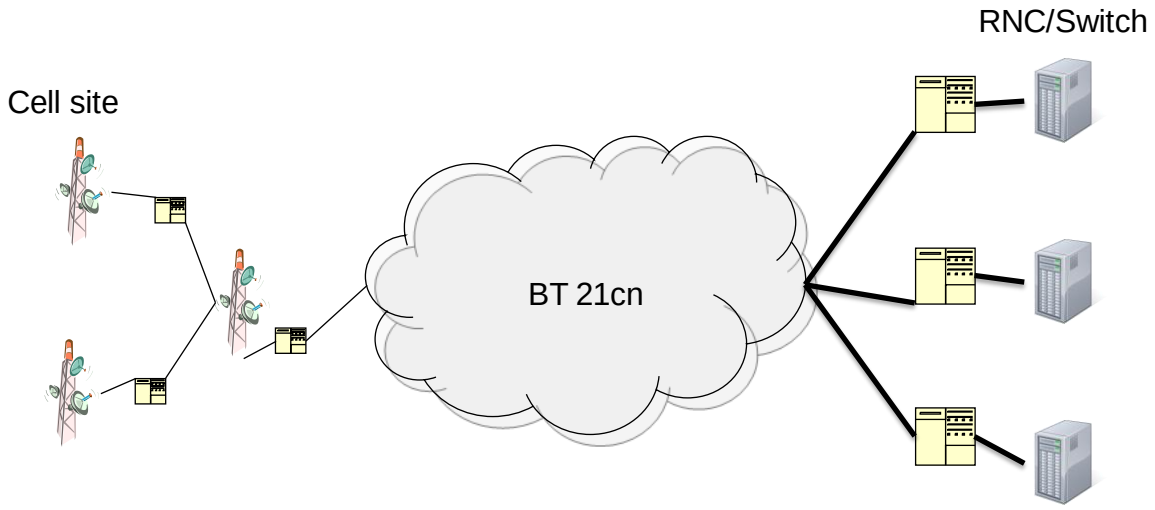
The connectivity being purchased is not only the backhaul which connects an individual site, but the end to end product which provides capacity across the network tail to the site and back across BT's 21CN fibre network to the MSCs (as shown by the BT 21CN cloud in Figure 1 below). This enables, for example, the traffic to be aggregated from a number of sites to be carried across BT's network to the MSCs. The traffic carried across BT's 21CN network can thus be efficiently managed and multiple overheads and peak capacity requirements do not need to be reserved across the whole of BT's network for each site. [CONFIDENTIAL]

In addition to the basic requirement of network reach to individual radio sites, it is therefore critical that the suppliers of leased lines for mobile backhaul have the capacity to provide a dedicated service from the mobile base station sites back to a mobile operator's core network layer (from where the mobile network operator can route traffic to its destination, wherever that may be in the UK or globally). Figure 1 provides a generic illustration of this service requirement.

Other operators can provide this service in certain geographic areas where they have appropriate infrastructure - most notably Virgin Media (VM) is able to provide a similar service within its former cable franchise areas. However, no other operator has the ubiquity of network provided by BT's 21CN infrastructure. [CONFIDENTIAL] BT will almost inevitably be one of the required backhaul providers for any UK mobile network.

[7] MEAS uses pseudo wire technology to carry native E1 (2Mb/s), ATM (8Mb/s) and 100 Mb/s Ethernet traffic between the mobile operators' cell and core sites in a single converged packet network. See, for example, https://www.btwholesale.com/shared/document/Products/Voice/IP_Voice_Services/MBNL_case_study_final_sept11.pdf.

Figure 1 Illustration of a generic mobile backhaul service with BT



MBNL's MEAS contract with BT for national mobile backhaul

Turning from the generic to the specific, MBNL purchases mobile backhaul, in the form of MEAS, to connect EE's and Three's core networks with radio sites. Figure 2 illustrates in more detail the basic architecture of how BT provides our current mobile Ethernet backhaul services. It is important to note that the mobile backhaul solution described by Ofcom in Figure 27 of the BCMR Consultation therefore does not accurately reflect how such services are, in fact, purchased.

Figure 2: [CONFIDENTIAL]

[CONFIDENTIAL][8]

[CONFIDENTIAL]

In short, BT's MEAS product offers an "any to any" connectivity of sites to core network which makes the operation of the mobile network overall more efficient.

Although Figure 2 relates specifically to MBNL's Ethernet backhaul service, TI backhaul products such as Radio Backhaul Services (RBS) and NetStream, and scope for Multiple Interface (e.g. EAD 1000) all require a similar backhaul service to the mobile operator's core network, albeit with different sized capacity circuits and types of equipment for those solutions.

[CONFIDENTIAL]

3.2 Market analysis of mobile backhaul services

Given the above description of how mobile backhaul is purchased as connectivity from multiple sites, we believe that this implies a different set of market conditions which justify treating the regulation of such services separately. The remainder of this section sets out why this would be justified.

Purchasing backhaul solutions from multiple providers introduces additional overheads through increasing operational complexity, making network design more complex, and a need to use multiple network management tools and systems. Basic issues such as fault identification and rectification become more complex if there are a greater number of networks involved. There are, of course, also greater administrative costs from negotiating and managing a greater number of contracts and relationships. This means that there is a natural limit to the number of backhaul providers which it makes sense to use. BT's ubiquity (combined with benefits achieved from the

[8] [CONFIDENTIAL]

"any to any" connectivity it provides) means that it is likely, if not certain, to be one of those providers for a UK mobile network. This reduces the competitive restraints on BT as a provider of mobile backhaul products.

As Ofcom is aware, MBNL purchases backhaul from VM.[9] [CONFIDENTIAL]

Microwave backhaul has relatively low operating costs compared to purchasing connectivity across third party fibre but has capital expenditure associated with it in terms of the radio equipment and spectrum licences. As such, [CONFIDENTIAL]

The incentives on operators are therefore to use alternative providers and microwave as much as is feasible, but there is a limit to the extent to which operators could credibly cease to purchase such services from BT. The ubiquity of BT's network also allows it to provide the "any radio site to any core site" connectivity described above which other networks are not able to provide. [CONFIDENTIAL]

In summary, developing alternatives to the BT MEAS product for a mobile network operator involve significant costs and initial investment, lead to additional on-going costs of managing the solution (which need to be lower than the competitive benefit which can be achieved to make it worthwhile) and involve a solution which requires the network operator to provide some of the functionality which BT provides for itself. For the reasons described above, backhaul needs to be purchased as a bundled product for a number of sites (and there are significant efficiency benefits from so doing). The competitive protection from there being alternatives in relation to part of this product (i.e. the access "tail" for certain sites) or regulatory protection for part of the product which is inputted into what BT sells the mobile operators (i.e. the AI/Ethernet charge controls) is therefore in practice limited.

Given these conditions of competition, it would be proportionate and reasonable to define a separate market in relation to the provision of mobile backhaul. Alternatively, these differing conditions of competition in relation to a specific set of products could be recognised in setting the SMP conditions as discussed further below. We currently consider that the latter solution is more likely to be practical and more consistent with Ofcom's wider approach in this market review.

3.3 The proposed Western, Central and Eastern London Area geographic market definition

We consider that there are two fundamental flaws to Ofcom's approach to defining a separate geographic market for the London area for wholesale leased lines products. First, Ofcom has not provided the evidence to support the extension of the CELA to the WECLA for leased lines used for serving business enterprise sites. Secondly, and more importantly, Ofcom's approach cannot be applied to leased lines used to provide national backhaul services from our mobile base station sites, a service which is underpinned by fundamentally weaker competitive conditions than those present for enterprise sites. As such, the case for extending the CELA to the WECLA has not been robustly made and we do not consider that this geographic market delineation is appropriate to apply to mobile backhaul even if Ofcom continues to consider that such an extension is appropriate.

Ofcom does not provide evidence to support the extension of the separate geographic market of CELA to the WECLA for business enterprise sites

In Ofcom's previous BCMR, Ofcom defined a separate geographic market for certain wholesale leased line products in the CELA because in Ofcom's assessment, competitive conditions (i.e. potential alternative suppliers to BT of leased lines to business enterprise sites within contiguous postcode sectors) was consistently greater in the CELA than in the rest of the UK.

[9] See http://www.mbnl.co.uk/_newsPdf/MBNL_finaldraft_media_22072011.pdf

In Ofcom's latest BCMR consultation, Ofcom now proposes to extend the CELA to include additional postcodes further west to create the WECLA, where Ofcom proposes that the conditions of competition are different to the rest of the UK. However, Ofcom has not demonstrated that competition in the incremental extended area (i.e. the additional postcodes added to the original CELA) is sufficient to justify the extension of the geographic market boundary. Ofcom has only provided the *average* number of alternative suppliers across the whole WECLA (in Table 26 of the BCMR Consultation), but does not separately identify the number of alternative suppliers for the extension area which could be materially lower than for the CELA.

First, Ofcom concludes that the most appropriate unit for assessing the leased lines geographic market is the postcode sector (of which there are approximately 10,000 in the UK). Ofcom argues this unit represents a trade-off between practicality and granularity and satisfies the European Regulators' Group (ERG) Common Position.[10]

In addition, when assessing geographic variations in competition, Ofcom builds on the postcode sector unit by then examining within each postcode sector, whether there are alternative infrastructure operators within a reasonable distance of types of enterprise sites. This approach is Ofcom's "network reach" approach.

Under the network reach approach Ofcom identifies sites of enterprises with more than 250 employees in each postcode sector from flex or hub points from which alternative operators' leased lines can be supplied. Ofcom then assesses how many alternative operators have flex points within a 200 metre "buffer" or radial zone of the business. This 200 metre estimate is of the maximum dig out distances which could be realised in the absence of wholesale remedies requiring BT to provide a regulated wholesale leased line product (Ofcom's "modified Greenfield" approach).

Based on this analysis, Ofcom supports its proposals to roll-back regulation in the larger WECLA area with Table 26 in the BCMR Consultation which suggests that in the WECLA as at 2011, at least 2 operators would have very significant coverage and a third would cover half the area based on enterprise sites. Ofcom relies on this analysis in forming its view that competitive conditions are sufficiently greater across the WECLA than in the rest of the UK to justify expanding the competitive geographic footprint area.

However, Table 26 does not provide adequate evidence for extending the competitive footprint from the CELA to the larger WECLA because it represents only an average across the whole WECLA, and does not explicitly compare the number of alternative suppliers for the incremental area (i.e. those areas within the WECLA but not the CELA, which we have termed the "extension area") with the CELA.

The competitive conditions in the extension area can potentially be obtained by comparing the CELA data (in Table 25) with the WECLA data (in Table 26).[11] One drawback is that the data for the CELA is taken from 2008 whereas the data for the WECLA is taken from 2011. To the extent that competition has increased in the CELA since 2008, comparing the data may therefore overstate the differences between the competition in the CELA compared to the extension area. Nonetheless our own analysis in the absence of any other available data suggests that when comparing these tables the number of alternative providers is materially lower in the extension area compared to the CELA for enterprise sites.

[10] BCMR Consultation, paragraphs 5.28 to 5.33.

[11] For example, for enterprise sites with one alternative operator, one would apply the following formula. Given the CELA accounts for 2.9% of all UK enterprise sites, and the WECLA 4.1% of sites, then the CELA must represent 71% (i.e. 2.9%/4.1%) of enterprise sites in the WECLA and the increment represents 29% (i.e. 1.2%/4.1%) of the WECLA. Given we also know that 90% of enterprise sites in the WECLA are served by at least one alternative supplier and 99% in the CELA. We can state the problem as follows: 90% = (99% x 71%) + ((Y) x 29%), where Y is the unknown percentage of enterprise sites service by at least one operator in the extension area. Rearranging we get Y= 68%. We note that 68% (in the extension area) is materially lower than 90% (for the CELA area)

A more appropriate approach would be for Ofcom to provide the number of alternative suppliers of leased lines for both the CELA and separately in the extension area.

Ofcom's network reach approach for defining both CELA and WECLA geographic market boundaries is flawed when applied to leased lines used for mobile backhaul services

For enterprise sites, the close proximity (or network reach) of alternative suppliers' networks provides one indicator of competitive constraints on BT and the potential geographic boundaries of leased lines competition within that area (e.g. CELA). However, as will be clear from the description in section 3, this is only one aspect of the requirement. Although there could be many competing supplier links within a 200 metres distance of our mobile base station sites (in the CELA or WECLA area for example), for many relevant mobile sites only BT's 21CN would have the necessary dedicated fibre or copper capacity to provide the national backhaul service back to our core network such that traffic could be routed via gateways back to MSCs across the UK to provide a national mobile service. That is, it is not only about network reach at the radio site end of the connection but about the availability of capacity and appropriate links all the way back to the core. Only BT's network has the ubiquity to provide this everywhere. While a small number of other operators – notably VM – can provide this in certain areas, no other operator has BT's ubiquity across the whole country. [CONFIDENTIAL]

Ofcom's approach is focused on single and multiple enterprise sites, potentially including for enterprises which operate nationally and have sites across the UK. For example, it could be that high street banks and retailers find it easier to source their wholesale leased lines services from alternative suppliers within the CELA than the rest of the UK, such that a separate geographic market boundary for leased lines in CELA may be appropriate for serving these enterprise sites.

However the network reach approach to determine geographical boundaries of competition in wholesale leased lines is flawed in its application to leased lines used for mobile backhaul from mobile base station sites, as this type of connectivity is not purchased in the same way or on a site by site basis.

Near reach is a necessary but not sufficient condition for assessing geographic market for leased lines used for national mobile backhaul services

Mobile backhaul services will require an alternative supplier's hub or flex points to be in close proximity to a mobile operator's mobile base station sites (as is the case for enterprise sites). However this is by no means a sufficient requirement to support the provision of mobile backhaul services. As explained in section 3.1 above, mobile backhaul is purchased from base station site to core network – not simply on the basis of the individual network "tails" out to individual radio sites.

[CONFIDENTIAL]

A near reach approach may make even less sense in a future LTE network with more small-cell sites. Future LTE network scenarios are likely to involve the roll-out of significant numbers of small cells to support the growing demand for capacity. These small cells are going to require backhaul. [CONFIDENTIAL]

The likelihood of roll out of smaller cells to support the development of LTE networks is also reflected in analysis by Real Wireless[12] who have looked at traffic demand scenarios and the increasing demand for sites (in the context of Real Wireless considering how the value of changing 700 MHz from DTT to mobile would depend on the timing, i.e. 700 MHz would be more valuable if it came before operators had had to densify their networks anyway). This suggests backhaul becomes more important in scenarios where there is increasing traffic per site and increasing site numbers.

[12] http://www.ofcom.org.uk/static/uhf/real-wireless-report.pdf

If Ofcom were to continue to apply the near reach approach to this greater number of small mobile cell sites, this would imply erroneously a further expansion of the CELA to most urban areas of the UK. This perverse expansion of the geographic area of competition simply by virtue of additional network roll out of LTE small cell sites brings into sharp relief the deficiency of the near reach approach for defining geographic markets for leased lines used for mobile backhaul.

Summary of our views on geographic market definition

The factors outlined above indicate that both the CELA and WECLA geographic market definition is not applicable to wholesale leased lines circuits used to provide national mobile backhaul services.

Ofcom's near reach approach is effectively applied equally to enterprise sites and mobile base station sites because Ofcom considers only the *type* of leased lines circuits in reaching its separate WECLA geographic market rather than the *service* the leased line circuit is used to provide.

If Ofcom were to conclude that there was a separate WECLA geographic market for TISBO, AISBO and MISBO products inclusive of mobile backhaul products such as RBS, NetStream, <1 Gbit/s Ethernet >1 Gbit/s Ethernet and/or WDM backhaul, then at a minimum, Ofcom needs to recognise the weaker competitive constraints on BT in the provision of the leased lines used for providing national mobile backhaul services relative to other TISBO, AISBO and MISBO services. In practice this could be recognised either in the market analysis itself (taking account of the different way in which mobile backhaul is purchased) or through the SMP Conditions imposed as a result of the existing proposed SMP findings. The latter would be consistent with, and merely an extension of, the approach of sub-caps within the defined markets which Ofcom is already proposing. In essence this justifies including stricter sub caps for these mobile backhaul services within the broader product groups for all UK services (including within the WECLA).

4 The proposed SMP conditions

The BCMR Consultation considers in detail the potential competition problems which could arise in relation to the markets where BT has been found to have market power and proposes a range of remedies in relation to each of the SMP markets. We address the price control remedies separately in the following section of this response, but we agree that there is still a requirement for such controls in relation to these markets. In relation to most of the remainder of the remedies, which place constraints on BT's pricing (for example, non-discrimination obligations) or impose transparency, notification and reference offer obligations, we understand that Ofcom is essentially proposing that the existing regulatory regime is still required. As will be clear from the preceding section on BT's market position, we would agree. Any changes to this regime which make the regulation clearer and its implementation more effective are to be welcomed.

However, Ofcom's proposals to withdraw or not impose regulatory requirements in three specific areas mean that regulation will be inadequate or not effective in achieving Ofcom's policy aims. The remainder of this section addresses each of these in turn, being:

- Ofcom declining to impose any specific obligation to provide mobile backhaul, especially in relation to AI services where Ofcom considers that the general requirements on generic carrier Ethernet services will be sufficient;
- Ofcom's proposal to remove the cost orientation remedy and any associated financial reporting obligations, which we consider to be mis-conceived and inappropriate; and
- Ofcom's view that dark fibre / physical infrastructure access is not required for the promotion of competition, with which we disagree.

4.1 Requirement to offer mobile backhaul, especially in relation to the AI markets

Paragraph 11.80 of the BCMR Consultation states that Ofcom does not consider it necessary "to introduce a specific obligation requiring BT to provide mobile backhaul". The stated reasons for this conclusion are that:

i) Mobile network operators use generic Ethernet services which fall within the scope of the low bandwidth AI markets anyway;
ii) The obligations placed on these markets otherwise, combined with BT's obligation to provide such services on an EOI basis, will be sufficient regulatory protection; and
iii) Openreach has stated that it will provide a SyncE variant of EAD.

These reasons do not provide a sound basis for Ofcom's conclusion that there is no need to require the provision of a mobile backhaul product. We therefore consider Ofcom should reconsider this conclusion. Taking each in turn:

While it is true that the product which mobile network operators purchase from BT for backhaul purposes use the same generic Ethernet services which are included within the low bandwidth AI markets, there are important differences in the way these products are packaged and sold for this use. Specifically, as noted in the Consultations[13], mobile network operators purchase the MEAS product discussed above in section 3.1. The nature of mobile backhaul requires the connection of a large number of geographically diverse sites to mobile network operators' core networks as discussed above. This means that the nature of the bundled product actually purchased and, crucially, the conditions of competition in which it is purchased are very different to the rest of the AI market, from which inputs to the MEAS product are sourced.

Therefore, we do not accept that the obligations placed on BT more generally are sufficient or provide appropriate regulatory protection from the potential competition issues which could otherwise arise. As discussed in the previous section, we consider that there is a case for finding SMP in a separate and distinct market. Even were Ofcom not to agree with our view on that, we believe that the specific circumstances of mobile backhaul warrant additional specific remedies in relation to BT's SMP in supplying such products. As discussed above, mobile network operators effectively have no choice but to purchase significant portions of their backhaul requirements from BT. It is worth stressing that the logic of our arguments in section 3 above suggests that such mobile backhaul regulation would apply both within and without the WECLA.

In relation to the third point, the BCMR Consultation appears to imply that the requirement for timing information is the *only* distinguishing factor of mobile backhaul compared to other Ethernet services. As will hopefully be clear from the above, we fundamentally disagree with this view. [CONFIDENTIAL]

4.2 Cost orientation

A key de-regulatory proposal in the Consultations is the removal of the Cost Orientation remedy (specifically it is proposed that there is no Basis of Charges SMP condition in relation to the markets covered in the Consultations). We do not agree that this obligation should be removed as Ofcom has not recognised all of the benefits of the current cost orientation remedy. We urge Ofcom to reconsider this aspect of its proposals.

The Consultations suggest that the key benefit from such a condition is that it provides an additional constraint on excessive prices and that the system of sub-caps on each and every

[13] For example, as discussed at paragraph 4.222 and following of the BCMR Consultation.

charge will be sufficient to deal with this potential concern. In relation to TI services the reasons for this conclusion are set out in paragraphs 5.69 to 5.74 of the LLCC Consultation (especially paragraph 5.72) while for Ethernet services the equivalent reasons are given in paragraphs 6.110 to 6.114 (especially the bullets in paragraph 6.113). In summary, in relation to both sets of services, the following reasons are given:

- First, that the cost orientation obligation provides less certainty than a cap and sub-cap regime;
- Second, that the charge controls are designed to bring charges in line with costs by the end of the charge control period, whereas if BT charged all services up to the DSAC level (the ceiling under the current guidance on how the cost orientation obligation is interpreted) then BT would be earning (significantly) above its cost of capital (i.e. a suggestion that the Cost Orientation obligation is somehow ineffective); and
- Third, that the system of sub-caps adequately replaces the cost orientation remedy through the sub-baskets and "safeguard" constraints on individual charges outside the baskets.

This logic is flawed for a number of reasons. First, the Consultations propose the idea that cost orientation is undesirable because it creates more uncertainty than charge controls (or even because the levels of the relevant cost benchmarks are variable and subject to up front uncertainty which is also suggested especially in relation to the Ethernet services). As discussed in the next paragraph, it is not appropriate to consider a Basis of Charges remedy as an *alternative* to charge controls. In relation to the wider suggestion that the market changes in relation to Ethernet make the DSAC and DLRIC measures "more difficult to predict than they have been in the past or in other markets"[14], this reinforces the need for such a condition rather than undermines it.

Charge controls are based on *ex ante* forecasts of costs which are inherently uncertain and subject to regulatory error. The standard regulatory mechanism for correcting any such errors is appropriate adjustments in future charge controls. This is a relatively blunt mechanism however and given the length of charge controls does not protect competition in the meantime. Such competition may be in relation to competition between the charge controlled product and other providers' products or may be downstream competition which is impacted through being based on purchasing the charge controlled product as an input. A cost orientation remedy, in contrast, can take account of market and technological changes on a more frequent basis and ensure that charges can continue to be set at a level which does not harm competition. It is precisely when the cost benchmarks are hard to predict up front that such protection is most required.

Ofcom is correct in saying that the Ethernet market is likely to be subject to much change, volume growth and migration from lower to higher bandwidth circuits over the course of the next charge control period. However, it has completely reversed the necessary implication of this for the appropriate set of SMP remedies. Regulation itself cannot remove this commercial and technological uncertainty, which is part of the reality with which Communications Providers need to deal. By setting regulation on the basis of a forecast at one point in time (which a reliance on charge controls only effectively does), these proposals effectively *increase* the uncertainty faced by purchasers as they do not know whether prices in future will be aligned with out-turn cost in future or not. The regulatory uncertainty - which Ofcom can do something about – needs to be distinguished from the commercial uncertainty – which Ofcom cannot, and indeed should not even try to, to influence. Therefore, simply saying that actual cost benchmarks are likely to be volatile and uncertain in a changing market is no reason to say that prices should not be required to aligned between such benchmarks.

[14] First bullet of paragraph 6.113 of the LLCC Consultation.

Of course, if the cost orientation remedy was of the form that prices had to be exactly in line with one specific cost benchmark (say LRIC+) and this benchmark was expected to be highly unpredictable and volatile – requiring prices necessarily to be variable on a regular basis, this would be a different situation. However, this is not the type of cost orientation imposed by the Basis of Charges Condition which simply requires prices to be between certain cost floors and ceilings, where historically there has been significant room between the benchmarks. Leaving aside the separate question of the effectiveness of the specifics of the Basis of Charges condition (which is a matter for the separate consultation process on Ofcom's Cost Orientation and Regulatory Reporting project), this means that even if there is some volatility to these benchmarks actual prices within these bands need not be as volatile and are set within such bands subject to the same commercial consideration for both the seller and purchaser as in other - unregulated - markets.

Second, the basic premise on which Ofcom has based its logic is that cost orientation is an alternative way of ensuring that charges are not excessive. This reasoning switches between considering cost orientation compared to a cap on the average price of a basket (which relates to the first two bullets above) to one compared with the sub-caps (the final bullet). It is not clear therefore whether Ofcom considers that it is appropriate to remove the cost orientation remedy as a redundant substitute to the overall average caps or the sub-caps. Either way, the approach of considering cost orientation as a substitute to price caps rather than something which works in conjunction with, and reinforces the efficacy of, price caps is mis-conceived. It is also contrary to Ofcom's prior approach more generally – where cost orientation and charge controls are seen as complementary remedies, as summarised even in these Consultations.[15] Price caps can work, and have done so, in conjunction with and enhanced by cost orientation. The above reasoning does not in fact explain why Ofcom considers that this is no longer appropriate in these specific circumstances.

If the irrelevant arguments which compare the efficacy of cost orientation as a replacement for price controls are ignored, Ofcom's case boils down to the simple proposition that cost orientation and the *sub-caps* achieve the same end of preventing excessive pricing and therefore it is not proportionate to retain both (as set out in the final sentences of both paragraph 5.72 and 6.113). That is, cost orientation ensures that individual prices are not set at an excessive level but this is also achieved, it is alleged by Ofcom, by the sub-caps on each and every charge. Alternatively this could be expressed as all prices which conform to the sub-caps must also be cost orientated and therefore the additional regulatory requirement adds nothing.

On the contrary, a requirement for cost orientated charges provides valuable additional protection against potentially anti-competitive or unfair prices which is not provided by the proposed sub-caps. As such, maintaining a Basis of Charges condition remains proportionate and would in fact provide appropriate and relevant complements to the proposed sub-caps (as well as the additional sub-caps we are proposing below in section 5.1).

The additional benefits which a cost orientation condition would provide alongside appropriate charge controls include the following.

- Cost orientation would apply to each and every charge rather than just those specifically set out in the charge control conditions. This provides some protection in relation to new products which would not otherwise be available until at least the next charge control review. By being based on actual current costs, the Basis of Charge condition at least provides purchasing operators with a starting basis for negotiation or the ability to bring a

[15] See for example paragraph 10.42, 10.117 and 11.175 which all refer to charge controls and cost orientation being complementary remedies. This was also explicitly referred to in Ofcom's Call for Inputs on its "Review of cost orientation and regulatory financial reporting in telecoms" (published 8 November 2011) where it was stated "Currently cost orientation is often used in conjunction with a charge control, often to allow some flexibility to vary relative charges within a charge control basket." (paragraph 2.2).

dispute (with some retrospective impact) to ensure that such new products are provided on a reasonable (and potentially commercially agreed basis). If reliant solely on a charge control, this involves either waiting until the next market review or engaging in a regulatory process (which is unlikely to have any retrospective impact) to determine new products which should be included in the charge controlled list to replace existing products. Any conceptual requirement that new products in some sense replace existing ones[16] in order to be charge controlled would also likely involve non trivial considerations about what this meant in practice. As such, Ofcom's approach of relying solely on charge controls seems likely to lead to disputes and complex regulatory considerations which will decrease certainty and increase costs for purchasing communications providers. Of course, as in the current charge control period, disputes can also arise in relation to a cost orientation obligation but there is greater precedent about how to resolve these and such an obligation also at least provides some benchmarks for commercial resolution which stands a better chance of avoiding regulatory disputes.

- Related to the previous point, there are a range of related products which are purchased from BT which are not covered by charge controls. Ofcom refers to some of these in the LLCC Consultation in relation to products where it has found SMP but is not imposing a charge control.[17] Ofcom considers that these products will be accorded appropriate regulatory protection by communications providers being able to purchase regulated or competitive substitutes. Given the speed at which these markets are evolving, compared to the speed of the market review process, this is a brave assumption. Even were it to be true, it omits to consider the benefits of understanding what cost orientated inputs are to products further downstream. Where operators purchase managed services (e.g. the MEAS product) which includes regulated components, it is of great benefit to understand what the cost orientated components of this managed service product would cost. This aids commercial discussion and without this understanding BT will be in an even stronger negotiating position. Only having access to some of the cost information every three years at the time of a market review will be a seriously retrograde step. [CONFIDENTIAL][18] In these circumstances, we do not consider it appropriate to remove the obligation altogether. At the very least, Ofcom's blithe statement that removing the cost orientation obligation means that the requirement to report cost information is no longer required[19] needs to be considered in more detail.
- The logic in the Consultations is that the sub-caps will ensure prices do not become excessive and will therefore remain cost orientated. The LLCC states that Ofcom is satisfied that all charge controlled prices are currently within the bounds set by the cost orientation obligation (i.e. below DSAC). However, given the volatility of some of the DSAC measures historically, and the fact that Ofcom has previously found charge controlled products not to be cost orientated[20] it is far from clear that this is a robust conclusion.

[16] The proposed SMP Conditions state that new services which "wholly or substantially" are introduced to substitute an existing service will be in scope of the charge controls. (see LLCC Consultation paragraph 10.22). This raises issues as to what "wholly or substantially" means in practice and what exactly is meant by a new service substituting an existing one (and how the migration issues between old and new are addressed, including how the charge control should be applied to both services in any interim period).

[17] See paragraphs 2.30 to 2.37 of the LLCC Consultation.

[18] [CONFIDENTIAL]

[19] See paragraphs 15.11 to 15.12 of the BCMR Consultation which provides no reasoning but simply states that cost reporting obligations are not required where there is no cost orientation obligation. Article 9 of the Access Directive allows national regulators to require the provision of, inter alia, "accounting information" separately from any specific cost orientation obligations (which are provided for separately in Article 13). Conceptually therefore, these SMP conditions can be separated and should be considered individually.

[20] For example, Ofcom found that certain charges were not cost orientated in relation to dispute on PPC charges, where these prices were also subject to a charge control. This finding has now been upheld by the Court of Appeal (BT v Ofcom, [2012] EWCA Civ 1051, case no: C3/2011/1683) available at http://www.bailii.org/cgi-bin/markup.cgi?doc=/ew/cases/EWCA/Civ/2012/1051.html&query=BT&method=boolean

Further, where products are being regulated for the first time (as is the case, for example, with the high bandwidth products which are being charge controlled in the MISBO market) it is not clear that there is sufficient information available to be sure that the starting position is such that cost orientation will be maintained through-out the charge control period by the application of the safeguard caps.

- Where the caps are applied to baskets of average charges, and much more permissive caps are set on individual charges (as is the case in the Ethernet basket controls), there is considerable scope for relative charges to change of the course of the charge control period. The range of products, and their differing relative impact on the competitive position of the various parts of BT compared to its competitors, suggests that there will be incentives on BT to change such relative prices to its own benefit. As such, it is not clear that all individual charges will remain cost orientated for the duration of the charge control period, even if they start off so.[21]
- Charge controls are also based on a regulatory forecast of costs at the time of the market review. Cost orientation obligations are effectively based on an annual assessment of current costs. Where markets, volumes and technology are evolving rapidly this therefore provides more up-to-date and flexible regulatory protection. Regulatory forecasting errors in a charge control can, of course, be corrected in a subsequent charge control. In other industries this can be sufficient. However, in relation to the markets in question here the potential damage which could be done to competition or investment incentives would be significant. Given the speed of technological and market change an adjustment at a subsequent market review is not likely to be capable of correcting such damage.
- A charge control can also, by definition, not protect against anti-competitively low charges which a cost orientation obligation can.

Furthermore, we note that Ofcom is currently considering its policy in relation to cost orientation generally, following the November 2011 Call for Inputs on the "Cost Orientation and Regulatory Reporting" (CORR) project. We understand Ofcom is expected to publish a consultation on its proposals in relation to this project shortly. It therefore seems inappropriate to propose a major change in relation to a cost orientation remedy with respect to a significant number of important markets while Ofcom is still in the process of setting its wider policy on such remedies. Good regulatory practice would suggest that, where there is a general policy project and specific implementations of that policy, then the specific implementations are only applied after the general policy has been set. Doing things the other way around, as here, effectively prejudices the outcome of the CORR project.

4.3 Dark Fibre and passive remedies

EE and MBNL's response to the Call for Inputs suggested that access to BT's dark fibre and ducts to provide connectivity could increase competition in the markets in which mobile backhaul are purchased. We suggested that such remedies could act in a complementary way to current SMP obligations, at least in the short term, but that longer term these could facilitate a more competitive landscape leading to less regulatory intervention in future. We continue to believe this. The reasons set out in the Consultations for not considering passive remedies further are not robust. We therefore suggest that Ofcom revisit its proposed decision in this area.

The key advantage which BT has in these markets, and especially in relation to the provision of mobile backhaul, is the ubiquity of its network. This allows it to provide the connectivity for many

[21] While we understand the reasons for basing the assessment of charge controls on prior year revenues and accept this is probably the practical approach for other reasons, this aspect of the charge controls will also potentially increase the risk of individual charge controlled products being no longer cost orientated when markets are evolving rapidly.

thousands of radio sites across the country and, crucially, to aggregate the traffic from sites and connect them back to a small number of connectivity sites into mobile core networks. Providing access to the underlying infrastructure in the form of dark fibre and/or physical infrastructure access would enable other operators to invest to provide products which can effectively compete to provide this any radio site to any core network connectivity site in an efficient way.

The BCMR Consultation recognises the possibility that passive remedies of this type have the potential to improve competitive prospects, but broadly concludes that such benefits can largely be achieved through the active remedies which Ofcom is currently proposing (i.e. through regulating BT's provision of active products) and that the potential risks of negative impacts from introducing passive remedies are large. In the discussion in section 8 of the BCMR Consultation Ofcom acknowledges some of the difficulties associated with developing the MEAS product but sees no evidence that any greater competition which passive remedies would provide would have led to any faster technological developments and no evidence that BT has an incentive to allocate common costs in a way which increases mobile backhaul prices to increase mobile network operators' costs.

That greater competition would provide a sharper incentive for technological innovation is, to some extent, a matter of faith. It is generally accepted, however, that competition will have this effect. Ofcom appears to accept that BT has deployed fibre-based Ethernet backhaul at an appropriate speed and to an appropriate extent. One example here though is in the provision of timing information, which BT has taken since the launch of MEAS in 2008 to deliver. While BT states this will be delivered very shortly, at the time of this response, it has yet to deliver a truly synchronous Ethernet product. In a much shorter time period, MBNL has been able to work with VM in order to provide such a product, which it has now delivered. BT has a privileged and ubiquitous position which should enable it to satisfy mobile backhaul needs quicker and more effectively – which requires a greater competitive spur. The question which Ofcom has not addressed is how much faster technical and market innovation could have been in a competitive environment.

This leads into the next argument against passive remedies in the BCMR Consultation, that there are "early signs of developing competition", based to a significant extent on the VM contract which MBNL has entered into. We accept, of course, that BT does not have a total monopoly in the provision of mobile backhaul Ethernet products; but for all the reasons set out in section 3 of this response, BT remains in a commanding position of market power in the provision of such services. Its delay in the delivery of a truly synchronous Ethernet product is sufficient evidence of this. Some other providers have been able to compete in certain areas, but the extent to which they can compete is limited and currently mobile operators still have no choice but to purchase significant amounts of backhaul from BT. [CONFIDENTIAL]

The relevant question is therefore not whether there are any "early signs" of competitive supply, but rather whether a vibrant competitive market can develop in future without additional passive-style remedies. In order to address the lack of ubiquity of competing networks (and [CONFIDENTIAL]), passive remedies would enable a small number of competing providers to provide nation-wide competition to BT on more equal terms.

Finally, the BCMR Consultation refers to what it calls mobile network operators' "broader concern that their future backhaul costs could escalate unduly" and suggests that these could be addressed by a combination of technical development (i.e. increased bandwidth available through Openreach's 1Gbit/s Ethernet access tails) and the operation of price controls.[22]

As Ofcom is no doubt aware, Openreach's 1Gbit/s Ethernet access tails currently are not able to provide bandwidth up to 1GBit/s. Moving the capability of individual tails [CONFIDENTIAL] More competitive markets could lead to better more future proofed solutions. Paragraph 8.84 of the

[22] See especially paragraph 8.85(c) but more generally paragraphs 8.78 to 8.84.

BCMR Consultation suggests that "technical development, which should enable the effective bandwidth delivered by BT's MEAS product … to increase substantially". What this fails to recognise is that this increase in bandwidth [CONFIDENTIAL]

The other way Ofcom proposes this broader concern will be addressed is through the operation of the charge controls proposed by the Consultations. If cost orientation is removed and there is no direct control of the managed service type of Ethernet which mobile operators need to purchase (for all the reasons described above), it is not clear how Ofcom envisages this mechanism working. In negotiating with BT, MBNL is informed that the prices for the end to end managed service it buys already factor in any required impacts of price controls on the products internally purchased from Openreach. However, individual charges ([CONFIDENTIAL]) are not subject to annual reductions [CONFIDENTIAL]. As discussed in the following section, a separate charge control on MEAS or some other mechanism to ensure that the benefits of regulation are achieved in these related markets is required at least in the short term. In this context, however, what is clear is that the proposed charge controls will not provide the same degree of regulatory protection which could be achieved from a more effectively competitive market.

The principal risks of introducing passive remedies outlined in the BCMR Consultation are the concern that competition based on passive remedies could, "at one extreme", be focused solely on serving certain customers of high bandwidth products, with BT consequently increasing prices to all other customers to recover its overall common costs. This seems to be a concern that there would in some sense be "inefficient" competition which undermines remedies in other markets. Exactly what the concern is here is very unclear. If the extreme outcome, which Ofcom describes as "unsatisfactory", did occur then in strict economic terms this would simply be an equity matter. The implication of the description in paragraph 8.64 of the BCMR Consultation is that common costs would be proportionately more recovered from less elastic markets (where competition was not introduced) while prices fell in more elastic markets (where passive remedies did result in more competition which Ofcom is concerned may simply be markets in which large business customers purchase). Leaving aside the fact that those more elastic markets are likely in many cases to be input cost to other products whose price is also likely to fall benefiting end consumers, Ofcom appears to be concerned that this will have an adverse and "unsatisfactory" outcome because "large business" customers will benefit while other customers will not. In other contexts Ofcom has specifically stated that dealing with equity concerns should not be a job for the regulator, who should be more concerned with promoting competition and efficiency. Specifically, in the recent Mobile Termination Rate market review (and in the subsequent appeal processes) Ofcom argued that promoting equity should not be its primary concern when setting charge controls and that charge controls were "a highly inefficient tool" for pursuing "social" outcomes.[23]

However, assuming Ofcom is correct to be concerned here about such equity concerns, the discussion in the BCMR Consultation takes no account of the fact that Ofcom would be setting a price for any passive remedies. Presumably a reasonable contribution to genuine common costs would be included in the setting of prices for such products. Therefore, it is entirely unclear why the greater competition resulting from the introduction of such remedies should in any sense be "inefficient". It would be based on providing a reasonable contribution to common costs for the underlying infrastructure. The concern therefore must be that BT, in providing its *own* products in the more competitive market, may reduce the amount of common cost it recovered from the more competitive market and load this recovery onto less competitive markets.

This would seem to be more an issue with the regulatory design of the relevant charge controls for the passive remedies. These prices would need to be set in a way which ensured BT received an appropriate contribution to common costs from the passive products (i.e. the new competitors contribute). In this context, if BT then recovers less common costs from the downstream products

[23] See paragraphs A3.272-3 of Ofcom's "Wholesale mobile voice call termination" Statement, published 15 March 2011.

it is providing, and is able to do this, then it will be competing unfairly with those competitors who have no choice but to contribute to those common costs through the passive remedies. This would then essentially be a situation of an anti-competitive margin squeeze and should be addressed accordingly.

Consequently, the objections to the potential "unsatisfactory" outcome which could arise from passive remedies seem to be focused on the potential for regulatory failure where the relevant regimes do not achieve what they should. It is a curious argument which suggests that the response to regulatory failure is not to promote competition.

Therefore, we urge Ofcom to revisit its decision not to consider passive remedies further in these markets and to undertake a fuller assessment of the potential benefits of promoting greater competition here. Any assessment of the potential risks and costs of such an approach should be based on a full and proper assessment of those potential downsides. We further note that the recent House of Lords Select Committee on Communications report urged Ofcom to remove the restrictions on physical infrastructure access imposed in the Wholesale Local Access market review (i.e. its use for the provision of leased lines and fixed, mobile and wireless backhaul).[24]

5 Ofcom's proposals for charge controls

We do not have any major concerns with Ofcom's broad approach to the form, duration and design of the relevant charge controls. The approach set out in the Consultations is effectively an evolution of Ofcom's existing practice in these relevant markets. It is also broadly consistent with Ofcom's practice in relation to charge controls in other regulated electronic communications markets. The continued use of RPI-X style controls within a market review framework therefore provides consistency and some degree of regulatory certainty. To the extent we have any comments on these issues they are provided in the answers to relevant specific consultation questions in section 6 of this response.

The one area of uncertainty concerning the implementation of these charge controls arises from the exact proposed duration of the charge controls and their relation to the interim undertakings provided by BT. Paragraph 3.24 of the LLCC Consultation states:

> *"We propose a charge control that will run for a maximum of three years from the date of implementation"*

Paragraph 11.166 of the BCMR Consultation uses a different formulation, which we understand also to mean that the charge control will apply for three years from the conclusion of the current consultation process:

> *"...the imposition of an appropriate echarge control condition to apply for a period of 3 years following the completion of this market review and the charge control consultation process."*

However, in discussing the practical impact of the "interim" period (between the expiration of the current charge controls and the new arrangements being put in place) in section 10 of the LLCC Consultation, Ofcom appears to imply that the three year period will run from the date of expiration of the current charge controls. This is implied, for example, by Figure 10.1 and the text surrounding it, especially in paragraphs 10.60 to 10.62. The details of how this should and could impact on the detailed implementation of any charge controls (i.e. the appropriate glide paths) is addressed below in answer to consultation question 10 of the LLCC Consultation. The high level point which we ask Ofcom to address clearly and quickly is the exact date from which the industry can expect the new arrangements to be assumed to have started from.

[24] "Broadband for all – an alternative vision", House of Lords Select Committee on Communications, 31 July 2012.

MBNL purchases a very limited amount of TI products ([CONFIDENTIAL]). In the context of mobile backhaul it is not in the interests of mobile network operators to purchase such legacy products for any longer than is necessary. We have strong incentives to migrate to higher bandwidth and more modern products and effectively only purchase the legacy products where it is currently not possible to migrate. Clearly it is appropriate to allow BT to recover its efficiently incurred costs, but the declining volumes of such TI services should not lead to BT being able to charge ever increasing amounts for these services. BT also needs to be incentivised to assist its customers to migrate to more modern products. An anchor pricing approach in this context therefore seems, in principle, reasonable. Limiting the price increases of these products as far as possible (and effectively requiring BT to shift recovery of fixed and common costs to growing services) will provide more appropriate incentives on all parties. In the context of a declining market, where BT can be considered as having effectively already having recovered a reasonable return on its investment, BT should not be making a significant return or margin in the TI markets.

[CONFIDENTIAL] The remainder of this section therefore focuses on the Ethernet / AI charge controls. These comprise a large part of the managed mobile backhaul product which MBNL purchases (the MEAS product) and as such have a potentially significant impact on mobile backhaul products, and set out below is the case for setting a separate Ethernet mobile backhaul sub-cap. We also provide some comments on the Excess Construction Charges charge control which is also of relevance to the products purchased by MBNL. More detailed comments on the make up of the Ethernet charge control and the derivation of the RPI-12 cap are provided in answer to the relevant specific consultation questions in section 6.

5.1 The need for an Ethernet mobile backhaul sub-cap

Section 3 of this response sets out why mobile backhaul services are purchased on an aggregated basis in national markets (including why sub-national markets such as the proposed WECLA market are inappropriate with respect to mobile backhaul). The BCMR Consultation has defined three broad sets of wholesale product markets based around TI services, AI services and MI services. However, there are a range of sub-caps associated with several of the specific wholesale product markets. Based on the discussion in sections 3 and 5.1 of this response, we propose that Ofcom sets a separate sub-cap as part of the Ethernet charge control (which in turn is based on the finding of SMP with respect to the AI market) which relates to mobile backhaul. Such a sub-cap could, for example, be applied to the MEAS product or Ethernet products supplied with synchronisation services. This would be consistent with Ofcom's proposed approach with respect to the TI market where is has set a sub-cap with respect to RBS backhaul products.

This section further examines the key features of leased lines used for mobile backhaul that justify specific remedies in the form of tighter sub caps within the overall cap for AISBO products to reflect the weaker competitive constraints on BT for these specific products; regardless of whether they are defined as separate to, or within, the AISBO product market.

Ofcom accepts that leased lines used for mobile backhaul services must have the added functionality of synchronisation services (which in contrast are not required for other AISBO services for enterprise sites). Mobile operators have to keep their mobile base stations synchronised to an accurate reference clock. This synchronisation provides for stable and predictable transmission characteristics, low transmission delay (latency) and low jitter (variation in transmission delay). These characteristics are important in the provision of mobile communications including backhaul of traffic.

Under MBNL's MEAS contract with BT, it is currently supplied with a sync source via an out of band E1 circuit. [CONFIDENTIAL]Although BT has indicated to Ofcom that it will be implementing a permanent synchronisation service (SyncE or based on IEEE 1588) in 2012, [CONFIDENTIAL]. Even if BT were to implement a full and permanent solution by the end of 2012, which remains

uncertain, we consider that there is a risk BT will seek to pass on the costs of developing this functionality in the absence of a tighter sub cap on these products. Providing such functionality is simply delivering a fit for purpose mobile backhaul product for which MBNL has in essence already contracted. We would therefore consider it unacceptable to be charged extra for a service we are technically supposed to be receiving at present but have not be receiving.

[CONFIDENTIAL]

For these reasons we consider that the Ethernet price cap should also be complemented by a tighter mobile Ethernet backhaul sub cap.

[CONFIDENTIAL]

Even if stricter sub caps are imposed on standard Ethernet backhaul products, under current arrangements it seems unlikely that any benefits of tighter caps will be passed through to customers of managed services. Given that these managed services are substantially based on products which are themselves price controlled, and that the specific nature of mobile backhaul makes it both impractical and inefficient to purchase those price controlled services directly, there is a strong case for the benefits of regulation to be passed through to those purchasing MEAS.

[CONFIDENTIAL]

This is an unsatisfactory outcome where MBNL and its shareholders are unable legitimately to benefit from price protection provided by regulation due to contractual arrangements in which we have few, if any alternatives, to BT Wholesale. The lack of transparency between different parts of BT on how regulated price cuts are passed through to customers of leased lines could therefore be addressed via a cap on the service contract itself. That is to say, we see no reason why there should not also be a MEAS sub-cap as part of the AI market SMP Conditions.

Given the relevant conditions of competition for the provision of mobile backhaul services described above, we also request as an alternative that Ofcom consider whether it is possible to mandate the pass through of regulated Ethernet basket price cuts within managed service contracts with BT. Clearly it is not in the spirit of the undertakings provided under the Enterprise Act 2002 that BT is able to avoid reducing charges for a specific type of product in line with regulated price caps, simply because it is sold as part of a bundle by a different part of BT.

5.2 Excess construction charges

When excess construction charges are required to link a particular site, these are usually additional costs for the purchasing communications provider where there is little choice but to incur them. These services are effectively bundled with the main service and as such are a type of "follow on" market where BT often is able to exert some market power. This is clearly seen in the level of margins which Ofcom has estimated that BT achieves from the sale of such services.[25] We therefore strongly support Ofcom's approach of a one-off 30% reduction in these charges. However, we consider that the use of the General Building Cost Index (GBCI) for the safeguard cap is inappropriate and Ofcom should set this cap using RPI as the relevant index.

The principle of setting a safe-guard cap whereby these charges remain constant in real terms (i.e. the costs are effectively passed through to the communication providers) also seems a reasonable approach. Passing through these costs going forward with no control would provide BT with no incentive efficiently to procure the construction services which are involved here. However, the proposal to use the GBCI in order to provide such an incentive is inappropriate.

The use of RPI in price caps (as opposed to the use of any inflation measure in the estimation of BT's costs which are used to set those price caps) is simply meant to reflect the changing value of

[25] As described in section 7 of the LLCC Consultation.

money. That is, an RPI-0 price cap simply ensures that prices stay constant in real terms. It is important that the cap is set with reference to general inflation and the regulated firm is then incentivised to set prices which (in the case of an RPI-0 cap) stay at least constant in real terms. The price which must be paid (which can also be considered as the opportunity cost of spending that money on that product rather than other products) is held constant. This is therefore about the level of financing which BT and purchasers need to raise. If the price level is held constant, then the overall volume of such costs can be passed directly through to purchasers. An RPI-0 price cap would therefore ensure that BT had to purchase a particular set of costs at the same real prices but, absent any other regulation, is not subject to risk around the volumes of such costs incurred.

The proposal to set a GBCI-0 price cap instead significantly waters down the incentive on BT efficiently to reduce such costs. What such a cap does is ensure that BT purchases such construction costs on average at the same price as the construction industry more generally. The key issue with this is that BT's actual construction costs are not likely to move in line with an industry average (noting that the GBCI includes the costs of materials as well for all types of construction). Costs of, for example, house building materials are not likely to move in line with the costs of the specialised materials required to lay ducts.

The proposed cap is therefore weaker than a simple cost pass through and also does not incentivise BT to constrain its costs in line with general inflation. Ofcom rightly notes that setting a cost pass through cap on the basis of a price index which BT itself could influence through its own purchases of construction services would also have weak incentive effects. We do not consider, however, that the correct solution to this is to choose a price index which is likely to increase at a higher rate than BT's own construction costs.

We therefore consider that it would be more appropriate to set a cap here which is solely based, like all the other charge controls set by Ofcom, on the general value of money, as determined by the RPI measure. i.e. the charge control applied to excess construction charges should be RPI-0 (rather than GBCI-0). It would then be up to BT to raise the money efficiently to procure construction services at the same real cost over time, while passing on the volume risk to its customers. In this way, each party is forced to manage the risks it is best placed to manage. Such an approach would be consistent with Ofcom's general approach to price caps (as summarised in paragraphs 3.14 to 3.23 of the LLCC Consultation) and regulatory practice more generally.[26]

[26] See, for example, http://www.regulationbodyofknowledge.org/documents/150.pdf

6 Answers to selected consultation questions

6.1 Business Connectivity Market Review Consultation

Question 1: Do you agree with our approach to retail market definition and our proposed retail product market definition?

We have no specific comments on Ofcom's retail market definitions in this market review at present.

Question 2: Do you agree with our approach to wholesale product market definition and our proposed wholesale product market definitions? In particular, do you agree with our proposal to define a Multiple Interface Symmetric Broadband Origination (MISBO) market?

As set out in the previous response to the call for inputs, we agree that it continues to make sense to define separate markets for TI and AI products. We further agree that there is a need to define a higher bandwidth market and therefore agree with the proposal to define a MISBO market.

As discussed in detail in section 3 of this response, we consider that the conditions of competition relating to mobile backhaul are distinguishable from those for the provision of other types of circuits, given the way in which they are purchased. Arguably this could lead to the delineation of a separate relevant market, but an alternative reasonable approach would be to recognise these differences in the way remedies are set. The practical implications are largely equivalent.

Question 3: Do you agree with our approach to geographic market definition and our proposed geographic market definitions? In particular do you agree with our proposal to define a larger geographic market in London (the WECLA)?

Section 3.3 sets out our reasons for disagreeing with the proposed larger geographic market in London. In particular in relation to mobile backhaul products the definition of any specific London market is not appropriate given that such services are purchased through national contracts and BT has a unique advantage from its network ubiquity in providing such services.

Question 4: Do you agree with our approach to product and geographic market definition for wholesale trunk and do you agree with our proposed market definitions for wholesale trunk?

As described in sections 3.1 and 3.2, mobile backhaul is purchased as a combined "end to end" product which includes both the access tail and conveyance across BT's 21CN. Separate regulation, as we propose, of a mobile backhaul product (for example, a sub-cap which applies to MEAS) would therefore effectively include both trunk and access elements. In this specific context, this means that a separate market definition for wholesale trunk services is not relevant. We have no further comments on the broader definition of this market for other purposes.

Question 5: Do you agree with our approach to SMP assessment?

We are surprised at the estimates of BT's market share for various retail and wholesale TISBO services which seem extremely low in some cases, especially in the WECLA. It is difficult to see how BT in some cases barely holds double digit market share percentages. We suggest Ofcom should undertake a series of cross checks using alternative methods to determine if there is a fundamental bias in the data that understates BT's share.

We also do not agree with Ofcom's approach, which does not adequately address the weaker competitive constraints on BT Wholesale in the provision of leased line circuits used for national mobile backhaul (see section 3 of this response).

Question 6: Do you agree with our assessment of SMP for the retail low bandwidth TI market in the UK excluding the Hull area?

We consider Ofcom's analysis of SMP for (TISBO) analogue and sub 2Mbit/s digital lines and remedies provide the minimum necessary protection for us for these products.

Question 7: Do you agree with our assessment of SMP for the wholesale TISBO markets in the UK excluding the Hull area?

As set out in section 3 of this response, BT has SMP for medium and high bandwidth TISBO leased lines used for mobile backhaul in the WECLA.

Question 8: Do you agree with our assessment of SMP for the wholesale AISBO markets in the UK excluding the Hull area?

We agree that BT has SMP in relation to wholesale AISBO across the UK (excluding Hull) and specifically in relation to mobile backhaul products for the reasons set out in section 3 of this response.

Question 9: Do you agree with our assessment of SMP for the wholesale MISBO markets in the UK excluding the Hull area?

As set out in section 3, we consider that BT has SMP for MISBO leased lines used for mobile backhaul nationally and also within the WECLA.

Question 10: Do you agree with our assessment of SMP for the wholesale TI regional trunk market and the wholesale TI national trunk markets?

See the answer to question 4 above.

Question 11: Do you agree with our assessment of SMP for the retail low bandwidth TI market and the retail low bandwidth AI market in the Hull area?

We have no further comments in relation to this issue.

Question 12: Do you agree with our assessment of SMP for the wholesale TISBO and AISBO markets in the Hull area?

We agree that KCOM has SMP in the Hull area. [CONFIDENTIAL] the logic of the discussion in section 3 above would also apply in relation to Hull.

Question 13: Do you agree with our approach to remedies and in particular our consideration of the case for imposing passive remedies?

Promoting further competition in the supply of mobile backhaul products, through imposing passive remedies, has the potential to create significant benefits. Ofcom's analysis of the potential costs and benefits is not robust and our views on this are set out in section 4.3 of this response.

Question 14: Do you agree with the remedies that we propose for BT in the low bandwidth TI retail market in the UK excluding the Hull area?

See the response to Question 6 above.

Question 15: Do you agree with the remedies that we propose for BT in the wholesale TISBO markets in the UK excluding the Hull area and the wholesale TI regional trunk market?

In relation to the charge controls see the answer to question 4 of the LLCC Consultation below. We also do not agree with the removal of the cost orientation remedy (see section 4.2 of this response).

Question 16: Do you agree with the remedies that we propose for BT in the wholesale AISBO markets in the UK excluding the Hull area?

We consider that BT should be subject to a sub cap for AISBO leased lines used for mobile backhaul across the UK including in the WECLA. See section 5.1. We also do not agree with the removal of the cost orientation remedy (see section 4.2 of this response).

Question 17: Do you agree with the remedies that we propose for BT in the wholesale MISBO markets?

See section 5.1, the logic of which also applies to higher bandwidth services covered by MISBO markets. The proposal to set charge controls only on "single service Ethernet" services is unclear in its implications and we are unconvinced that this will provide sufficient constraint on other products in this market, especially if any such "single service Ethernet" products are withdrawn during the course of the next market review.

We also consider that cost orientation remedies should be imposed in this market (see section 4.2 for our general arguments on this topic). In this particular market, this is even more important for those products where Ofcom is not proposing any other kind of price remedy (i.e. the proposal for no charge control on products where Ofcom has found SMP other than in relation to the single service Ethernet products). The reasons for this, set out in paragraph 2.34 of the LLCC Consultation, are that these are new services such that any pricing remedy would be too intrusive and that the proposed price control in conjunction with the "limited competition" are sufficient to constrain BT. We also note the tentative nature of the language which Ofcom uses in relation to how the charge controlled products "*may*" be constraints on those where SMP has been determined but where there is no charge control (BCMR Consultation, paragraph 12.80). These may be reasons not to set a formal charge control on these products, but given their increasing importance some form of regulatory safeguard would still be proportionate and required.

A cost orientation remedy would provide such a reasonable measure, which would not be overly intrusive, still provide BT with significant flexibility in a growing, relatively new market, but also provide some backstop protection to purchasers in this market.

Question 18: Do you agree with the remedies that we propose for KCOM in the retail TI and AI markets? In particular, do you agree with our proposal that KCOM should be required only to publish maximum prices and to be permitted to offer bespoke discounts?

We have no comments or proposals for change in relation to these remedies.

Question 19: Do you agree with the remedies that we propose for KCOM in the wholesale TISBO and AISBO markets? In particular, do you agree with our proposal that KCOM should be required only to publish maximum prices and to be permitted to offer bespoke discounts?

[CONFIDENTIAL] We therefore believe that there should be a remedy requiring the supply of suitable mobile backhaul products in the Hull area.

6.2 Leased Lines Charge Control Consultation

Question 1: Do you agree with our proposal to use an RPI-X form of charge control? If not, please explain why and propose an alternative approach with supporting information.

RPI-X charge controls are well established and understood. Regulatory continuity and certainty therefore supports their continued use.

Question 2: Do you agree with our proposal for the charge control to run for a maximum of three years from the date of implementation? If not, please explain why and propose an alternative approach with supporting information.

See the comments in the introduction to section 5 of this response with respect to the lack of clarity about the exact timing of the proposed charge control. A three year charge control is consistent with Ofcom's current practice and current European best practice for market reviews. The only issue with this approach is that the market review process does appear to be over running in a number of cases, in particular where the previous market review decision was appealed. Ofcom should consider whether it should build in potential interim arrangements into the SMP Conditions up front which it could invoke if required at the end of the proposed charge controls. This would provide greater certainty for all parties than the current approach of seeking voluntary undertakings from BT. If Ofcom agrees there is merit in this proposal, we would be happy to discuss the exact form which such "reserve" interim arrangements could reasonably take.

Question 3: Do you agree with our overall proposal for the design of the charge control? If not, please explain why and propose an alternative approach with supporting information.

See section 5 above.

We also have the following more detailed comments.

- In considering whether to make any "starting charge adjustments" the LLCC Consultation suggests Ofcom takes account of whether individual charges are out of line with cost benchmarks (paragraph 4.103). Assuming this approach would be used next time around as well, we note that this provides another reason to continue to require regular cost accounting information to be collected by BT. Relying solely on information collected infrequently for the purposes of the charge controls, in market such as these where cost measures can be volatile, would not provide sufficient information to make such assessments. Having a regular time series available would be harder to present in a light favourable to a certain approach to a specific set of charge controls and provide Ofcom with a much more robust data set on which to make such important regulatory assessments.
- The proposed treatment of discounts in relation to the calculation of starting prices is predicated on the assumption that prices should reach the cost orientated level at the end of the charge control period (rather than on average over the period). It also assumes no initial cut and that a glide path necessarily must consist of equal cuts to that end point. None of these implicit assumptions are justified in the Consultations. In short, there appears to be no *a priori* reason why the treatment of such discounts in setting the starting charges should not lead to a kinked and slightly more aggressive glide path.

Question 4: Do you agree with our proposals for TI, specifically: basket design; anchor pricing approach; base year adjustments; and forecasting assumptions? If not, please explain why and propose alternative approaches with supporting information.

BT should be subject to stricter sub price caps for medium and high bandwidth TISBO leased lines used for mobile backhaul across the UK including in the WECLA (see section 5). However, we welcome the proposed inclusion of a separate sub-cap for the first time covering Radio Base Station backhaul services.

We also have one additional more detailed point. Ofcom is proposing a blanket reallocation of £101 million of costs from TI to Ethernet as a result of the continued migration away from TI products and towards Ethernet. It is to be welcomed that Ofcom is not mechanistically applying the cost models and the logic that TI services should attract a declining amount of certain fixed costs such as duct and fibre which cannot be adequately reflected in a cost model seems sound.

However, we question why all of these costs are necessarily automatically re-allocated to the Ethernet cost base. This concerns the extent to which such fixed and common costs are recovered from a wide range of services and it is not clear why some of this amount should not be recovered from other BT products (both regulated and unregulated) which also use the same common costs. We would be concerned if it was simply administrative convenience which is driving this decision on the basis that the Ethernet charge control is the one which is also being considered at the same time. In principle, some of the £101million should also be allocated to other services not covered by the current market review.

Question 5: Do you agree with our proposal for Ethernet, specifically: basket design; modern equivalent asset approach; base year adjustments; and forecasting assumptions? If not, please explain why and propose alternative approaches with supporting information.

See section 5 of this response for our high level comments in relation to the Ethernet price caps.

We also have the following more detailed comments.

- The migration cost allowance appears to have very poor incentive effects as it is not tied to any specific obligations but simply provides an additional cost which BT can recover as it sees fit within the broader constraints of the Ethernet basket (which Ofcom acknowledges is a relatively broad basket). Migration to newer forms of Ethernet is likely to be a key issue during the period covered by this market review and both BT and its customers need to be properly incentivised in this area. Ofcom's proposals do not appear to provide any incentives on BT to ensure that migration is managed in an appropriate way.
- On the Regulatory Asset Value of the access duct we refer Ofcom to EE's response on this issue to the Charge Control Review for LLU and WLR services (dated 20 July 2011) which covered these issues.
- The RPI-12% cap is the mid-point of a range between RPI-8% and RPI-16%. Given this, the caps on each individual charge of RPI-RPI (i.e. constant nominal prices) appear overly generous. This would mean that some individual charges could move significantly out of line with the range which Ofcom considers is reasonable for Ethernet prices on average. Further, Ofcom proposal that the RPI-RPI converts into an RPI-5% cap if inflation increases above 5% appears to be a one-sided. While it is reasonable to provide BT with some flexibility in how it meets the overall RPI-12 Ethernet cap, Ofcom does not provide any robust justification for the relatively lax level at which individual charges are capped. This is especially important if Ofcom continues with its proposal to remove the Basis of Charges SMP condition. We would therefore propose that it would be justified and proportionate for the individual Ethernet sub-caps to be set at a lower level than RPI-RPI.
- In this context, we also note that the return on capital employed (ROCE) in relation to these products has recently been volatile according to BT's Regulatory Financial Statements. The adjustments which Ofcom proposes for the Ethernet basket (as set out in Table 6.6 of the LLCC Consultation) also have a significant impact on the resulting ROCE. This suggests that there is considerable latitude for BT to reallocate how it is recovering costs and making a making a margin to cover its wider common and fixed costs. This would therefore support providing relatively less latitude on how individual charges can be changed and taking a strong line on the efficiency improvements which are assumed in setting the charge controls. (We note that Ofcom is effectively proposing to give BT more latitude in relation to the extent it can change individual Ethernet charges than individual TI charges, whereas it could be argued that the reverse should be true given that BT needs to manage a declining TI market but benefits from a growing Ethernet market).

Question 6: Do you agree with our approach and proposals for controls for excess construction charges? If not, please explain why and propose an alternative approach with supporting information.

See section 5.2 of this response.

Question 7: Do you agree with our approach and proposals for charge controls for accommodation? If not, please explain why and propose an alternative approach with supporting information.

We do not have any specific comments in relation to these proposed charge controls.

Question 8: Do you agree with our proposal for charge controls for AI services in the WECLA? If not, please explain why and propose an alternative approach with supporting information.

See section 5.1 of this response, the logic of which also applies here (in combination with the arguments made in section 3).

Question 9: Do you agree with our proposal for charge controls for retail analogue services? If not, please explain why and propose an alternative approach with supporting information.

We do not have any specific comments in relation to these proposed charge controls.

Question 10: Do you agree with our proposals for the implementation of the new charge controls? If not, please explain why and propose alternative approaches with supporting information.

See comments in section 5 and answer to question 2 above.

Question 11: Do you agree with our approach to cost forecast modelling? If not, please explain why and propose an alternative approach with supporting information. Question 12: Do you agree with our assumptions of key inputs? If not, please explain why and propose an alternative approach with supporting information. Question 13: Do you agree with our approach in relation to POH charges? If not, please explain why and propose an alternative approach with supporting information. Question 14: Do you agree with our proposals for the treatment of cost of capital? If not, please explain why and propose an alternative approach with supporting information.

Given our more fundamental issues set out in sections 3 and 5 of this response we do not have any further comments on the detail of the cost modelling in addition to those made in answer to other consultation questions above.