

TELEFÓNICA UK

PRELIMINARY COMMENTS ON ANTICIPATED ACQUISITION BY BT OF EE

1. SUMMARY

- 1.1 Telefónica UK ("**TUK**") is grateful for the opportunity to provide preliminary comments to the CMA on the anticipated acquisition by BT of EE (the "**Transaction**").
- 1.2 TUK is likely to make further submissions in due course and may wish to comment on other potential effects of the Transaction then. However, in light of the timeframe for preliminary comments, this document briefly outlines two of TUK's key concerns. These are that the Transaction will give rise to:
- a) **A significant concentration of spectrum in the hands of the merged entity;**
and
 - b) **Potential foreclosure issues resulting from the merged entity's position of significant market power in transmission** (i.e. connectivity between mobile network base stations and switch sites).
- 1.3 These concerns are addressed in more detail in sections 2 and 3 below respectively. TUK would be pleased to provide any additional information in support of these points that the CMA would find useful.

2. SIGNIFICANT CONCENTRATION OF SPECTRUM

Overview

- 2.1 Spectrum is an essential input for which mobile operators compete. In situations where one or more mobile operators have limited capacity, spectrum holdings have an important impact on the extent to which mobile operators are able to compete with each other in a retail mobile telecommunications market. For example, an operator's spectrum holdings may affect its quality of service or the amount of data offered as part of a tariff.
- 2.2 TUK has serious concerns about the aggregation of BT and EE's spectrum holdings resulting from the Transaction. The merged entity will hold a very significant amount of spectrum (approximately 45% of the mobile spectrum currently available, and an even higher share of high capacity spectrum), and its strong position in this key input will allow it to foreclose competitors from segments of the retail market. Indeed, a 45% share of spectrum could allow the merged entity to increase its retail market share to a corresponding level within a relatively short time.
- 2.3 The extreme asymmetry in spectrum holdings is also likely to lead to market bifurcation, with only a subset of mobile operators (i.e. the merged entity and, at most, one other operator) able to meet demand in some segments of the retail market.

Current spectrum holdings in key mobile bands

2.4 The following table sets out current shares of available mobile spectrum¹ alongside the projected share of the merged entity:

Band	Spectrum holdings						
	EE	BT	BT+EE	Vodafone	Telefónica UK	Three	Total
800 MHz	10	--	10	20	20	10	60
900 MHz	--	--	--	34.8	34.8	--	69.6
1800 MHz	90	--	90	11.6	11.6	30	143.2
2100 MHz	40	--	40	30	20	30	120
2600 FDD MHz	70	30	100	40	--	--	140
2600 TDD MHz	--	15	15	20	--	--	35
<i>Total</i>	<i>210</i>	<i>45</i>	<i>255</i>	<i>156.4</i>	<i>86.4</i>	<i>70</i>	<i>567.8</i>
<i>Current share</i>	<i>37.0%</i>	<i>7.9%</i>	<i>44.9%</i>	<i>27.5%</i>	<i>15.2%</i>	<i>12.3%</i>	

2.5 The shares in the table above do not take account of:

¹ The table contains the spectrum holdings recognised by Ofcom for the purpose of determining auction caps. They exclude 2600TDD low power guard bands, 2100TDD (for which there is no established ecosystem) and DECT guard band spectrum (which is shared low power licences). None of these are materially relevant to competition in the retail mobile telecommunications market.

- 2.5.1 the 1.4 GHz band;
 - 2.5.2 the 2.3 GHz band (which, as a result of a forthcoming Public Sector Spectrum Release ("**PSSR**"), is being made available by Ofcom at auction (the "**PSSR Auction**")); or
 - 2.5.3 the 3.4 GHz band (which, as a result of a forthcoming PSSR, is also being made available by Ofcom at the PSSR Auction).
- 2.6 The 1.4 GHz, 2.3 GHz and 3.4 GHz bands cannot be taken into account in assessing spectrum holdings either at present or following the Transaction.
- 2.7 It would be appropriate for the CMA to take into consideration in its competition assessment the substitutability of existing mobile bands during the next two to four years (i.e. in the short-to-medium term). This is supported by the European Commission's approach in its recent decisions on the *Hutchison 3G UK/Telefónica Ireland* and *Telefónica Deutschland/E-Plus* cases, in which the Commission noted that it typically uses such a period to assess the effects of a proposed merger (and that a longer period would mean more speculative prediction of future market conditions).²
- 2.8 The 1.4 GHz band is currently licensed to Qualcomm, which is not a mobile operator. TUK does not consider the 1.4 GHz band to be an effective substitute to the bands listed in the table above. There are clear issues with device availability for this band in the short-to-medium term: there are currently no mobile devices available which use the band, potential uptake in major vendor releases is unlikely to be confirmed until after the PSSR Auction and it would take until at least [X] for device availability to reach the necessary critical mass. Indeed, Ofcom has acknowledged that the 1.4 GHz band is unlikely to have the same scale of ecosystem as the existing UK mobile bands for at least some years.³
- 2.9 TUK considers that the 2.3 GHz band is in principle substitutable with existing mobile spectrum bands, in particular the 2.6 GHz band, in light of device availability, signal propagation characteristics and compatibility with existing networks. However, the 2.3 GHz band will not be available for use until after the PSSR Auction (the date of which has not yet been confirmed, but will most likely be after the Transaction is formally notified to the CMA) and there is no certainty as to which operators will win spectrum in that band through the PSSR Auction. It therefore cannot be assumed that the merged entity's share of relevant mobile spectrum will decrease as a result of the PSSR Auction.
- 2.10 Like the 2.3 GHz band, the 3.4 GHz band will not become available for use until after the PSSR Auction. In any event, TUK does not consider the 3.4 GHz band to be substitutable with existing mobile spectrum bands, as explained further below.

² See Case No. COMP/M.6992, *Hutchison 3G UK/Telefónica Ireland*, decision of 28 May 2014, paragraph 765 and Case No. COMP/M.7018 *Telefónica Deutschland/E-Plus*, decision of 2 July 2014, paragraph 940.

³ Ofcom, *Variation of the Spectrum Access Licence for 1452-1492MHz and changes for fixed link use in the paired bands 1350-1375 MHz and 1492-1517 MHz: Consultation on a licence variation request to enable MFCN SDL (Mobile/Fixed Communication Network Supplemental downlink) in the 1452-1492 MHz band* (30 September 2014), paragraph 4.55.

Competition concerns about significant holdings of spectrum

Significant spectrum holding will give the merged entity a strong position in a key input

- 2.11 In the 4G auction in 2013, Ofcom considered it appropriate to impose an overall spectrum cap of 2x105 MHz (equating to 37% of available mobile spectrum) on each operator so as to limit the potential asymmetry of spectrum holdings and to minimise the risk that competitive intensity in the future might be lower than it could be.⁴ Similarly, in its consultation last year on the PSSR Auction, Ofcom proposed the application of a cap on the overall level of spectrum that any individual operator can hold, set at around 37% (referencing the spectrum cap set in the 2013 auction).⁵
- 2.12 The Transaction will lead to the concentration of a significant amount of available mobile spectrum in the hands of the merged entity. Taking into account the existing mobile spectrum bands that are available to mobile operators, the merged entity's combined spectrum holdings would clearly exceed the 37% cap that Ofcom considers appropriate. Indeed, at 45% of available mobile spectrum, the merged entity's holdings would be at a level that could give rise to concerns about the creation or strengthening of a dominant position in the context of a merger review.⁶
- 2.13 A combined spectrum holding of this level, and particularly in high-capacity spectrum (where the merged entity will hold 66% of spectrum in the 2.6 GHz high-capacity band), will put the merged entity in a very strong position vis-a-vis other mobile operators in respect of an essential input which is vital to competition in the retail market. As a result of the aggregation of spectrum holdings, the merged entity is likely to be able to increase its retail market share to a level corresponding with its 45% spectrum holding within a relatively short time at the expense of mobile operators with smaller spectrum holdings, weakening the competitive constraint that those other mobile operators are able to exert on the merged entity.
- 2.14 In addition, the merged entity's position would only strengthen its incentives to hinder the efficient use of spectrum, i.e. to bid strategically in the PSSR Auction for lots it may not actively want in order to prevent other operators acquiring them, and to retain spectrum or avoid trading it, even if it is not being used. It may well be profitable for the merged entity to adopt such a strategy if that allows it to benefit from a weaker competitive constraint.

Asymmetry of spectrum holdings and market bifurcation

- 2.15 As a result of the Transaction the merged entity will hold almost 66% of the spectrum in the 2.6 GHz band, i.e. high-capacity spectrum. The concentration of a significant amount of relevant spectrum in the hands of one operator would lead to a pronounced asymmetry in spectrum holdings and is likely to give rise to market bifurcation, i.e. a

⁴ Ofcom, *Assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum and related issues* (22 March 2011), Annex 6, paragraphs 6.126 and 6.129.

⁵ Ofcom, *Public Sector Spectrum Release (PSSR): Award of the 2.3 and 3.4 GHz bands* (7 November 2014), paragraph 7.117.

⁶ *Merger Assessment Guidelines* (CC2 (Revised)/OFT1254, September 2010), paragraph 5.3.5 and the Commission's Horizontal Merger Guidelines, paragraph 17.

situation in which only a subset of mobile operators are able to service some segments of the retail market.

- 2.16 The European Commission has already expressly raised concerns about market bifurcation in the retail market in the UK in its decision on the *T-Mobile/Orange* case:

*"[Spectrum concentration] could result in a bifurcation of the market in the years to come, with [EE] being the only MNO in the UK to offer LTE technology at the best possible speeds with full coverage and with the remaining MNOs offering a much inferior product."*⁷

- 2.17 Ofcom has also voiced concerns about the fact that very asymmetric spectrum holdings could have a negative impact on competition, noting that a reduction in competition could take place because (for example) an operator with a low spectrum share might not be able to compete quite as strongly for some customer segments.⁸

- 2.18 [X].

- 2.19 TUK therefore does not have enough high capacity spectrum to act as a real competitive constraint in [X] of the market, and the aggregation of spectrum in the hands of the merged entity as a result of the Transaction makes it more likely that this position will be replicated across more segments in the medium term.

- 2.20 Such bifurcation would result in the merged entity facing a weaker competitive constraint in those segments: indeed, it may be the case that only the merged entity and, at most, one other operator are able to serve particular segments of the market effectively. This would give the merged entity significant latitude to raise prices, lower quality or otherwise worsen its offering to consumers in those segments.

Resolving concerns about concentration of spectrum

- 2.21 TUK does not consider that the 1.4 GHz, 2.3 GHz or 3.4 GHz bands provide a means to resolve these concerns about the significant concentration of spectrum resulting from the Transaction in the short-to-medium term, as explained in more detail below.

⁷ Case No. COMP/M.5650 *T-Mobile/Orange*, decision of 1 March 2010, paragraph 121.

⁸ Ofcom, *Public Sector Spectrum Release (PSSR): Award of the 2.3 and 3.4 GHz bands* (7 November 2014), paragraphs 7.47-7.48.

The 1.4 GHz band

- 2.22 As detailed above, TUK does not consider the 1.4 GHz band to be substitutable with existing available mobile spectrum. This spectrum is currently licensed to a non-mobile operator, Qualcomm. Even if Qualcomm were to trade its spectrum and therefore make it available to a mobile operator, the CMA would have no influence over the timing of such a trade. Furthermore, any such spectrum could be sold to the merged entity, thereby further exacerbating the concentration issue. Although Ofcom has indicated that it intends to make trades of 1.4 GHz spectrum subject to its consent (and therefore a competition assessment) shortly before the PSSR Auction,⁹ there is currently no requirement for Ofcom to consent to such a trade.

The upcoming PSSR Auction

- 2.23 The upcoming PSSR Auction cannot be relied on as a means to resolve concerns about a substantial lessening of competition ("**SLC**") arising from the Transaction either.
- 2.24 The PSSR Auction is unlikely to make new spectrum available in a timely manner because:
- 2.24.1 the timing of the PSSR Auction has not yet been confirmed. Whilst originally scheduled for the end of this year, we understand that Ofcom considers that it will be unable to run the PSSR Auction until the Transaction has been assessed by the CMA, because Ofcom needs to be able to adequately consider the potential effects on competition arising from the PSSR Auction to assess whether or not it needs to take specific measures to address potential competition concerns; and
- 2.24.2 the PSSR Auction process and Auction rules may be subject to legal challenges and delay, as was seen in the case of the recent 4G auction (which was originally expected by Ofcom to take place in summer 2009 but was delayed until 2013 as a result of various legal challenges brought by the mobile operators in the UK).

The 3.4 GHz band is not substitutable

- 2.25 We have already noted above why the lack of timely availability of spectrum in the PSSR Auction means that the spectrum being auctioned should not be relied upon by the CMA as a means to resolve concerns about the significant concentration of spectrum resulting from the Transaction.
- 2.26 In addition, even if the PSSR Auction were to take place and the award were to be concluded in a timely manner, the 3.4 GHz band being auctioned is not substitutable with existing relevant mobile bands and will therefore not help to address any competition concerns in the short-to-medium term. Mobile operators are not likely to be able to

⁹ Ofcom, *Public Sector Spectrum Release (PSSR): Award of the 2.3 and 3.4 GHz bands* (7 November 2014), paragraphs 7.155-7.157.

compete effectively in the retail market using spectrum in this band during that timeframe. TUK's view is based on three main factors, namely (i) device availability, (ii) signal propagation and (iii) compatibility with existing networks, each of which are detailed below. This view is also supported by the fact that, in the forthcoming PSSR Auction, Ofcom is proposing a reserve price for the 2.3 GHz band (a new band with a mature ecosystem of devices) which is up to five times higher than that proposed for the 3.4 GHz band.

(i) Device availability

- 2.27 TUK does not expect widespread device support for the 3.4 GHz band to be likely for approximately [x] years, not including any risk of delay. Currently, no mobile phones use the 3.4 GHz band and only one mobile tablet does so. As 90% of TUK's data traffic comes from smartphones, and customers with high-end devices use more data than average, support from the leading smartphones and devices is essential for capacity spectrum.
- 2.28 Following discussions with key vendors, OEMs and chipset suppliers, TUK believes that the first chipsets with integrated 3.4 GHz capability are not likely to appear [x]. The take-up rate of the new chipsets by device vendors is heavily dependent on the demand from mobile operators and, in the best case, it normally takes a minimum of [x] months for the first device implementations to appear. TUK believes that it would take a further [x] years for device availability to reach the necessary critical mass (i.e. [x] of devices with the capability). Indeed, this view is supported by the fact that it has taken more than two years for the 2.3 GHz band, first introduced in devices in 2012, to be accessible by [x] of devices; TUK believes this period would have been longer had the band not been supported by leading device manufacturers.

(ii) Propagation

- 2.29 Given its higher frequency, the 3.4 GHz band has significantly worse propagation characteristics than other mobile bands currently used by smartphones and so cannot be considered substitutable with them. It is currently expected that mobile operators will use the 3.4 GHz band as a capacity layer. In urban areas, this difference in propagation will be significant as higher building penetration may mean that this band may perform much worse than lower frequencies. As urban areas are where the traffic density is generally the highest, this is where the additional capacity will be most needed. Consequently, it would take many more macro sites in urban and suburban areas to cover the same area as lower frequency bands. Lower cell range will often fall below achievable inter-site distances owing to site acquisition limitations, meaning it will be unfeasible for the 3.4 GHz band to provide as wide a capacity layer as lower frequency bands.

(iii) Network compatibility

- 2.30 TUK also notes that mobile operators face significant costs and barriers in integrating 3.4 GHz into their networks which do not apply to the existing bands, further limiting its substitutability. For example, as a result of the propagation limitations described above, it is likely that the 3.4 GHz band will be suitable for macro sites only in limited scenarios. Higher building penetration losses, particularly in indoor locations, means that 3.4 GHz

will require additional investment in order to meet demand for indoor traffic. TUK also envisages that FDD/TDD Carrier Aggregation will be available much later for the 3.4 GHz band than for other bands, further limiting the 3.4 GHz band's substitutability. When this arrives, it will significantly improve end user speeds as well as helping to mitigate the coverage disadvantage of TDD.

Conclusion

- 2.31 In the context of all of the above, it will be important for the CMA to consider carefully what measures are appropriate to address the SLC that is likely to arise from the Transaction.

3. FORECLOSURE ISSUES: TRANSMISSION

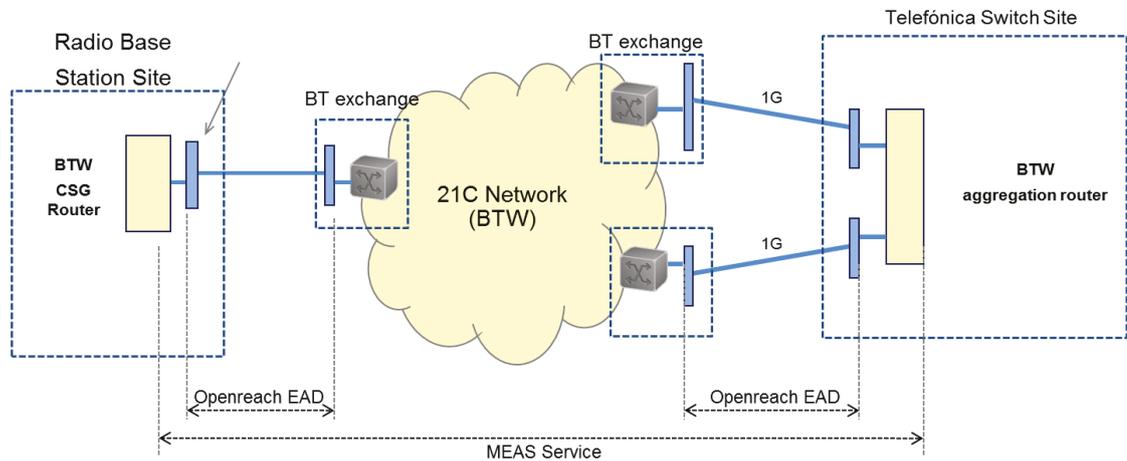
Overview

- 3.1 A mobile network is composed of a number of mobile sites, essentially a mast with an antenna and a radio-frequency system. These mobile sites are linked to a core network by backhaul connections. Leased lines provide dedicated transmission capacity between fixed locations and are used by mobile operators to carry mobile voice and data services between their radio base stations and switching centres. Transmission costs make up a significant proportion of mobile network operational costs.
- 3.2 Subscribers access the network through a radio link between their handset and the nearest mobile site (i.e. the radio access network). The signal then travels through the transmission network by microwave links and/or fibre optic cables to reach the core network. From the core network, the signal is connected to the receiving network and another radio link is transmitted to the receiving party.
- 3.3 Ofcom regulates the access products provided by Openreach on an "Equivalence of Inputs" ("**EOI**") basis. EOI is a strict form of non-discrimination that requires BT to use exactly the same products and services as its competitors. The development, provision, maintenance and repair of access services are provided on the same timescales, terms and conditions (including price and service levels), by means of the same systems and transactional processes and by sharing the same information. Essentially, the inputs available to all communications providers (including BT) are provided on an equivalent basis.
- 3.4 BT Wholesale also provides additional wholesale transmission products to mobile operators which are not regulated, and offers managed services solutions combining both regulated and non-regulated products.

Transmission services TUK procures from BT Wholesale

- 3.5 TUK has historically relied upon BT Wholesale for managed transmission solutions connecting its base stations back to its switch sites, including the use of Openreach's regulated access products. These solutions are provided by BT Wholesale as part of a package which includes the provision of both regulated and non-regulated products as described above.
- 3.6 BT Wholesale's package is known as MEAS (Managed Ethernet Access Service) and uses Openreach components called EADs (Ethernet Access Direct) to connect radio base station sites back to the nearest BT exchange which has access to BT's 21st Century Network ("**21CN**"). The 21CN is a high capacity IP network which carries all of BT's customers' traffic and internal traffic except for anything still on BT's legacy network. It also has connections from the BT network into mobile operators' switch sites. Essentially the MEAS is a solution which uses EAD circuits from Openreach on either side of an

aggregation network "cloud" provided by the 21CN to connect a large number of cell sites back to a much smaller number of switch sites. The following diagram illustrates this:¹⁰



3.7 [X].

3.8 [X].

¹⁰ Note: the CSG router at the radio base station is used to connect multiple radio equipment at the base station into one physical circuit; the aggregation router is used to present multiple connections from the radio base stations into TUK's core infrastructure.

Competition concerns arising as a result of the Transaction (vertical integration)

- 3.9 In relation to BT's unregulated transmission services, TUK is concerned that, post-Transaction, the merged entity will have both the ability and the incentive to foreclose competing mobile operators by providing these services to those competing operators at a higher price than it charges its own mobile operator arm. Differential pricing of this nature in relation to a major operating cost would place third party operators at a significant competitive disadvantage to EE (as the mobile division of the merged entity).
- 3.10 BT Wholesale is in a unique position as it has the scale and scope to connect via more Openreach exchanges than other providers, as well as the market presence to aggregate connectivity on a fully nationwide basis. The Transmission Agreement obliges BT to provide a "port only" service which allows TUK to connect third party fibre connections into a BT exchange to access the aggregation network. While TUK has contracted with a third party provider for connectivity on a number of sites, performance has been sub-optimal compared with BT's ability to deliver due to a number of factors, including challenges with duct/fibre access into existing sites. Such sites are not challenges for BT Wholesale as it typically has installed physical infrastructure and associated agreements for access. BT Wholesale therefore does not face significant competitive constraints from other providers in this regard, and mobile operators are heavily dependent on its product.
- 3.11 BT would therefore have the ability to put third party operators at a competitive disadvantage to EE post-Transaction by charging them higher prices for BT Wholesale's unregulated services (which are a key input) than it effectively charges EE for the same services. It could certainly have an economic incentive to favour EE in this way post-Transaction.
- 3.12 In relation to BT's regulated transmission services, such as local access transmission from cell sites to the BT exchange (the Openreach EAD service), BT would be obliged to provide those services to EE at the price at which it provides them to other mobile operators. However, as the price of those Ethernet services is regulated at a "basket" level rather than individually or on an "equivalence of cost" input, it would be open to BT to price certain individual services at a rate which is higher than required for a reasonable return. While EE would in principle be charged the same amount as other mobile operators, the headline value of that charge would not be relevant as EE would simply be making an intra-group payment. It would therefore be possible for BT to disadvantage third party operators indirectly by seeking to recover more than a reasonable return on an individual regulated service.