



## Dispute between Cable & Wireless and BT about BT's charges for Ethernet services

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Provisional  
Determination

[This version includes figures in table 5.11 and table 7.2 which were redacted in the version published on 23 February 2012]



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## Section 1

# Summary

- 1.1 This document (the "Provisional Determination") sets out for comment the main elements of our provisional reasoning and assessment of the matters in dispute.
- 1.2 This dispute was brought by CWW against BT (the "Dispute") and concerns BT's charges to CWW for certain Backhaul Extension Services ("BES") and Wholesale Extension Services ("WES"), which are types of Ethernet services. CWW alleges that BT's charges for certain BES and WES services between 1 April 2006 and 31 March 2011 (the "Relevant Period") were too high, and were not compliant with the relevant cost orientation obligation, SMP Condition HH3.1.
- 1.3 CWW requests that Ofcom determine the proper amount of charges for BES and WES services provided by BT over the Relevant Period and require BT to repay any overcharge, together with interest.
- 1.4 We are already considering some of the services that are in dispute between BT and CWW in resolving the *Disputes between each of Sky, TalkTalk and Virgin Media and BT regarding BT's charges for Ethernet services (CW/01055/08/10)* (the "Ethernet 1 Disputes"), which concern the level of BT's charges for certain BES and WES services over periods between 24 June 2004 and 31 July 2009. The services and years common to this Dispute and the Ethernet 1 Disputes are set out in Table 1.1 below:

**Table 1.1: Service and year combinations for which CWW considers BT has overcharged**

Services disputed by CWW	Years disputed by CWW	Years on which Ofcom has reached a provisional conclusion in the Ethernet 1 Disputes	Additional years in this Provisional Determination
BES100 rental	2006/07 to 2010/11	2006/07 to 2009/10	2010/11
BES1000 rental	2006/07 to 2010/11	2006/07 to 2009/10	2010/11
BES155 rental	2006/07 to 2010/11	Not covered	2006/07 to 2010/11
BES 622 rental	2006/07 to 2010/11	Not covered	2006/07 to 2010/11
BES2500 rental	2008/09	Not covered	2008/09
BES10000 rental	2008/09	Not covered	2008/09
WES100 rental	2006/07 to 2010/11	2006/07 to 2008/09	2009/10 to 2010/11
WES1000 rental	2006/07 to 2010/11	2006/07 to 2008/09	2009/10 to 2010/11
WES155 rental	2006/07 to 2010/11	Not covered	2006/07 to 2010/11
WES622 rental	2006/07 to 2010/11	Not covered	2006/07 to 2010/11
WES10000 rental	2007/08 to 2008/09	Not covered	2007/08 to 2008/09
BES100 connection	2006/07 to 2008/09	2006/07 to 2009/10	None

- 1.5 Where CWW is in dispute with BT about the same services in the same years as we are considering in the Ethernet 1 Disputes, we reach a consistent provisional determination on whether BT has overcharged CWW.

- 1.6 For those services in dispute between BT and CWW that we are not already considering as part of the Ethernet 1 Disputes, and for the part of the Relevant Period not covered by the Ethernet 1 Disputes, we are proposing to adopt the same approach to assessing overcharging that we have followed in the Ethernet 1 Disputes.
- 1.7 Accordingly, much of the analysis in our Draft Determinations of the Ethernet 1 Disputes<sup>1</sup> (the "Ethernet 1 Draft Determinations") is also relevant to this Dispute and we refer to the Ethernet 1 Draft Determinations throughout this document. The Ethernet 1 Draft Determinations were published on 9 February 2012 and stakeholders are invited to comment on them by 5pm on 5 April 2012.

### Ofcom's provisional assessment of the matters in dispute

- 1.8 Our provisional assessment in this Dispute is that:
- 1.8.1 BT has not demonstrated to our satisfaction that all its charges for the BES and WES services in dispute were cost orientated over the Relevant Period;
  - 1.8.2 we have therefore undertaken our own assessment of whether BT's charges were cost orientated by first comparing charges with their relevant DSACs and then taking account of other factors to avoid a mechanistic approach to our assessment;
  - 1.8.3 where BT's charges for the services in dispute were not cost orientated, we consider that there has been an overcharge;
  - 1.8.4 our provisional view is that BT has overcharged for some of the BES and WES charges in dispute over the Relevant Period;
  - 1.8.5 BT has overcharged CWW a total of £[~~3~~]m; and
  - 1.8.6 BT is required to make a repayment to CWW of the amount overpaid.

### Structure of the remainder of this document

- 1.9 This document is issued in accordance with Ofcom's Dispute Resolution Guidelines (the "Guidelines").<sup>2</sup>
- 1.10 The introduction and background to this Dispute are set out in **Section 2**. **Sections 3-6** set out the analysis underpinning our provisional reasoning and assessment and **Section 7** sets out the overcharge and repayment. Our provisional determination is set out at **Annex 3**, relevant cost standards are explained at **Annex 4** and a glossary of terms is set out at **Annex 5**.

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<sup>1</sup>See: <http://stakeholders.ofcom.org.uk/binaries/consultations/ethernet-services/summary/Ethernet-services.pdf>

<sup>2</sup> *Dispute Resolution Guidelines*, 7 June 2011. See: <http://stakeholders.ofcom.org.uk/binaries/consultations/dispute-resolution-guidelines/statement/guidelines.pdf>.

## Next steps

- 1.11 Interested parties have until **5pm on 5 April 2012** to comment on this Provisional Determination (the same date as the deadline for responses to the Ethernet 1 Draft Determinations). After considering any comments received, Ofcom will make a final determination. Details of how to respond to this Provisional Determination are set out in **Annexes 1-2**.

## Section 2

# Introduction and background

## Issues in dispute

- 2.1 The Dispute was referred to Ofcom for resolution by CWW<sup>3</sup> on 17 November 2011. It concerns the level of BT's charges for certain BES and WES Ethernet services over the Relevant Period.

## Legal framework for resolution of the Dispute

- 2.2 The relevant legal framework is described in Section 2 of the Ethernet 1 Draft Determinations. There is however one difference. As the Dispute was referred to Ofcom and Ofcom decided it was appropriate to handle it after 26 May 2011, the Dispute falls under section 185(1A) of the 2003 Act, which was inserted into the 2003 Act by the Electronic Communications and Wireless Telegraphy Regulations 2011. This is because it concerns the terms on which BT provides network access<sup>4</sup> to CWW, and that network access is required to be provided by or under a condition imposed under section 45 of the 2003 Act (Condition HH3.1, set out below).

## BT's cost orientation obligations

- 2.3 Section 4 of the Ethernet 1 Draft Determinations describes the history of BT's cost orientation obligations. Readers are referred to those sections, and we have included in paragraphs 2.4 to 2.8 below a shorter summary.
- 2.4 In its 2004 Leased Lines Market Review ("LLMR 2004")<sup>5</sup>, Ofcom found that BT had significant market power ("SMP") in the AISBO market (which includes the provision of wholesale Ethernet services). Ofcom therefore imposed SMP conditions on BT in that market ("Conditions HH"), including:
- 2.4.1 a requirement to provide Network Access<sup>6</sup> on reasonable request (Condition HH1);
  - 2.4.2 a requirement not to unduly discriminate (Condition HH2); and
  - 2.4.3 a basis of charges (cost orientation) obligation (Condition HH3.1) which requires that:

*"Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition HH1 is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach"*

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<sup>3</sup> There are a number of companies within the Cable & Wireless Worldwide plc group to which this Dispute relates: Cable & Wireless Worldwide plc itself; Cable & Wireless UK; Cable & Wireless Access Ltd; Energis Communications Ltd; Thus Group Holdings Ltd; and Your Communications Group Ltd.

<sup>4</sup> Network access is defined in section 151 of the 2003 Act.

<sup>5</sup> *Review of the retail leased lines, symmetric broadband origination and wholesale trunk segments markets*: [http://stakeholders.ofcom.org.uk/binaries/consultations/llmr/statement/state\\_note.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/llmr/statement/state_note.pdf).

<sup>6</sup> As defined in section 151 of the 2003 Act.

*and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.”<sup>7</sup>*

- 2.5 In December 2008, Ofcom published the Business Connectivity Market Review Statement (“2008 BCMR Statement”)<sup>8</sup> which defined two separate markets for AISBO services: a low bandwidth market (including Ethernet services up to and including 1 Gbit/s) and a high bandwidth market (including Ethernet services with bandwidths above 1 Gbit/s). Ofcom concluded that BT has SMP in the market for low bandwidth AISBO services and that no CP has SMP in the high bandwidth AISBO market.
- 2.6 In the 2008 BCMR Statement, Ofcom imposed a number of SMP conditions on BT in the low bandwidth AISBO market.<sup>9</sup> Conditions HH1, HH2 and HH3.1 were reimposed on BT, but only in relation to the low bandwidth AISBO market. The wording of Condition HH3.1 remained as set out at paragraph 2.4.3.
- 2.7 Ofcom also concluded in principle that it was appropriate to impose a charge control in relation to low bandwidth AISBO services (Condition HH4). This charge control was set in a statement published on 2 July 2009 (the “2009 LLCC Statement”)<sup>10</sup> and came into force on 1 October 2009.<sup>11</sup>
- 2.8 Condition HH3.2, imposed in the 2008 BCMR Statement, provides:

*“For the avoidance of any doubt, where the charge offered, payable or proposed for Network Access covered by Condition HH1 is for a service which is subject to a charge control under Condition HH4, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that such a charge satisfies the requirement of Condition HH3.1.”*

- 2.9 All BT's BES and WES services were therefore subject to Condition HH3.1 from 2004 until 8 December 2008. From 8 December 2008, only its low bandwidth BES and WES (up to and including 1 Gbit/s) were subject to Condition HH3.1. Of the services listed in Table 1.1, BES2500, BES10000 and WES10000 are high bandwidth services and so they are not subject to Condition HH3.1 from 8 December 2008.

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<sup>7</sup> Annex D to the LLMR 2004.

<sup>8</sup> <http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr08/summary/bcmr08.pdf>

<sup>9</sup> From 8 December 2008, BT was no longer subject to SMP conditions in the high bandwidth AISBO market.

<sup>10</sup> <http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/llccstatement.pdf>. The 2009 LLCC Statement was appealed to the CAT, which referred certain price control matters to the Competition Commission (“CC”). The CC issued a determination ([http://www.competition-commission.org.uk/assets/bispartners/competitioncommission/docs/pdf/non-inquiry/appeals/communications\\_act/final\\_determination\\_excised\\_version\\_for\\_publication.pdf](http://www.competition-commission.org.uk/assets/bispartners/competitioncommission/docs/pdf/non-inquiry/appeals/communications_act/final_determination_excised_version_for_publication.pdf)) which resulted in the CAT directing Ofcom to make a number of changes to the charge control. Ofcom published a revised charge control on 14 October 2010 ([http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/LLCC\\_decision\\_final.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/LLCC_decision_final.pdf)).

<sup>11</sup> The starting charge adjustment to the price of 1 Gbit/s BES rental services came into force on 1 August 2009.



## BT's financial reporting obligations and BT's LRIC model

- 2.10 BT is also subject to an SMP obligation to publish detailed financial statements, known as BT's Regulatory Financial Statements ("RFS").<sup>12</sup>
- 2.11 Section 5 of the Ethernet 1 Draft Determinations describes in further detail BT's regulatory financial reporting obligations, and BT's LRIC model and its application. An understanding of these facts is also necessary to Ofcom's proposed determination of this Dispute.

## Wholesale Ethernet products

- 2.12 Section 6 of the Ethernet 1 Draft Determinations describes what BT's wholesale Ethernet service products are and how BT charges for WES and BES products. BES and WES can be provided in different bandwidths starting from 10 megabits per second, and the products are known by acronyms made up of the type of service and the bandwidth, e.g. "BES10" for 10 Mbit/s, "BES100" for 100 Mbit/s.
- 2.13 BT's charges for main link, connection and rental services for BES and WES at different bandwidths have been set out individually in the Openreach Price List ("OPL") throughout the Relevant Period, e.g. separate WES100 rental charges and WES100 connection charges are listed. The Openreach Price List is publicly available on the Openreach website<sup>13</sup>. Readers are particularly referred to paragraphs 6.14 to 6.20 of the Ethernet 1 Draft Determinations.
- 2.14 In this case however the Dispute relates to some services which were not part of the Ethernet 1 Disputes. These are: BES155 rental, BES622 rental, BES2500 rental, BES10000 rental, WES155 rental, WES622 rental and WES10000 rental. This is shown in Table 1.1.
- 2.15 This Dispute differs from the Ethernet 1 Disputes also in that it includes, in addition to time periods which overlap with Ethernet 1 Disputes, more recent periods of time (2010 and 2011).

## Issues in dispute

### CWW's submission

- 2.16 In summary, CWW considers that the issues for consideration by Ofcom are:
- 2.16.1 whether BT has overcharged CWW for BES and WES services over the Relevant Period; and if so
- 2.16.2 what BT's prices should have been in order for BT to have complied with its cost orientation obligation; and

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<sup>12</sup>The Regulatory Financial Reporting obligations on BT and Kingston Communications final statement and notification, 22 July 2004:

[http://stakeholders.ofcom.org.uk/binaries/consultations/fin\\_reporting/statement/finance\\_report.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/fin_reporting/statement/finance_report.pdf)

<sup>13</sup>The OPL price list for BES is available at:

<http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=K9Cgp01UhnAMs22R9huCHWVvGaJZiqBmLZgtNREaGoIMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIIsgtIFAKw%3D%3D>

The OPL price list for WES is available at:

<http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=bj1iagV2rmVhUxhJRV2ltZ6l6oCf3ew2ZeuZm4VRqG0IMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIIsgtIFAKw%3D%3D>

- 2.16.3 by how much CWW has been overcharged and should therefore be reimbursed.<sup>14</sup>
- 2.17 CWW considers that an assessment of BT's compliance with its cost orientation obligation will include:
- 2.17.1 making appropriate adjustments to BT's DSACs "*including, but not limited to the adjustments made by Ofcom in the Leased Lines Charge Control*" and
- 2.17.2 "*unit cost adjustments and any adjustments to holding gains to take account of the impact of BT's network revaluation in 2009/10 and there on*".<sup>15</sup>
- 2.18 CWW submits that, consistent with the wording of the relevant cost orientation which requires BT to ensure that "*each and every charge is provided on a cost orientated basis,*" any test of cost orientation "*should look at cost orientation of a single charge and not compliance of cost orientation over a combination or aggregation of multiple charges.*"<sup>16</sup> CWW say that each charge should be assessed separately.
- 2.19 CWW considers that arguments put to it by BT in relation to particular circumstances or events (BT's argument that the Ethernet market was "nascent"; BT's price changes over the Relevant Period; BT's interaction with Ofcom over the Relevant Period) should not affect BT's obligation to comply with the cost orientation obligation.<sup>17</sup>
- 2.20 CWW submits analysis for 2006/07, 2007/08 and 2008/09 which it considers indicates that BT's charges were "*significantly above the DSAC ceiling.*"<sup>18</sup>
- 2.21 CWW states that "*in making a decision to conclude this dispute Ofcom [...] needs to determine what is the best set of data available upon which to base the resolution of the dispute.*" CWW considers that BT's published RFS represent one set of data but Ofcom may conclude that it should amend the data to reflect known errors.<sup>19</sup>
- 2.22 CWW states that it has been "*unable*" to use BT's published DSACs for 2009/10 and 2010/11 to assess overcharging as it considers that there are "*issues with the methodology*" BT used:
- 2.22.1 CWW "*regard the numbers to be incorrect as BT has taken a CCA approach to setting the cost but decided to exclude any holding gains from the DSAC calculations. This means that the CCA methodology is not fully/appropriately adopted*"; and
- 2.22.2 CWW "*do not agree with the size of the increase that has arisen due to BT's duct revaluation.*"<sup>20</sup>
- 2.23 CWW considers that SMP Conditions HH2 (Requirement not to unduly discriminate) and HH4 (Charge Control) are also relevant to this Dispute but has made no specific

<sup>14</sup> CWW submission, paragraph 2.5.

<sup>15</sup> CWW submission, paragraph 2.5.

<sup>16</sup> CWW submission, paragraphs 2.9-2.10 (CWW's emphasis).

<sup>17</sup> CWW submission, paragraph 2.29.2 and paragraphs 2.34-2.54.

<sup>18</sup> CWW submission, paragraph 2.56 and preceding table.

<sup>19</sup> CWW submission, paragraph 2.60.

<sup>20</sup> CWW submission, paragraph 2.63.

arguments in relation BT's compliance with these conditions, nor explained why it considers them to be relevant.<sup>21</sup>

### **CWW's request for Ofcom to make a determination**

2.24 CWW requests that Ofcom resolve the Dispute under section 185(1A) of the Act and use its powers under section 190 of the Act to:

2.24.1 determine the proper amount of charges for the particular BES and WES service products provided by BT to CWW from 1 April 2006 to 31 March 2011; and

2.24.2 give a direction requiring BT to repay any overcharge, plus interest.

### **BT's comments on CWW's submission**

2.25 We provided a copy of CWW's submission to BT. In its response, on 29 November 2011, BT:

2.25.1 restated its view<sup>22</sup> that the issues raised should be handled by Ofcom as a compliance complaint rather than as a dispute;

2.25.2 acknowledged that its discussions with CWW regarding the level of charges for BES and WES services in the period 1 April 2006 to 31 March 2009 had not reached satisfactory resolution;

2.25.3 suggested, if Ofcom were to accept the Dispute for resolution, that Ofcom "merge" an initial period of the Dispute (1 April 2006 to 31 July 2009) with the Ethernet 1 Disputes on the basis that CWW raises similar or the same issues as those being considered in the Ethernet 1 Disputes;

2.25.4 noted that there had been no discussion between the parties in relation to the period 1 April 2009 to 31 March 2011; and

2.25.5 made no substantive additional submissions.

### **Enquiry Phase Meeting**

2.26 Before holding an Enquiry Phase Meeting ("EPM"), Ofcom issued a pre-EPM questionnaire to which BT and CWW (the "Parties") responded. In their responses both Parties indicated that they did not consider alternative dispute resolution ("ADR") an alternative means of resolving the Dispute.

2.27 On 7 December 2011, Ofcom held an EPM with representatives of CWW and BT, in order to clarify the principal arguments and facts raised by the Parties and to discuss the potential scope of the Dispute.

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<sup>21</sup> CWW submission, paragraphs 1.14-1.21.

<sup>22</sup> Previously stated in its submission of 20 May 2011 in response to the Ethernet 1 Disputes and in its application to the Court of Appeal for permission to appeal *BT plc v Ofcom* [2010] CAT 15 and *BT plc v Ofcom* [2011] CAT 5 (the latter case being referred to in this document as "the PPC Judgment"). BT's submission of 20 May 2011 set out its views on the error of law which it considers that Ofcom made in accepting the Ethernet 1 Disputes for resolution and the errors of law it would make if it followed the PPC Judgment in resolving them. We consider BT's submissions on these points briefly at paragraphs 3.17-3.20 of the Ethernet 1 Draft Determinations.

- 2.28 At the EPM, the Parties confirmed that whilst there had been little discussion between them in relation to 1 April 2009 to 31 March 2011, they were unable to reach agreement in relation to the whole of the period 1 April 2006 to 31 March 2011.

### Decision to accept the Dispute for resolution

- 2.29 Having considered all of the comments made by both parties, Ofcom was satisfied that the Dispute is a dispute within the meaning of section 185(1A) of the 2003 Act.
- 2.30 We considered BT's suggestion that we should "merge" the initial period of the Dispute (from 1 April 2006 to 31 July 2009) with the Ethernet 1 Disputes (which relate to that period). At the time we accepted the Dispute, we did not consider it appropriate, for practical reasons, to join this Dispute with the Ethernet 1 Disputes for the initial period. Nevertheless, as set out at paragraphs 1.4-1.7 above, we are proposing to adopt the same approach that we have followed in the Ethernet 1 Disputes in resolving this Dispute, and in relation to the portion of the Dispute which is about the same services in the same years as we are considering in the Ethernet 1 Disputes, having made the assessments in Sections 4-6 we reach the same provisional conclusions on whether BT has overcharged. In relation to disputed services reported in BT's RFS under "other bandwidths" rental (see paragraphs 5.30-5.52) and in relation to 2010/11, new issues arise and we consider these too, before arriving at our provisional determination.
- 2.31 On 9 December 2011 we decided in accordance with section 186 of the 2003 Act that it was appropriate for Ofcom to handle the Dispute. Shortly after this decision was made, we informed the Parties of our decision.

### The scope of the Dispute

- 2.32 On 15 December 2011 we published details of the Dispute, including the scope, in our Competition and Consumer Enforcement Bulletin:<sup>23</sup>

*"The scope of the dispute is to determine whether, from 1 April 2006 to 31 March 2011:*

- *BT overcharged CWW for BES and WES services; and if so*
- *by how much CWW was overcharged for those services; and*
- *whether, and by how much, BT should reimburse CWW in relation to the overcharge."*

### Additional comments from the Parties

- 2.33 In response to stakeholder comments on the process set out in our Guidelines, which we have received since their publication, Ofcom decided to give the Parties two weeks to make additional comments on the Dispute after we accepted it for resolution. We intend to apply this practice to all future disputes accepted under the Guidelines.
- 2.34 We therefore asked the Parties to make any further comments in relation to the Dispute by 6 January 2012.

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<sup>23</sup> [http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/open-cases/all-open-cases/cw\\_01078/](http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/open-cases/all-open-cases/cw_01078/)

- 2.35 CWW had no further comments to make at this time.
- 2.36 BT made the following points:
- 2.36.1 BT said that Ofcom's decision not to "merge" the initial period of the Dispute with the Ethernet 1 Disputes was of concern to BT, as both disputes *"concern the same underlying compliance complaint for that period"*;
  - 2.36.2 BT asked us to take into account its submission of 20 May 2011 made in response to the Ethernet 1 Disputes and made no other substantive additional submissions; and
  - 2.36.3 BT commented that for the period between 1 April 2009 to 31 March 2011 it *"does not understand the specific basis of CWW's complaint and it is thus impossible for BT to comment on the merits of CWW's complaint for this period"*.
- 2.37 On 6 February 2012, CWW provided additional comments on BT's letter of 6 January 2012. CWW reiterated its view that the Parties are in dispute from 1 April 2009 to 31 March 2011.

### **Key information relied upon in resolving the Dispute**

- 2.38 In coming to our Provisional Determination, we have relied on submissions made by the Parties outlined above. Additionally we rely on the information provided by Parties in submissions and responses made to information requests as follows.

### **Information previously provided by BT**

- 2.39 BT has requested that we take into account all of the submissions and information it has provided in relation to the Ethernet 1 Disputes in resolving this Dispute. BT's principal arguments and Ofcom's responses to them are set out in full in the Ethernet 1 Draft Determinations and we refer to them as relevant in this Provisional Determination.
- 2.40 We have informed BT we also intend to use the following information provided in relation to the Ethernet 1 Disputes for the purpose of considering this Dispute:
- 2.40.1 BT's responses to the section 191 notice dated 22 October 2010 (the "22 October s191 notice");
  - 2.40.2 BT's responses to the section 191 notice dated 16 June 2011 (which also related to the *Disputes between THUS, Cable & Wireless and others and BT regarding BT's charges for Partial Private Circuits (CW/00992/06/08)*) (the "16 June s191 notice"); and
  - 2.40.3 correspondence between Ofcom and BT relating to a number of supplementary questions/points of clarification which arose from the notices set out above.
- 2.41 We also intend to use information provided BT on 21 December 2011 in the context of the Leased Lines Charge Control review, updating its response to question 16 of a section 135 notice sent on 1 July 2011.

### **Information requests: BT**

- 2.42 On 22 December 2011 we sent BT a notice under section 191 of the 2003 Act (the "22 December s191 notice") asking for information for the purposes of resolving the Dispute. BT responded to this notice on 12, 18, 23 and 31 January 2012.
- 2.43 On 20 January 2012 we sent BT a second notice under section 191 of the 2003 Act (the "20 January s191 notice"). We requested this information so we could more fully understand the methodology that BT adopted in calculating the DSACs of the services in dispute, as published in BT's RFS 2010/11. On 27 January 2012, BT responded to this request.
- 2.44 On 24 January 2012 we sent BT a third notice under section 191 of the 2003 Act (the "24 January s191 notice"). We requested this information so we could fully understand BT's responses of 12 January and 18 January to the 22 December s191 notice. BT responded to this notice on 27 January, 3 and 6 February 2012.

### **Information requests: CWW**

- 2.45 On 22 December 2011 we sent CWW a notice under section 191 of the 2003 Act ("CWW's 22 December s191 notice") asking for information for the purposes of resolving the Dispute. On 11 January 2012 CWW responded to this request.
- 2.46 On 18 January and 2 February 2012, we sent CWW some follow-up questions further to CWW's 22 December s191 notice so we could fully understand the CWW businesses to which the Dispute relates. On 19 January and 6 February 2012 respectively, CWW responded to our follow-up questions.

### **Interested parties**

- 2.47 Four stakeholders, Verizon<sup>24</sup>, Global Crossing,<sup>25</sup> Sky<sup>26</sup> and Talk Talk<sup>27</sup> have expressed an interest in the outcome of this Dispute.

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<sup>24</sup> Verizon UK Limited.

<sup>25</sup> Global Crossing (UK) Telecommunications Ltd.

<sup>26</sup> British Sky Broadcasting Limited.

<sup>27</sup> Talk Talk Telecom Group plc.

### Section 3

## Analytical approach

### Introduction

- 3.1 The scope of this Dispute is to determine whether BT has overcharged CWW for BES and WES services during the Relevant Period.
- 3.2 As discussed in Section 2, BT is subject to a number of SMP conditions relating to its provision of Ethernet services. In particular, SMP Condition HH3.1 requires BT to secure, and to be able to demonstrate to Ofcom's satisfaction, that each and every charge for BES and WES services is cost orientated.
- 3.3 Our proposed approach to resolving this Dispute is the same as the approach we are proposing to adopt in the Ethernet 1 Draft Determinations.
- 3.4 We propose to determine this Dispute by determining whether BT's has overcharged for the WES and BES services in dispute.
- 3.5 In the remainder of this Section, we consider:
  - 3.5.1 which services we need to consider in our analysis and which charges should be cost orientated; and
  - 3.5.2 the approach we propose to take in our analysis of whether BT has overcharged for those services.

### Which BES and WES services do we need to consider in our analysis?

- 3.6 As we consider at Section 7 of the Ethernet 1 Draft Determinations in relation to the Ethernet 1 Disputes, we first confirm that the Parties are in dispute in relation to the services listed in CWW's submission. CWW provided details of the services for which it considers BT has overcharged it over the Relevant Period as set out in Table 3.1 below.<sup>28</sup>

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<sup>28</sup> In response to question 1 of CWW's 22 December s191 notice, CWW suggests (in a spreadsheet that forms part of its response to that question) that BT's reported prices for WES2500 were above their corresponding DSACs for three of the five years of the Relevant Period. However, CWW's response suggests that it did not purchase any WES2500 circuits over the Relevant Period and we have not therefore considered this service in our analysis.

**Table 3.1: Service and year combinations for which CWW considers BT has overcharged<sup>29</sup>**

	2006/07	2007/08	2008/09	2009/10	2010/11
BES100 rental	X	X	X	X	X
BES1000 rental	X	X	X	X	X
BES1000ER rental*		X	X	X	X
BES155 rental	X	X	X	X	X
BES 622 rental	X	X	X	X	X
BES2500 rental			X		
BES10000 rental			X		
WES100 rental	X	X	X	X	X
WES1000 rental	X	X	X	X	X
WES1000ER rental*	X	X	X	X	X
WES155 rental	X	X	X	X	X
WES622 rental	X	X	X	X	X
WES10000 rental		X	X		
BES100 connection	X	X	X		

\*ER = Extended Reach, a variant of BES1000 rental and WES 1000 rental.

### BES1000 and WES1000 extended reach

3.7 BES1000 standard and BES1000 extended reach rentals are amalgamated (along with other BES1000 rental variants such as Daisy Chain) into the BES1000 rental category in the RFS. Similarly, WES1000 standard and WES1000 extended reach are also amalgamated (along with other WES1000 rental variants) into the WES1000 rental category in the RFS. As explained in paragraphs 5.28-5.29 below we are proposing to resolve the dispute in relation to BES1000 and WES1000 rental variants by using the level of aggregation presented in the RFS, consistent with the Ethernet 1 Draft Determinations. That is, we propose to resolve the disputes for all variants of BES1000 and WES1000 rentals using the average price and unit costs reported in the RFS as our starting point.

### BES and WES rentals above 1Gbit/s after 8 December 2008

3.8 As noted in paragraph 2.5, in the 2008 BCMR Statement, Ofcom determined no CP had SMP in the market for AISBO services at bandwidths above 1Gbit/s. BES and WES services with a bandwidth above 1Gbit/s were therefore only subject to Condition HH3.1 up to 8 December 2008 and we have not considered them in our analysis after that date (the relevant services are BES2500, BES10000, and WES10000 rentals).

### **Which charges should be cost orientated?**

3.9 In assessing whether BT's charges in dispute were cost orientated, we go on to consider which charges must be cost orientated. We considered this issue in Section 8 of the Ethernet 1 Draft Determinations and readers are referred to that section.

<sup>29</sup>CWW's response to question 1 of CWW's 22 December s191 notice refers to "WES/WEES" at each bandwidth (e.g. "WES/WEES 100"). BT's website describes WEES (Wholesale End to End Services or Wholesale End to end Extension Services) as "an end user to end user version" of WES (<http://www.openreach.co.uk/orpg/home/products/ethernet-services/wholesale-extension-services/wes.d>). WEES is a link between two customer sites, whereas WES is a link between a customer site and the purchasing CP's network.



- 3.10 In the PPC Judgment<sup>30</sup> the Competition Appeal Tribunal (“CAT”) considered the appropriate level of aggregation for assessing BT’s compliance with Condition H3.1, given the requirement (identical to that in HH3.1) that BT secure that “*each and every charge offered, payable or proposed for Network Access*” is cost orientated. The CAT found that Ofcom was correct to consider, discretely, the charges for each separate trunk service.<sup>31</sup>
- 3.11 BT considers services should be aggregated and that it is the charge for aggregated services that should be considered by Ofcom in assessing cost orientation. BT’s arguments are set out in detail in paragraphs 8.17-8.30 of the Ethernet 1 Draft Determinations. In summary, BT argues that Ofcom should not read across the CAT’s approach in the PPC Judgment to the Ethernet market. BT considers, first, that we should consider aggregation across the market as a whole. It considers the following factors are relevant in this regard: the absence of aggregation across markets; the absence of a charge control; aggregation in BT’s RFS; and the nascent state of the market. Notwithstanding this position BT also argues that we should aggregate connection and rental charges for each bandwidth. BT additionally argues that we should aggregate main link and rental charges.
- 3.12 In contrast, it is CWW’s view that the charges should be considered on a disaggregated basis. CWW considers that “*the basis of charges condition wording is precise and deliberate. The imposition of the condition to charge each and every charge on a cost orientated basis limits the ability of BT to game the pricing of services to its own competitive advantage.*”<sup>32</sup> CWW notes<sup>33</sup> Ofcom’s statement made in Table 8.11 of the 2008 BCMR Statement that imposition of a cost orientation requirement on BT in the low bandwidth AISBO market is justified “*because, although the charge control conditions will... limit average charges, they do not in themselves control the level of individual charges within a basket subject to an average charge control. In the absence of this [cost orientation] condition, BT might set individual charges at excessively high or anti-competitively low levels within a basket.*”
- 3.13 CWW notes that “*Although connection is never bought on its own, but in combination with rental it is not bought in equal proportion.*”<sup>34</sup> It argues that connection and rental services are distinct services with differing cost bases.<sup>35</sup>
- 3.14 Referring to BT’s arguments about aggregation in BT’s RFS, CWW contends that “*Regulatory Accounting is a separate and complementary SMP obligation to the basis of charging obligation. There is not any correlation of the fact that Regulatory Accounting does not require reporting at the level of charges in the price list and the interpretation of cost orientation for each and every charge.*”<sup>36</sup>

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<sup>30</sup> The CAT’s judgment of 22 March 2011 disposing of BT’s appeal of Ofcom’s determinations (“the PPC Final Determinations”) of disputes about the pricing of Partial Private Circuits (“PPCs”). The PPC Judgment is available at [www.catribunal.org.uk/files/1146\\_BT\\_Judgment\\_CAT5\\_220311.pdf](http://www.catribunal.org.uk/files/1146_BT_Judgment_CAT5_220311.pdf) and the PPC Final Determinations at

[http://stakeholders.ofcom.org.uk/binaries/consultations/draft\\_deter\\_ppc/PPC\\_final\\_determination.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/draft_deter_ppc/PPC_final_determination.pdf)

<sup>31</sup> See the Ethernet 1 Draft Determinations, paragraphs 8.7-8.13.

<sup>32</sup> CWW submission, paragraph 2.12.

<sup>33</sup> CWW submission, paragraph 2.15.

<sup>34</sup> CWW submission, paragraph 2.17.

<sup>35</sup> CWW submission, paragraph 2.17.

<sup>36</sup> CWW submission, paragraph 2.36.

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- 3.15 CWW considers that *“Aggregation of cost and charges over multiple services is not relevant to our claim or in our view relevant to application of the SMP condition.”*<sup>37</sup>
- 3.16 We propose to consider BT's charges on a disaggregated basis i.e. to consider whether BT has secured that each and every disputed charge is cost orientated. We consider this approach to be consistent with the explicit requirements of Condition HH3.1 and the precedent provided by the PPC Judgment. Ofcom's views, including its responses to the specific arguments made by BT, are set out in Section 8 of the Ethernet 1 Draft Determinations.

### **Has BT overcharged CWW for BES and WES services?**

- 3.17 In Section 9 of the Ethernet 1 Draft Determinations we set out how we plan to consider whether BT's charges are cost orientated or not, and how we will resolve the Ethernet 1 Disputes if they are not, taking into account the arguments made by the parties. Our approach for resolving this Dispute is the same and readers are referred to the discussion in Section 9 of the Ethernet 1 Draft Determinations.
- 3.18 In summary, given the similarities<sup>38</sup> between this Dispute, the Ethernet 1 Disputes and the PPC Disputes, we consider it appropriate to adopt the same approach that we adopted in the PPC Final Determinations, which were upheld by the CAT in the PPC Judgment. We consider in Section 9 of the Ethernet 1 Draft Determinations how we will address any differences in the factual circumstances.
- 3.19 In order to determine if BT has overcharged CWW, we need to assess BT's compliance with its cost orientation obligation in respect of each of the distinct charges in dispute. Condition HH3.1 (like Condition H3.1 which was considered in the PPC Judgment) requires that:
- 3.19.1 first, each and every charge covered by Condition HH3.1 must:
- a) be reasonably derived from the costs of provision based on a forward looking long run incremental cost approach;
  - b) allow for an appropriate mark up for the recovery of common costs; and
  - c) include an appropriate return on capital employed.
- 3.19.2 second, BT must be able to demonstrate this to Ofcom's satisfaction.
- 3.20 In accordance with the PPC Judgment, our assessment of the alleged overcharge essentially involves answering two key questions:
- 3.20.1 Has BT demonstrated to our satisfaction that its charges in dispute were cost orientated (i.e. were they based on an appropriate allocation of common costs)? If it has done so, then there is no overcharging. BT is afforded discretion in how it demonstrates that its charges are cost orientated, as long as it can demonstrate to our satisfaction that its chosen approach is appropriate; and

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<sup>37</sup> CWW submission, paragraph 2.29.1.

<sup>38</sup> Notably the consistency of the wording of the relevant SMP conditions and the fact that the conditions were all imposed in the same market review for the same time period.

- 3.20.2 If it has not done so, we must ask whether BT's charges were nevertheless appropriate (i.e. based on an appropriate allocation of common costs).
- 3.21 Ofcom considers that DSAC is the appropriate cost benchmark for Ofcom to use in its assessment of whether BT's charges in dispute were cost orientated. BT's views on the use of DSAC as a cost benchmark, and ROCE as an alternative, are set out at paragraphs 9.23 and 9.37 (use of DSAC), and 9.65-66 (ROCE) of the Ethernet 1 Draft Determinations. CWW considers that *"DSAC remains the first order test by which Ofcom should judge cost-orientation."*<sup>39</sup>
- 3.22 Ofcom considers, however, that the DSAC test should not be implemented in a mechanistic way. In the PPC Judgment the CAT concluded that, although Condition H3.1 (and therefore by implication Condition HH3.1) requires Ofcom to treat prices above DSAC as intrinsically excessive and in breach of the condition,<sup>40</sup> *"Ofcom must guard against the possible injustices of a mechanistic application of a test for the allocation of common costs."*<sup>41</sup> The CAT considered that *"Ofcom acted appropriately<sup>42</sup> in looking to other factors in addition to the mere fact that DSAC had been breached by BT's prices."*<sup>43</sup> Therefore, and consistent with the approach in the Ethernet 1 Draft Determinations,<sup>44</sup> we consider in particular:<sup>45</sup>
- 3.22.1 **the magnitude and duration of the amounts by which charges exceeded DSAC.** As in the Ethernet 1 Draft Determinations,<sup>46</sup> where charges exceeded DSAC in fewer than three financial years (three out of five years being the majority of the Relevant Period), we propose that BT's underlying reasons why BT's charges exceeded DSAC should be given more weight in determining whether it overcharged for its services. However, given the importance of the DSAC benchmark, in order to conclude that a charge that exceeds DSAC does not constitute overcharging due to the circumstances surrounding the pricing decision, we would need BT to provide us with a specific and evidence-based explanation of those circumstances.
- 3.22.2 **whether, and the extent to which, charges exceeded FAC.** As discussed in the Ethernet 1 Draft Determinations<sup>47</sup> where charges are above DSAC, we also consider the relationship of charges to FAC to determine whether a charge is nonetheless cost orientated. The use of FAC in this manner can act as a useful cross-check. A charge being above FAC is not intrinsically an indicator that a charge is not cost orientated. However if a charge was above DSAC, and revenues were significantly above FAC, this evidence would corroborate a conclusion of overcharging.

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<sup>39</sup> CWW submission, paragraph 2.66.

<sup>40</sup> PPC Judgment, paragraph 307(3).

<sup>41</sup> PPC Judgment, paragraph 305.

<sup>42</sup> In the PPC Final Determinations.

<sup>43</sup> PPC Judgment, paragraph 305.

<sup>44</sup> Ethernet 1 Draft Determinations, paragraphs 9.25-9.84.

<sup>45</sup> We note that the CAT concluded at paragraphs 327 and 329 of the PPC Judgment that *"the need to show economic harm – of any sort – is not a pre-requisite for a finding that Condition H3.1 has been breached"* and therefore *"we do not consider there to be a role for an economic harm test when Ofcom is seeking to assess whether BT has breached Condition H3.1"*. On the basis of the CAT's conclusions we do not consider economic harm in this Provisional Determination.

<sup>46</sup> Ethernet 1 Draft Determinations, paragraphs 9.38 to 9.40.

<sup>47</sup> Ethernet 1 Draft Determinations, paragraphs 9.49 to 9.64.

- 3.22.3 **the rate of return on capital employed.** As discussed in the Ethernet 1 Draft Determinations<sup>48</sup> we consider rates of return to be a relevant factor in addition to a comparison of charges against DSAC although caution is needed in its application. We consider that the appropriate WACC is the “rest of BT” WACC (which was between 11% and 11.4% during the Relevant Period).
- 3.23 We set out below the three steps we propose to take in the assessment we carry out in Sections 4-6:
- Step 1:** In Section 4, consider whether the evidence provided by BT demonstrates to our satisfaction that each and every charge was cost orientated in accordance with its obligations under Condition HH3.1. If BT demonstrates this to our satisfaction, we do not need to proceed to carry out the other steps.
- Step 2:** If BT does not satisfy us in relation to step 1, we shall go on to consider whether BT's charges were nevertheless appropriate, comparing the relevant Ethernet charges with their respective DSACs to identify any charges exceeding DSAC. This is set out in Section 5.
- Step 3:** Before reaching any conclusions in relation to whether BT has overcharged for the services in dispute, we consider whether there are any other relevant factors which could affect our decision. We undertake this analysis in Section 6 and consider in particular the factors set out in paragraph 3.22 above.
- 3.24 If we conclude that BT overcharged for the services in dispute, we will then calculate the level of overcharge. Our provisional conclusions are set out in Section 7.

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<sup>48</sup> Ethernet 1 Draft Determinations, paragraphs 9.65-9.83.

## Section 4

# Has BT satisfactorily demonstrated that its relevant charges were cost orientated?

- 4.1 In Section 10 of the Ethernet 1 Draft Determinations, we consider whether BT has demonstrated to our satisfaction that each and every one of its charges in dispute was cost orientated during the Relevant Period. We carry out the same assessment – step 1 of our analysis – in this Section.
- 4.2 We summarise BT's arguments as to why it believes that its charges were cost orientated, which are set out in Section 10 of the Ethernet 1 Draft Determinations. We then set out CWW's views in relation to these arguments. Finally we summarise Ofcom's views and provisional conclusions, which are set out in full in Section 10 of the Ethernet 1 Draft Determinations.

### BT's views

- 4.3 As noted at paragraph 2.39, BT has asked us to take into account its submissions made in relation to the Ethernet 1 Disputes in resolving this Dispute. BT's arguments made in those submissions as to why its charges were cost orientated are set out in Section 10 of the Ethernet 1 Draft Determinations. In summary, BT argues that:
- 4.3.1 analysis of rates of return at the AISBO market level demonstrates that its charges were cost orientated. This argument is set out in paragraphs 10.6-10.11 of the Ethernet 1 Draft Determinations.
  - 4.3.2 comparison of revenues relative to revised DSACs at an aggregate market (or sub-group of the market) level demonstrates its charges were cost orientated. This argument is set out in paragraphs 10.21-10.24 of the Ethernet 1 Draft Determinations.
  - 4.3.3 international benchmarking of charges shows UK consumers have benefited from lower retail prices for Ethernet services than consumers in other comparable countries, and these lower prices demonstrate its charges are cost orientated. This argument is set out in paragraphs 10.27-10.29 of the Ethernet 1 Draft Determinations; and
  - 4.3.4 no observable economic harm has occurred as a result of its charges. This argument is set out in paragraphs 10.36-10.39 of the Ethernet 1 Draft Determinations.
- 4.4 BT also argues that it can demonstrate that it took steps to ensure compliance historically, as shown through its interaction with Ofcom between 2004 and 2007, Ofcom's adjustment of only one starting charge in the 2009 LLCC Statement and BT's price reductions in 2008/09. These arguments (and Ofcom's response) are set out in paragraphs 10.49-10.101 of the Ethernet 1 Draft Determinations
- 4.5 Our review of pricing papers provided by BT in relation to the Ethernet 1 Disputes showed that BT was aware of its obligation to ensure its charges were cost orientated, but the pricing papers we reviewed did not reveal any steps taken to

ensure the obligation was met.<sup>49</sup> In order to resolve this Dispute, we asked BT for further information relating to the processes it followed to ensure prices were cost oriented. [REDACTED]<sup>505152</sup>

### CWW's views

- 4.6 CWW states that BT has not made it aware of any formal processes it has in place to ensure pricing is compliant.<sup>53</sup> It states that *"It is apparent that the obligations set out in the SMP conditions are not being adhered to by BT and in particular its product managers who appear to take a more generic approach to product management than is required where products are subject to ex-ante price regulation."*<sup>54</sup>
- 4.7 CWW notes that *"Whilst WACC is a useful indicator this number is provided in relation to the entire AI [AISBO] market rather than cost compliance with specific services. While overall WACC may have been low in 2004/05 this is not relevant to this claim which looks at the period commencing 2006/07 during which WACC was exceeded."*<sup>55</sup>
- 4.8 CWW states that *"It is our belief that BT's actions in this market have resulted in economic harm"*.<sup>56</sup> It argues that it is *"undeniable"* that CPs' build or buy decisions would have been influenced by the higher prices they had to pay, and that end consumers would have paid more, or CPs would have had to accept lower margins to retain or gain retail business.<sup>57</sup>
- 4.9 CWW notes that, while BT had numerous meetings with Ofcom to ensure that it was aligned with Ofcom policy, Ofcom *"did not offer any documented comfort to BT that BT was meeting its regulatory compliance obligations for cost orientation."*<sup>58</sup>
- 4.10 CWW notes that BT highlights that Ofcom's preliminary investigation of Ethernet pricing prompted by THUS plc's 2007 complaint did not result in an investigation. It states that Thus did not actively pursue its complaint after [REDACTED].<sup>59</sup> It also notes that

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<sup>49</sup> Ethernet 1 Draft Determinations, paragraphs 10.100-10.101 and 10.103.4.

<sup>50</sup> [REDACTED].

<sup>51</sup> [REDACTED].

<sup>52</sup> [REDACTED].

<sup>53</sup> CWW submission, paragraph 2.20.

<sup>54</sup> CWW submission, paragraph 2.24.

<sup>55</sup> CWW submission, paragraph 2.37.

<sup>56</sup> CWW submission, paragraph 2.26.

<sup>57</sup> CWW submission, paragraph 2.27.

<sup>58</sup> CWW submission, paragraph 2.39.

<sup>59</sup> THUS is now part of CWW.

Ofcom decided that the upcoming market review was the best place to take forward the issues raised by the complaint.<sup>60</sup>

- 4.11 CWW notes the section 135 request of June 2007 which required BT to demonstrate compliance with the cost orientation conditions imposed under the LLMR 2004 (this request is discussed at paragraphs 10.68-10.75 of the Ethernet 1 Draft Determinations). CWW argues that the timing of the request is likely to mean the data used in responding to it related to 2005/06 (which is not part of this Dispute) or 2006/07, which would only have shown evidence of a single year's overcharging and so *"would not have presented to Ofcom a serious ongoing issue at the time, which was later evidenced by subsequent reoccurring overcharging periods"*.<sup>61</sup> CWW argues that *"The only factual conclusion that we can draw from the information request activity is that the data that Ofcom collected during the course of the market review period led it to conclude that BT required tighter controls beyond just cost orientation obligations and therefore charge controls were additionally put in place as a result of the review."*<sup>62</sup>
- 4.12 CWW argues that the lack of starting charge adjustments by Ofcom in the 2009 LLCC Statement offered no comfort to BT.<sup>63</sup> It argues that *"Ofcom clearly sets out in the explanatory text and on the face of the charge control obligation that BT's obligation to charges services on a cost orientated basis are in addition to the charge control obligation"*, and refers to Ofcom's statement in the 2009 LLCC Statement that *"Our starting charge adjustments are without prejudice to BT's cost orientation obligations."*<sup>64</sup> Moreover CWW contends that *"This historic review of BT's pricing around the time of the charge control is largely irrelevant to our dispute as the reductions put forward by BT primarily result in reducing the connection charge and continue to leave rental charges well in excess of their relevant DSAC levels."*<sup>65</sup>

### Ofcom's views

- 4.13 In Section 10 of the Ethernet 1 Draft Determinations we provisionally conclude that BT has failed to demonstrate to our satisfaction that its BES and WES charges in dispute were cost orientated. Having considered the submissions made by BT in relation to the Ethernet 1 Disputes and CWW's views, we reach the same provisional conclusion in relation to this Dispute. We consider that the reasons why we reached that provisional conclusion in relation to the Ethernet 1 Disputes apply equally to this Dispute. In summary:
- 4.13.1 we consider that BT has undertaken its ROCE analysis using an inappropriate level of aggregation and has therefore not satisfactorily demonstrated that its relevant charges were cost orientated;<sup>66</sup>
- 4.13.2 we do not agree that BT's DSAC analysis demonstrates that its charges were cost orientated, as we do not consider that BT has used an appropriate level of disaggregation to consider the question of cost orientation.<sup>67</sup> In addition, BT bases its analysis on its revised DSACs for

<sup>60</sup> CWW submission, paragraph 2.45.

<sup>61</sup> CWW submission, paragraph 2.46-2.47.

<sup>62</sup> CWW submission, paragraph 2.49.

<sup>63</sup> CWW submission, paragraph 2.53-2.54.

<sup>64</sup> CWW submission, paragraph 2.53.3 quoting 2009 LLCC Statement, heading above paragraph 5.94.

<sup>65</sup> CWW submission, paragraph 2.54.

<sup>66</sup> Ethernet 1 Draft Determinations, paragraphs 10.15-10.20.

<sup>67</sup> Ethernet 1 Draft Determinations, paragraphs 10.25-10.26.

2006/07 to 2009/10. As set out at paragraph 5.5 and as discussed in Section 11 of the Ethernet 1 Draft Determinations<sup>68</sup> we do not consider it to be appropriate to use the revised DSACs for these years;

- 4.13.3 we do not consider that BT's international benchmarking analysis demonstrates that BT's charges for the services in dispute are cost orientated, as it relates solely to prices and fails to give any consideration to possible cost differences between the services being compared. Furthermore, it is based on aggregated connection and rental charges rather than individual charges;<sup>69</sup> and
- 4.13.4 we disagree that BT's analysis that there was no economic harm as a result of its charges demonstrates that its charges are cost orientated because:<sup>70</sup>
- a) economic harm is not a pre-requisite for considering whether BT's charges are cost orientated;<sup>71</sup> and
  - b) in any event, BT's analysis does not demonstrate that economic harm has not occurred.
- 4.14 We do not believe that any of our actions or omissions (or any actions taken by BT) constitute evidence that Ofcom considered, or gave BT grounds to believe it considered, that BT's charges for Ethernet services were cost orientated. Further, we do not think BT could ever have a legitimate expectation that Ofcom would not resolve a dispute about the cost orientation of BT's charges (in the light of an SMP obligation) in accordance with its statutory functions. This view is set out in further detail in paragraphs 10.49-10.101 of the Ethernet 1 Draft Determinations (together with BT's arguments).
- 4.15 We note BT's arguments that it sought to reduce prices in 2008/09 and acknowledge that BT was prevented from implementing the price reductions for nearly ten weeks.<sup>72</sup> We consider that applying the DSAC test non-mechanistically allows us to take into account the prolonged duration of any breach.
- 4.16 [X].

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<sup>68</sup> See 11.74 to 11.80 of the Ethernet 1 Draft Determinations in particular.

<sup>69</sup> See paragraphs 10.30-10.35 of the Ethernet 1 Draft Determinations.

<sup>70</sup> See paragraphs 10.40-10.48 of the Ethernet 1 Draft Determinations.

<sup>71</sup> As a result, we have not assessed the validity of CWW's arguments in relation to the economic harm that may have arisen as a result of BT's charges in dispute.

<sup>72</sup> See paragraphs 10.89-10.99 of the Ethernet 1 Draft Determinations.



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- 4.17 We therefore provisionally conclude that BT has failed to demonstrate that its charges for the BES and WES services in dispute were cost orientated. We now carry out our own assessment of whether BT's charges were cost orientated.

## Section 5

# Comparison of the disputed charges with their respective DSACs

- 5.1 In Section 4, we provisionally concluded that BT has failed to demonstrate that its charges for the BES and WES services in dispute were cost orientated. We therefore move on to step 2 of our analysis.
- 5.2 In this Section we first consider the appropriate data for assessing cost orientation. Our analysis considers the following:
- 5.2.1 which is the appropriate DSAC data for assessing cost orientation; and
  - 5.2.2 BT's revenues and costs of providing the BES and WES services in dispute, including:
    - a) the data we should use where BT is unable to provide us with sufficiently granular revenue and cost data; and
    - b) adjustments to BT's revenue and cost data.
- 5.3 We then provide a summary of the revenue and cost data we propose to use to assess whether BT has overcharged for the services in dispute, and we set out the results of the DSAC test for each of the disputed services, comparing external revenues and external DSAC.

## Which is the appropriate DSAC data for assessing cost orientation?

- 5.4 In Section 11 of the Ethernet 1 Draft Determinations, we explained how BT's LRIC model calculates DSACs and then set out BT's views on the appropriateness of its LRIC model and its proposed alternative methodology for calculating DSACs. Finally, we provided our assessment of BT's arguments and our provisional conclusion that we should use BT's published DSACs as the basis for our resolution of the Ethernet 1 Disputes.
- 5.5 For the period between 1 April 2006 and 31 July 2009 (i.e. the part of the Relevant Period that overlaps with the period we are considering in the Ethernet 1 Disputes) we propose to adopt the same approach that we have adopted in the Ethernet 1 Disputes, i.e. to use BT's published DSACs as the basis for our resolution of the Dispute. We propose to adopt the same approach, for the same reasons, for the period from 31 July 2009 to 31 March 2010 (i.e. for the remainder of the 2009/10 financial year).
- 5.6 The following paragraphs set out the approach we propose to take for 2010/11, which we did not consider in the Ethernet 1 Disputes.
- 5.7 BT's approach to generating DSACs for individual services involves, within the LRIC model, first calculating the costs associated with the individual components that the services consume. In turn, these component costs are built up from various (around 400) individual cost categories. The relevant costs from each cost category attributable to each component are generated using cost-volume relationships

("CVRs"). We explain this process in more detail in Section 11 of the Ethernet 1 Draft Determinations.

- 5.8 In preparing its 2010/11 RFS, BT altered its methodology for calculating DSACs.<sup>73</sup> Prior to 2010/11, 14 cost categories had been split into 28 sub-categories. BT's revised methodology removed the split cost categories by amalgamating sub-categories into single categories. This change therefore involves replacing, for each cost category, the two separate CVRs for the two sub-categories with one aggregated CVR for the combined cost category. As a consequence of revising the CVRs, the new methodology changes both the LRICs and common cost allocations for component DSACs. We explain this proposed change and its implications in more detail in Section 11 of the Ethernet 1 Draft Determinations.
- 5.9 BT has argued that in order to resolve the Ethernet 1 Disputes (and therefore this Dispute), we should use DSACs calculated on the basis of the new methodology, and not on the basis of those originally published in its RFS, for the years prior to 2010/11.<sup>74</sup>
- 5.10 CWW notes that there are multiple disagreements between it and BT over the financial numbers relevant to the Dispute. Further CWW expresses "*complete exasperation at BT's continued selective adjustment approach to regulatory accounting, whereby errors are uncovered during dispute which apparently bolster BT's case*"<sup>75</sup> and argues that "*Regardless of the accuracy or otherwise of BT's adjustment claims, the regulatory accounting figures published at the time by BT represented the relevant measure of cost orientation and BT should have acted promptly to ensure that prices were compliant as soon as they became aware that the DSAC ceiling might be breached.*"<sup>76</sup>
- 5.11 We have considered BT's argument in the Ethernet 1 Disputes and concluded that it would not be appropriate to use BT's recalculated DSACs to resolve the Dispute for the years prior to 2010/11. For the same reasons we propose to do likewise in this Dispute for these years. Readers are referred to the analysis in Section 11 of the Ethernet 1 Draft Determinations.
- 5.12 As set out in the Ethernet 1 Draft Determinations<sup>77</sup>, we consider that unless there are errors in BT's RFS, or the methodology used in preparing the RFS was obviously inappropriate, Ofcom should rely on the RFS published in the year after charges were levied<sup>78</sup> for the purposes of determining the Dispute. As at paragraphs 12.30-12.41 in the Ethernet 1 Draft Determinations, while we have made adjustments to BT's published DSACs, these adjustments have been made to correct for volume errors and to ensure that revenues are appropriately matched to costs. We have not made adjustments to incorporate BT's revised methodology for calculating DSACs for the period 2006/07 to 2009/10 because BT has not demonstrated that the approach to calculating DSACs set out in its Long Run Incremental Cost: Relationships & Parameters document ("LRIC R&P") prior to 2010/11 is obviously inappropriate or there were errors in its implementation.

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<sup>73</sup> See section 1.4 of the 2011 Long Run Incremental Cost Model: Relationships & Parameters available from

<http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2011/index.htm>

<sup>74</sup> Ethernet 1 Draft Determinations, paragraphs 11.18-11.23.

<sup>75</sup> CWW submission, paragraph 2.66

<sup>76</sup> CWW submission, paragraph 2.66.

<sup>77</sup> Ethernet 1 Draft Determinations, paragraphs 11.30-11.73.

<sup>78</sup> We note that BT has restated its RFS for some years.

5.13 We have adopted the same approach in considering whether we should use BT's published DSACs for 2010/11, as derived using the new methodology. As we set out in paragraphs 11.31 and 11.42-11.62 of the Ethernet 1 Draft Determinations, there are different methods which BT could use to implement the DSAC cost concept. Our starting point for considering whether any of these various methodologies are obviously inappropriate is to consider whether they are consistent with the broad policy objective for setting floors and ceilings. We explain this policy objective in paragraph 11.36 of the Ethernet 1 Draft Determinations. In summary, it is to provide BT with an appropriately bounded degree of pricing flexibility over how it recovers common costs across the services that share those common costs. The revised methodology adopted by BT for calculating the DSACs reported in its 2010/11 RFS fulfils this broad objective and therefore, on this measure, does not seem to be obviously inappropriate. Further, we are not aware of any errors in BT's implementation of the revised methodology.

5.14 However, BT supplied us with a detailed explanation of its revised methodology, including the specific modelling assumptions and simplifications it employed, in the context of the Ethernet 1 Disputes. Our review of this material has led to a number of observations around the new methodology and its robustness in generating DSACs.

5.15 First, BT told us that the new (i.e. aggregated) CVRs for the combined cost categories which are used to calculate its revised DSACs (and which replace the two individual CVRs for each of the previously split cost categories) are "*simplified*" estimates which provide "*indicative results*":

*"The CVR is a simplified estimate to provide indicative results, and in order to get accurate results, a new CVR will need to be derived using engineering derivations, and the LRIC model re-run accordingly."*<sup>79</sup>

5.16 Second, some cost categories within BT's LRIC model are dependent upon the level of costs for other cost categories (e.g. if cost x increases, cost y also increases). BT's new methodology has not been implemented by changing the LRIC model itself. Rather, BT has made an off-line adjustment to the LRIC model outputs. BT explained to us that this approach reflects practical difficulties in altering the LRIC model.<sup>80</sup> As a consequence of this simplified approach, BT has not reflected the "ripple-through" effect that arises where other cost categories are dependent on the cost categories with revised CVRs. In principle, not including the ripple-through effect could give rise to some inaccuracies in the generation of DSACs under the revised methodology.

5.17 In our 20 January s191 notice we asked BT whether it still considered its new CVRs to be "*indicative*" and what further work it had undertaken that gave it confidence that the CVRs were "*a very good proxy*"<sup>81</sup> for the output that would result if it re-ran the LRIC model using CVRs derived using engineering derivations. BT's response did not explain whether it considered the CVRs used in the preparation of its 2010/11 RFS to be indicative. Rather, it responded describing the process through which it had developed the new methodology, and setting out that this new methodology produced the expected relationship between LRIC, FAC and DSAC.<sup>82</sup> BT stated that:

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<sup>79</sup> BT response to question 8 of the 16 June s191 notice.

<sup>80</sup> BT's response of 20 May 2011 to questions 6a and 7 of Ofcom's supplementary questions of 11 May 2011.

<sup>81</sup> BT's response of 20 May 2011 to question 6a of Ofcom's supplementary questions of 11 May 2011.

<sup>82</sup> See Section 11 of the Ethernet 1 Draft Determinations.

*"This methodology provides a better estimate of (D)LRIC and DSAC than the previous unadjusted method of calculation for the reasons that BT previously explained when the overlay model was introduced.<sup>[83]</sup> The overlay model used to calculate DSACs for 2010/11 RFS incorporated the best available information at the time."<sup>84</sup>*

- 5.18 We also asked BT why it did not recalculate dependent cost categories to reflect the new methodology, and asked it to provide any analysis it had conducted of the effect that recalculating dependent cost categories might have had on reported DSACs of BES and WES services in 2010/11.<sup>85</sup> In response, BT again described the process through which it had developed the new methodology, and set out that this new methodology produced the expected relationship between LRIC, FAC and DSAC. It stated that the revised methodology was implemented as an overlay as additional delays would have resulted from reworking the LRIC model in full. In particular, it would have required a further delay to the publication of the RFS, which Ofcom did not agree to.<sup>86</sup> BT stated that its initial assessment showed that the differences for DSACs for WES and BES services if dependent cost categories were included in the adjustment were likely to be in the range of 0% to 2% (i.e. DSACs would have been 0% to 2% higher if the cost dependencies had been fully reflected in BT's revised DSACs).<sup>87</sup> It provided a spreadsheet showing the calculation of this range. While this spreadsheet seems to include columns for DSACs both with and without an adjustment for dependent cost categories, it does not include details of how these columns are estimated. BT's written submission also did not explain the basis for its calculations.
- 5.19 We are not fully satisfied that BT has addressed our questions about the robustness of its revised methodology. However, as we have noted above and in paragraph 11.31 in the Ethernet 1 Draft Determinations, BT has discretion over the methodology it uses to generate DSACs in its RFS. Unless we are satisfied that the chosen approach is obviously inappropriate, we expect to rely on BT's chosen methodology for considering its compliance with its cost orientation obligations.
- 5.20 In this case, while we have some observations on the detailed modelling assumptions and simplifications BT has adopted in implementing its revised methodology, on balance, we do not consider that these observations, and the evidence we have in relation to them, are sufficient to conclude that the new methodology is obviously inappropriate or its implementation contains errors.
- 5.21 Therefore, for 2010/11 we propose to use BT's DSACs as published in the 2011 RFS (subject to the adjustments discussed in paragraphs 5.57 to 5.63 below).<sup>88</sup>

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<sup>83</sup> That DSAC should always be above FAC (see Section 11 of the Ethernet 1 Draft Determinations).

<sup>84</sup> BT response to question 2 of the 20 January 2012 s191 notice.

<sup>85</sup> BT response to questions 4 and 5 of the 20 January 2012 s191 notice.

<sup>86</sup> BT response to question 4 of the 20 January 2012 s191 notice.

<sup>87</sup> BT response to question 5 of the 20 January 2012 s191 notice.

<sup>88</sup> We do not have DSACs for 2010/11 calculated using the old methodology and so cannot tell exactly how much the change in methodology affects our assessment of the charges in dispute. However, BT provided DSACs for the services and period relevant to the Ethernet 1 Disputes calculated under both the old and new methodologies. Based on these data, typically the change in methodology increases the DSACs of rental services by between 20% and 30% (while having no or almost no impact on connection service DSACs) in most years (as shown in Table 11.3 in the Ethernet 1 Draft Determinations). If we assume the change in methodology would have a similar scale of effect in 2010/11, then using DSACs calculated using the old methodology would not affect any of

- 5.22 We therefore propose to use BT's DSACs published in its RFS in the year after charges were levied<sup>89</sup> as the basis of our analysis for the whole of the Relevant Period (subject to the adjustments discussed below). This means that the DSACs we are using for 2006/07-2009/10 were calculated using BT's former methodology (where cost categories are split into sub-categories as outlined in the LRIC R&P for each of these years) while for 2010/11 the DSACs are based on BT's new methodology (where categories are not split).

### **BT's revenues and costs of providing the BES and WES services in dispute**

- 5.23 As in Section 12 of the Ethernet 1 Draft Determinations, we now discuss the data available to us for assessing BT's compliance with its cost orientation obligation and the corrections and adjustments which we propose to make to that data.

### **Data we should use where BT is unable to provide us with sufficiently granular revenue and cost data**

- 5.24 BT's cost orientation obligation applies to "*each and every charge*" that BT levies for the services in dispute. In order for us to assess compliance with this obligation, the costs and revenues associated with each individual charge are relevant.
- 5.25 As set out in paragraphs 8.42-8.44 of the Ethernet 1 Draft Determinations, for the purposes of reporting financial data in its RFS, Ofcom has permitted BT to merge some "low value services" in order to reduce the regulatory burden on BT, but made clear that BT "*will however retain data at service level and make this available to Ofcom.*"<sup>90</sup> BT must be able to demonstrate to our satisfaction that those charges covered by a cost orientation obligation are compliant with that obligation. The fact that BT is not required to publish the information to demonstrate this in its RFS does not mean it need not be able to provide it if required.
- 5.26 BT's RFS include much of the data we rely on in resolving this Dispute, including revenues, volumes and costs of services which are subject to cost orientation obligations. However the RFS report the costs and revenues of BES and WES services at different levels of aggregation for different years in the Relevant Period, and even where they include more disaggregated data they do not disaggregate data to the level contained in the OPL. For example, while the OPL sets out charges for each variant of BES1000 ('standard', 'daisy chain', 'extended reach' and 'term' rentals), BT's RFS only includes details on 'BES1000' rentals, i.e. BT aggregates all variants of BES1000 and reports them under the heading 'BES1000 rentals' in the RFS.<sup>91</sup>
- 5.27 BT has provided price, volume and revenue data for each service listed in the OPL, which reconciles to the volume and price information reported in the RFS for the AISBO market in the period 2006/07 to 2010/11<sup>92</sup>. However, BT has not been able to provide cost information at this level of disaggregation. BT has explained that cost

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our proposed conclusions on whether there was overcharging for the services in dispute, although it would affect the level of the overcharge.

<sup>89</sup> We note that BT has restated its RFS for some years.

<sup>90</sup> Paragraph 6.10 of "Proposed changes to BT's regulatory financial reporting framework" – Regulatory reporting May 2005.

<sup>91</sup> Limitations to the available data and their implications are discussed further at paragraphs 12.8 to 12.14 of the Ethernet 1 Draft Determinations.

<sup>92</sup> BT response to question 4 of the 22 December 2011 s191 notice.

information at the level of OPL does not exist in any system within Openreach.<sup>93</sup> We have therefore been unable to obtain cost information for each individual service listed in the OPL. Instead, the cost information available to us is only disaggregated to the level published in the RFS.

- 5.28 In Section 12 of the Ethernet 1 Draft Determinations we explained that we were unable to robustly disaggregate the cost data that relates to the different bandwidth variants. We did not consider that this materially affected our ability to determine whether BT had overcharged for the services considered in the Ethernet 1 Disputes<sup>94</sup> and here, as in the Ethernet 1 Draft Determinations, we have not sought to disaggregate the data any further for services which are common to both disputes. In the Ethernet 1 Disputes our provisional conclusions on overcharging were therefore based on the revenues and costs reported in the RFS, subject to certain adjustments.
- 5.29 For services in dispute that are reported at a bandwidth level in the RFS we propose to use the published revenue and cost data as a basis for resolving the Dispute. This is consistent with the approach taken in the Ethernet 1 Draft Determinations<sup>95</sup>.

### **Services in dispute that are aggregated into BES and WES "other bandwidth" rental in the RFS**

- 5.30 However, while the RFS reports some BES and WES rental bandwidths separately, such as BES1000 rental (which only includes variants of BES1000), it amalgamates other rental bandwidths into categories called BES and WES "other bandwidth" rental. For example, the BES "other bandwidth" rental category in the RFS can include services such as BES10, BES155, BES622 and Cablelink rentals (the mix of services can change from year to year).
- 5.31 One difference between these Disputes and the Ethernet 1 Disputes is that CWW is disputing charges for services which are reported within BES "other bandwidth" rental and WES "other bandwidth" rental in the RFS. We consider below whether it would be appropriate to resolve the Dispute for services that are reported under BES and WES 'other bandwidth' rental by reference to the revenues and costs reported in the RFS for BES and WES 'other bandwidth' rental and, if not, how we propose to resolve the Dispute in relation to those services.

### **CWW's views**

- 5.32 CWW said in its submission that it had requested disaggregated data from BT in relation to BES and WES "other bandwidth" rentals so that it could assess cost recovery. CWW expressed a particular concern that the reported average prices for BES "other bandwidth" rental did not seem to be related to the underlying BES services that it bought (i.e. BES155, BES622, BES2500 and BES10000 rental).<sup>96</sup> For example, the prices per local end for BES155 and BES622 rental are currently £4,700 and £8,230 respectively, but the average prices for BES other bandwidth rental reported in the RFS have typically been much lower.

### **Ofcom's views**

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<sup>93</sup> BT's responses to question 2 of the 22 October 2010 s191 notice, and question 1 of the 22 December 2011 s191 notice.

<sup>94</sup> Ethernet 1 Draft Determinations paragraph 12.14.

<sup>95</sup> Ethernet 1 Draft Determinations, paragraph 12.9-12.14.

<sup>96</sup> CWW submission, paragraph 2.60.

- 5.33 We have found that the reason the reported average price of BES 'other bandwidth' rental is often low compared to the prices of BES155 and BES622 rental is principally due to the amalgamation of a variety of different bandwidths and, in 2007/08 and 2008/09 the Cablelink service in this category. The Cablelink service in particular has a much lower price than either BES155 or BES622 rental but higher volume, affecting the average price calculation through a compositional effect. Similarly, the reported average unit price of BES 'other bandwidth' rental is distorted in 2006/07, 2009/10 and 2010/11 due to the inclusion of BES10 rental (and BES100 rental in 2010/11), which affects the average price calculation through a compositional effect. Both BES10 and BES100 rental have lower prices but higher volumes than BES155 or BES622 rental.
- 5.34 As well as affecting the reported unit price, we consider that the amalgamation of a variety of different BES rental bandwidths and, in 2007/08 and 2008/09, the Cablelink service, into one BES "other bandwidth" category is likely to have affected the unit costs, given the significant differences between the services.
- 5.35 Consequently, we do not consider it is appropriate to resolve the disputes in relation to BES155, BES622, BES2500 and BES10000 rental<sup>97</sup> with reference to the prices and costs of BES 'other bandwidth' rental reported in the RFS.
- 5.36 CWW is also disputing the charges for WES155 and WES622 rental which are reported in WES 'other bandwidth' rental in the RFS. WES622 is a more expensive service than WES155. For example in 2009/10 it was around 60% more expensive. The reported average price for WES 'other bandwidth' rental is therefore not reflective of either WES155 or WES622 rentals on their own. We consider that the reported unit DSACs suffer from similar compositional effects since they represent an average of all the different rental bandwidth services that are reported under WES 'other bandwidth' rental.
- 5.37 We do not consider it is appropriate to resolve the disputes in relation to WES155, WES622 and WES 10000 rentals<sup>98</sup> by reference to the reported unit prices and costs of WES "other bandwidth" rentals because the aggregation of different WES rental bandwidths could distort the results of the DSAC test.
- 5.38 BES100 rental was reported within "BES100 rental" in the RFS between 2006/07 and 2009/10, however in 2010/11 it was reported within BES 'other bandwidth' rental. We will therefore consider proxies for revenue and cost for BES100 rental in 2010/11.

## Conclusion

- 5.39 For services in dispute that are reported within BES and WES 'other bandwidth' rentals in the RFS it would not be appropriate to resolve the Dispute by reference to the revenue and cost data reported in the RFS. Instead, for services in dispute that are reported within BES and WES 'other bandwidth' rentals in the RFS we propose to use proxies for revenue and cost, as summarised in Table 5.1.

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<sup>97</sup> We note that BES 2500 and BES10000 rentals were only reported in the RFS under BES other bandwidths rental in 2007/08. They were not included in the RFS at all in 2008/09 (the year for which they are in dispute).

<sup>98</sup> We note that WES 10000 rental was only reported in the RFS under WES other bandwidths rental in 2007/08. It was not included in the RFS at all in 2008/09 (one of the years for which it is in dispute).



**Table 5.1: Source of revenue and cost data to be used in resolving the Dispute**

Services disputed by CWW	Resolve Dispute based on specific bandwidth data reported in the RFS	Resolve Dispute based on proxies for revenues and costs
BES100 rental	X	X*
BES1000 rental	X	
BES155 rental		X
BES 622 rental		X
BES2500 rental		X
BES10000 rental		X
WES100 rental	X	
WES1000 rental	X	
WES155 rental		X
WES622 rental		X
WES10000 rental		X
BES100 connection	X	

*\*BES100 rental was reported within BES100 rental in the RFS between 2006/07 and 2009/10. In 2010/11 it was reported within BES 'other bandwidth' rental.*

Proposed proxies for revenues and costs for services in dispute that are reported within BES and WES 'other bandwidth' rentals in the RFS

5.40 As noted above, we have provisionally concluded that it is not appropriate to resolve the Dispute in relation to the following services by reference to the reported unit prices and costs of BES and WES 'other bandwidth' rentals because this would be likely to distort the results of the DSAC test:

5.40.1 BES100 rental in 2010/11

5.40.2 BES155 rental

5.40.3 BES622 rental

5.40.4 BES2500 rental

5.40.5 BES10000 rental

5.40.6 WES155 rental

5.40.7 WES622 rental

5.40.8 WES10000 rental

*Pricing data*

5.41 BT has been able to provide volume and revenue data for BES155, BES622, WES155, WES622 and BES100 rentals. Therefore we propose to use this data in resolving the Dispute. In addition we have used price data from the OPL for each of these services.

5.42 BT has not provided revenue data for BES2500, BES10000 and WES10000 for the years in dispute (although we do have volume data). Therefore we propose to use prices from the OPL to assess whether there was overcharging for these services.

*Cost data*

- 5.43 For services in dispute that are reported within BES and WES "other bandwidth" rentals in the RFS<sup>99</sup> we are proposing to use proxies for the unit FAC and DSAC.
- 5.44 For BES155 and WES155 rental we are proposing to use, where available, the unit FAC and DSAC of the nearest bandwidth which is separately reported, i.e. BES100 and WES100 rental respectively.
- 5.45 For BES622 and WES622 rentals, we are concerned that, if cost increases with bandwidth, using the unit FAC and DSAC for the nearest bandwidth which is separately reported (i.e. BES1000 and WES1000) may overstate costs and therefore understate overcharging. In our view it is not appropriate for BT to benefit from its failure to provide us with sufficiently disaggregated data to consider whether it has complied with its regulatory obligations. As set out at paragraph 5.25, the fact that BT is not required to publish the information to demonstrate its individual charges are cost orientated in its RFS does not mean it need not be able to provide it if required. Therefore, we propose to use an average of the BES100 and BES1000 rental unit DSAC and unit FAC as a proxy for the DSAC of BES622 rental, and similarly to use an average of the WES100 and WES1000 rental unit DSAC and unit FAC as a proxy for the DSAC of WES622 rental.
- 5.46 In 2010/11, BT did not report BES100 rental separately in the RFS and included it in BES "other bandwidth" rental instead. BT has been unable to provide DSAC and FAC data for BES100 rental for this year. There are a number of methods we could employ to develop a proxy for BES100 rental DSAC and FAC in 2010/11:
- 5.46.1 Option 1: Use the 2009/10 unit DSAC and unit FAC for BES100 rental;
- 5.46.2 Option 2: Use the average unit DSAC and FAC for BES100 rental over the period in dispute for which data is available (2006/07 to 2009/10);
- 5.46.3 Option 3: Use the 2009/10 total DSAC and total FAC for BES100 rental and divide this by the 2010/11 volumes to produce unit DSAC and FAC; or
- 5.46.4 Option 4: Use the ratio of 2009/10 BES100 and BES1000 rental DSACs to calculate 2010/11 BES100 rental unit DSAC from 2010/11 BES1000 rental DSAC.
- 5.47 In Section 6 we set out the results of our assessment of overcharging for BES100 and BES155 rentals in 2010/11 on the basis of each of these approaches. In the event that we identify on the basis of our proxies that BT's charges were not cost orientated we need to establish the level of overcharging. This requires us to choose one of the proxy options upon which to base the overcharging calculation.
- 5.48 We have therefore considered the relative merits of each option. Option 4 assumes there is a stable relationship between BES100 and BES1000. This does not seem to be the case – the ratio of BES100 rental DSACs to BES1000 rental DSACs varies between 0.65:1 and 0.97:1 in the earlier years of the Relevant Period. Option 3 assumes that total DSAC and total FAC would be unchanged from 2009/10. Given that total volumes have reduced, and volumes and total DSAC seem to move together to some extent, this seems unlikely to be the case. If we therefore reject Options 3 and 4, we are left with Options 1 and 2. We note that these two options

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<sup>99</sup> Or, in some cases, were not reported in the RFS at all.

produce very similar results. This is because DSACs in the last two years were reasonably stable, and higher DSACs in 2006/07 were offset by lower DSACs in 2007/08. In a stable environment, we would usually expect an average over a longer period to provide a more robust proxy than one observation for an individual year. This is because the average reduces the impact of any year to year variability in the cost measure. On this basis, of the four options identified, we prefer Option 2.

- 5.49 We invite stakeholders to comment on whether Option 2 is appropriate, and if you consider it is inappropriate, to suggest whether any of the other Options are appropriate or if there are other ways to derive cost data for BES100 rental in 2010/11.
- 5.50 We note that WES10000 rental is in dispute for 2007/08 and 2008/09 and BES2500 and BES10000 rentals are in dispute for 2008/09. BT has been unable to provide DSAC and FAC data for these services and we therefore need to use proxies. The best proxies we have been able to identify are WES1000 and BES1000 rental DSACs, as these are the highest bandwidth services for which we have cost information. However, it is our understanding that the Ethernet services with bandwidths at and above 2500Mbit/s may be more expensive to provide than those of lower bandwidths because of differences in the equipment needed to provide higher bandwidth services. Nevertheless, as stated above, the costs for 1000Mbit/s bandwidth services represent the best information we have available. If stakeholders are able to provide additional relevant cost information in response to this Provisional Determination, we will take it into consideration in our final determination.
- 5.51 Table 5.2 summarises the proxies for cost we propose to use to resolve the Dispute for services reported within BES and WES 'other bandwidth' rentals.

**Table 5.2: Summary of cost proxies to be used in resolving the Dispute**

Service	Proxy used
BES100 rental (2010/11 only)	4 options (see paragraphs 5.46 above)
BES155 rental	BES100 rental (including the 4 options in 2010/11)
BES622 rental	Average of BES100 and BES1000 rental <sup>100</sup>
BES2500 rental	BES1000 rental
BES10000 rental	BES1000 rental
WES155 rental	WES100 rental
WES622 rental	Average of WES100 and WES1000 rental
WES10000 rental	WES1000 rental

- 5.52 Where we are using as proxies cost data to which we propose in paragraphs 5.53-5.101 to make adjustments, we will use the adjusted data as the proxies, i.e. we will use the unit DSACs<sup>101</sup> as adjusted below and set out in Table 5.8.

<sup>100</sup> In 2010/11 we have used Option 2 for BES 100 for the purposes of calculating the average rather than present all options.

<sup>101</sup> And unit FAC although these are not set out in Table 5.9.

## Adjustments to BT's revenue and cost data

- 5.53 For the services in dispute that are reported within specific bandwidth categories in the RFS (See Table 5.1), we have based our assessment of overcharging on the data provided by BT. In the following paragraphs, as in Section 12 of the Ethernet 1 Draft Determinations, we set out the adjustments which we propose to make to BT's published data in order to correct for volume and revenue errors and ensure revenues and costs are appropriately matched.
- 5.54 For the services in dispute that are reported within BES and WES "other bandwidth" rentals in the RFS, where we use as proxies cost data to which we propose to make adjustments (as set out in Table 5.1), we will use the adjusted data as the proxies.

### BT data for the period 2006/07 to 2010/11 for services that are reported within specific bandwidth categories in the RFS

- 5.55 We required BT to provide us with total revenue, total FAC and total DSAC for each service in the AISBO market over the Relevant Period.<sup>102</sup> The unit cost data provided for each service is the same as that published in the RFS for the years in question as BT was unable to provide more granular information.
- 5.56 Table 5.3 summarises the revenue, FAC and DSAC data for the BES and WES rental services in dispute that are reported within specific bandwidth categories in the RFS.

**Table 5.3; Total revenue and cost data for services reported in specific bandwidth categories in the RFS for the period 2006/07 to 2010/11, £m**

	2006/07	2007/08	2008/09	2009/10	2010/11
<b>BES 100 rental</b>					
Revenue	12	13	16	8	n/a
FAC	7	4	8	9	n/a
DSAC	7	6	10	9	n/a
<b>BES 1000 rental</b>					
Revenue	13	27	30	17	18
FAC	3	3	9	8	18
DSAC	3	5	11	9	30
<b>BES 100 connection</b>					
Revenue	10	5	2	NiD	NiD
FAC	2	2	1	NiD	NiD
DSAC	4	3	1	NiD	NiD
<b>WES 100 rental</b>					
Revenue	92	79	86	86	99
FAC	47	37	44	64	118
DSAC	52	49	57	86	229
<b>WES 1000 rental</b>					
Revenue	43	27	32	32	40
FAC	6	5	6	12	26
DSAC	8	7	7	17	47

Source: BT's responses to question 2 of the 22 October s191 notice and question 1 of the 22 December 2011 s191 notice. n/a = not available. NiD = not in dispute.

\*BES100 rental was included within BES 'other bandwidth' rental in 2010/11.

<sup>102</sup> BT's responses to question 2 of the 22 October s191 notice and question 1 of the 22 December 2011 s191 notice.

Adjustments to the data provided by BT

- 5.57 In its submission, CWW noted that in the 2009 LLCC Statement Ofcom made a number of adjustments to BT's data and suggested that these adjustments would also be relevant for resolving this Dispute.<sup>103</sup>
- 5.58 In Section 12 of the Ethernet 1 Draft Determinations, we identified two types of adjustment that we propose to make to BT's data in order to ensure it can be relied upon for determining the Ethernet 1 Disputes:
- 5.58.1 the first corrects for volume and revenue errors and associated issues in the RFS data; and
- 5.58.2 the second replicates a series of cost adjustments that were identified in the 2009 LLCC Statement,<sup>104</sup> to the extent that they are applicable to those historic disputes.
- 5.59 The first set of adjustments corrects for what we would consider straightforward errors in the RFS data. In particular they correct for misstatements of volumes and the associated impacts on revenues and costs. It is necessary to correct for these errors in order to ensure that the data is appropriate for determining the Disputes.
- 5.60 The second set of adjustments aims to ensure that the revenues we are assessing are compared against the appropriate costs. It is not always possible to directly compare the revenues and costs reported in BT's RFS because the data for a service may include revenues and costs associated with a different service, or relevant revenues and costs may be reported elsewhere. This means that the costs of a service may not always be matched against the revenues to which they relate.
- 5.61 The 2009 LLCC Statement identified some particular areas where this mismatching of costs and revenues had occurred and recommended some adjustments to BT's RFS to enable a better comparison between revenues and costs to be made. In making adjustments when resolving the Ethernet 1 Disputes we sought, where appropriate, to ensure consistency with the adjustments made in the 2009 LLCC Statement and we are proposing to take the same approach when resolving these Disputes.
- 5.62 For the purposes of resolving the Dispute, as for the Ethernet 1 Disputes, we have modelled all corrections associated with volume errors as individual standalone changes to the base data. The adjustments in line with the 2009 LLCC Statement are based on the original RFS data but have been modified to take account of the volume corrections. For example, if a volume correction reduced the originally published FAC for a service by 10% then our adjustments in line with the 2009 LLCC Statement will also be reduced by 10% for that service.
- 5.63 All corrections associated with volume errors are the same as set out in the Ethernet 1 Draft Determinations. The adjustments in line with the 2009 LLCC Statement are also the same as set out in the Ethernet 1 Draft Determinations with two exceptions – in 2010/11 the methodology behind the adjustments associated with transmission equipment and Equipment and Excess Construction Charges are different. This is explained further in paragraphs 5.69 to 5.75 and 5.80 to 5.82 below.

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<sup>103</sup> CWW submission, paragraph 2.61. See also paragraph 2.9.1 above.

<sup>104</sup> The adjustments are explained in detail in Section 5 (paragraphs 5.42 to 5.76) and Annex 6 of the 2009 LLCC Statement.

### **Corrections to the data provided by BT associated with volume and revenue errors**

5.64 We have made the same corrections to the base data that we propose to make for the Ethernet 1 Disputes. These are described in detail in paragraphs 12.42 to 12.55 of the Ethernet 1 Draft Determinations and address:

- i) 2006/07 and 2007/08 unit FACs and DSACs<sup>105</sup>;
- ii) volume errors relating to WES services in 2006/07;
- iii) issues associated with volume errors for BES1000 rental and BES1000 connection in 2008/09; and
- iv) a revenue error associated with main link in 2008/09<sup>106</sup>.

5.65 For each BES and WES service in dispute that is reported within a specific bandwidth category in the RFS, Table 5.4 sets out the total revenue, FAC and DSAC after making these corrections to BT's data.

**Table 5.4: Corrected revenue, FAC and DSAC data for services reported in specific bandwidth categories in the RFS in the period 2006/07 to 2010/11, £m**

	2006/07	2007/08	2008/09	2009/10	2010/11
<b>BES 100 rental</b>					
Revenue	12	13	14	8	n/a
FAC	7	4	9	9	n/a
DSAC	7	5	11	9	n/a
<b>BES 1000 rental</b>					
Revenue	13	27	28	17	18
FAC	3	3	6	8	18
DSAC	3	5	8	9	30
<b>BES 100 connection</b>					
Revenue	10	5	2	NiD	NiD
FAC	2	2	1	NiD	NiD
DSAC	2	3	2	NiD	NiD
<b>WES 100 rental</b>					
Revenue	92	79	86	86	99
FAC	47	37	44	64	118
DSAC	52	49	57	86	229
<b>WES 1000 rental</b>					
Revenue	43	27	32	32	40
FAC	6	5	6	12	26
DSAC	8	7	7	17	47

*Source: Ofcom, based on data provided by BT  
NiD = Not in dispute, n/a= data not available*

### **Adjustments to the corrected base data consistent with the 2009 LLCC Statement**

5.66 In Section 12 of the Ethernet 1 Draft Determinations, we considered the following adjustments which were derived from the 2009 LLCC Statement.

<sup>105</sup> In its submission, CWW also identified that when BT restated its RFS in 2007/08 it had not recalculated its unit costs even though volumes had changed. We have corrected for this error as described in paragraphs 12.43 to 12.45 of the Ethernet 1 Draft Determinations.

<sup>106</sup> Identified by BT in its response to question 15 of the 22 December 2011 s191 notice.

5.67 Paragraph references in this list are to the relevant paragraphs of the Ethernet 1 Draft Determinations:

- 5.67.1 transmission equipment costs (in paragraphs 12.60-12.66);
- 5.67.2 21CN costs (in paragraphs 12.67-12.78);
- 5.67.3 ancillary services (excess construction charges) (in paragraphs 12.79-12.80);
- 5.67.4 payment terms (in paragraphs 12.81-12.84);
- 5.67.5 RAV adjustment (in paragraphs 12.97-12.100); and
- 5.67.6 treatment of holding gains/losses and current cost normalisation (in paragraphs 12.85-12.96).

5.68 We consider these adjustments in turn in relation to this Dispute.

#### Transmission equipment costs

##### *2006/07 to 2009/10*

5.69 Between 2006/07 and 2009/10 transmission equipment costs were recovered through upfront circuit connection charges. We propose to adjust for this to address the timing mismatch between the revenues and costs reported in the RFS where:

- 5.69.1 the revenues associated with this equipment were all recognised in the circuit connection revenues that BT levied from customers upfront; but
- 5.69.2 for accounting purposes, the assets were capitalised and depreciated over the life of the underlying equipment.

5.70 As in the Ethernet 1 Draft Determinations<sup>107</sup> we have removed the depreciation and asset charges associated with transmission equipment and replaced them with an estimate of the cost of expensing the equipment in the Profit and Loss account ("P&L") in the year of purchase. The figures for depreciation and Mean Capital Employed ("MCE") by service were provided by BT.

5.71 As in the Ethernet 1 Draft Determinations we have estimated the cost of expensing the equipment in the P&L each year by apportioning BT's annual additions from the asset register on the same basis as depreciation and MCE are apportioned in the RFS.<sup>108</sup>

##### *2010/11*

5.72 In 2010/11 BT attributed the costs of transmission equipment to BES and WES rentals rather than connections, leading to a large increase in the FAC of rental services and a corresponding decrease in FAC for connection services.

5.73 Some of the costs associated with transmission equipment that have been allocated to rentals in 2010/11 have already been recovered from connection charges in

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<sup>107</sup> Ethernet 1 Draft Determinations, paragraph 12.62.

<sup>108</sup> As provided in BT's response of 28 March 2011 to follow up question 13 to the 22 October s191 notice.

previous years and as a result there is a risk that BT is recovering those costs twice – once from connection charges and again from rental charges. We have therefore made an adjustment to remove from rentals the MCE and depreciation associated with transmission equipment that was acquired before 2010/11 because these costs appear to have already been recovered from connection charges.

- 5.74 After making this adjustment, the rental services still include MCE and depreciation relating to transmission equipment acquired in 2010/11. These costs arise due to new customers connecting in 2010/11, but are spread over all rental customers in 2010/11, regardless of whether they connected in 2010/11 or at some point in the past. We do not propose to make a further adjustment to reflect the impact of this averaging of costs between different types of customers for two reasons. First, we do not consider BT's treatment is inconsistent with Condition HH3.1. This is because Condition HH3.1 requires each and every *charge* to be cost orientated and not any payment by any customer. Second, the impact of any adjustment is relatively small compared to the adjustment to remove transmission equipment costs that are associated with connections made in previous years (as described in paragraph 5.73).
- 5.75 BT also told us<sup>109</sup> that development costs were attributed to rental services in 2010/11 rather than to connection services as in previous years. As with transmission equipment, an element of MCE and depreciation costs associated with development costs in 2010/11 relates to costs incurred prior to 2010/11 and has already been recovered via connection charges. Therefore, consistent with our adjustment for transmission equipment costs, we have made an adjustment to remove the MCE and depreciation costs associated with development costs that relates to spend prior to 2010/11.

### 21CN costs

- 5.76 In the Ethernet 1 Draft Determinations we propose to make two adjustments in relation to 21CN costs:
- 5.76.1 an adjustment to remove costs directly attributable to 21CN; and
  - 5.76.2 a further adjustment to remove certain indirect 21CN costs
- 5.77 In relation to the first of these 21CN adjustments, we are proposing to make the same adjustment as set out in the Ethernet 1 Draft Determinations<sup>110</sup>, updated to take into account 2010/11. In 2010/11, BT has provided the percentage of 21CN costs that are specific to 21CN for both P&L and MCE related costs<sup>111</sup>, equivalent to the figures presented in Table 12.9 of the Ethernet 1 Draft Determinations. The resulting percentages, which we propose to use to make the 21CN adjustment, are shown in Table 5.5:

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<sup>109</sup> BT response of 18 January 2012 to question 13 of the 22 December 2011 s191 notice.

<sup>110</sup> Ethernet 1 Draft Determinations, paragraphs 12.67 to 12.78.

<sup>111</sup> BT response to question 19 of the 22 December 2011 s191 notice.



**Table 5.5: Estimate of direct (specific) 21CN costs in the period 2006/07 to 2010/11**

	2006/07	2007/08	2008/09	2009/10	2010/11
P&L	22%	22%	[✂]	[✂]	[✂]
MCE	93%	93%	[✂]	[✂]	[✂]

Source: 2006/07 to 2009/10: BT email dated 12 July 2011 in response to follow up question 21b to the 22 October s191 notice. 2010/11: BT response to question 19 of the 22 December 2011 s191 notice.

- 5.78 In relation to the second of these 21CN adjustments, BT provided us with an estimate of the 21CN overhead costs within the AISBO market that had been allocated on the basis of MCE<sup>112</sup> in the period 2006/07 to 2010/11<sup>113</sup>. For the period 2006/07 to 2009/10, these estimates are the same as the ones we used in the Ethernet 1 Draft Determinations.

#### Excess construction charges

- 5.79 In the Ethernet 1 Disputes, BT told us that the costs of Excess Construction Charges (“ECCs”) were included within the base data of Ethernet services in the period 2006/07 to 2009/10<sup>114</sup>. BT provided us with an estimate of the costs associated with ECCs and we removed them from the relevant Ethernet services.
- 5.80 In relation to the 2010/11 RFS, BT has told us that the costs associated with ECCs are not shown within the service cost information, which is a different treatment compared to previous years<sup>115</sup>. BT said that in 2010/11 it estimated the ECC depreciation embedded within AISBO services and attributed this separately to a new component called AISBO excess construction<sup>116</sup>. This estimate of depreciation associated with ECCs was £4m, and this can be seen against “Equipment depreciation” on page 53 of the 2010/11 RFS<sup>117</sup>. This estimate of £4m has been removed from the depreciation estimates included within AISBO services.
- 5.81 Given that a proportion of the depreciation embedded within AISBO services is actually associated with ECCs, it would appear to follow that a proportion of MCE embedded within AISBO services would also be associated with ECCs. If so, the MCE associated with ECCs should be removed from AISBO services since it relates to ECCs.
- 5.82 For the purposes of resolving this Dispute, we have assumed that, in 2010/11, a proportion of the MCE for each AISBO service is actually associated with ECCs. We have estimated the proportion of MCE that is associated with ECCs by assuming that the ratios of ECC MCE/AISBO market MCE and ECC depreciation/AISBO market depreciation are the same. We have apportioned the resultant estimate of MCE between services on the basis of volumes. If we receive more information from BT on how the costs of ECCs have been treated in 2010/11, either as part of this Dispute or

<sup>112</sup> BT response to question 19e of the 22 December 2011 s191 notice.

<sup>113</sup> The second 21CN adjustment eliminates the majority of these 21CN overhead costs, based on the proportion of MCE removed as being directly incurred as a result of 21CN (see Table 12.9 of the Ethernet 1 draft determination).

<sup>114</sup> BT email dated 13 December 2010.

<sup>115</sup> BT response dated 27 January 2012 to Q4 of the 24 January s191 notice.

<sup>116</sup> This cost component can be seen on page 99 and 108 of the 2010/11 RFS.

<sup>117</sup> <http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2011/CurrentCostFinancialStatements2011.pdf>

as part of the current Leased Lines Charge Control review, we propose to reflect this in the final determination of this Dispute.

#### Payment terms

- 5.83 This adjustment was discussed in detail in paragraphs 12.81 to 12.84 of the Ethernet 1 Draft Determinations. We are also proposing to make this adjustment in resolving this Dispute in order to ensure that the notional debtors amounts included within the MCE reflect the payment terms for CPs that are purchasing Ethernet services.

#### RAV adjustment

- 5.84 As in the Ethernet 1 Draft Determinations and for the same reasons<sup>118</sup>, we do not consider that it would be appropriate to take account of the RAV adjustment for the purposes of assessing whether BT has been overcharging for the services in dispute.<sup>119</sup>

#### Treatment of holding gains and losses/current cost normalisation

- 5.85 Current cost accounting ("CCA") requires the consideration of holding gains and losses. These are the changes in the replacement costs of an asset held during the year. Holding gains and losses can be caused by a variety of things such as changes to commodity prices, technical obsolescence and changes to valuation methods. For example, if the replacement cost of an asset increases during the year from £100 to £120 then there is a holding gain of £20. If reflected in the P&L, a holding gain in a given period would have the effect of decreasing costs (and increasing returns) for that period, while a holding loss would increase costs (reducing returns) for that period.
- 5.86 In its dispute submission CWW made the following points in relation to holding gains and losses and duct asset valuation:
- 5.86.1 in the 2009 LLCC Statement Ofcom made an adjustment to the AISBO basket to smooth the holding gains/losses for inclusion in the base year and this adjustment may be relevant to this Dispute<sup>120</sup>;
- 5.86.2 CWW did not agree with BT's estimate of the replacement cost of duct in 2009/10 and stated that *"Ofcom has concluded that BT's approach to revaluation is not acceptable for determining the LLU/WLR charge control and we consider that Ethernet RFS numbers also require similar adjustment"*<sup>121</sup>;
- 5.86.3 CWW was concerned that BT had not adopted an appropriate approach to dealing with the holding gain associated with the duct revaluation in 2009/10 – in particular it considered that BT had taken a CCA approach when assessing the replacement value of duct, but had not taken a CCA approach when it excluded the resulting holding gain from the unit DSAC calculations.

#### *Treatment of holding gains/losses in the 2009 LLCC Statement*

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<sup>118</sup>See paragraphs 12.97 to 12.100 of the Ethernet 1 Draft Determinations.

<sup>119</sup>This is also consistent with our approach in the PPC Final Determinations where we did not take account of the RAV adjustment. PPC Final Determinations, paragraphs 6.117 to 6.123.

<sup>120</sup>CWW submission, paragraph 2.61

<sup>121</sup>CWW submission, paragraph 1.13

- 5.87 In the 2009 LLCC Statement we made an adjustment to forecast the changes to asset values that might arise from the CCA treatment of assets over the period of the charge control (we refer to this as “current cost normalisation”). A forecast value was included in the charge control model because historic CCA holding gains and losses are unlikely to provide a robust forecast for future years<sup>122</sup>. CWW suggests in its submission that we should consider making a similar adjustment to resolve this Dispute<sup>123</sup>. In the PPC Final Determinations we considered a similar adjustment but concluded that, since we were considering historic charges rather than the forward looking charges considered in the 2009 LLCC Statement, such an adjustment was not relevant<sup>124</sup>. As in the Ethernet 1 Draft Determinations, we consider that the same reasoning applies to this Dispute.
- 5.88 In the PPC Final Determinations we also discussed the treatment of holding gains and losses more generally and decided to use “*the actual holding gains and losses reported by BT in its regulatory financial statements*”. We considered replacing these with the holding gains and losses forecast by BT at the time that it set its prices but concluded “*Absent information that these actual gains and losses would not have been foreseen by BT, we have not made adjustments to the reported holding gains and losses*”.<sup>125</sup> As in the Ethernet 1 Draft Determinations, we have followed this approach here, except for the 2009/10 holding gain associated with duct which we discuss further below.

*BT's estimate of the replacement cost of duct in 2009/10 and its treatment of the resulting holding gain*

- 5.89 BT's RFS usually include all holding gains and losses within the reported market-level costs and also the unit costs for each service. However, BT's 2009/10 RFS excluded a large holding gain relating to duct from the unit cost information and also presented market level returns with and without the duct holding gain.<sup>126</sup>
- 5.90 As explained in the RFS,<sup>127</sup> this large holding gain arose following a change in accounting estimate reflecting BT's revision of how much it would cost to replace its duct network. The increase in BT's valuation of the duct network occurred as a result of BT revising one of the input assumptions forming part of the asset valuation rather than, for example, a significant increase in the cost of labour or materials associated with building duct. BT's RFS set out that “*whilst this large holding gain has been recognised in 2009/10 it does not represent a genuine periodic change in the valuation of the duct assets. BT believes that it results in an artificial upwards distortion of returns in the year*”.<sup>128</sup>

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<sup>122</sup> See Table A6.5 of the 2009 LLCC Statement, entry “#2”.

<sup>123</sup> CWW submission, paragraph 2.61.

<sup>124</sup> PPC Final Determinations, paragraph 6.113.

<sup>125</sup> PPC Final Determinations, paragraphs 6.114 and 6.115.

<sup>126</sup> 2009/10 Current Cost Financial Statements, page 18. Details of the duct holding gain are on pages 17 and 18 of the 2009/10 RFS:

<http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2010/CurrentCostFinancialStatements2010.pdf>

<sup>127</sup> RFS 2009/10, pages 17 to 18,

<http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2010/CurrentCostFinancialStatements2010.pdf>

<sup>128</sup> 2009/10 Current Cost Financial Statements, page 18.

- 5.91 In its consultation on the charge control review for LLU and WLR services dated 31 March 2011 (the "LLU and WLR 2011 Consultation")<sup>129</sup> Ofcom considered BT's estimate of the replacement cost of duct for the purposes of setting those charge controls. This document is discussed in paragraph 12.91 of the Ethernet 1 Draft Determinations. On 3 February 2012 Ofcom published a Draft Statement on its Charge control review for LLU and WLR services (the "LLU and WLR Draft Statement").<sup>130</sup>
- 5.92 As we had proposed in the LLU and WLR 2011 Consultation, in the LLU and WLR Draft Statement we concluded that the RAV methodology remains appropriate for setting the LLU and WLR charge controls.<sup>131</sup> Any pre-August 1997 duct is therefore valued on an indexed HCA basis and any post-August 1997 duct is valued on a CCA replacement cost basis. In the LLU and WLR Draft Statement we replaced BT's estimate of the replacement cost of duct associated with post-97 assets with our own estimate of how much it would cost to replace post-97 duct assets.<sup>132</sup> We did this because we considered that BT's CCA estimate of post-August 1997 duct was not robust<sup>133</sup> although we made clear that we were not specifically challenging the valuation of total duct assets included in the audited RFS (which includes both pre-1997 and post-1997 duct assets and does not present figures on a RAV basis).<sup>134</sup>
- 5.93 In its submission CWW<sup>135</sup> suggests that Ofcom should make an adjustment to BT's estimate of duct assets in the RFS as a result of what was said in the LLU and WLR 2011 Consultation.<sup>136</sup> In the Ethernet 1 Draft Determinations at paragraph 12.94, we set out that for the purposes of those draft determinations we had not made any adjustment to BT's RFS duct valuation for 2009/10 but we were considering whether to do so. We have considered these issues further as part of this Dispute. We do not agree that an adjustment to BT's RFS duct valuation is required in order to resolve this Dispute because in the LLU and WLR 2011 Consultation we were not challenging BT's estimate of the replacement cost of the entire duct network (i.e. as reported in the audited RFS), but rather BT's estimate of the replacement cost of duct assets BT had acquired since 1997, which is required as part of the RAV methodology for setting forward looking charge controls. As set out in paragraph 5.84 and consistent with the Ethernet 1 Draft Determinations, we do not consider that it would be appropriate to make a RAV adjustment for the purpose of assessing whether BT has overcharged for the services in dispute. We are not, therefore, proposing to adjust BT's estimate of the replacement cost of duct in 2009/10 as it appears in the RFS.<sup>137</sup>

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<sup>129</sup> Charge control review for LLU and WLR services:

<http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc-2011/summary/wlr-cc-2011.pdf>

<sup>130</sup> <http://stakeholders.ofcom.org.uk/consultations/llu-wlr-further-consultation/statement>. The European Commission, the Body of European Regulators for Electronic Communications and other EU Member State national regulatory authorities have one month to comment on the Draft Statement. The "LLU and WLR Draft Statement Annexes" are available at

[http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc/statement/LLU\\_WLR\\_CC\\_annexes.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc/statement/LLU_WLR_CC_annexes.pdf)

<sup>131</sup> See A1.2 of the LLU and WLR Draft Statement Annexes

<sup>132</sup> Our estimate was based on an RPI indexation of BT duct expenditure since 1997.

<sup>133</sup> See A1.128 of the LLU and WLR Draft Statement Annexes and also paragraph 3.58 of LLU and WLR 2011 Consultation

<sup>134</sup> LLU and WLR 2011 Consultation, paragraph 3.81.

<sup>135</sup> CWW submission, paragraph 1.13.

<sup>136</sup> We note that CWW's submission predated the LLU and WLR Draft Statement

<sup>137</sup> The LLU and WLR Draft Statement does not explicitly discuss the CCA valuation of duct as used in the RFS, but this is discussed in Annex 5 of the LLU and WLR 2011 Consultation, which is

- 5.94 CWW also expresses concern in its submission about whether BT's exclusion of the associated holding gain from the unit cost information in 2009/10 was appropriate.<sup>138</sup>
- 5.95 The duct holding gain (as reported at a market level in the RFS) results from a change in accounting estimate rather than, for example, an in-year change in the cost of labour or materials associated with building duct. This change in accounting estimate is an attempt to reflect in the 2009/10 RFS a change in the environment for building duct and the consequent replacement cost, which may have arisen at any point prior to the publication of the 2009/10 RFS. Therefore the gain through holding the asset may not actually all have arisen during 2009/10 but could have occurred during any year or over a number of years in the past (including years prior to the Relevant Period). As a result, we consider there is merit in BT's assertion in the 2009/10 RFS that the combination of the nature and size of the holding gain would result in an artificial upwards distortion of returns in 2009/10 if it was reflected in the unit costs. Since we have not identified that BT's exclusion of the holding gains is either an error or obviously inappropriate, we are not proposing to change BT's reported treatment of the holding gain associated with duct in 2009/10.

### **Main link in 2006/07**

- 5.96 In 2006/07, revenues and costs associated with main link rentals were included within the revenue and cost information for WES and BES rental services. If main link revenues were below DSAC in 2006/07 then aggregation of the main link and rental charges could suppress the amount of overcharging on BES and WES rental services. However, if main link revenues were above DSAC in 2006/07, and BES and WES rentals were above DSAC, then aggregation of main link and rental changes would make no difference to the overall level of overcharging. In the Ethernet 1 Draft Determinations (where main link rentals were in dispute) we considered it likely that main link revenues exceeded DSAC in 2006/07 but concluded that there was no robust way of disaggregating the data.<sup>139</sup>
- 5.97 As in the Ethernet 1 Draft Determinations<sup>140</sup> our analysis indicates that the revenue for both main link and BES and WES rentals exceeded DSAC in 2006/07. Therefore we do not consider there is a risk that the aggregation of main link and rentals in 2006/07 has masked the extent of any overcharging. However, since we are proposing to base our assessment of overcharging in 2006/07 on the aggregated data from the restated RFS in 2006/07 (as adjusted above and consistent with the Ethernet 1 Draft Determinations), our assessment of overcharging for BES and WES rentals will include an embedded overcharge on main link which we are unable to disaggregate.

### **Results and impact**

- 5.98 On the basis of the information currently available to us, we are proposing to make four adjustments to the corrected RFS data associated with transmission equipment costs, 21CN costs, costs association with excess construction charges and payment terms. The adjustments to FAC are set out in Tables 5.6 and 5.7.

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available at <http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc-2011/annexes/wlr-cc-annexes.pdf>, see A5.18 to A5.20 and A5.76 to A5.85 in particular.

<sup>138</sup>CWW submission, paragraph 2.29.

<sup>139</sup>Ethernet 1 Draft Determinations, paragraph 12.104.

<sup>140</sup>Ethernet 1 Draft Determinations, paragraphs 12.101-12.107.

**Table 5.6: Impact of the adjustments on the corrected FAC for each disputed service which is reported in a specific bandwidth category in the RFS in the period 2006/07 to 2009/10, %**

	2006/07	2007/08	2008/09	2009/10	2010/11
BES 100 rental	(11%)	(21%)	(13%)	(9%)	n/a
BES 1000 rental	(13%)	(26%)	(13%)	(19%)	(36%)
BES 100 connection	8%	(29%)	38%	<i>NiD</i>	<i>NiD</i>
WES 100 rental	(10%)	(12%)	(12%)	(9%)	(26%)
WES 1000 rental	(12%)	(17%)	(15%)	(18%)	(44%)

*Source: Ofcom, based on information provided by BT*

*NiD: Not in Dispute*

**Table 5.7: Impact of the adjustments on the corrected FAC for each disputed service which is reported in a specific bandwidth category in the RFS in the period 2006/07 to 2009/10, £m**

	2006/07	2007/08	2008/09	2009/10	2010/11
BES 100 rental	(0.8)	(0.8)	(1.1)	(0.8)	n/a
BES 1000 rental	(0.4)	(0.8)	(0.8)	(1.5)	(6.3)
BES 100 connection	0.1	(0.4)	0.4	<i>NiD</i>	<i>NiD</i>
WES 100 rental	(4.7)	(4.5)	(5.4)	(5.9)	(30.1)
WES 1000 rental	(0.8)	(0.8)	(0.9)	(2.2)	(11.4)

*Source: Ofcom, based on information provided by BT*

*NiD: Not in Dispute*

5.99 On the basis of the information currently available to us, we believe that the adjustments proposed above are necessary and result in a data set suitable for resolving the Dispute.

### Adjusting BT's DSACs

5.100 Before assessing whether BT has overcharged CWW for the services in dispute we need to identify how our proposed adjustments to BT's FAC data translate into adjustments to BT's DSAC data.

5.101 The issue was discussed in some detail in the PPC Final Determinations<sup>141</sup> and summarised in paragraphs 12.110-12.118 of the Ethernet 1 Draft Determinations. We have adopted the same approach in this Dispute as in those disputes and adjusted DSAC in line with the absolute adjustment made to FAC.

### Summary of revenue and cost data

5.102 As in paragraphs 12.118 and 12.119 of the Ethernet 1 Draft Determinations, we now set out a summary of the revenue and cost data we propose to use to assess whether BT has overcharged for the services in dispute.

5.103 Table 5.8<sup>142</sup> sets out the corrected and adjusted external revenue and external DSAC for the disputed services which are reported within specific bandwidth categories in the RFS in the period 2006/07 to 2010/11 on a £m basis. The table shows the difference between external revenues and external DSAC. A positive number indicates that external revenues were greater than DSAC.

<sup>141</sup> PPC Final Determinations, paragraphs 6.131 to 6.179.

<sup>142</sup> Which is similar to Table 12.16 in the Ethernet 1 Draft Determinations.

**Table 5.8 Corrected and adjusted external revenue and DSAC data for each disputed service which is reported within a specific bandwidth category in the RFS in the period 2006/07 to 2010/11, £m**

	2006/07	2007/08	2008/09	2009/10	2010/11
<b>BES 100 rental</b>					
External revenue	12.1	12.8	13.9	8.3	n/a
External DSAC	6.0	4.5	10.4	8.3	n/a
Difference	6.1	8.2	3.6	0.0	n/a
<b>BES 1000 rental</b>					
External revenue	13.1	26.6	28.2	17.2	17.6
External DSAC	2.8	4.5	7.0	7.7	23.9
Difference	10.3	22.0	21.3	9.6	(6.3)
<b>BES 100 connection</b>					
External revenue	10.2	4.8	1.5	NiD	NiD
External DSAC	2.6	2.8	2.1	NiD	NiD
Difference	7.6	2.0	(0.5)	NiD	NiD
<b>WES 100 rental</b>					
External revenue	4.2	13.5	20.8	27.8	34.5
External DSAC	2.2	7.5	12.6	26.4	70.4
Difference	2.0	6.0	8.2	1.4	(35.9)
<b>WES 1000 rental</b>					
External revenue	1.2	3.1	6.4	8.4	12.8
External DSAC	0.2	0.7	1.4	4.0	11.8
Difference	1.0	2.4	5.1	4.4	0.9

Source: Ofcom, based on information provided by BT

n/a = data not available, NiD = Not in dispute

5.104 Table 5.9 shows the corrected and adjusted external revenue and external DSAC for the disputed services which are reported within specific bandwidth categories in the RFS in the period 2006/07 to 2010/11 on a unit (per local end) basis. The table shows the difference between external revenues and external DSAC. A positive number indicates that external revenues were greater than DSAC. As explained in paragraphs 13.7 and 13.8 of the Ethernet 1 Draft Determinations, the average revenue per local end reported below may be materially different from the charge listed in the OPL.

**Table 5.9 Corrected and adjusted external revenue and DSAC data for each disputed service which is reported within a specific bandwidth category in the RFS in the period 2006/07 to 2010/11, per local end<sup>143</sup>**

	2006/07	2007/08	2008/09	2009/10	2010/11
<b>BES 100 rental</b>					
Unit charge	£4,459	£2,302	£2,293	£1,583	n/a
Unit DSAC	£2,215	£817	£1,704	£1,577	n/a
Difference	£2,244	£1,485	£589	£6	n/a
<b>BES 1000 rental</b>					
Unit charge	£11,430	£7,586	£7,110	£4,199	£3,576
Unit DSAC	£2,464	£1,298	£1,752	£1,873	£4,860
Difference	£8,966	£6,288	£5,358	£2,326	(£1,284)
<b>BES 100 connection</b>					
Unit charge	£2,750	£2,741	£2,370	NiD	NiD
Unit DSAC	£699	£1,621	£3,193	NiD	NiD
Difference	£2,051	£1,120	(£823)	NiD	NiD
<b>WES 100 rental</b>					
Unit charge	£4,508	£2,936	£2,656	£2,273	£2,141
Unit DSAC	£2,328	£1,639	£1,613	£2,160	£4,366
Difference	£2,180	£1,297	£1,043	£114	(£2,225)
<b>WES 1000 rental</b>					
Unit charge	£15,736	£9,238	£7,569	£5,555	£5,500
Unit DSAC	£2,471	£2,195	£1,597	£2,643	£5,098
Difference	£13,265	£7,043	£5,972	£2,911	£401

Source: Ofcom, based on information provided by BT

n/a = data not available, NiD = Not in dispute

Note: Unit DSACs, average revenue and prices are given per local end throughout the Relevant Period. BT's RFS data was generated per circuit in 2006/07 and 2007/08 and we have halved these results to give results per local end. Some WES circuits only require a single end so these figures may under-state the average charge and the DSAC per end for WES services, but the results per end are presented for comparative purposes only and would not affect the calculation of the extent of overcharging.

- 5.105 In paragraph 5.39 we said that for services in dispute that are reported within BES and WES "other bandwidths" we propose to resolve the Dispute using proxies for revenue and cost. We said that we would use pricing and volume data provided by BT as a proxy for revenues and Table 5.2 sets out the cost proxies we intend to use. Applying these proxies gives rise to the revenue and cost data set out in Table 5.10 and Table 5.11. Note that revenues and costs of BES and WES services of more than 1Gbit/s have been pro-rated in 2008/09 to account for the fact that such services were not subject to the cost orientation obligation from 8 December 2008.
- 5.106 Table 5.10 shows the external revenue and external DSAC for the disputed services which are not reported within specific bandwidth categories in the RFS in the period 2006/07 to 2010/11, and so for which we are using proxies, on a unit basis.

<sup>143</sup> There are very minor differences between the external DSACs for some services in 2009/10 presented in this table and those presented in Table 13.2 of the Ethernet 1 Draft Determinations. These do not materially affect the extent of overcharging. They have arisen because of new information provided to us by BT with respect to BES other bandwidth rental services, which were not in dispute in the Ethernet 1 Disputes. This new information has a small impact on the adjustment for Excess Construction Charges discussed in paragraph 5.79-5.82. Parties should be aware that we intend to reflect these minor differences in the final determinations of both disputes.



**Table 5.10 External revenue and DSAC data using proxies for each disputed service which is reported within BES and WES 'other bandwidth' rental in the RFS in the period 2006/07 to 2010/11, per local end**

	2006/07	2007/08	2008/09	2009/10	2010/11*
<b>BES 100 rental</b>					
Unit charge					£1,523
Unit DSAC					£1,578
Difference					(£55)
<b>BES 155 rental</b>					
Unit charge	£6,690	£4,708	£4,700	£4,700	£4,700
Unit DSAC	£2,215	£817	£1,704	£1,577	£1,578
Difference	£4,475	£3,891	£2,996	£3,123	£3,122
<b>BES 622 rental</b>					
Unit charge	£12,055	£8,470	£8,230	£8,230	£8,230
Unit DSAC	£2,339	£1,058	£1,728	£1,725	£3,219
Difference	£9,716	£7,412	£6,502	£6,505	£5,011
<b>BES 2500 rental</b>					
Unit charge	NiD	NiD	£10,480	NiD	NiD
Unit DSAC	NiD	NiD	£1,752	NiD	NiD
Difference	NiD	NiD	£8,728	NiD	NiD
<b>BES 10000 rental</b>					
Unit charge	NiD	NiD	£12,820	NiD	NiD
Unit DSAC	NiD	NiD	£1,752	NiD	NiD
Difference	NiD	NiD	£11,068	NiD	NiD
<b>WES 155 rental</b>					
Unit charge	£6,812	£5,215	£5,210	£5,210	£5,210
Unit DSAC	£2,328	£1,639	£1,613	£2,160	£4,366
Difference	£4,484	£3,577	£3,597	£3,050	£844
<b>WES 622 rental</b>					
Unit charge	£13,389	£8,732	£8,500	£8,500	£8,500
Unit DSAC	£2,399	£1,917	£1,605	£2,401	£4,732
Difference	£10,990	£6,815	£6,895	£6,099	£3,768
<b>WES 10000 rental</b>					
Unit charge	NiD	£14,455	£13,059	NiD	NiD
Unit DSAC	NiD	£2,195	£1,597	NiD	NiD
Difference	NiD	£12,260	£11,462	NiD	NiD

Source: Ofcom, based on information provided by BT

\*For BES100 and BES155 in 2010/11, the cost data shown is consistent with Option 2 as set out in paragraph 5.46 above.

NiD = Not in dispute

Note: Unit DSACs, average revenue and prices are given per local end throughout the Relevant Period. BT's RFS data was generated per circuit in 2006/07 and 2007/08 and we have halved these results to give results per local end. Some WES circuits only require a single end so these figures may under-state the average charge and the DSAC per end for WES services, but the results per end are presented for comparative purposes only and would not affect the calculation of the extent of overcharging.

5.107 Table 5.11 shows the external revenue and external DSAC for the disputed services which are not reported within specific bandwidth categories in the RFS in the period 2006/07 to 2010/11, and so for which we are using proxies, on a £m basis.

**Table 5.11 External revenue and DSAC data using proxies for each disputed service which is reported within BES and WES 'other bandwidth' rental in the RFS in the period 2006/07 to 2010/11, £m**

	2006/07	2007/08	2008/09	2009/10	2010/11**
<b>BES 100 rental</b>					
External revenue					6.4
External DSAC					6.6
Difference					(0.2)
<b>BES 155 rental</b>					
External revenue	1.1	1.3	0.8	0.1	0.0
External DSAC	0.4	0.2	0.3	0.0	0.0
Difference	0.7	1.1	0.5	0.1	0.0
<b>BES 622 rental</b>					
External revenue	2.9	1.7	1.0	0.0	0.0
External DSA	0.6	0.2	0.2	0.0	0.0
Difference	2.3	1.5	0.8	0.0	0.0
<b>BES 2500 rental*</b>					
External revenue	NiD	NiD	0.1	NiD	NiD
External DSAC	NiD	NiD	0.0	NiD	NiD
Difference	NiD	NiD	0.1	NiD	NiD
<b>BES 10000 rental*</b>					
External revenue	NiD	NiD	0.1	NiD	NiD
External DSAC	NiD	NiD	0.0	NiD	NiD
Difference	NiD	NiD	0.1	NiD	NiD
<b>WES 155 rental</b>					
External revenue	0.9	1.4	1.5	1.5	1.4
External DSAC	0.3	0.4	0.5	0.6	1.2
Difference	0.6	0.9	1.1	0.9	0.2
<b>WES 622 rental</b>					
External revenue	0.3	0.4	0.4	0.5	0.5
External DSAC	0.0	0.1	0.1	0.1	0.3
Difference	0.2	0.3	0.3	0.3	0.2
<b>WES 10000 rental*</b>					
External revenue	NiD	0.0	0.2	NiD	NiD
External DSAC	NiD	0.0	0.0	NiD	NiD
Difference	NiD	0.0	0.2	NiD	NiD

Source: Ofcom, based on information provided by BT

NiD = Not in dispute

\*2008/09 data has been pro rated to 8 December 2008.

\*\* For BES100 in 2010/11 and BES155 services, the cost data shown is consistent with option 2 as set out in paragraph 5.46 above.

## Results of the DSAC test

5.108 As in paragraphs 13.3-13.14 of the Ethernet 2 Draft Determinations, and in line with step 2 of our methodology set out at paragraph 3.23, we now compare the disputed charges with their respective DSACs to identify any charges exceeding DSAC. Table 5.12<sup>144</sup> compares external average revenues with the external unit DSACs for the services in dispute, based on data provided by BT as adjusted by Ofcom,<sup>145</sup> and

<sup>144</sup> Table 5.12 is equivalent to Table 13.2 in the Ethernet 1 Draft Determinations.

<sup>145</sup> The base data provided in BT's responses to question 2 of the 22 October s191 notice and question 1 of the 22 December 2011 s191 notice as amended in line with the adjustments described in paragraphs 5.33-5.101.

shows the unit charge as a percentage of DSAC. A percentage above 100% indicates that the charge exceeded DSAC.

**Table 5.12: Comparison of BT's external Ethernet unit revenues with an estimate of external unit DSAC**

	2006/07	2007/08	2008/09	2009/10	2010/11*
<b>BES 100 rental</b>					
Unit charge (per local end)	£4,459	£2,302	£2,293	£1,583	£1,523
Unit DSAC (per local end)	£2,215	£817	£1,704	£1,577	£1,578
Unit charge as % of DSAC	201%	282%	135%	100%	96%
<b>BES 1000 rental</b>					
Unit charge (per local end)	£11,430	£7,586	£7,110	£4,199	£3,576
Unit DSAC (per local end)	£2,464	£1,298	£1,752	£1,873	£4,860
Unit charge as % of DSAC	464%	584%	406%	224%	74%
<b>BES 155 rental</b>					
Unit charge (per local end)	£6,690	£4,708	£4,700	£4,700	£4,700
Unit DSAC (per local end)	£2,215	£817	£1,704	£1,577	£1,578
Unit charge as % of DSAC	302%	576%	276%	298%	298%
<b>BES 622 rental</b>					
Unit charge (per local end)	£12,055	£8,470	£8,230	£8,230	£8,230
Unit DSAC (per local end)	£2,339	£1,058	£1,728	£1,725	£3,219
Unit charge as % of DSAC	515%	801%	476%	477%	256%
<b>BES 2500 rental</b>					
Unit charge (per local end)	NiD	NiD	£10,480	NiD	NiD
Unit DSAC (per local end)	NiD	NiD	£1,752	NiD	NiD
Unit charge as % of DSAC	NiD	NiD	598%	NiD	NiD
<b>BES 10000 rental</b>					
Unit charge (per local end)	NiD	NiD	£12,820	NiD	NiD
Unit DSAC (per local end)	NiD	NiD	£1,752	NiD	NiD
Unit charge as % of DSAC	NiD	NiD	732%	NiD	NiD
<b>BES 100 connection</b>					
Unit charge (per local end)	£2,750	£2,741	£2,370	NiD	NiD
Unit DSAC (per local end)	£699	£1,621	£3,193	NiD	NiD
Unit charge as % of DSAC	393%	169%	74%	NiD	NiD
<b>WES 100 rental</b>					
Unit charge (per local end)	£4,508	£2,936	£2,656	£2,273	£2,141
Unit DSAC (per local end)	£2,328	£1,639	£1,613	£2,160	£4,366
Unit charge as % of DSAC	194%	179%	165%	105%	49%
<b>WES 1000 rental</b>					
Unit charge (per local end)	£15,736	£9,238	£7,569	£5,555	£5,500
Unit DSAC (per local end)	£2,471	£2,195	£1,597	£2,643	£5,098
Unit charge as % of DSAC	637%	421%	474%	210%	108%
<b>WES 155 rental</b>					
Unit charge (per local end)	£6,812	£5,215	£5,210	£5,210	£5,210
Unit DSAC (per local end)	£2,328	£1,639	£1,613	£2,160	£4,366
Unit charge as % of DSAC	293%	318%	323%	241%	119%

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**WES 622 rental**

Unit charge (per local end)	£13,389	£8,732	£8,500	£8,500	£8,500
Unit DSAC (per local end)	£2,399	£1,917	£1,605	£2,401	£4,732
Unit charge as % of DSAC	558%	456%	530%	354%	180%

**WES 10000 rental**

Unit charge (per local end)	NiD	£14,455	£13,059	NiD	NiD
Unit DSAC (per local end)	NiD	£2,195	£1,597	NiD	NiD
Unit charge as % of DSAC	NiD	659%	818%	NiD	NiD

Source: Ofcom, based on information provided by BT

NiD = Not in dispute

\* For BES100 in 2010/11 and BES155 services, the cost data shown is consistent with option 2 as set out in paragraph 5.46 above

Note: Unit DSACs, average revenue and prices are given per local end throughout the Relevant Period. BT's RFS data was generated per circuit in 2006/07 and 2007/08 and we have halved these results to give results per local end. Some WES circuits only require a single end so these figures may under-state the average charge and the DSAC per end for WES services, but the results per end are presented for comparative purposes only and would not affect the calculation of the extent of overcharging.

5.109 Therefore, on the basis of the data set out in Table 5.12 above, the following charges were above DSAC:

- 5.109.1 BES100 rental in 2006/07, 2007/08, 2008/09 and 2009/10;
- 5.109.2 BES1000 rental in 2006/07, 2007/08, 2008/09 and 2009/10;
- 5.109.3 BES155 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11;
- 5.109.4 BES622 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11;
- 5.109.5 BES100 connection in 2006/07 and 2007/08;
- 5.109.6 WES100 rental in 2006/07, 2007/08, 2008/09 and 2009/10;
- 5.109.7 WES1000 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11;
- 5.109.8 WES155 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11;
- 5.109.9 WES622 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11;
- 5.109.10 WES10000 rental in 2007/08 and 2008/09
- 5.109.11 BES 2500 in 2008/09; and
- 5.109.12 BES10000 in 2008/09.

## Section 6

# Ofcom's assessment of whether BT's charges were cost orientated

- 6.1 In paragraphs 5.105-5.109 we compared the disputed charges with their respective DSACs. In this Section, we continue our assessment of the cost orientation of the disputed charges, and consider whether other factors could indicate that any charges exceeding DSAC were nonetheless cost orientated - step 3 of our analysis as described in paragraph 3.22.
- 6.2 We carry out the same assessment in relation to the charges disputed in the Ethernet 1 Disputes at paragraphs 13.15 to 13.74 of the Ethernet 1 Draft Determinations.
- 6.3 We first consider BT's and CWW's arguments as to what other factors are relevant to our assessment.

### BT

- 6.4 As summarised at paragraph 13.17 of the Ethernet 1 Draft Determinations, BT considers that we should take the developing nature of the AISBO market into account when considering whether its charges were cost orientated. BT argues that: it should be able to use market level data in assessing cost orientation; it is entitled to earn a higher ROCE given the developing nature of the market; and due to a lack of historic data, it cannot accurately forecast its future costs and therefore it *"cannot confidently predict whether and how it needs to change its prices."*<sup>146</sup>

### CWW

- 6.5 CWW states that its claim against BT starts two years after the LLMR 2004 and following a period of recurring year on year growth in demand. It considers that this should have been a sufficient period for BT to *"determine the potential for the product growth and to analyse compliance with the cost orientation obligations."*<sup>147</sup>

### Ofcom's view

- 6.6 We note CWW's arguments on these points as set out above. We set out our views on BT's arguments in paragraphs 13.18-13.27 of the Ethernet 1 Draft Determinations. In particular, we do not rule out the possibility that BT may have experienced difficulties in forecasting costs and revenues for individual services in dispute and that these difficulties may have contributed to it failing the DSAC test. Should BT wish us to take the specific circumstances surrounding a charge into account when assessing overcharging, it needs to provide us with an explanation of the specific reasons why it encountered such difficulties. It should also provide supporting evidence of its original forecasts and the factors that it considered at the time. BT would need to demonstrate that its unit DSACs were lower than it reasonably expected. If, for example, this was a consequence of an error in forecasting volumes, it would need to provide us with details of the volume forecasts it used in setting prices, together with an explanation of why it considered these to be reasonable forecasts and why the deviation from forecast led to the failure of the

<sup>146</sup>BT's submission of 20 May 2011, paragraph 32.

<sup>147</sup>CWW submission, paragraph 2.35.

DSAC test. A second possibility is that unit DSACs could be lower than expected due to unexpected movements in costs. If this were the case, BT would need to explain why the cost movements could not have been reasonably forecast and evidence of its original cost forecast, together with the supporting reasoning for that forecast at the time. We would typically expect BT to include, at a minimum:

- 6.6.1 a detailed description of which specific cost category (or categories) contributed to the change in unit costs;
  - 6.6.2 an explanation of the underlying reason for these cost changes;
  - 6.6.3 an explanation of why BT therefore considered the level of the costs to be different to the level it had reasonably expected; and
  - 6.6.4 if the actual unit volumes that occurred were not expected, the volumes that BT used in setting its prices.
- 6.7 While BT has not provided us with sufficient evidence to date to allow us to place significant weight on its arguments in relation to its forecasting difficulties in our assessments below, we do not rule out that it could provide such evidence in response to this Provisional Determination. If specific evidence were provided by BT, it could lead us to revise our proposed conclusions below in relation to the affected services.

#### Results of analysis

- 6.8 Unless explicitly stated otherwise, the data reported within this Section relates to the level of aggregation reported in the RFS and refers to external customers only. We include pricing data for years that services are outside the scope of the Dispute as it is relevant context to the general path of pricing BT took with each of its services. All the data reported includes Ofcom's adjustments as described in paragraphs 5.53 to 5.101. For each of the services listed in BT's RFS (which include a number of different service variants) we set out the following information:
- 6.8.1 revenue as a percentage of DSAC;
  - 6.8.2 revenue as a percentage of FAC;
  - 6.8.3 ROCE;<sup>148</sup>
  - 6.8.4 unit DSAC;<sup>149</sup> and
  - 6.8.5 the price listed in the OPL for the service that makes up the majority of revenue in the service as listed in the RFS.<sup>150</sup>

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<sup>148</sup> Note for some services we do not have ROCE information as we are using a proxy or estimate.

<sup>149</sup> Unit DSACs, average revenue and prices are given per local end throughout the Relevant Period. BT's RFS data was generated per circuit in 2006/07 and 2007/08 and we have halved these results to give results per local end. Some WES circuits only require a single end so these figures may understate the average charge and the DSAC per end for WES services, but the results per end are presented for comparative purposes only and would not affect the calculation of the extent of overcharging.

<sup>150</sup> E.g. In the BES100 rental category, the standard one year minimum variant attracted the most revenue within the RFS category. For BES2500/BES10000/WES10000 which are not shown in the RFS in all years, we show the standard variant.

6.9 We refer to this financial and pricing data in a number of different tables in this Section. In each table, we highlight in grey where: the revenue/DSAC ratio is over 100% (i.e. where revenues are greater than DSAC); the revenue/FAC ratio is over 100% (i.e. where revenues are greater than FAC); and where the ROCE is greater than the “rest of BT” WACC (which was between 11% and 11.4% during the Relevant Period<sup>151</sup>). As we have explained in Ethernet 1 Draft Determinations,<sup>152</sup> a charge above FAC (and hence one where the rate of return is greater than the WACC) does not necessarily indicate that BT's charges are not cost orientated, but rather lends weight to a conclusion of overcharging where the charge is also above DSAC.

6.10 We consider the services in the order in which they are set out in paragraph 5.110.

### BES 100 rental

6.11 **Table 6.1** below shows the relevant comparisons of external DSAC, FAC and ROCE for BES100 rental over the Relevant Period.<sup>153</sup> As discussed above, in 2010/11, BT did not report BES100 rental separately in the RFS and it was unable to produce DSAC for BES100 rental for this year. We have therefore estimated what the DSAC would likely have been. The results of the DSAC test using the four possible options we have identified in paragraph 5.46 are shown in the table. **Figure 6.1** shows the charge per local end for the standard service and the DSAC per local end for BES100 rental. As discussed at paragraphs 13.7-13.8 of the Ethernet 1 Draft Determinations, the average revenue per local end can materially vary from the price listed in the OPL, particularly in 2006/07 where the average revenue per local end included main link charges (whereas for other years it did not).

**Table 6.1: Key financial measures for BES100 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC	ROCE
2006/07	201%	191%	44%
2007/08	282%	427%	95%
2008/09	135%	182%	36%
2009/10	100%	107%	13%
2010/11 Option 1 - constant 2009/10 unit DSAC	97%	103%	n/a
2010/11 Option 2 - average 2006/07-2009/10 DSAC	96%	109%	n/a
2010/11 Option 3 - constant 2009/10 total DSAC	77%	82%	n/a
2010/11 Option 4 - ratio 2009/10 BES100 to BES1000 rental DSACs	37%	69%	n/a

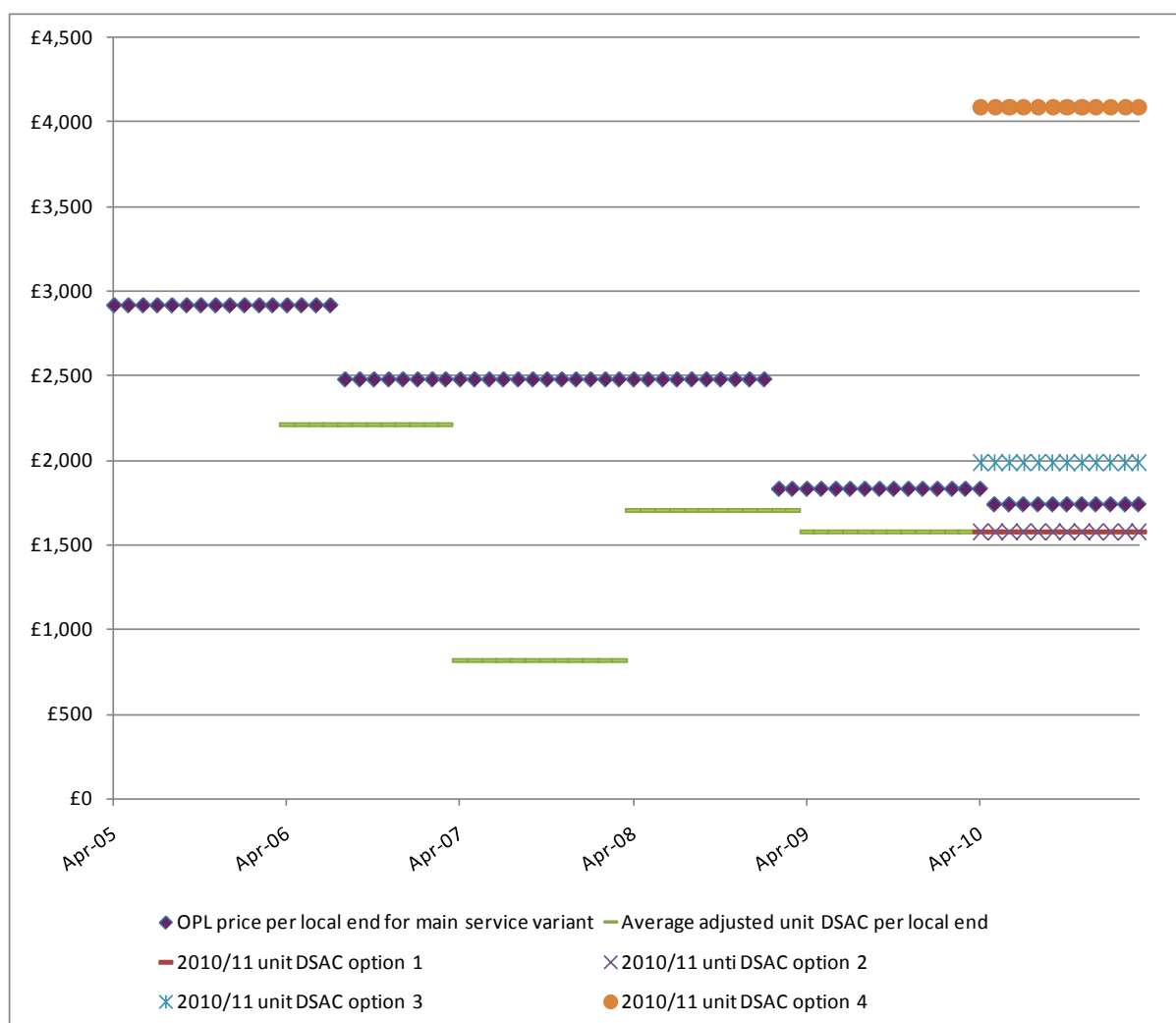
Source: Ofcom based on BT data

<sup>151</sup> The Rest of BT WACC was 11.4% in 2006/07, 2007/08 and 2008/09, and 11% in 2009/10 and 2010/11.

<sup>152</sup> See paragraph 13.16 of the Ethernet 1 Draft Determinations.

<sup>153</sup> We do not have ROCE data for 2010/11.

**Figure 6.1: BES100 rental, OPL price and unit DSAC per local end**



6.12 We considered whether BT was overcharging for BES100 rental from 2006/07 to 2009/10 in the Ethernet 1 Draft Determinations.<sup>154</sup> As discussed there, our provisional view is that BT overcharged for BES100 rental in 2006/07, 2007/08 and 2008/09. We noted that in 2009/10, the case is less clear cut, but the pattern of overcharging in previous years, and the fact that the price reductions were not sufficient to reduce prices to below the previous years' DSACs, suggest that a small degree of overcharging also took place in 2009/10. We propose to adopt the same provisional conclusion in this Dispute.

6.13 For 2010/11, under each option, revenues are less than DSAC (if revenues are adjusted to reflect minimum term discounts).<sup>155</sup> Under two of the options (Options 3 and 4), revenues are also less than FAC, while under Options 1 and 2 revenues are less than 10% above FAC.

<sup>154</sup> Ethernet 1 Draft Determinations, paragraphs 13.28-13.35.

<sup>155</sup> In 2010/11, BT's data shows minimum term discounts for BES "other bandwidth" rentals overall and does not separate out how much of this discount applies to the different services. However, it seems that BES100 is the only service included in the BES "other bandwidth" category which has a term option. The unit charges for BES100 rental are derived by removing this discount from the BES100 rental revenue. Without this adjustment, average revenue is £1642, which is higher than DSAC calculated using some of the options above.



- 6.14 BT slightly reduced its rental charge in April 2010, from £1830 to £1738. Given that the level of overcharging was already relatively low in 2009/10, this price reduction supports the results of our proxied DSAC test for 2010/11, namely that BT was not overcharging for BES100 Rental in 2010/11.

#### Conclusion on BES100 rental

- 6.15 In summary, in the Ethernet 1 Draft Determinations we provisionally conclude that BT overcharged for BES100 rental in 2006/07, 2007/08, 2008/09 and 2009/10 on the basis that:

- 6.15.1 revenues exceeded DSAC in each year;
- 6.15.2 revenues substantially exceeded FAC in the first three years, and were also above FAC in 2009/10;
- 6.15.3 ROCE was substantially above WACC in the first three years, and was also above the WACC in 2009/10; and
- 6.15.4 BT's 2009 price reductions were insufficient to reduce charges below DSAC.

- 6.16 As explained in paragraph 5.37, we do not have DSAC data for 2010/11 because BT reported the services within BES "other bandwidth" rental. However, we provisionally conclude that BT did not overcharge in 2010/11 on the basis that revenues do not exceed DSAC using any of our DSAC proxies.

#### **BES1000 rental**

- 6.17 **Table 6.2** below shows the relevant comparisons of external DSAC, FAC and ROCE for BES1000 rental over the Relevant Period. **Figure 6.2** shows the charge per local end for the standard service and the DSAC per local end for BES1000 rental.

**Table 6.2: Key financial measures for BES1000 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC	ROCE
2006/07	464%	473%	145%
2007/08	584%	1085%	345%
2008/09	406%	545%	143%
2009/10	224%	268%	70%
2010/11	74%	153%	40%

*Source: Ofcom based on BT data*

**Figure 6.2: BES1000 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

- 6.18 We considered whether BT was overcharging for BES1000 rental from 2006/07 to 2009/10 in the Ethernet 1 Draft Determinations. As discussed there,<sup>156</sup> our provisional view is that BT overcharged for BES1000 rental in 2006/07, 2007/08, 2008/09 and 2009/10. We propose to adopt the same provisional conclusion in this Dispute.
- 6.19 In 2010/11, revenue was well below DSAC. This is largely because unit DSAC increased substantially in 2010/11, from around £1900 to around £4700 (although there was also a slight reduction in average revenue). This increase in unit DSAC appears to be due to a combination of factors including: an increase in fibre costs;<sup>157</sup> a change in the allocation of costs for electronics from connections to rentals (for which we have made a partial adjustment as described in paragraphs 5.72-5.75); and the change in BT's methodology for calculating DSACs (as discussed in paragraphs 5.4-5.22).
- 6.20 While revenue exceeded FAC, it did so by considerably less than in the earlier four years. Consistent with this, BT's ROCE was above its WACC for this year but also by a significantly lower amount than in the earlier years. We therefore provisionally conclude that BT did not overcharge for BES 1000 rentals in 2010/11.
- 6.21 We note that CWW is also in dispute with BT about the charges for BES1000 Extended Reach rental. BES1000 ER has a higher price than the standard variant and so is also likely to have been overcharged over the period (although we note that it may also have a higher incremental cost due to the longer distance covered by the local end). As noted at paragraph 3.7 we intend to resolve this Dispute in relation to BES1000 rental variants by using the level of aggregation presented in the RFS,

<sup>156</sup> Ethernet 1 Draft Determinations, paragraphs 13.37-13.41.

<sup>157</sup> BT told us that the costs of fibre attributed to these services increased from 2009/10 to 2010/11 due to increases in volume and due to a change in CCA valuation in the period (BT response of 18 January 2012 to question 13 of the 22 December 2011 s191 notice).

consistent with the Ethernet 1 Draft Determinations. We therefore do not make a separate finding for BES1000 ER.

### Conclusion on BES1000 rental

6.22 In the Ethernet 1 Draft Determinations we provisionally conclude that BT overcharged for BES1000 rental in 2006/07, 2007/08, 2008/09 and 2009/10 on the basis that:

6.22.1 revenues significantly exceeded DSAC in these years;

6.22.2 revenues substantially exceeded FAC in these years; and

6.22.3 ROCEs were substantially above the WACC in these years.

6.23 We provisionally conclude that BT did not overcharge for BES 1000 rental in 2010/11 on the basis that revenues were significantly less than DSAC in this year.

### **BES 155 rental**

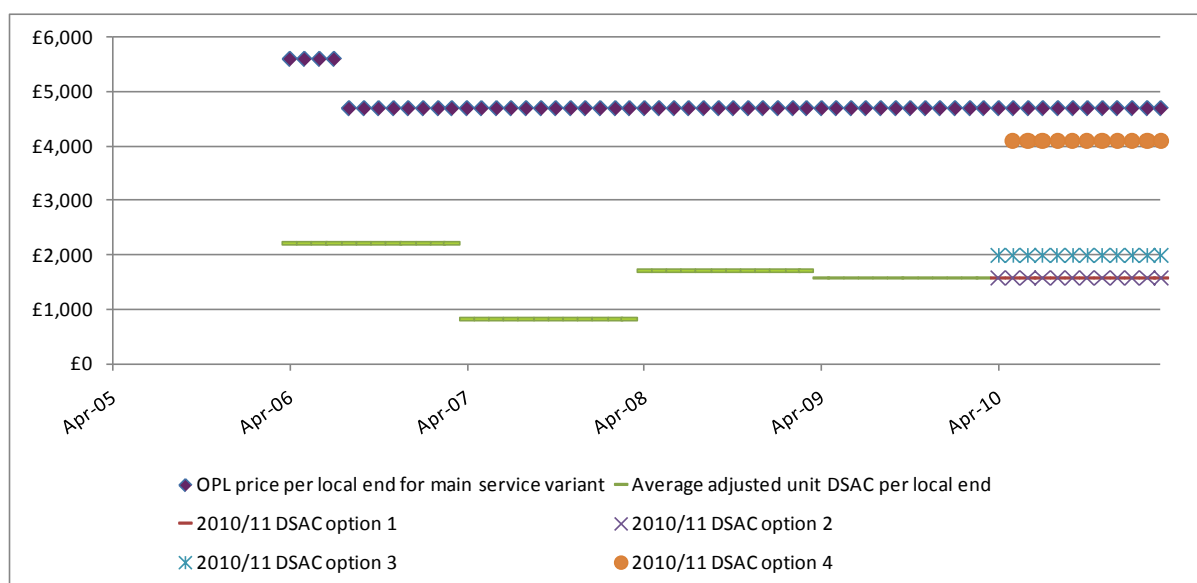
6.24 **Table 6.3** below shows the relevant comparisons of external DSAC and FAC for BES155 rental over the Relevant Period. As set out at 5.44, we are using BES100 rental DSAC and FAC as a proxy for the DSAC and FAC of BES155. As noted above, BT did not produce DSAC for BES100 rentals in 2010/11. We have therefore used the four possible estimates we produced for assessing BES100 for the assessment of BES155 in this year. As set out at paragraph 5.48, for the purposes of calculating repayments in Section 7, we use our preferred option (Option 2). **Figure 6.3** shows the BES155 charge per local end for the standard service and the DSAC per local end for BES100 rental.

**Table 6.3 Key financial measures for BES155 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC
2006/07	302%	287%
2007/08	576%	873%
2008/09	276%	374%
2009/10	298%	318%
2010/11 - option 1	298%	318%
2010/11 - option 2	298%	336%
2010/11 - option 3	237%	253%
2010/11 - option 4	115%	213%

Source: Ofcom based on BT data

**Figure 6.3: BES155 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

6.25 BES155 rental revenues exceeded our proxy DSAC in 2006/07 to 2009/10 by a considerable margin. Revenues were also above FAC in all of these years. While the costs of BES155 rental may be slightly higher than BES100 due to the higher bandwidth, costs would have to be around 200% higher (and even more in 2007/08) for them to be higher than the charges levied for BES155 rentals in 2006/07 to 2009/10. Revenues also exceed DSAC in 2010/11 under each of the four options used to proxy BES100 rental DSAC in this year.

6.26 Further, we would expect the underlying costs of BES155 are closer to those of BES100 than BES1000, given that it seems reasonable to believe costs increase with bandwidth to some extent. However, we note that, in fact, the charges for BES155 rental were higher than even the BES1000 rental DSAC in each year except 2010/11. This supports our proposed finding of overcharging on BES155 rental.

6.27 On this basis, we consider that BT's charges were persistently above DSAC for the entirety of the Relevant Period. As we explain in paragraph 9.33 in the Ethernet 1 Draft Determinations, we would normally expect charges above DSAC for this length of time to indicate that BT had failed to take action to alter its charges appropriately. We note BT has not changed its price for this service since July 2007, and the reduction in this year was insufficient to bring charges below DSAC.

### Conclusion on BES155 rental

6.28 We provisionally conclude that BT overcharged for BES155 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 on the basis that:

- 6.28.1 revenues significantly exceeded DSAC in these years; and
- 6.28.2 revenues substantially exceeded FAC in these years.

### **BES622 rental**

6.29 **Table 6.4** below shows the relevant comparisons of external DSAC and FAC for BES622 rental over the Relevant Period. As set out at 5.45, we are using the

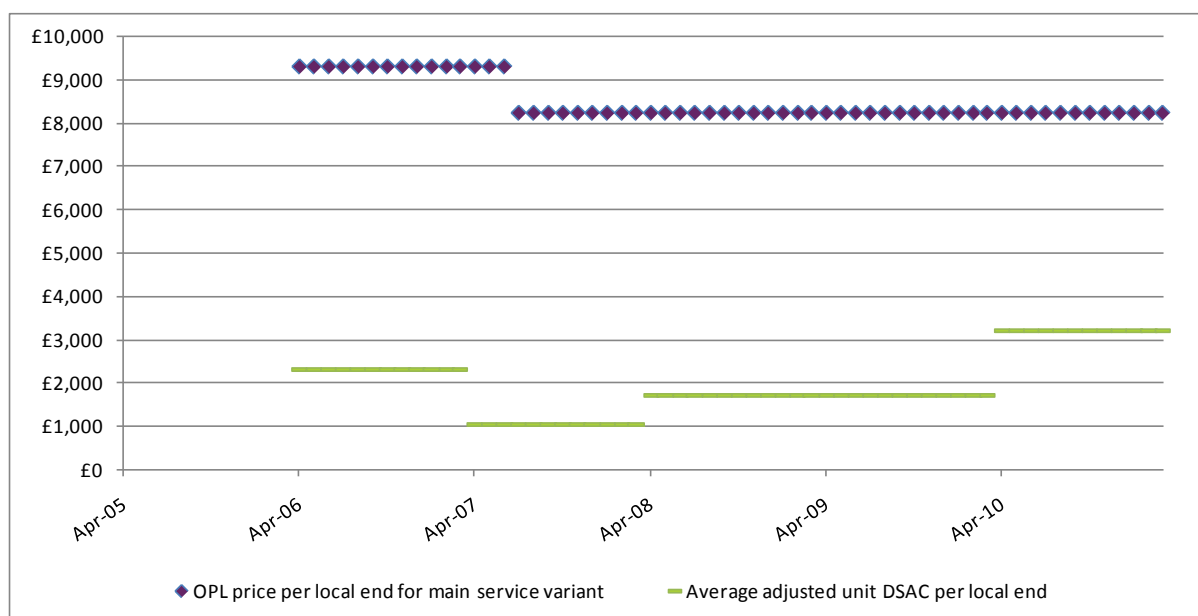
average of BES100 and BES1000 rental unit DSAC and unit FAC as a proxy for the DSAC and FAC of BES622.<sup>158</sup> **Figure 6.4** shows the BES622 charge per local end for the standard service and the DSAC per local end for BES1000 rental.

**Table 6.4: Key financial measures for BES622 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC
2006/07	515%	508%
2007/08	801%	1367%
2008/09	476%	643%
2009/10	477%	541%
2010/11	256%	440%

Source: Ofcom based on BT data

**Figure 6.4: BES622 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

6.30 BES622 rental revenues exceeded our proxy DSAC in each year from 2006/07 to 2010/11 by a considerable margin. Revenues were also significantly above FAC in all of these years. While the costs of BES622 rental may be higher than our proxy due to the higher bandwidth, DSACs would have to be around 400% higher (more in 2007/08) for them to be higher than the charges levied for BES622 rentals in 2006/07 to 2009/10. In 2010/11, DSACs would have to be more than twice those of our proxy to be above the charges levied in this year.

6.31 Further, we would expect the underlying costs of BES622 to be less than BES1000, given that it seems reasonable to believe costs increase with bandwidth to some extent. However, we note that, in fact, the charges for BES622 rental were higher than even the BES1000 DSAC in each year including 2010/11 (albeit by considerably less than in the earlier years) when DSAC increased significantly. This supports our proposed finding of overcharging on BES622.

<sup>158</sup> In 2010/11, we use the average of BES 1000 DSAC and our preferred method of calculating 2010/11 BES100 rental DSAC.

6.32 On this basis, we consider that BT's charges were persistently above DSAC for the entirety of the Relevant Period. As we explain in paragraph 9.33 in the Ethernet 1 Draft Determinations, we would normally expect charges above DSAC for this length of time to indicate that BT had failed to take action to alter its charges appropriately. We note BT has not changed its price for this service since June 2007, and the reduction in this year was insufficient to bring charges below DSAC.

#### Conclusion on BES622 rental

6.33 We provisionally conclude that BT overcharged for BES622 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 on the basis that:

6.33.1 revenues significantly exceeded DSAC in these years; and

6.33.2 revenues substantially exceeded FAC in these years.

#### **BES100 connection**

6.34 **Table 6.5** below shows the relevant comparisons of external DSAC, FAC and ROCE for BES100 connection over the Relevant Period. **Figure 6.5** shows the charge per local end for the standard service and the DSAC per local end for BES100 connection.

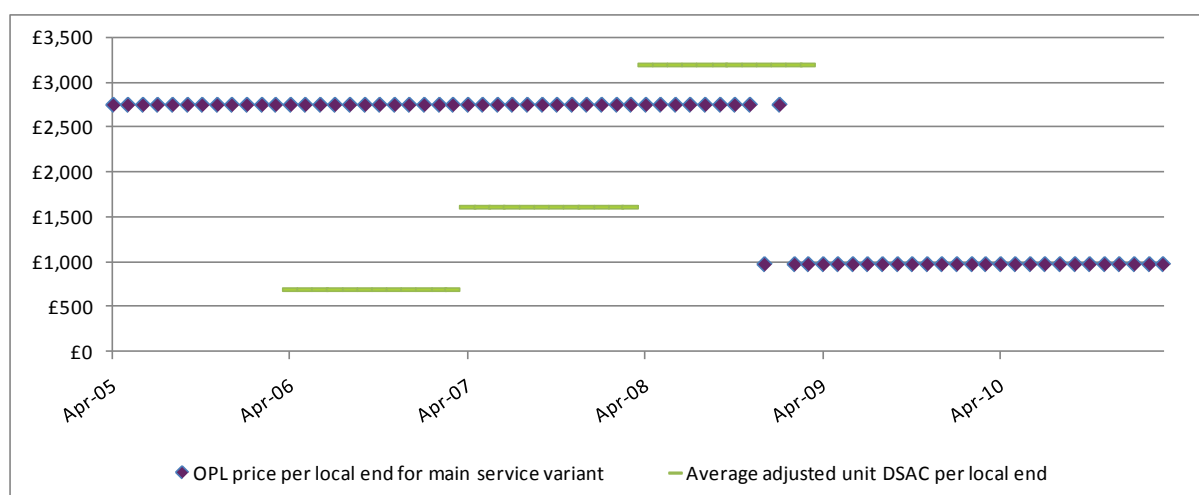
6.35 Connection services typically have low levels of MCE, and can thus show very high levels of ROCE even when charges are below DSAC. Given the volatility of ROCEs, we place less weight on this measurement when considering whether BT's charges were cost orientated.

**Table 6.5: Key financial measures for BES100 connection, 2006/07 to 2008/09**

Years	Revenue as % of DSAC	Revenue as % of FAC	ROCE
2006/07	393%	533%	785%
2007/08	169%	443%	411%
2008/09	74%	110%	38%

*Source: Ofcom based on BT data*

**Figure 6.5: BES100 connection, OPL price and unit DSAC per local end<sup>159</sup>**



Source: Ofcom based on BT data

6.36 We considered whether BT was overcharging for BES100 rental from 2006/07 to 2009/10 in the Ethernet 1 Draft Determinations. As discussed there,<sup>160</sup> our provisional view is that BT overcharged for BES100 connection services in 2006/07 and 2007/08 but not in 2008/09. We propose to adopt the same provisional conclusion in this Dispute.

#### Conclusion on BES100 connection

6.37 As in the Ethernet 1 Draft Determinations, we provisionally conclude that BT overcharged for BES100 connection services in 2006/07 and 2007/08 (but not in 2008/09), on the basis that:

6.37.1 revenues exceeded DSAC in 2006/07 and 2007/08 but not in 2008/09; and

6.37.2 revenues exceeded FAC in 2006/07 and 2007/08.

#### **WES100 rental**

6.38 **Table 6.6** below shows the relevant comparisons of external DSAC, FAC and ROCE for WES100 rental over the Relevant Period. **Figure 6.6** shows the charge per local end for the standard service and the DSAC per local end for WES100 rental.

**Table 6.6: Key financial measures for WES100 rental, 2006/07 to 2010/11**

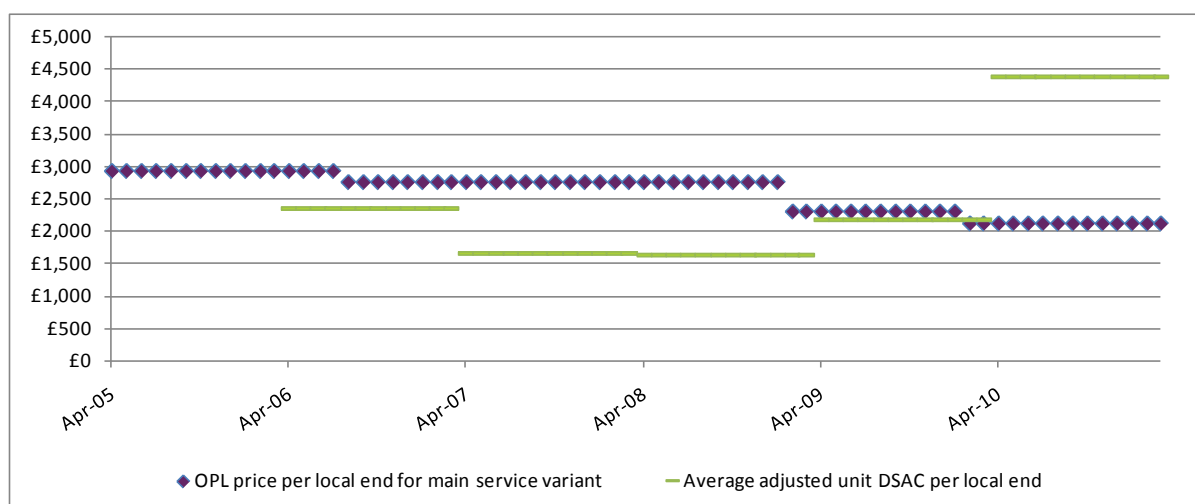
Years	Revenue as % of DSAC	Revenue as % of FAC	ROCE
2006/07	194%	217%	55%
2007/08	179%	244%	53%
2008/09	165%	221%	47%
2009/10	105%	146%	27%
2010/11	49%	111%	17%

Source: Ofcom based on BT data

<sup>159</sup> BT temporarily reduced its charges for connections before making the reduction permanent in February 2009.

<sup>160</sup> Ethernet 1 Draft Determinations, paragraphs 13.42-13.49.

**Figure 6.6: WES100 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

- 6.39 We considered whether BT was overcharging for WES100 rental from 2006/07 to 2008/09 in the Ethernet 1 Disputes. As discussed there<sup>161</sup>, our provisional conclusion is that BT overcharged for WES100 rental services in 2006/07, 2007/08 and 2008/09. Given the overlap between this Dispute and the Ethernet 1 Disputes, we propose to adopt the same provisional conclusion in this Dispute.
- 6.40 Revenues also exceeded DSAC in 2009/10, but by considerably less than in the earlier three years.<sup>162</sup> This was partly due to an increase in DSAC in that year, and partly due to a reduction in average revenue due to price reductions in early 2010. However, this was not sufficient to bring revenue below DSAC in 2009/10. On this basis, it appears that BT's charges were persistently above DSAC for the period 2006/07 to 2009/10. As we explain in paragraph 9.33 of the Ethernet 1 Draft Determinations, we would normally expect charges above DSAC for this length of time to indicate that BT had failed to take action to alter its charges appropriately.
- 6.41 In 2010/11, revenue was below DSAC and BT's ROCE was closer to its WACC. This was largely because DSAC increased significantly in 2010/11, from around £2200 to £4400 per local end. However, average revenue also fell in 2010/11 such that, even without this increase in DSAC, the reduction in revenue in 2010/11 would have brought prices into line with the DSAC.

### Conclusion on WES100 rental

- 6.42 In the Ethernet 1 Draft Determinations, we provisionally conclude that BT overcharged for WES100 rental services in 2006/07, 2007/08, 2008/09 on the basis that in each of those years:
- 6.42.1 revenues exceeded DSACs;
  - 6.42.2 revenues exceeded FACs;

<sup>161</sup> Draft Determinations, paragraphs 13.61-13.64.

<sup>162</sup> Similarly, the amount by which revenue exceeded FAC in 2009/10 was considerably lower than in the preceding years. Consistent with this, BT's ROCE was above its WACC for this year but also by a significantly lower amount than in the earlier years.



Provisional Determination of a dispute between Cable & Wireless and BT about BT's charges for Ethernet services

- 6.42.3 BT's ROCE was more than twice its WACC in all years; and
  - 6.42.4 BT's price reductions over the period were insufficient to bring its charges below unit DSAC.
- 6.43 We provisionally conclude that BT also overcharged for WES 100 rental services in 2009/10 on the basis that:
- 6.43.1 revenues exceeded DSACs in this year;
  - 6.43.2 revenues exceeded FACs in this year;
  - 6.43.3 BT's ROCE was more than twice its WACC in this year; and
  - 6.43.4 BT's price reductions in January 2010 were insufficient to bring its charges below unit DSAC.
- 6.44 We provisionally conclude that BT did not overcharge for WES 100 rental services in 2010/11 on the basis that revenues were less than DSAC.

### WES1000 rental

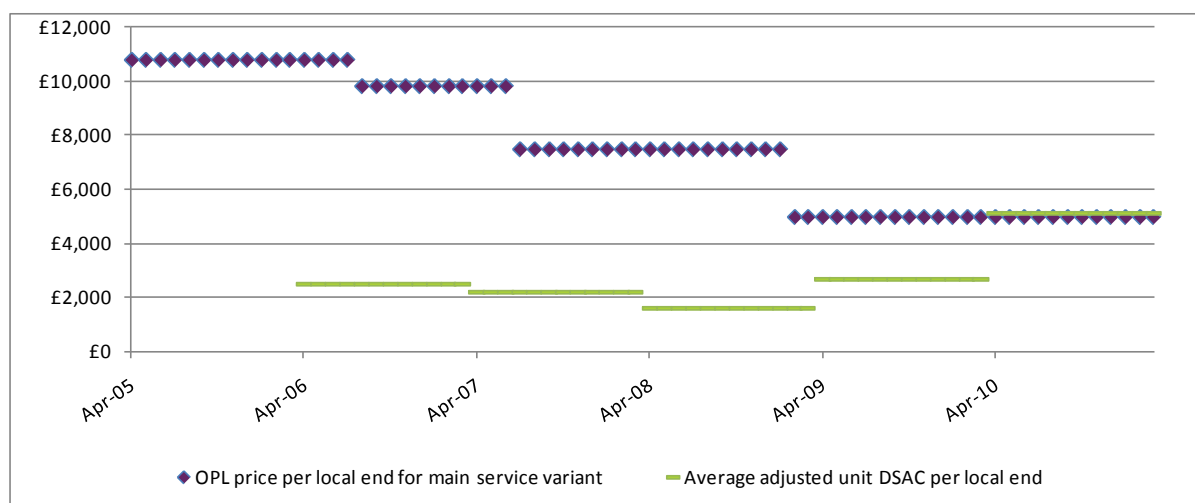
6.45 **Table 6.7** below shows the relevant comparisons of external DSAC, FAC and ROCE for WES1000 rental over the Relevant Period. **Figure 6.7** shows the charge per local end for the standard service and the DSAC per local end for WES1000 rental.

**Table 6.7: Key financial measures for WES1000 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC	ROCE
2006/07	637%	758%	277%
2007/08	421%	675%	212%
2008/09	474%	616%	160%
2009/10	210%	325%	95%
2010/11	108%	166%	94%

Source: Ofcom based on BT data

**Figure 6.7: WES1000 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

- 6.46 We considered whether BT was overcharging for BES100 rental from 2006/07 to 2008/09 in the Ethernet 1 Draft Determinations<sup>163</sup>. As discussed there,<sup>164</sup> our provisional conclusion is that BT has overcharged for WES1000 rental services for 2006/07, 2007/08, and 2008/09. We propose to adopt the same provisional conclusion in this Dispute.
- 6.47 In 2009/10, BT's revenues also exceeded DSAC, although by less than in the previous years. BT's revenues also substantially exceeded FAC, resulting in ROCE substantially above its WACC in this year.
- 6.48 In 2010/11, revenues were again above DSAC, albeit by around 8%, compared to more than 100% in the previous years in dispute. This was not because of a reduction in price but because of a large increase in unit DSAC, from around £2600 to £5100 that year. While revenue still exceeded FAC by a significant margin, it did so by considerably less than in the earlier four years. Consistent with this, BT's ROCE was above its WACC for this year but also by a significantly lower amount than in the earlier years (but similar to 2009/10).
- 6.49 On this basis, it appears that BT's charges were persistently above DSAC for the entirety of the Relevant Period (2006/07 to 2010/11). As we explain in paragraph 3.22.1, we would normally expect charges above DSAC for this length of time to indicate that BT had failed to take action to alter its charges appropriately.
- 6.50 We note that CWW is also in dispute with BT about the charges for WES1000 ER rental. WES1000 ER has a higher price than the standard variant and so is also likely to have been overcharged over the period (although we note that it may also have a higher incremental cost due to the longer distance covered by the local end). As noted at paragraph 5.29 we intend to resolve this dispute in relation to WES1000 rental variants by using the level of aggregation presented in the RFS, consistent with the Ethernet 1 Draft Determinations. We therefore do not make a separate finding for WES1000 ER.

#### Conclusion on WES1000 rental

- 6.51 We provisionally conclude in the Ethernet 1 Draft Determinations that BT has overcharged for WES1000 rental services for 2006/07, 2007/08 and 2008/09 on the basis that:
- 6.51.1 revenues exceeded DSAC in each of those years;
  - 6.51.2 revenues substantially exceeded FAC in each of those years;
  - 6.51.3 ROCEs were substantially above the WACC in each of those years; and
  - 6.51.4 BT's price reductions over the Relevant Period were insufficient to bring its charges below unit DSAC.
- 6.52 We provisionally conclude that BT also overcharged for WES1000 rental services in 2009/10 and 2010/11 on the basis that:
- 6.52.1 revenues exceeded DSAC in each of those years;

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<sup>163</sup> We also showed the information for 2009/10, but did not draw any conclusions in this year as it was not in the scope of the Ethernet 1 Disputes.

<sup>164</sup> Ethernet 1 Draft Determinations, paragraphs 13.66-13.70.

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6.52.2 revenues substantially exceeded FAC in each of those years; and

6.52.3 ROCEs were substantially above the WACC in each of those years

### WES155 rental

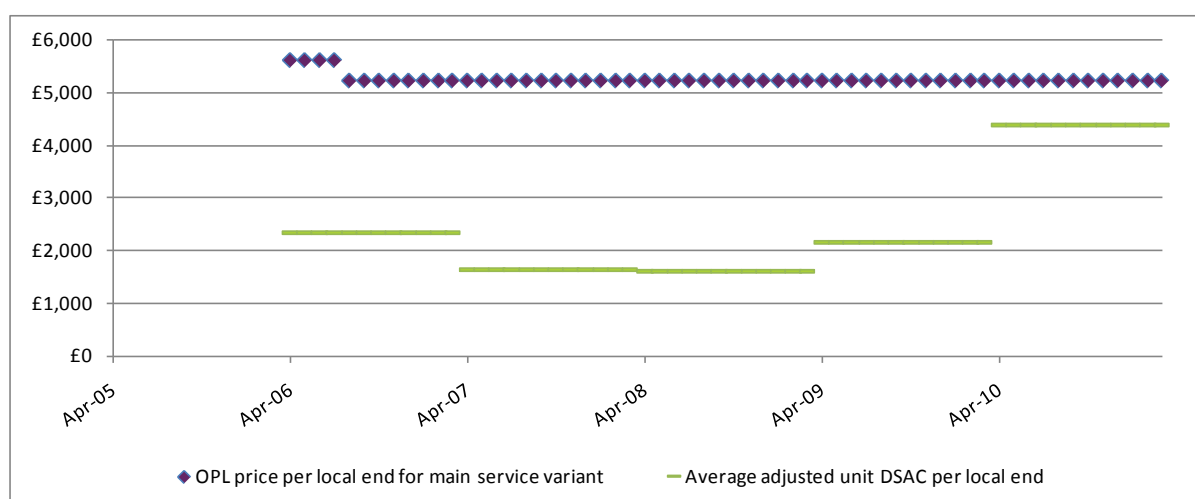
6.53 **Table 6.8** below shows the relevant comparisons of external DSAC, FAC and ROCE for WES155 rental over the Relevant Period. As set out at paragraph 5.44, we are using WES100 rental DSAC and FAC as a proxy for the DSAC and FAC of WES155. **Figure 6.8** shows the WES155 charge per local end for the standard service and the DSAC per local end for WES100 rental.

**Table 6.8: Key financial measures for WES155 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC
2006/07	293%	328%
2007/08	318%	434%
2008/09	323%	434%
2009/10	241%	334%
2010/11	119%	271%

Source: Ofcom based on BT data

**Figure 6.8: WES155 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

6.54 Revenues exceeded our proxy DSAC in 2006/07 to 2009/10. BT's revenues also substantially exceeded FAC in these years. Even if the costs of WES155 rental are slightly higher than WES100 due to the higher bandwidth, costs would have to be more than 200% higher in some years for them to exceed the charges levied for WES155 rentals.

6.55 Further, we would expect the underlying costs of WES155 are closer to those of WES100 than WES1000, given that it seems reasonable to believe costs increase with bandwidth to some extent. However, we note that, in fact, the charges for WES155 rental were higher than even the BES1000 rental DSAC in each year except 2010/11. This supports our proposed finding of overcharging on WES155 rental.

- 6.56 In 2010/11, revenues also exceeded DSAC, but by a much smaller margin. This was due to a large increase in our proxy for DSAC in 2010/11. While revenues still significantly exceeded FAC, they did so by considerably less than in the earlier four years.
- 6.57 On this basis, it appears that BT's charges were persistently above DSAC for the entirety of the Relevant Period. As we explain in paragraph 9.3 of the Ethernet 1 Draft Determinations, we would normally expect charges above DSAC for this length of time to indicate that BT had failed to take action to alter its charges appropriately. We note BT has not changed its price for this service since July 2006, and that the reduction in this year was insufficient to bring charges below DSAC.

#### Conclusion on WES155

- 6.58 We provisionally conclude that BT overcharged for WES155 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 on the basis that:

- 6.58.1 revenues significantly exceeded DSAC in these years; and
- 6.58.2 revenues substantially exceeded FAC in these years.

#### **WES622 rental**

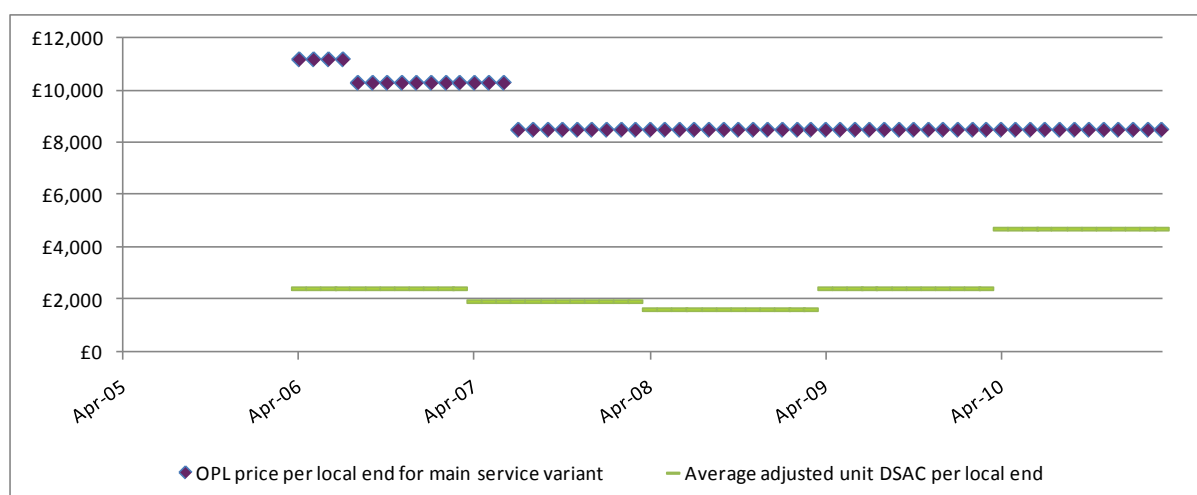
- 6.59 **Table 6.9** below shows the relevant comparisons of external DSAC and FAC for WES622 rental over the Relevant Period. As set out at 5.45, we are using the average of WES100 and WES1000 rental unit DSAC and unit FAC as a proxy for the unit DSAC and unit FAC of WES622. **Figure 6.9** shows the WES622 charge per local end for the standard service and the DSAC per local end for WES1000 rental.

**Table 6.9: Key financial measures for WES622 rental, 2006/07 to 2010/11**

Years	Revenue as % of DSAC	Revenue as % of FAC
2006/07	558%	645%
2007/08	456%	679%
2008/09	530%	700%
2009/10	354%	520%
2010/11	180%	424%

*Source: Ofcom based on BT data*

**Figure 9.9: WES622 rental, OPL price and unit DSAC per local end**



Source: Ofcom based on BT data

- 6.60 WES622 rental revenues exceeded our proxy DSAC in each year from 2006/07 to 2010/11 by a considerable margin. Revenues were also significantly above FAC in all of these years. While the costs of WES622 rental may be slightly higher than our proxy due to the higher bandwidth, DSACs would have to be around 400% higher for them to be higher than the charges levied for BES622 rentals in 2006/07 to 2008/09, and two to three times higher for them to be above the charges in 2009/10 and 2010/11.
- 6.61 Further, we would expect the underlying costs of WES622 to be less than WES1000, given that it seems reasonable to believe costs increase with bandwidth to some extent. However, we note that, in fact, the charges for WES622 rental were higher than even the WES1000 DSAC in each year including 2010/11 (albeit by considerably less than in the earlier years) when DSAC increased significantly. This supports our proposed finding of overcharging on WES622.
- 6.62 On this basis, we consider that BT's charges were persistently above DSAC for the entirety of the Relevant Period. As we explain in paragraph 9.3 of the Ethernet 1 Draft Determinations, we would normally expect charges above DSAC for this length of time to indicate that BT had failed to take action to alter its charges appropriately. Although BT did decrease its rental prices over time, it did not reduce prices sufficiently to bring them below DSAC.

### Conclusion on WES622

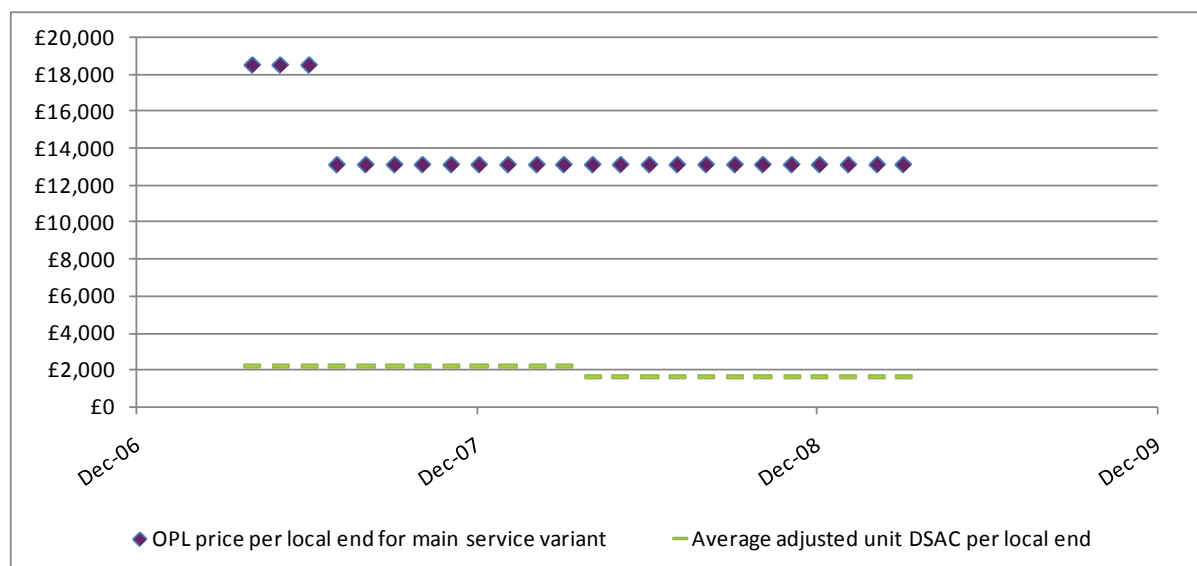
- 6.63 We provisionally conclude that BT overcharged for WES622 rental in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 on the basis that:
- 6.63.1 revenues significantly exceeded DSAC in these years; and
  - 6.63.2 revenues substantially exceeded FAC in these years.

### **WES 10000 rental**

- 6.64 As set out at paragraph 3.8, the charge for WES 10000 rental is in dispute for 2007/08 to 2008/09, until Conditions HH3 were revoked in relation to the high bandwidth AISBO market on 8 December 2008. As we set out in paragraph 5.50, we

have used WES1000 rental unit DSACs as a proxy for the DSAC of this service. As set out in paragraph 5.42, in the absence of revenue data, we have compared this with the price of the standard service listed in the OPL. **Figure 6.10** shows the WES10000 charge per local end for the standard service and the DSAC per local end for WES1000 rental.

**Figure 6.10: WES10000, OPL charge and proxy unit DSAC per local end**



- 6.65 The price of WES10000 listed in the OPL was between six and eight times higher than our proxy DSAC throughout 2007/08 and 2008/09. Although BT did reduce its price in June 2007, it remained significantly above our cost proxy.
- 6.66 This suggests there was a considerable degree of overcharging for WES10000. However, as set out at paragraph 5.50, although our DSAC proxy is the best available to us at this time, we understand that it may not reflect the costs of providing BES and WES with bandwidths greater than or equal to 2500Mbit/s. If interested parties are able to provide additional relevant cost information in response to this Provisional Determination, we will take it into consideration.

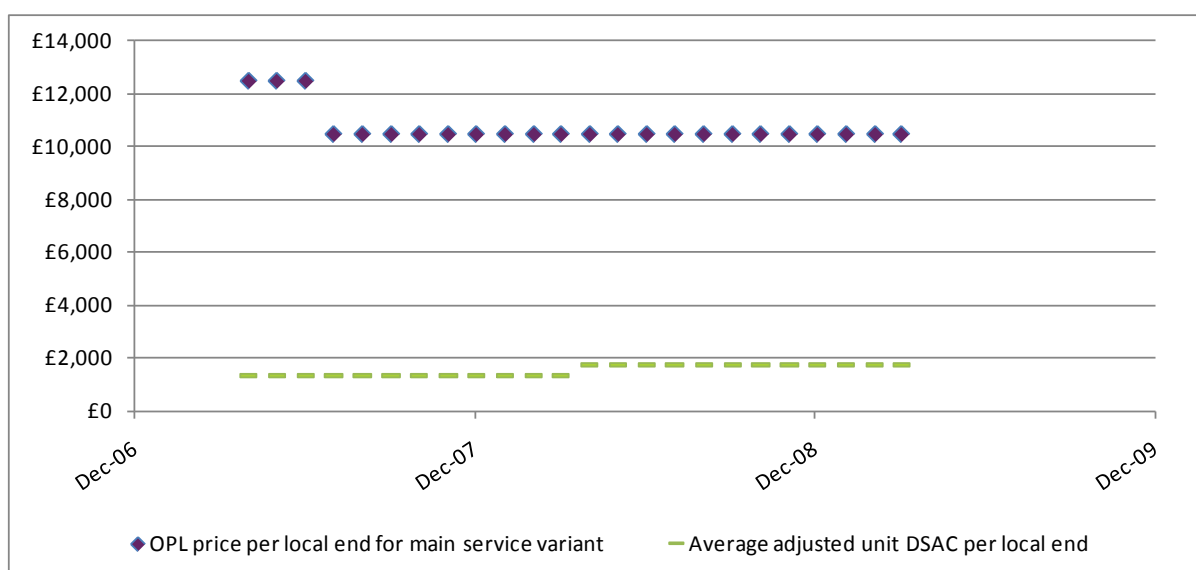
Conclusion on WES10000

- 6.67 We provisionally conclude that BT overcharged for WES10000 in 2007/08 and 2008/09 on the basis that prices as listed in the OPL exceeded our proxy DSAC in these years.

**BES 2500**

- 6.68 As set out at paragraph 3.8, BT's charges for BES 2500 rental are in dispute for part of 2008/09 (i.e. from 1 April 2008 until Conditions HH3 were revoked in relation to the high bandwidth AISBO market on 8 December 2008). As we highlighted at paragraph 5.50, we have used BES1000 rental unit DSACs as a proxy for the DSAC of this service. As set out in paragraph 5.42, in the absence of revenue data, we have compared this with the price of the standard service listed in the OPL. **Figure 6.11** shows the BES2500 charge per local end for the standard service and the DSAC per local end for BES1000 rental.

**Figure 6.11: BES2500, OPL charge and proxy unit DSAC per local end**



6.69 The price of BES2500 listed in the OPL was roughly six times higher than our proxy DSAC during 2008/09. Although BT did reduce its price in the previous year, it remained significantly above our cost proxy.

6.70 This suggests there was a considerable degree of overcharging for BES2500. However, as set out at paragraph 5.50, although our DSAC proxy is the best available to us at this time, we understand that it may not reflect the costs of providing BES and WES with bandwidths greater than or equal to 2500Mbit/s. If stakeholders are able to provide additional relevant cost information in response to this Provisional Determination, we will take it into consideration.

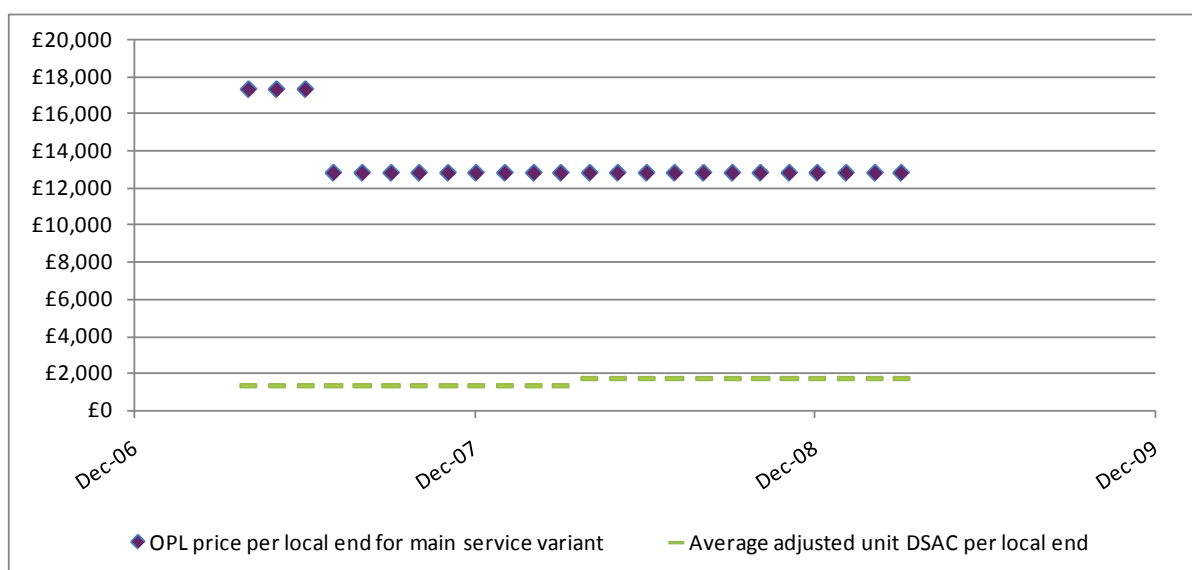
#### Conclusion on BES2500

6.71 We provisionally conclude that BT overcharged for BES2500 in 2008/09 on the basis that prices as listed in the OPL exceeded DSAC in these years.

#### **BES 10000**

6.72 As set out at paragraph 3.8, the charge for BES 10000 rental is in dispute for 2008/09 until Conditions HH3 were revoked in relation to the high bandwidth AISBO market on 8 December 2008. As we highlighted at paragraph 5.50, we have used BES1000 rental unit DSACs as a proxy for the DSAC for this service. As set out in paragraph 5.42, in the absence of revenue data, we have compared this with the price of the standard service listed in the OPL. **Figure 6.12** shows the BES10000 charge per local end for the standard service and the DSAC per local end for BES1000 rental.

**Figure 6.12: BES10000, OPL charge and proxy unit DSAC per local end**



6.73 The price of BES10000 listed in the OPL was roughly seven times higher than our proxy DSAC during 2008/09. Although BT did reduce its price in the previous year, it remained significantly above our cost proxy.

6.74 This suggests there was a considerable degree of overcharging for BES10000. However, as set out at paragraph 5.50, although our DSAC proxy is the best available to us at this time, we understand that it may not reflect the costs of providing BES and WES with bandwidths greater than or equal to 2500Mbit/s. If stakeholders are able to provide additional relevant cost information in response to this Provisional Determination, we will take it into consideration.

Conclusion on BES10000

6.75 We provisionally conclude that BT overcharged for BES10000 in 2008/09 on the basis that prices as listed in the OPL exceeded DSAC in these years.



## Section 7

# Overcharge and repayment

- 7.1 Having provisionally established the years in which BT overcharged for specific services in Section 6, in this Section we go on to consider the extent of that overcharging. We then consider whether we should direct BT to make a repayment to CWW, and if so what the level of any such repayment should be.
- 7.2 We provisionally conclude that BT has overcharged CWW for BES and WES services over the Relevant Period as set out in Table 7.1:

**Table 7.1 Ethernet services where overcharging has been identified**

	2006/07	2007/08	2008/09	2009/10	2010/11
BES100 rental	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	N
BES1000 rental	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	N
BES155 rental	Y	Y	Y	Y	Y
BES 622 rental	Y	Y	Y	Y	Y
BES2500 rental			Y		
BES10000 rental			Y		
WES100 rental	<b>Y</b>	<b>Y</b>	<b>Y</b>	Y	N
WES1000 rental	<b>Y</b>	<b>Y</b>	<b>Y</b>	Y	Y
WES155 rental	Y	Y	Y	Y	Y
WES622 rental	Y	Y	Y	Y	Y
WES2500 rental					
WES10000 rental		Y	Y		
BES100 connection	<b>Y</b>	<b>Y</b>	<b>N</b>		

Source: Ofcom based on BT data

Key – Y = Provisionally conclude overcharging, N = Provisionally conclude no overcharging. Blank cells indicate services not in dispute.

*Bold italics indicates where we reached a provisional conclusion in Ethernet 1 Draft Determinations*

## Establishing the level of overcharge

- 7.3 As in paragraphs 13.75-13.79 of the Ethernet 1 Draft Determinations, having provisionally established the years in which BT overcharged for the services in dispute, we go on to consider the extent of that overcharging. We establish the level of overcharge by comparing actual charges with the maximum charge under which we would have considered BT not to have overcharged for its services. The maximum charge that would have been permissible is normally at the level of DSAC, so where we conclude that BT has overcharged for a service, we consider that the extent of overcharging is the extent by which BT's charges exceeded DSAC.
- 7.4 Where we have assessed that there is overcharging having used a proxy for DSAC (for BES and WES 155, 622, 10000 and BES2500), we calculate the level of overcharging by reference to that proxy DSAC e.g. overcharging for WES155 is

calculated as the difference between charges for WES155<sup>165</sup> and WES100 unit DSAC.<sup>166</sup>

7.5 The level of overcharging we calculate for each service is:

7.5.1 zero if charges were lower than DSAC;

7.5.2 zero if charges were above DSAC, but we nonetheless consider that they were cost orientated; or

7.5.3 the difference between charges and DSAC, if charges were above DSAC and we consider that they were not cost orientated.

7.6 We summarise the levels of overcharging in Table 7.2 below. We calculate the level of overcharging with respect to all of BT's external customers.

**Table 7.2: The degree of overcharging to BT's external customers, £m<sup>167</sup>**

	2006/07	2007/08	2008/09	2009/10	2010/11
BES 100 rental	6.1	8.2	3.6	0.0	n/a
BES 1000 rental	10.3	22.0	21.3	9.6	-
BES 155 rental	0.7	1.1	0.5	0.1	0.0
BES 622 rental	2.3	1.5	0.8	0.0	0.0
BES 2500 rental*	-	-	0.1	-	-
BES 10000 rental*	-	-	0.1	-	-
BES 100 connection	7.6	2.0	-	-	n/a
WES 100 rental	2.0	6.0	8.2	1.4	-
WES 1000 rental	1.0	2.4	5.1	4.4	0.9
WES 155 rental	0.6	0.9	1.1	0.9	0.2
WES 622 rental	0.2	0.3	0.3	0.3	0.2
WES 10000 rental*	-	0.0	0.2	-	-

*Shaded cells reflect where a proxy has been used in calculating overcharges*

*\*2008/09 data has been pro rated to 8 December 2008*

*Source: Ofcom based on BT data*

### **Is BT required to make repayments to CWW for the overcharge?**

7.7 We have provisionally concluded that BT has overcharged for a number of BES and WES services for periods of between one and five years over the Relevant Period as summarised in Table 7.2 above.

7.8 We now consider whether we should exercise our discretion under section 190(2)(d) of the 2003 Act to direct BT to make a payment to CWW by way of adjustment of an overpayment, and if so what the level of any such repayment should be. We carry out

<sup>165</sup> For BES2500, BES10000 and WES10000, for which we do not have revenue data to calculate average charges, we have used the average price from the OPL for that year.

<sup>166</sup> As noted at paragraph 5.48, for BES155 in 2010/11 where we have identified a number of options for the proxy to use, we have used our preferred option to calculate repayments.

<sup>167</sup> Figures are rounded to the nearest £100,000.

this assessment in relation to the Ethernet 1 Disputes in Section 14 of the Ethernet 1 Draft Determinations.

- 7.9 In deciding whether it is appropriate to make such a direction, we have been guided by our duties and Community obligations under sections 3, 4 and 4A of the 2003 Act (as amended). We have also taken account of guidance provided by the CAT and comments made to us by the Parties.
- 7.10 As in the Ethernet 1 Draft Determinations, we first consider whether we should require payment by BT to CWW; if so, we consider what the level of any repayment should be.

#### CWW's views

- 7.11 CWW has asked Ofcom to determine the proper amount of the disputed charges and to give a direction requiring BT to repay any overcharge, plus interest.<sup>168</sup> CWW considers that

*"Resolving the dispute in this way would be fair between the parties, reasonable from the point of view of the regulatory objectives in the framework, and consistent with Ofcom's Community requirements set out in section 4(3)(a) of the Act to promote competition in the provision of electronic communications services, and sections 4(7) and 4(8)(a) to encourage the provision of network access and service interoperability for the purpose of securing efficiency and sustainable competition in the markets for electronic communications services."*<sup>169</sup>

#### BT's views

- 7.12 We set out BT's views on the remedy that Ofcom can grant under section 190(2)(d), and whether it should grant a remedy in the case of the Ethernet 1 Disputes, at paragraphs 14.12 to 14.19 of the Ethernet 1 Draft Determinations.

#### Ofcom's views

- 7.13 Consistent with our views set out in the Ethernet 1 Draft Determinations at paragraphs 14.24-14.30 we consider that, given the evidence of overcharging that we have identified and in light of the guidance provided by the CAT, we should direct that BT repay CWW for the full amount of the overcharge.

### Calculating the level of repayments

- 7.14 As in the Ethernet 1 Draft Determinations, to calculate repayments to CWW for each year, we propose to use BT's billing data for each service in dispute to calculate the relative share of total external spend that is attributable to CWW. On the basis of this proposed methodology, we set out in Table 7.3 below the proposed repayments to CWW for each service in each year (rounded to the nearest £1000).

**Table 7.3: Repayments due to CWW in £ split by year and service**

	2006/07	2007/08	2008/09	2009/10	2010/11	Total
BES 100 rental	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BES 1000 rental	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BES 155 rental	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

<sup>168</sup> CWW submission, paragraph 1.2.

<sup>169</sup> CWW submission, paragraph 1.3.

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BES 622 rental	[X]	[X]	[X]	[X]	[X]	[X]
BES 2500 rental	[X]	[X]	[X]	[X]	[X]	[X]
BES 10000 rental	[X]	[X]	[X]	[X]	[X]	[X]
BES 100 connection	[X]	[X]	[X]	[X]	[X]	[X]
WES 100 rental	[X]	[X]	[X]	[X]	[X]	[X]
WES 1000 rental	[X]	[X]	[X]	[X]	[X]	[X]
WES 155 rental	[X]	[X]	[X]	[X]	[X]	[X]
WES 622 rental	[X]	[X]	[X]	[X]	[X]	[X]
WES 10000 rental	[X]	[X]	[X]	[X]	[X]	[X]
	[X]	[X]	[X]	[X]	[X]	[X]

Amounts to nearest £ thousand. Totals have been calculated by summing the rounded data.

Source: Ofcom, based on data supplied by BT

## Interest on repayments

- 7.15 The contracts applicable to the services in dispute<sup>170</sup> exclude interest on any repayments due to either party as a result of recalculation or adjustment of a charge with retrospective effect under a direction (or other requirement) of Ofcom.

*“12.3. If any charge is recalculated or adjusted with retrospective effect under an order, direction, determination or requirement of Ofcom, or any other regulatory authority or body of competent jurisdiction, the parties agree that interest will not be payable on any amount due to either party as a result of that recalculation or adjustment.”*

- 7.16 Ofcom proposes to direct that interest should be paid on the repayments in accordance with the contractual provisions entered into by the Parties. This is consistent with our previous determinations and the Ethernet 1 Draft Determinations<sup>171</sup>. In this case, the relevant contractual provisions provide that interest will not be payable.

## Ofcom's statutory obligations and regulatory principles

- 7.17 We have considered our general duties in section 3 of the 2003 Act and the six “Community requirements” set out in section 4 of the 2003 Act, which give effect, among other things, to the requirements of Article 8 of the Framework Directive.
- 7.18 We consider that this Provisional Determination is consistent with these duties and we would highlight in particular the following statutory obligations and regulatory principles as relevant to our proposed decision to require BT to make repayments by way of adjustment of overpayments in this Dispute.
- 7.19 Accepting the Dispute for resolution fits with Ofcom's regulatory principle to intervene where there is a specific regulatory duty to do so.

<sup>170</sup> From 2004 until March 2009 BES and WES were provided under separate contracts; from March 2009 to March 2010 they were provided under a consolidated contract; and since March 2010 they have been provided under BT's Contract for Connectivity Services.

<sup>171</sup> Ethernet 1 Draft Determinations, paragraphs 14.36-14.37.

- 7.20 Ofcom considers that to require BT to make a repayment to CWW by way of adjustment of an overpayment supports its obligation to further the interests of consumers, where appropriate by promoting competition, as it encourages BT to comply with its SMP obligations (the purpose of which is to promote competition). It promotes competition more generally by enabling other providers to compete with BT in the provision of retail leased lines to businesses. Promoting competition in this case leads to benefits for businesses in the form of increased choice, downward pressure on retail prices and improved quality of service.
- 7.21 Requiring BT to make a repayment as set out in Table 7.3, supports Ofcom's principal duty at section 3(1)(b) of the 2003 Act as well as its duty under section 4 of the 2003 Act, to promote competition in communications markets in accordance with the Framework Directive.
- 7.22 In addition, Ofcom considers that requiring BT to make a repayment to CWW by way of adjustment of an overpayment supports its obligation at section 3(2)(b) of the 2003 Act to secure the availability of a wide range of communications services, as well as its duty under section 4 of the 2003 Act to encourage the provision of network access (here, Ethernet services) for the purposes of securing efficiency and sustainable competition, for the benefit of consumers.
- 7.23 Finally, Ofcom considers that its proposal to require BT to make a repayment to CWW by way of adjustment of the overpayment is in line with Ofcom's duty and regulatory principles to ensure that its regulatory activities are transparent, accountable, evidence-based, proportionate, consistent and targeted.
- 7.24 Ofcom considers that this document clearly sets out BT's and CWW's arguments and Ofcom's reasoning that leads to this proposed conclusion, thereby supporting Ofcom's duty and regulatory principle to ensure that its decision making process is evidence-based, proportionate and consistent. BT and CWW will have an opportunity to comment on Ofcom's proposals, supporting Ofcom's duty to ensure that its regulatory activities are transparent, accountable, evidence-based and consistent. Ofcom considers that its proposed determination is proportionate, in that it strikes a fair balance between the Parties to the Dispute, and targeted in that it is limited to the matters in dispute and binding on the Parties.

### Summary of proposed resolution of the Dispute

- 7.25 Based on the analysis set out in Sections 3-7, Ofcom proposes to determine that:
- 7.25.1 BT has overcharged for a number of the services that are the subject of this Dispute;
  - 7.25.2 BT has overcharged CWW a total of £[~~8~~]m during the Relevant Period; and
  - 7.25.3 BT should refund CWW the amount overpaid.

### Next steps

- 7.26 Stakeholders are invited to comment on Ofcom's proposed resolution of this Dispute by **5pm on 5 April 2012**.

## Annex 1

# Responding to this Provisional Determination

## How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 5 April 2012**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at <http://stakeholders.ofcom.org.uk/consultations/prov-deter-cw-bt-ethernet/> as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 2), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A1.3 For larger responses - particularly those with supporting charts, tables or other data - please email [melanie.everitt@ofcom.org.uk](mailto:melanie.everitt@ofcom.org.uk) attaching your response in Microsoft Word format, together with a response coversheet.
- A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the provisional determination.
- Melanie Everitt  
4<sup>th</sup> Floor  
Competition Group  
Riverside House  
2A Southwark Bridge Road  
London SE1 9HA
- Fax: 020 7783 4109
- A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A1.6 It would be helpful if you can explain why you hold your views and how Ofcom's proposals would impact on you.

## Further information

- A1.7 If you want to discuss the issues raised in this provisional determination, or need advice on the appropriate form of response, please contact Melanie Everitt on 020 7783 4340.

## Confidentiality

- A1.8 We believe it is important for everyone interested in an issue to see the views expressed by respondents. We will therefore usually publish all responses on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk), ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether all of your response

should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>.

### **Next steps**

- A1.11 Following the end of the consultation period, Ofcom intends to publish a final determination.
- A1.12 Please note that you can register to receive free mail updates alerting you to the publications of relevant Ofcom documents. For more details please see: [http://www.ofcom.org.uk/static/subscribe/select\\_list.htm](http://www.ofcom.org.uk/static/subscribe/select_list.htm).

## Annex 2

# Response cover sheet

- A2.1 In the interests of transparency and good regulatory practice, we will publish all responses in full on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk).
- A2.2 We have produced a coversheet for responses and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A2.3 Publishing responses before the period for comment closes can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the period for comment has ended.
- A2.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at [www.ofcom.org.uk/consult/](http://www.ofcom.org.uk/consult/).
- A2.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.



## Cover sheet for response

### BASIC DETAILS

Title of provisional determination:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

### CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing	<input type="checkbox"/>	Name/contact details/job title	<input type="checkbox"/>
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

### DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the period for comment has ended, please tick

Name

Signed (if hard copy)

### Annex 3

# Provisional Determination to resolve the dispute between BT and CWW

**Determination under sections 188 and 190 of the Communications Act 2003 (“2003 Act”) for resolving a dispute between Cable & Wireless Worldwide plc group (“CWW”)<sup>172</sup> and British Telecommunications Plc (“BT”) concerning BT’s charges for wholesale Ethernet services.**

#### WHEREAS—

**(A)** Section 188(2) of the 2003 Act provides that, where Ofcom has decided pursuant to section 186(2) of the 2003 Act that it is appropriate for it to handle a dispute, Ofcom must consider the dispute and make a determination for resolving it. The determination that Ofcom makes for resolving the dispute must be notified to the parties in accordance with section 188(7) of the 2003 Act, together with a full statement of the reasons on which the determination is based. Ofcom must publish so much of its determination as (having regard, in particular, to the need to preserve commercial confidentiality) it considers appropriate to publish for bringing it to the attention of the members of the public, including to the extent that Ofcom considers pursuant to section 393(2)(a) of the 2003 Act that any such disclosure is made for the purpose of facilitating the carrying out by Ofcom of any of its functions;

**(B)** Section 190 of the 2003 Act sets out the scope of Ofcom’s powers on resolving a dispute which may include, in accordance with section 190(2) of the 2003 Act:

- a) making a declaration setting out the rights and obligations of the parties to the dispute;
- b) giving a direction fixing the terms or conditions of transactions between the parties to the dispute;
- c) giving a direction imposing an obligation, enforceable by the parties to the dispute, to enter into a transaction between themselves on the terms and conditions fixed by Ofcom; and
- d) for the purpose of giving effect to a determination by Ofcom of the proper amount of a charge in respect of which amounts have been paid by one of the parties to the dispute to the other, giving a direction, enforceable by the party to whom sums are to be paid, requiring the payment of sums by way of adjustment of an underpayment or overpayment;

**(C)** On 24 June 2004, Ofcom published a statement called “*Review of the retail leased lines, symmetric broadband origination and wholesale trunk segments markets*”<sup>173</sup> (the “2004 LLMR Statement”) which found that BT held significant market power (“SMP”) in a number of markets, including the wholesale alternative interface symmetric broadband origination (“AISBO”) market at all bandwidths within the United Kingdom but not including the Hull Area;

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<sup>172</sup> Including the following CWW companies: Cable & Wireless UK; Cable & Wireless Access Limited; Energis Communications Limited; Thus Group Holdings Limited; and Your Communications Group Limited.

<sup>173</sup> See: [http://www.ofcom.org.uk/consult/condocs/llmr/statement/state\\_note.pdf](http://www.ofcom.org.uk/consult/condocs/llmr/statement/state_note.pdf).

**(D)** In the 2004 LLMR Statement, Ofcom imposed a series of SMP conditions on BT in the AISBO market under section 45 of the Act, including a basis of charges obligation which requires:

*“HH3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition HH1 is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.*

*HH3.2 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition.”;*

**(E)** On 8 December 2008, Ofcom published the conclusions of its second review of the markets for retail leased lines, wholesale symmetric broadband origination and wholesale trunk segments in the 2008 Business Connectivity Market Review Statement (the “2008 BCMR Statement”).<sup>174</sup> Ofcom concluded that two separate markets should now be defined for AISBO services: a low bandwidth AISBO market for services with bandwidths up to and including 1Gbit/s and a high bandwidth AISBO market for services with bandwidths above 1Gbit/s. Ofcom concluded that BT continued to have SMP in the market for low bandwidth AISBO services outside the Hull area but that no communications provider had SMP in the high bandwidth AISBO market.

**(F)** In the 2008 BCMR Statement, Ofcom imposed SMP conditions on BT in relation to the low bandwidth AISBO market (services with bandwidths up to and including 1Gbit/s), including a basis of charges obligation. Ofcom additionally concluded that BT should in principle be subject to a charge control in relation to low bandwidth AISBO services, the scope and form of which was considered in a separate consultation published alongside the BCMR Statement. The basis of charges obligation requires:

*“HH3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition HH1 is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.*

*HH3.2 For the avoidance of any doubt, where the charge offered, payable or proposed for Network Access covered by Condition HH1 is for a service which is subject to a charge control under Condition HH4, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that such a charge satisfies the requirement of Condition HH3.1.*

*HH3.2 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition.”*

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<sup>174</sup> See <http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr08/summary/bcmr08.pdf>.

**(G)** On 17 November 2011, CWW referred a dispute with BT to Ofcom for dispute resolution requesting a determination that BT has overcharged them for certain wholesale Ethernet services, known as Backhaul Extension Services ("BES") and Wholesale Extension Services ("WES"), provided to them between 1 April 2006 to 31 March 2011 (which depends on whether or not BT's charges for those services were cost orientated during that time) and, if so, by how much they have been overcharged and should therefore be reimbursed;

**(H)** Having considered the submissions of the parties to the dispute, Ofcom set the scope of the issues in dispute to be resolved as follows-

*"The scope of the dispute is to determine whether, from 1 April 2006 to 31 March 2011:*

- *BT overcharged CWW for BES and WES services; and if so*
- *by how much CWW was overcharged for those services; and*
- *whether, and by how much, BT should reimburse CWW in relation to the overcharge.*";

**(J)** In order to resolve this dispute, Ofcom has considered (among other things) the information provided by the parties and Ofcom has further acted in accordance with its general duties set out in section 3 and the Community requirements set out in sections 4 and 4A of the 2003 Act;

**(K)** A fuller explanation of the background to the dispute and Ofcom's reasons for making this Determination is set out in the explanatory statement accompanying this Determination; and

**NOW, THEREFORE, OFCOM MAKES, FOR THE REASONS SET OUT IN THE ACCOMPANYING EXPLANATORY STATEMENT, THE FOLLOWING DETERMINATION FOR RESOLVING THE DISPUTE:**

#### **I Declaration of rights and obligations, etc.**

1. BT has overcharged CWW for the provision of the services which BT calls BES100 rental, BES1000 rental, BES155 rental, BES622 rental, BES2500 rental, BES10000 rental, WES100 rental, WES1000 rental, WES155 rental, WES622 rental, WES10000 rental and BES100 connection.

2. The level of that overcharge is determined at £[~~£~~].

3. Ofcom gives a direction to BT to pay to CWW, by way of adjustment of an overpayment for BES100 rental, BES1000 rental, BES155 rental, BES622 rental, BES2500 rental, BES10000 rental, WES100 rental, WES1000 rental, WES155 rental, WES622 rental, WES10000 rental and BES100 connection in the period between 1 April 2006 and 31 March 2011, the sum of £[~~£~~] plus interest calculated at the rate specified in the Agreements.

#### **II Binding nature and effective date**

4. This Determination is binding on BT and CWW in accordance with section 190(8) of the 2003 Act.

5. This Determination shall take effect on the day it is published.

#### **III Interpretation**

6. For the purpose of interpreting this Determination—

- a) except as otherwise defined in this Determination, words or expressions used in this Determination (and in the recitals hereto) shall have the same meaning as they have been ascribed in the 2003 Act;
- b) headings and titles shall be disregarded; and
- c) the Interpretation Act 1978 shall apply as if this Determination were an Act of Parliament.

7. In this Determination—

- a) “2003 Act” means the Communications Act 2003 (c.21) (as amended);
- b) “Agreements” means the contract for Backhaul Extension Services, the contract for Wholesale Extension Services, the contract for Backhaul and Wholesale Extension Services, and the Contract for Connectivity Services that CWW has entered into with BT;
- c) “BT” means British Telecommunications plc, whose registered company number is 01800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, as defined by section 1159 of the Companies Act 2006;
- d) “CWW” means Cable & Wireless Worldwide plc (whose registered company number is 7029206) group, including the following CWW companies: Cable & Wireless UK (registered company number 1541957), Cable & Wireless Access Limited (registered company number 4005262), Energis Communications Limited (registered company number 2630471), Thus Group Holdings Limited (registered company number SC192666) and Your Communications Group Limited (registered company number 4171876);
- e) “Ofcom” means the Office of Communications.

**Neil Buckley**  
**Director of Investigations**

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

[Date]

## Annex 4

# Relevant cost standards for Ofcom's analysis

- A4.1 As set out at **paragraph 2.43**, the cost orientation obligations imposed on BT in the AISBO markets require BT to secure that *“each and every charge offered, payable or proposed for Network Access covered by Condition HH3.1 is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed”* (emphasis added).
- A4.2 This obligation requires Ethernet charges to be LRIC-based and to provide for the recovery of an appropriate share of common costs. The key cost measures relevant to these Disputes and the common terminology used are summarised in the table below. This annex is the same as Annex 6 of the Ethernet 1 Draft Determinations.

**Incremental cost** is the cost of producing a specified additional product, service or increment of output over a specified time period. In many cases, the relevant increment may be the entire output of a particular service or group of services. The incremental costs of a service are then those costs which are directly caused by the provision of that service in addition to the other services which the firm also produces. Another way of expressing this is that the incremental costs of a service are the difference between the total costs in a situation where the service is provided and the costs in another situation where the service is not provided.

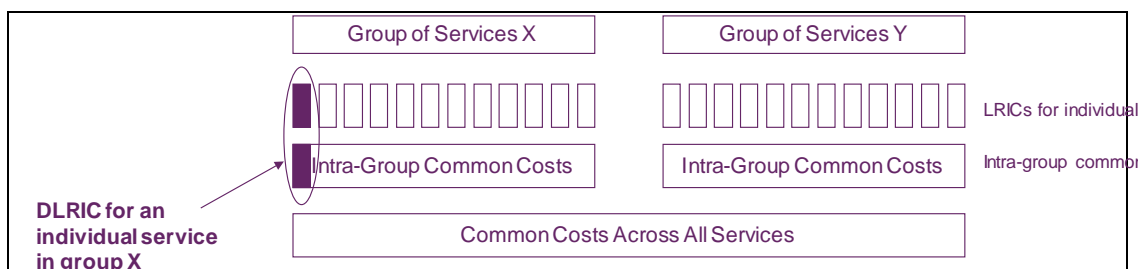
**Long Run Incremental Cost (“LRIC”)** is the incremental cost over the long run, i.e. the period over which all costs can, if necessary, be varied.

**Common costs** are those costs which arise from the provision of a group of services but which are not incremental to the provision of any individual service. Common costs may be identified in the following way: if the incremental costs of each service are removed from the total cost of providing all services, what are left are the common costs (i.e. those costs which are shared). Where there are no common costs, incremental cost and SAC are the same. Where there are common costs, the SAC of a service is the sum of the incremental cost of the service plus all of the costs which are common between that service and other services.

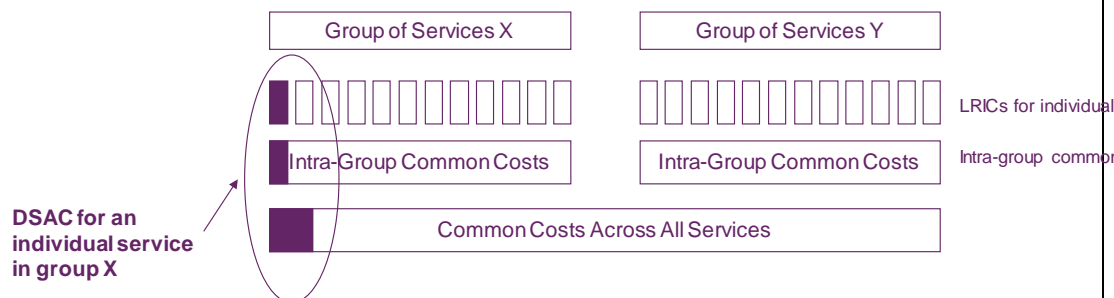
**Stand Alone Cost (“SAC”)** is the cost of providing that particular service on its own, i.e. on a stand-alone basis.

**Distributed Long Run Incremental Cost (“DLRIC”)** is a cost measure related to the LRIC of a component. Within BT's network, groups of components are combined together to form what is known as a “broad increment”. Two of these “broad increments” are the core network and the access network. The DLRIC of a component is equal to the LRIC of a component plus a share of the costs that are common between the components within the “broad increment”, these costs are known as “intra-group” common costs. The common costs are shared between the components by distributing them on an equi-proportionate mark up (EPMU) basis. The sum of the DLRICs of all the components in the core is equal to the LRIC of the core itself. This is represented in the diagram below:

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**Distributed Stand Alone Cost (“DSAC”)** is a cost measure related to the LRIC of a component. As described above, there are components within the “broad increment” of the core. As an example the DSAC of a core component is calculated by distributing the SAC of the core between all the components that lie within the core. Each core component therefore takes a share of the intra-group common costs, and the costs that are common to the provision of all services. The sum of the core components DSACs is equal to the SAC of the core. This is demonstrated in the diagram below:



**Fully allocated cost (“FAC”)** is an accounting approach under which all the costs of the company are distributed between its various products and services.

**Fixed and variable costs:** when considering which costs are fixed and which are variable the time period is key. In the short-run some costs (particularly capital costs) are fixed. The shorter the time period considered, the more costs are likely to be fixed. In the long-run, all costs are (by definition) considered variable.

**Current Cost Accounting (“CCA”)** is an accounting convention, where assets are valued and depreciated according to their current replacement cost whilst maintaining the operating or financial capital of the business entity.

**Weighted average cost of capital (“WACC”):** a company's WACC measures the rate of return that a firm needs to earn in order to reward its investors. It is an average representing the expected return on all of its securities, including both equity and debt.

## Annex 5

# Glossary

**2003 Act:** Communications Act 2003.

**21st Century Network (21CN)** BT's network programme which aims to provide a new simplified and higher capacity UK core network to manage the growing volumes of digital media traffic being consumed by end users.

**Additional Financial Statements (AFS)** Financial statements which BT produces in addition to the RFS, provided to Ofcom on a confidential basis. They give a breakdown of the published accounts information by individual service.

**Alternative interface symmetric broadband origination (AISBO)** A form of symmetric broadband origination service providing symmetric capacity between two sites, generally using an Ethernet IEEE 802.3 interface.

**BT:** British Telecommunications plc, whose registered company number is 1800000.

**Bandwidth** The physical characteristic of a telecommunications system that indicates the speed at which information can be transferred. In analogue systems, it is measured in cycles per second (Hertz) and in digital systems in bits per second (Bit/s).

**Backhaul Extension Services (BES)** A wholesale Ethernet service which provides high speed, point-to-point data circuits. Each one provides a secure link from a customer's premises, to a Communications Provider's Digital Subscriber Line Access Multiplexer and the Communications Provider's site. Please refer to Section 6 of the Ethernet 1 Draft Determinations for further explanation.

**CWW** Cable & Wireless Worldwide plc (whose registered company number is 7029206) group, including the following CWW companies: Cable & Wireless UK (registered company number 1541957), Cable & Wireless Access Limited (registered company number 4005262), Energis Communications Limited (registered company number 2630471), Thus Group Holdings Limited (registered company number SC192666) and Your Communications Group Limited (registered company number 4171876).

**Common Costs** See Annex 4.

**Communications Provider (CP)** A person who provides an Electronic Communications Network or provides an Electronic Communications Service (as defined by section 32 of the Communications Act 2003).

**Cost Volume Relationships (CVR)** LRICs are derived using a CVR. A CVR is a curve which describes how costs change as the volume of the cost driver changes. The costs associated with an increment can be of several types:

- Variable with respect to the increment being measured;
- Fixed but increment specific; and
- Fixed but spanning several increments.



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**Current Cost Accounting (CCA)** See Annex 4.

**Customer Premises Equipment (CPE)** Sometimes referred to as customer apparatus or consumer equipment, being equipment on consumers' premises which is not part of the public telecommunications network and which is directly or indirectly attached to it.

**Distributed LRIC (DLRIC)** See Annex 4.

**Distributed SAC (DSAC)** See Annex 4.

**Equi-Proportionate Mark Up (EPMU)** A method of allocating Fixed and Common Costs in proportion to the LRICs.

**Ethernet Access Direct (EAD)** A wholesale Ethernet product which offers permanently connected, point-to-point high speed data circuits that provide a secure and un-contended access service for Communications Providers. EAD is a next generation network compatible service designed to complement Openreach's Ethernet Backhaul Direct (EBD) and Bulk Transport Link (BTL) products already offered within the Connectivity Services portfolio.

**Ethernet Backhaul Direct (EBD)** A wholesale Ethernet product which offers permanently connected, point-to-point high speed data circuits that provide a secure and un-contended backhaul service for Communications Providers.

**Electronic Communications Network (ECN)** A transmission system for the conveyance, by the use of electrical, magnetic or electro-magnetic energy, of signals of any description.

**Fixed and common costs (FCC)** See Common costs.

**Fully allocated cost (FAC)** See Annex 4.

**Gbit/s** Gigabits per second. A measure of speed of transfer of digital information.

**HCA (historical cost accounting) depreciation** The measure of the cost in terms of its original purchase price of the economic benefits of tangible fixed assets that have been consumed during a period. Consumption includes the wearing out, using up or other reduction in the useful economic life of a tangible fixed asset whether arising from use, effluxion of time or obsolescence through either changes in technology or demand for the goods and services produced by the asset.

**kbit/s** kilobits per second. A measure of speed of transfer of digital information.

**LAN Extension Service (LES)** A communications service that enables the connection of two Local Area Networks together.

**Leased line** A permanently connected communications link between two customer premises, or between a customer's premises and the CP's network, dedicated to the customers' exclusive use.

**Long Run Incremental Cost (LRIC)** See Annex 4.

**LLU (Local Loop Unbundling)** The process where the incumbent operators make their local network (the copper cables that run from customers' premises to the exchange) available to other companies. CPs are able to upgrade individual lines using DSL technology to offer services such as always on high speed Internet access, direct to the customer.

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**Mbit/s** Megabits per second. A measure of speed of transfer of digital information.

**Next Generation Network (NGN)** A Network utilising new technology such as Ethernet and IP to provide an array of services to end-users.

**Openreach Price List (OPL)** The price list published by BT for services provided by Openreach.

**Partial Private Circuit (PPC)** A generic term used to describe a category of private circuits that terminate at a point of connection between two communications providers' networks. It is therefore the provision of transparent transmission capacity between a customer's premises and a point of connection between the two communications providers' networks. It may also be termed a part leased line.

**Points of Connection (POC)** A point where one communications provider interconnects with another communications provider for the purposes of connecting their networks to 3rd party customers in order to provide services to those end customers.

**Regulated Asset Value (RAV)** The RAV relates to the valuation of Openreach's access assets deployed before August 1997 on a historic costs accounting (HCA) basis, and assets deployed since August 1997 on a current costs accounting (CCA) replacement cost basis.

**Regulatory Financial Statements (RFS)** The annual financial statements that BT is required to prepare and publish in order to demonstrate compliance with its regulatory obligations.

**Stand Alone Cost (SAC)** See Annex 4.

**Symmetric broadband origination (SBO)** A symmetric broadband origination service provides symmetric capacity from a customer's premises to an appropriate point of aggregation, generally referred to as a node, in the network hierarchy. In this context, a "customer" refers to any public electronic communications network provider or end user.

**Traditional interface symmetric broadband origination (TISBO)** A form of symmetric broadband origination service providing symmetric capacity from a customer's premises to an appropriate point of aggregation in the network hierarchy, using a CCITT G703 interface.

**Weighted Average Cost of Capital (WACC)** See Annex 4.

**Wholesale End-to-End Service (WEES)** A type of Ethernet product which allows a CP to provide its customers with a dedicated fibre optic high bandwidth data circuit between two different sites.

**Wholesale Extension Service (WES)** A wholesale Ethernet product that can be used to link a customer premises to a node in a communications network. Please refer to Section 6 of the Ethernet 1 Draft Determinations for further explanation.