Charge control review for LLU and WLR services

Non-confidential version;
redactions are indicated with [✂]"

Consultation

Publication date: 31 March 2011

Closing Date for Responses: 8 July 2011

Contents

Section 1

Executive summary

1.1 This consultation document contains Ofcom's proposals for new charge controls for Local Loop Unbundling (LLU) and Wholesale Line Rental (WLR) services.

1.2 We are proposing new controls as a result of our conclusions in the reviews of the Wholesale Local Access (WLA)[1] and Wholesale Fixed Analogue Exchange Line (WFAEL)[2] markets. In both markets, we have identified that BT (Openreach)[3] has Significant Market Power (SMP) and that charge controls are necessary as a remedy to Openreach's ability to set excessive levels of charge for LLU and WLR services in the respective markets.

Structure of the proposed charge controls

LLU

1.3 As with the current controls, we propose to set individual charge controls for Metallic Path Facility (MPF) rental and Shared MPF (SMPF) rental, and separate baskets for MPF and SMPF ancillary services. We are also proposing to continue with a separate co-mingling basket for ancillary services used for both MPF and SMPF.

1.4 We are proposing some changes to the structure of the controls for MPF and SMPF ancillary services. Specifically, the changes we are proposing are:

- Separate values of X for each basket. Based on our modelling we believe that this is necessary to establish the right glide paths to align charges and costs.
- Separate controls outside of the main baskets for certain key migration services. This will ensure that the charges for these services do not become misaligned with their underlying costs as a result of being included in a broader basket, as was the case with MPF New Provide under the current controls.

1.5 In developing these proposals, we have taken account of the Final Determinations of the Competition Commission on points in the appeal of the current charge controls[4].

1.6 Based on the policy proposals and financial modelling explained in this document, we propose that the new charge controls for the rental services and main baskets for LLU will be set in the following ranges, in Figure 1.1.

[1] http://stakeholders.ofcom.org.uk/consultations/wla/statement
[2] http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement
[3] Openreach is the access division of BT established by Undertakings in 2005. Whilst the proposed SMP services conditions in this document formally apply to British Telecommunications plc, Openreach is the division of BT which provides the LLU and WLR services which we are proposing to regulate. Therefore, throughout this document, we refer to Openreach as the supplier of wholesale LLU and WLR services.
[4] *The Carphone Warehouse Group Plc v Office of Communications (Local Loop Unbundling)*, case number 1111/3/3/09 and *The Carphone Warehouse Group Plc v Office of Communications (Wholesale Line Rental,)* case number 1149/3/3/09.

Figure 1.1 : Proposed LLU charge controls

Basket/service	Range for charge controls	Base case	Ranges for charge ceilings for 1st period of the controls (from start date to 31 March 2012)	Base case
MPF rental	RPI-2.0% -RPI-5.0%	RPI-3.5%	£88.70 - £91.30	£90.00
SMPF rental	RPI-11.6% - RPI-14.6%	RPI-13.1%	£13.50 - £14.00	£13.70
MPF ancillary services basket	RPI-6.0% - RPI-9.0%	RPI-7.5%	N/A	N/A
SMPF ancillary services basket	RPI-9.4% - RPI-12.4%	RPI-10.9%	N/A	N/A
Co-mingling ancillary services basket	RPI+6.0% - RPI+9.0%	RPI+7.5%	N/A	N/A

WLR

1.7 For WLR, we are proposing the same structure as applies in the existing control. For avoidance of doubt, that is that the proposed control will apply to the Analogue Core WLR rental service ('WLR rental'), and we propose to continue to apply controls on the charges for WLR New Connection and WLR Transfer.

1.8 Based on the policy proposals and financial modelling explained in this document, we propose that the new charge controls for WLR rental and New Connection will be set in the following ranges. We are consulting on a number of options for the treatment of WLR Transfer and these are explained in Section 5.

Figure 1.2: Proposed WLR charge controls

Service	Range for charge controls	Base case	Ranges for charge ceilings for 1st period of the controls (from start date to 31 March 2012)	Base case
WLR Rental	RPI-3.0% - RPI-6.0%	RPI-4.5%	£102.10 - £105.20	£103.70
WLR New Connection	RPI-4.6% - RPI-7.6%	RPI-6.1%	£54.00 - £55.70	£54.90

Duration of the new controls

1.9 We are proposing that the new controls for both LLU and WLR services should run to 31 March 2014. This will enable review before the end of the forward look period for both the WLA and WFAEL market reviews. In developing this proposal, we have

taken account of the requirements of the new European Regulatory Framework, scheduled to be implemented in the UK by May 2011.[5]

Valuation of BT's duct network

1.10 Since completion of the previous Openreach charge control reviews, BT has undertaken a review of the valuation of its duct network. As a result, its Regulatory Financial Statements (RFS) for 2009/10 include a re-valuation of BT's duct network. BT has further provided an estimate of duct value to be used in the charge controls based on this re-valuation.

1.11 The cost of duct is a material input to the LLU and WLR charge controls, and we are consulting in this document on our treatment of the value of duct as an input to the charge controls. As part of our consideration of this we have reviewed our 2005 decision on the Regulatory Asset Value (RAV) of Openreach access assets.[6] The RAV established a valuation of 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.

1.12 We are proposing that the RAV methodology established in 2005 remains appropriate. Our assessment of BT's revision of the value of post 1997 duct is that it does not represent a reliable estimate of the CCA value for the purpose of setting regulated charges. Accordingly, we are consulting on a range bases for the CCA valuation for post-1997 duct, derived directly from capital expenditure on duct since 1997, to be included in the costs and charges for LLU and WLR services.

Cost of Capital

1.13 Our proposals and the underlying cost modelling are based on a weighted average cost of capital (WACC) for Openreach of 8.6%. This is based on our current consultation on the WACC for BT, including the disaggregated WACC for Openreach, as part of the broader consultation on charge controls for Wholesale Broadband Access (WBA).[7] Openreach's WACC is an important component of the costs of the regulated services covered by this consultation document and therefore, in our broader consideration of the WACC, we will take account of any comments from stakeholders on the WACC submitted in response to this consultation. For ease of reference therefore, the section of the WBA consultation document containing our proposals on the BT WACC is reproduced in this document at Annex 12 (Cost of Capital).

Timing of this review and the need for bridging arrangements

1.14 The new controls on which we are consulting in this document will not be in place in time for the expiry of the current controls on 31 March 2011. This is a consequence of the appeal of the existing controls which was finally concluded in October 2010[8]. Our work was scheduled to enable us to take account of appeal outcomes in

[5] In 2009, the European Parliament and Council of Ministers agreed a package of reforms to the common framework for communications regulation which applies across all EU Member States.[5] The new package is required to be transposed into the national laws and regulatory systems of Member States, including the UK, by May 2011.
[6] http://stakeholders.ofcom.org.uk/binaries/consultations/copper/statement/statement.pdf
[7] http://stakeholders.ofcom.org.uk/consultations/wba-charge-control/
[8] The Competition Commission published its final determinations on 31 August 2010.

developing our proposals for the next charge controls, and this meant that we were unable to complete the reviews before the expiry of the current controls.

1.15 To bridge the gap between the expiry of the current controls and the start of the new controls, Openreach has offered to adhere to charge ceilings calculated using the financial models used to set the current controls, adjusted for consistency with the remedies applied following the Competition Commission's Determinations in the appeal of the current controls. Figure 1.3 shows these price ceilings alongside current charge levels.

Figure 1.3: Bridging arrangement prices

Service	Bridging charge ceiling	Current charge (i.e. at 31 March 2011)
MPF Rental	£91.50	£89.10
SMPF Rental	£14.70	£15.04
WLR rental	£103.68	£103.68
MPF New Provide	£52.79	£62.11
WLR New Connection	£48.22	£55.74
WLR Transfer	£3.09	£3.09
Ancillary services	The charge for individual services to rise by no more than 3%.	

1.16 We have indicated to Openreach that we consider that setting the charges on the basis indicated is a reasonable approach, and that we therefore do not intend to impose interim charge controls for the period between the expiry of the existing controls and the start of the new ones. We announced this publicly on 1 December 2010.[9] Stakeholders should note that the X ranges on which we are consulting are calculated using the charges on 31 March 2011 (i.e. the current charges shown above) as the start point and not the bridging charge levels.

1.17 We are also proposing that the 90 day notification periods for regulated services be reduced to 28 days for the first charge changes in the next charge control period. This is will enable charges to be adjusted more quickly and reflects the fact that a 90 day notification prior to the start of the controls will not be appropriate .

Disclosure of financial modelling

1.18 Our modelling approach, together with the associated outputs, is explained in Section 7 and its supporting annexes. In addition we are making non-confidential versions of the charge control models available to stakeholders who request them. The charge control models have been developed using highly disaggregated data from Openreach containing cost forecasts and allocations of costs across Openreach's business – i.e. to LLU and WLR services, and also to services and activities which are out of the scope of this review. In developing our proposals on model disclosure

[9] http://stakeholders.ofcom.org.uk/binaries/consultations/openreachframework/statement/charges

and transparency, we have had regard to our obligations under the Communications Act 2003 ("the Act). We have also taken account of our Framework for Disclosure of Charge Control Models.[10]

1.19 The proposed controls have been developed using three models - the Regulatory Asset Value (RAV) model, the Cost Allocation model, and the Cost Forecast model - and we are providing disclosure of these models as follows:

- The full RAV model is available to stakeholders who request it from today.
- Two non-confidential versions of the Cost Allocation model will be made available to stakeholders. An 'empty model' is available to stakeholders who request it from today. This will provide visibility of the full functionality of the model. We will also provide a further non-confidential version of the Cost Allocation model showing information on the allocation of costs for in scope services and activities. This model will be available shortly, and we will notify stakeholders of this.
- Two non-confidential versions of the Cost Forecast model will also be made available. An 'empty model' is available to stakeholders who request it from today. We will also provide a further non-confidential version of the Cost Forecast model showing information relevant to the consultation. This model will also be available shortly, and we will notify stakeholders of this

1.20 Our approach to disclosure is explained in Section 6.

[10] http://stakeholders.ofcom.org.uk/binaries/consultations/784024/Charge_control.pdf.

Section 2

Introduction

Introduction

2.1 In this section we explain the background to the current LLU and WLR price controls, the developments since the last charge control reviews for each, and our objectives for this review. In particular, we summarise:

- The significance of LLU and WLR for promoting competition in fixed line data and voice services.
- Why we are carrying out this charge control review and consultation.
- The outcomes of market reviews which established the need for this charge control review.
- Developments since the last review, including the outcome of the appeal of the current charge controls, and the development of transitional arrangements to cover the period between the ending of the current controls and start of the new ones.
- Our Impact Assessment, and our approach to Equality Impact Assessment in this review.
- Our approach to transparency and model disclosure (which is also covered in detail in Section 6).

The significance of LLU and WLR in promoting competition in the provision of broadband and narrowband services

LLU

2.2 LLU is a regulated wholesale service sold by BT Openreach. It allows CPs to physically take-over or share the copper access network connection (from end-user to the BT exchange building), and to provide data services (e.g. broadband) and voice to retail customers.

2.3 Communications Providers (CPs) can use two types of LLU product - Metallic Path Facility ('MPF') and Shared Metallic Path Facility ('SMPF'). MPF allows a competing CP to provide the customer with data and voice services; while SMPF only allows direct provision of data, with narrowband voice services being provided separately.

2.4 There has been considerable investment in networks using LLU to reach customers in the UK in the last few years, and the number of unbundled lines has continued to increase rapidly. In November 2010 it stood at 7.42 million, up from 6.26 million in November 2009 and 5.36 million in November 2008.[11] This has contributed to an

[11] Data from Office of the Telecommunications Adjudicator, http://www.offta.org.uk/updates/otaupdate20101207.htm, http://www.offta.org.uk/updates/otaupdate20091201.htm, http://www.offta.org.uk/updates/otaupdate20081205.htm

open and competitive retail market, which, in turn, has resulted in greater choice for consumers.

2.5 Competitive pricing has helped to fuel the growth of LLU, which is demonstrated by the UK's performance at a European level. Prices for MPF and SMPF have been consistently below the EU average.[12] To illustrate this, the comparison from the most recent EU implementation report is shown in Figure 2.1 below.

Figure 2.1: Comparison of average LLU prices in the UK and EU, October 2009[13]

LLU services	UK average (€)	EU average (€)
MPF monthly total cost	9.06	9.75
SMPF monthly total cost	2.59	3.53
MPF connection cost	41.72	43.30
SMPF connection cost	41.72	46.40
MPF monthly rental cost	7.90	8.55
SMPF monthly rental cost	1.43	2.24

Source: EC, Implementation report, 2009

WLR

2.6 WLR is also a regulated wholesale service sold by BT Openreach. It is used by CPs to provide retail customers (both residential and business) with exchange lines and, in turn, access to other narrowband telephony services (for example telephone calls, facsimile and dial-up internet access).

2.7 The number of WLR lines has also increased year on year. In November 2010 there were 6.24 million, up from 6.13 million in November 2009 and 5.26 million in November 2008.[14] WLR has been a major factor in creating a competitive, and now de-regulated, market for exchange lines and calls at the retail level.

Purpose of this review and consultation

2.8 This charge control review is concerned with how we should set charges for LLU and WLR services after the current controls expire on 31 March 2011[15].

2.9 On 7 October 2010, we concluded the Wholesale Local Access ('WLA') market review, which considered LLU services.[16] On 20 December 2010, we concluded our review of the Wholesale Fixed Analogue Exchange Line (WFAEL") market which considered WLR.[17]

[12] Data from European Commission's Implementation Report 2009, pp. 97-103, http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/15threport/15report_part2.pdf
[13] EC Implementation Report 2009, pp. 97-103
[14] Data from Office of the Telecommunications Adjudicator, http://www.offta.org.uk/updates/otaupdate20101207.htm, http://www.offta.org.uk/updates/otaupdate20091201.htm, http://www.offta.org.uk/updates/otaupdate20081205.htm
[15] As explained above, the new controls on which we are consulting in this document will not be in place in time for the expiry of the current controls. To bridge the gap between the expiry of the current controls and the start of the new ones, Openreach has offered to adhere to certain charge ceilings.
[16] http://stakeholders.ofcom.org.uk/consultations/wla/statement
[17] http://stakeholders.ofcom.org.uk/binaries/consultations/review-wholesale-fixed-exchange/statement/statement.pdf

2.10 Market reviews are carried out to assess the competitive conditions that exist in a market and, where that market is found not to be effectively competitive, to impose appropriate regulatory remedies that address any potential negative effects that arise from the lack of competition identified. The recent WLA review found BT to have SMP in the relevant market and concluded that a charge control for LLU should be imposed on BT as a remedy. The WFAEL review also found BT to have SMP in the relevant market and concluded that a charge control for WLR should be imposed on BT as a remedy.

2.11 Both the WLA and WFAEL reviews deferred consideration of the specifics of the charge control to a separate consultation. In light of this, we are undertaking this review.

2.12 In this consultation we set out our proposals and analysis for determining how we set the level, form and duration of the charge control, for BT's WLR and LLU services after 31 March 2011.

Background and other developments

Previous charge control reviews

2.13 We began the previous review of LLU and WLR charges, in 2007, as part of the Openreach Financial Framework Review. However, during the review we took the decision to separate the determination of both charges as recommended by the European Commission, and also because of potential changes to the wholesale analogue access market. We completed the reviews and set the charge controls for LLU and WLR services in May 2009[18] and February 2010[19], respectively.

2.14 Both charge control reviews set controls to expire on 31 March 2011. In the case of LLU, this was to allow re-setting of the controls following completion of the following WLA market review. In the case of WLR, we considered it was appropriate to synchronise the expiry and start date of any future WLR charge controls with those for LLU services.

Conclusions from previous charge control review

2.15 We summarise below some of the other main decisions taken in the reviews.

2.16 For LLU, we decided to:

- Set new charge controls for both the MPF and SMPF rental services.
- Set new charge controls for each of three baskets[20] that comprised ancillary type services – we categorised individual ancillary services into MPF, SMPF, and co-mingling baskets[21].
- Set sub-caps for certain migration services within the baskets (to limit potential price increase of individual services within the baskets); and also set inertia

[18] http://stakeholders.ofcom.org.uk/binaries/consultations/openreachframework/statement/statement.pdf
[19] http://stakeholders.ofcom.org.uk/consultations/wlr/
[20] The term "basket" describes a group of services. The charge control in the baskets applied to the weighted average price of the entire basket rather than individual items within the basket.
[21] Co-mingling are services that CPs require to locate their equipment at Openreach's local exchange buildings.

clauses (which limit the changes in prices for individual services) across *all* services in baskets.

2.17 For WLR, we decided to:

- Replace separate charges on Residential and Business WLR rental services with one individual charge (the Analogue Core WLR rental service); and to phase the full implementation of this service.[22]
- Set new individual charges for other ancillary type[23] services – WLR Transfer and WLR New Connection (as well as for the Analogue Core WLR rental service).
- Remove the basis of charges (cost orientation) obligation on specific higher care service options for WLR.

Market reviews

2.18 The proposals and conclusions of the WFAEL and WLA market reviews provide the backdrop for this consultation.

2.19 The WLA review examined the competitive conditions in the market, including the impact of Next Generation Access (NGA) networks (i.e. those based on fibre) on these conditions, as part of its forward look from 2011 to March 2014.

2.20 The review recognised the continued importance of current generation networks (i.e. those based on copper) in supporting competition, and concluded that BT should continue to provide LLU to other providers. Further, it decided that a charge control and other general remedies (including basis of charges – cost orientation) should remain on existing LLU services.

2.21 The WLA market review did not reach a conclusion on the question of whether a basis of charges (cost orientation) obligation should continue to apply to LLU enhanced care services. As we explained in the WLA Statement, we deferred further analysis and consultation on this point to this review[24], and we consider it further in Section 4.

2.22 As noted above, we previously decided that it was appropriate to align the current charge controls to expire on 31 March 2011. As a consequence, we also considered that it would be necessary to review the market for WLR services again, before this date, to allow us to consider implementing any potential WLR charge control that may take effect after 31 March 2011.[25]

2.23 The WFAEL market review found that competitive conditions in the market have not changed substantially since we completed the last review in 2009 (*Review of the fixed narrowband wholesale markets*[26]), and concluded that we should retain the

[22] We also set a cap on the WLR premium rental charge for the period of the transition (to full service implementation) to protect users during in the interim. Given that migration of business customers to the core service is well advanced, we consider that this cap is no longer necessary.
[23] By 'Ancillary', we mean a service which is required to provide and support WLR services (or LLU services where applicable). For example, these include migration and new line provision type services (amongst others).
[24] http://stakeholders.ofcom.org.uk/consultations/wla/statement
[25] We recognised that by setting a control (for 31 March 2011) that is designed to end during the course of a market review forward look, we would need to consider setting a further appropriate control for the remainder of the review period; and we would need to look again at the competitive conditions in the market before setting any new WLR charge control on BT.
[26] http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf

current regulation, with respect to WLR services. It considered these conditions over a forward look period to 2014.

2.24 Specifically, it decided that BT has SMP for wholesale fixed analogue exchange lines in the UK, excluding the Hull area, that it should continue to provide WLR lines to other providers, and that a charge control and basis of charges obligation should continue to apply to BT's WLR services. It also decided to retain the decision (implemented in the previous charge control review) to remove cost orientation from WLR enhanced care services.

2.25 Where relevant to the scope of this review, we have taken account of all responses to the WLA and WFAEL market reviews, in developing the proposals set out in this consultation.

Scope

2.26 BT's LLU and WLR services are currently subject to one or more of the following types of SMP obligation

- Charge control - services which are currently subject to a price ceiling (or price cap)
- Cost orientation – services which are currently subject to a basis of charges obligation.
- Other general access obligations - services which are not currently subject to any direct pricing regulation, but are subject to other general access obligations (e.g. no undue-discrimination, price publication and transparency)

2.27 In Sections 4 and 5, we set out our proposals on the final scope of the charge controls for the forward look period covered under this review.

We have set our proposals in light of our legal framework

2.28 As part of the WLA and WFAEL market reviews, on 23 March 2010 and 15 October 2010 respectively, we published consultation documents (the "WLA Consultation" and the "WFAEL Consultation")[27], in which, at Annex 5 and Annex 6 respectively, we set out an overview of the market review process, including the imposition of remedies, to provide appropriate context and understanding to the matters discussed in that review.

2.29 This consultation does not seek to duplicate all of the information provided in those Annexes, which remains relevant to understanding the context for the proposed LLU and WLR charge controls.

2.30 This review does, however, consider each of the relevant legal tests that apply when imposing a charge control as an SMP condition under section 87(9) of the Communications Act 2003 (the "Act"). In particular, in Section 9 below we set out our reasoning as to why we consider our proposed charge control conditions meets each of those relevant tests.

[27] http://stakeholders.ofcom.org.uk/binaries/consultations/wla/summary/wlacondoc.pdf and http://stakeholders.ofcom.org.uk/binaries/consultations/review-wholesale-fixed-exchange/summary/main.pdf

2.31 Firstly, section 88 of the Act prohibits the setting of SMP conditions under section 87(9) of the Act except where it appears, from the market analysis, that there is a relevant risk of adverse effects arising from price distortion; and it appears that the setting of the condition is appropriate for the purposes of promoting efficiency, promoting sustainable competition and conferring the greatest possible benefits on end users. We are also required to take into account the extent of BT's investment in wholesale local access and wholesale fixed analogue exchange lines.

2.32 Secondly, we consider whether the proposed condition meets the test set out at section 47 of the Act. In summary, section 47 requires that any SMP condition must not be imposed unless it is:

- Objectively justifiable in relation to the services to which it relates;
- Not such as to discriminate unduly against particular persons;
- Proportionate to what the condition is intended to achieve;
- In relation to what it is intended to achieve, transparent.

2.33 Thirdly, we need to ensure that the condition proposed remains consistent with our general duties under section 3 of the Act and our duties for the purpose of fulfilling our Community obligations as set out under section 4 of the Act.

2.34 Under section 3, our principal duty in carrying out functions is to further the interests of citizens in relation to communications matters and to further the interests of consumers in relevant markets, where appropriate by promoting competition.

2.35 In so doing, we are required to secure a number of specific objectives and to have regard to a number of matters set out in section 3 of the Act. As to the prescribed specific statutory objectives in section 3(2), we considered in both the WLA Consultation and the WFAEL Consultation that the objective of securing the availability throughout the UK of a wide range of electronic communications services was particularly relevant to the market review, and therefore to the proposed regulation in this review.

2.36 In performing our duties, we are also required to have regard to a range of other considerations, as appear to us to be relevant in the circumstances. In the WLA Consultation and the WFAEL Consultation, we considered that a number of such considerations were relevant to the market review, namely the desirability of promoting competition in relevant markets, the desirability of encouraging investment and innovation in relevant markets and the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.

2.37 Section 4 of the Act requires us to act in accordance with six European Community requirements for regulation. In the WLA Consultation and the WFAEL Consultation, we considered that the first, third, fourth and fifth of those requirements were of particular relevance to the market review, namely to promote competition in the provision of electronic communications networks and services, associated facilities and the supply of directories; to promote the interests of all persons who are citizens of the European Union; to take account of the desirability of Ofcom's carrying out of its functions in a manner which, so far as practicable, does not favour one form of or means of providing electronic communications networks, services or associated facilities over another, i.e. to be technologically neutral; and to encourage, to such extent as Ofcom considers appropriate for certain prescribed purposes, the provision

of network access and service interoperability, namely securing efficient and sustainable competition and the maximum benefit for customers of communications providers.

2.38 We also considered that no conflict arose in this regard with those specific objectives in section 3 that we consider are particularly relevant in this context.

We have taken into account our specific policy objectives when developing our proposals

2.39 Our specific policy objectives in proposing the charge controls for LLU and WLR services are:

- to prevent BT from setting excessive charges for LLU and WLR services in the UK, excluding the Hull Area where it has SMP while providing incentives for it to increase its efficiency;
- to ensure that prices are subject to appropriate controls whilst still encouraging BT to maintain service quality and innovation in LLU and WLR services in the UK, excluding the Hull Area;
- to promote efficient and sustainable competition in the delivery of LLU and WLR services;
- to provide regulatory certainty for BT and its customers and to avoid undue disruption;
- to encourage investment and innovation in the relevant markets; and
- to ensure that the delivery of the regulated services is sustainable, in that the prevailing prices provide BT with the opportunity to recover all of its relevant costs (where efficiently incurred), including its cost of capital.

2.40 We have adopted these policy objectives when developing the charge control proposals. We believe that these policy objectives flow out of and are consistent with our general duties under section 3 of the Act and our duties for the purpose of fulfilling our Community obligations as set out under section 4 of the Act.

We have taken into account other relevant Ofcom projects

2.41 In addition to the LLU and WLR charge controls, Ofcom is in the process of reviewing charge controls for other regulated services including:

- Wholesale Broadband Access (WBA); and
- ISDN30 WLR.

2.42 We consider that there are significant benefits to synchronising these charge controls as far as is practical. In particular, the WLR, LLU and WBA charge controls relate to products that are used by CPs to deliver voice, broadband or voice and broadband to end-users. For example, an LLU operator that provides voice and broadband services using MPF in Market 2 and Market 3, would use WLR and WBA services to offer the same bundle in Market 1. Setting these charge controls at a similar time and for a similar duration will provide certainty for CPs with regard to the pricing of these products as they will be able to make more informed investment decisions.

2.43 Furthermore, aligning the charge controls facilitates consistency between the various controls in terms of common inputs such as adoption of cost of capital value and treatment of base year costs. For these charge control reviews we commonly use BT's regulated financial statements (RFS) as a data source to verify that the base year costs fairly represent a normal and stable level of cost necessary to provide the services covered by each charge control. Where this is the case we also ensure reconciliation to the RFS from our charge control model. For each control we will also make, if necessary, adjustments to the RFS data that, for example, excludes exceptional "one-off" costs incurred in the base year. This exercise tends to require additional information from BT. Where the underlying reasons for such adjustments are common across different charge controls, it is important that we ensure the assumptions used to project costs are fully consistent.

Other developments

2.44 There have been a number of other developments since the last charge control review that we consider are relevant to this review. We discuss these below.

Appeal

2.45 On 22 July 2009 The Carphone Warehouse plc (now TalkTalk Telecom Group plc ("Talk Talk")) submitted an appeal to the Competition Appeal Tribunal (the "Tribunal") under section 192 of the Act against the decisions contained in Ofcom's Statement "*A new pricing framework for Openreach*" of 22 May 2009 (the "LLU appeal")[28]. British Sky Broadcasting Ltd ("Sky") and British Telecommunications plc ("BT") both intervened.

2.46 Talk Talk's appeal raised specified price control matters. On 27 November 2009, the Tribunal referred the specified price control matters to the Competition Commission (the "CC") pursuant to section 193 of the Act.

2.47 On 24 December 2009 Talk Talk brought a further appeal to the Tribunal, again under section 192 of the Act, against the decisions contained in Ofcom's statement "*Charge controls for Wholesale Line Rental and related services*" of 26 October 2009 (the "WLR appeal")[29]. Again, Sky and BT both intervened in this appeal. The WLR appeal raised specified price control matters which overlapped with the LLU appeal. The Tribunal referred the specified price control matters to the CC on 18 February 2010 (and at the same time extended the time period for the reference in the LLU appeal).

2.48 On 31 August 2010 the CC notified the Tribunal of their determination of the price control matters in both the LLU and WLR appeals.

2.49 In the LLU appeal, the CC found Ofcom not to have erred on a substantial number of the challenges raised by Talk Talk. However, the CC did find that Ofcom had materially erred: by underestimating the rate of efficiency savings which Openreach could reasonably be expected to achieve over the period of the price controls; in its assessment of inflation relevant to wage and energy costs; by not setting individual price caps on the baskets of ancillary services; and by not safeguarding against price manipulation by Openreach within the co-mingling basket. In light of this determination, the CC proposed that these errors be remedied by:

[28] For further details please see http://www.catribunal.org.uk/237-4154/1111-3-3-09-The-Carphone-Warehouse-Group-plc.html

[29] For further details, please see http://www.catribunal.org.uk/237-5167/1149-3-3-09-The-Carphone-Warehouse-Group-Plc.html.

- amending the MPF services annual rental charge to £89.10 for the remainder of the charge control period;
- amending the SMPF services annual rental charge to £15.04 for the remainder of the charge control period;
- moving the ancillary service MPF New Provide out of the basket of MPF Ancillary Services;
- amending the MPF New Provide Charge to £62.11 for the remainder of the charge control period; and
- requiring BT not to make any further upwards price adjustments to any of the products in the co-mingling baskets including LLU Ceases and Bulk Reterminations.

2.50 For the WLR appeal, the CC did not find Ofcom to have erred on any of the challenges raised by Talk Talk.

2.51 On 11 October 2010, the Tribunal disposed of both the LLU and WLR appeals. In respect of the LLU appeal, the Tribunal upheld those grounds of Talk Talk's appeal in respect of which the CC determined that Ofcom had erred, and remitted the LLU decision to Ofcom pursuant to section 195(4) of the Act with appropriate directions. The Tribunal dismissed the other grounds in the LLU appeal, and Talk Talk's WLR appeal in its entirety.

2.52 Ofcom gave effect to the Tribunal's directions on 14 October 2010 by publishing the Statement "*Openreach Financial Framework Local Loop Unbundling Charge Control: Adoption of Revised SMP Services Conditions following the Competition Appeal Tribunal's Directions*"[30] which revised the LLU charge control conditions with effect from 15 October 2010..

2.53 In formulating the proposals set out in this consultation, we have taken full account of the conclusions reached on the issues raised in the appeal.

BTs duct revaluation

2.54 Since the completion of previous charge control reviews, BT has undertaken a review of the valuation of its duct network. As a result, its Regulatory Financial Statements (RFS) for 2010/11 include a re-valuation of BT's duct network.

2.55 The cost of duct is a material input to the LLU and WLR charge controls, and we are consulting in this document on what the appropriate method should be for re-valuing duct, and also on our treatment of the duct re-valuation as an input in the charge controls.

2.56 We set out our approach for this in Section 3 and Annex 5.

30 http://stakeholders.ofcom.org.uk/binaries/consultations/openreachframework/statement/revisedsmpconditions.pdf

Transitional arrangements for the period between the ending of the current controls and start of the new controls

2.57 The new controls on which we are consulting in this document will not be in place in time for the expiry of the current controls on 31 March 2011. This is a consequence of the appeal of the existing controls which was finally concluded in October 2010[31]. Our work was scheduled to enable us to take account of appeal outcomes in developing our proposals for the next charge controls, and this meant that we were unable to complete the reviews before the expiry of the current controls.

2.58 To bridge the gap between the expiry of the current controls and the start of the new ones, Openreach has offered to adhere to charge ceilings calculated using the financial models used to set the current controls, adjusted for consistency with the remedies applied following the CC Determinations in the appeal of the current controls. These ceilings are as follows:

Figure 2.2: Bridging arrangement prices

Service	Bridging charge ceiling	Current charge
MPF Rental	£91.50	£89.10
SMPF Rental	£14.70	£15.04
WLR Rental	£103.68	£103.68
MPF New Provide	£52.79	£62.11
WLR New Connection	£48.22	£55.74
WLR Transfer	£3.09	£3.09
Ancillary services	The charge for individual services to rise by no more than 3%.	

2.59 Ofcom has indicated to Openreach that we consider that setting the charges on the basis indicated is a reasonable approach, and that we therefore do not intend to impose interim charge controls for the period between the expiry of the existing controls and the start of the new ones. We announced this publicly on 1 December 2011.[32]

2.60 Stakeholders should note that the X ranges on which we are consulting are calculated using the charges on 31 March 2011 and not the bridging levels. This is to ensure consistency in the modelling between the current and new controls.

[31] The Competition Commission published its final determinations on 31 August 2010 and the CAT upheld these determinations on 11 October 2010.
[32] http://stakeholders.ofcom.org.uk/binaries/consultations/openreachframework/statement/charges

Removal of cap on WLR *Premium* rental service and expiry of BT voluntary undertakings

2.61 In the final WLR charge control statement'[33] we decided that a price ceiling would remain in place on BT's business ('premium') rental service, until it had updated its systems and products (creation of a new WLR product - called WLR3), as part of it 1400 release programme. This was intended to allow BT to fully implement the new (analogue core) rental control, in a cost-effective manner, for its newly designed products (i.e. its WLR3 product), and also to protect business customers using the older WLR2 product in the interim period. We decided that it would be appropriate to retain the charge ceiling on its business ('premium') rental product, but only until BT had completed this programme.

2.62 We can confirm that on 30 July 2010 BT formally completed the programme and implemented WLR3 (analogue core) rental service with an option for CPs to select a business directory listing or a residential listing. In response, we confirmed that, as BT is fully compliant with the regulation, the cap no longer applied.

2.63 In recognition of concern from stakeholders, BT also provided, during the last charge control review, a voluntary commitment not to increase the differential between the prices for the analogue core rental and business ('Premium') rentals (for WLR2 or WLR3), until the end of the current charge controls (31 March 2011). BT has recently confirmed that this commitment will remain in place until this date. In addition, BT made a voluntary commitment not to charge a different or higher rental, transfer or new connection price for WLR2 premium than for WLR3 premium. This is scheduled to remain in place until 30 June 2011, to coincide with the scheduled withdrawal of WLR2.

2.64 We are not proposing that these commitments be replaced or extended when they expire. With respect to protection of WLR2 users, we note that the product will be withdrawn on 30 June 2011 and that the vast majority of users have already migrated to WLR3, or intend to do so, by this date. We therefore consider that consumers will be sufficiently protected after the voluntary undertakings expire.

Impact assessment

2.65 The analysis presented in this document represents an impact assessment, as defined in section 7 of the Act. In Sections 3,4,5,7 and 8 we discuss all of the relevant considerations and options that we have considered, including their impact.

2.66 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Act, which requires Ofcom to carry out impact assessments where its proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of its policy decisions. For further information about Ofcom's approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on the Ofcom website[34].

[33] http://stakeholders.ofcom.org.uk/binaries/consultations/wlr/statement/wlr_statement.pdf
[34] http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

2.67 Specifically, pursuant to section 7, an impact assessment must set out how, in our opinion, the performance of our general duties (within the meaning of section 3 of the Act) is secured or furthered by or in relation to what we propose.

Equality Impact Assessment

2.68 Ofcom is separately required by statute to assess the potential impact of all our functions, policies, projects and practices on race, disability and gender equality. Equality impact assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity. Unless we otherwise state in this document, it is not apparent to us that the outcome of our review is likely to have any particular impact on race, disability and gender equality. Specifically, we do not envisage the impact of any outcome to be to the detriment of any group of society.

2.69 Nor are we envisaging any need to carry out separate EIAs in relation to race or gender equality or equality schemes under the Northern Ireland and Disability Equality Schemes. This is because we anticipate that our regulatory intervention will affect all industry stakeholders equally and will not have a differential impact in relation to people of different gender or ethnicity, on consumers in Northern Ireland or on disabled consumers compared to consumers in general. Similarly, we are not envisaging making a distinction between consumers in different parts of the UK or between consumers on low incomes. Again, we believe that our intervention will not have a particular effect on one group of consumers over another.

Consultation period

2.70 We invite comments, from interested parties, on the proposals in this document. The consultation period runs for 10 weeks, to 9 June 2011. Following consideration of responses to the consultation we would expect to publish our conclusions in Q2 or 3 2011

Structure of the document

2.71 The rest of this document is structured as follows:

- Section 3 covers our proposals on our approach to setting charge controls;
- Sections 4 and 5 cover our proposals for the structure of LLU and WLR charge controls;
- Section 6 covers our approach to disclosure of the Ofcom charge control models;
- Section 7 covers our calculation of the charge controls;
- Section 8 covers our approach and proposals for setting WLR and LLU differentials for core and ancillary services;
- Section 9 covers our proposals for charge control implementation and legal tests;
- Annexes 1-3 concern the process for responding to this consultation;
- Annex 4 collates the our questions to stakeholders for consultation

- Annex 5 is our detailed analysis for duct valuation;
- Annex 6 is our detailed analysis of volume forecasts;
- Annex 7 is our detailed analysis of scope for efficiency gains
- Annex 8 is our detailed analysis of cost allocation;
- Annex 9 is our detailed review of unit costs by activity;
- Annex 10 is our detailed review of Assets ;
- Annex 11 is our detailed analysis on the RAV adjustment
- Annex 12 is our detailed analysis of cost of capital;
- Annex 13 sets out the formal legal instruments of our proposals;
- Annex 14 is the glossary of terms we have used in this document;
- Annex 15 is a list of the main sources of evidence we have relied upon.
- Annex 16 is a letter from Price Waterhouse Coopers with respect to duct valuation

Section 3

Proposed approach to setting charge controls

Introduction

3.1 In this section, we explain our proposals which apply across both charge controls (LLU and WLR). These cover our approach to:

- the duration of the controls;
- the appropriate cost standard for the setting of the controls;
- our approach to technology change in the setting of the controls;
- the valuation of duct for the purpose of setting the controls;
- alignment of costs and charges using glide paths; compliance arrangements; and
- implementation of the controls.

Summary of proposals

3.2 We are proposing that:

- the controls run to 31 March 2014 (i.e. 3 years after the expiry of the current controls);
- the controls be set using current cost accounting fully allocated costs (CCA FAC) with an adjustment to the regulatory asset valuation of pre-1997 assets to historic cost accounting (HCA) (the RAV adjustment) to establish the cost base;
- the controls should be set with reference to current technology costs to establish an upper bound for pricing consistent with the principle of "anchor pricing", but including economies of scope which are currently realised through the allocation of costs in our financial modelling for the charge controls;
- valuation of duct in the charge controls should be based on indexation of post 1997 expenditure and no change to the treatment of pre-1997 expenditure;
- charges and costs should usually be aligned using glide paths, though there are some circumstances in which one-off adjustments may be more appropriate;
- compliance arrangements should continue as for the current controls; and
- the first charge changes in the new charge control period will be subject to 28 days notice, including for services (LLU charges and WLR rental) which are subject to a 90 day notification requirement.

3.3 These proposals and the analysis underlying them are explained fully in this section.

Duration of the charge controls

3.4 We are proposing that new charge controls for LLU and WLR should run concurrently to end on 31 March 2014 – i.e. for a period of 3 years from the ending of the current controls. The current LLU and WLR charge controls were both set with short durations (less than two years) relative to other charge controls set by Ofcom. The reasons for this were:

- in the case of LLU, to enable re-setting of the controls following completion of a new wholesale local access (WLA) market review[35]; and
- in the case of WLR, to enable synchronisation of any new controls for both LLU and WLR.

3.5 In developing our proposal we have also taken account of the forward look period of the WLA market review. This review considered a four year period. However, since the WLA market review was completed in October 2010, the forward look does not go beyond 2014. Therefore, a four year charge control for LLU would outlast the duration of our forward look, and would require a further review of the market (or finding of no material change) to cover the final months of the control. A three year duration allows the controls to be set such that they will not outlast the market review forward look period. We prefer to take this approach to achieve synchronisation of charge control remedies and market review periods.

3.6 We have also taken account of the new harmonised framework for the regulation of electronic communications networks and services (known as the "Common Regulatory Framework") by the EU 'Better Regulation' Directive[36], which is scheduled to be implemented in the UK no later than 26 May 2011. The Common Regulatory Framework sets the requirements for harmonisation of communications regulation across European member states through a series of Directives establishing rules to be enshrined in the national law of each Member State.

3.7 The revised Common Regulatory Framework requires that analysis of the relevant market and notification of the corresponding draft measure must take place within three years of the adoption of a previous measure relating to that market (although, exceptionally that period may be extended).[37] The setting of charge controls for LLU and WLR to end in March 2014 is consistent with this obligation.Other charge controls set by Ofcom (e.g. the network charge controls) have been set to run for four years. In assessing options for charge control durations for this charge control review, we have considered the balance between incentives for dynamic efficiency for the regulated firm, and the benefits of allocative efficiency.

3.8 Dynamic efficiency concerns the ability of firms to innovate and make efficient investments, including activities designed to reduce costs over time. Price caps generally provide strong incentives for dynamic efficiency because they allow regulated firms to earn profits in excess of the cost of capital if they are able to manage costs below the level established by the RPI +/- X formula which sets the regulated prices. These incentives can drive innovation and investment. Other things being equal, incentives for dynamic efficiency will be stronger in a longer price cap

[35] http://stakeholders.ofcom.org.uk/consultations/wla/
[36] Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, and 2002/20/EC on the authorisation of electronic communications networks and services.
[37] Article 16(6) of the revised Framework Directive.

than in a shorter one because a longer period gives the firm more opportunity to enhance its profitability through innovation and cost reduction.

3.9 In designing a price cap, incentives for dynamic efficiency must be considered alongside the benefits of allocative efficiency. Allocative efficiency is achieved when prices are aligned with underlying resource costs. As explained above, prices can diverge from costs over the life of a price cap if the costs of price-capped services deviate from the trajectory of prices or charges established by the RPI +/- X formula. However, in establishing price caps, regulators are able to ensure that allocative efficiency objectives are also met through the review mechanism and periodic setting of new controls. Hence price caps, if set correctly, have built-in safeguards for both dynamic and allocative efficiency.

3.10 Whilst a four year duration has proved effective in providing a good balance between dynamic and allocative efficiency for other charge controls set by Ofcom, we have concluded that expiry in March 2014 is more appropriate for these controls for the reasons explained above. We do not believe that this duration will disrupt the balance between dynamic and allocative efficiency effects unduly – indeed, the current LLU and WLR charge controls were set with shorter durations, and so the duration we are proposing will shift the controls further towards the balance between dynamic and allocative efficiency that exists in other charge controls.

Synchronisation of LLU and WLR charge controls

3.11 We propose that the new controls for LLU and WLR will start on the same date. As explained above, we are also proposing that both charge controls will end on 31 March 2014.

3.12 In the October 2009 WLR charge control Statement and Consultation[38], we explained that consistency in the setting of charge controls for LLU and WLR was important because these services share a high proportion of common costs, and both are inputs to common downstream markets. We said that, whilst exact synchronisation was not a necessity, it could be an advantage going forward and, for this reason, we set the WLR charge control to end in March 2011 to enable synchronisation in the setting of the new controls.

3.13 An alternative approach for these charge controls might be to de-link the end point of the controls. This might be appropriate if the forward look for the WFAEL market were longer than that for WLA, and there were advantages to setting a longer control for WLR than for LLU – e.g. if there were reasons to strengthen dynamic efficiency incentives in the WLR charge control relative to the LLU control. We do not think that this is the case, and we believe that there are strong advantages to synchronising both the start and end points of the LLU and WLR charge controls to facilitate consistency.

***Question 3.1**: Do you agree with Ofcom's proposal to set synchronised charge controls for LLU and WLR?*

***Question 3.2**: Do you agree with Ofcom's proposal to set charge controls for LLU and WLR to expire on 31 March 2014?*

[38] http://stakeholders.ofcom.org.uk/consultations/wlr/

Cost standard for new charge controls

3.14 We propose to continue to use current cost accounting (CCA) fully allocated cost (FAC) as the basis for setting the LLU and WLR charge controls. We also propose to continue to apply an adjustment to the regulatory asset valuation (the RAV adjustment) which abstracts away from a 'pure CCA' approach to prevent over-recovery of the costs of older assets (the RAV is discussed in detail in the part of this section which explains our approach to the valuation of Openreach's duct network, and at Annex 5).

3.15 This approach was used in the setting of the current LLU and WLR controls. CCA FAC has generally been used by Ofcom in the setting of other charge controls applied to BT. In addition, we are mindful that our use of CCA FAC to set the current controls was considered by the Competition Commission (CC) under the appeal of the current LLU and WLR controls. In its determination, the CC found that we did not err in our use of CCA FAC to assess whether the differentials in charges between MPF and WLR and/or SMPF+WLR were sufficient to cover the differential in the LRICs of the services or service combinations. It also found that we had given sufficient weight to allocative and dynamic efficiency factors in adopting a CCA FAC approach to cost allocation.[39]

3.16 CCA FAC provides a robust and transparent basis for the regulation of wholesale access charges. It is a well understood concept and, as explained above, has been the cost standard for many previous price caps and charge controls. Also, CCA FAC uses data which can be reconciled to the regulatory financial statements (RFS), which are published by BT and independently audited.

3.17 CCA FAC is a suitable cost standard to prevent excessive levels of charges being levied by Openreach. It also ensures that the delivery of regulated services is sustainable by enabling Openreach to recover all relevant and efficiently incurred costs.

3.18 We are mindful that, whilst CCA FAC has the advantages explained in this section, it will not, in all circumstances, necessarily result in the most efficient outcome. We have, therefore, considered carefully whether there are any strong objections to CCA FAC costs as the basis for the rental charge controls on efficiency grounds.

3.19 In addition, as we did when the current controls were set, we have run an analysis to check whether efficiency could be distorted through the setting of charges for separate regulated services, which are inputs to the same downstream markets. This is the case with LLU and WLR services, and particularly with MPF and SMPF+WLR, both of which provide a wholesale platform for retail voice and broadband bundles. Our analysis identifies whether the differentials between the charges for MPF and WLR rental, and MPF and SMPF+WLR rental, are sufficient to cover the difference in costs between the services on a long run incremental costs (LRIC) basis.

3.20 Our analysis of the efficiency characteristics of CCA FAC – which we consider confirms that there are no reasons to depart from CCA FAC on efficiency grounds – and our analysis of the charge differential measured against LRIC, are covered in detail in Section 8.

***Question 3.3**: Do you agree with Ofcom's proposal to use a CCA FAC methodology to establish the cost base for the next LLU and WLR charge controls? Please give reasons for*

[39] See paragraph 2.648 of the CC's 31 August 2010 Determination in the WLR appeal.

your answer. (Note that respondents are also invited to comment on continuation of the RAV approach in Question 3.5 below.)

Treatment of NGA costs in financial modelling for the LLU and WLR charge controls

Anchor product pricing

3.21 In general, our preferred approach to setting charges is to base costs on what is believed to be the most efficient available technology. This is sometimes described as the "Modern Equivalent Asset" (MEA[40]) approach to pricing.

3.22 However, there are also circumstances where Ofcom does not set charges on the basis of MEA costs. During a period of major technological change, we generally adopt an approach to charge control setting which we refer to as "anchor product pricing" approach.[41] Under this approach we do not allow prices to rise above the level implied by the hypothetical continuation of the existing technology. This prevents the introduction of new technology increasing pricing for the same services.[42] A detailed description of the principles of anchor product regulation was set out in our September 2007 consultation on "Future broadband: policy approach to next generation access"[43]. We discussed the use of anchor product regulation in the context of investment in next generation access in the wholesale local access (WLA) market, and so our policy is directly relevant now to the setting of the charge controls.

3.23 We have previously referred to this approach as the "technology neutral" approach. However, the term "anchor product pricing" better captures one key feature of our approach, which is that consumers of existing services are not made worse off by the adoption of new technology. The price (and quality) of existing services are 'anchored' by the legacy technology, even if the services are actually provided over new technology. This approach is intended to give the regulated firm incentives to invest in new technology only when providing services over the new technology would lower its overall costs, or would enable it to provide higher quality services for which consumers are willing to pay.

3.24 The anchor product pricing approach also reduces the risk of errors in estimating as yet not fully known costs of the provision of 'replacement' or 'emulated' services over the alternative platform, and of estimating any cost of transition from one technology to another. Economies of scale and scope are of course prevalent in telecoms and this means that the average costs on both the old and new platforms will depend on the rate of migration between them, which may be difficult to forecast with any precision. In fact, whilst parallel running is in force, average costs on both networks will tend to be higher than if there was a single network, due to the loss of economies

[40] For a definition of MEA, see for example paragraph 4.86 of Ofcoms' second consultation "Valuing copper access" (March 2005). Ofcom asked Analysys Consulting "to undertake a comparison between the valuation of the existing [copper access] network and a hypothetical Modern Equivalent Asset (MEA)". The definition of the MEA used was: "The MEA chosen will be the most cost efficient method, using modern technology, of providing the same services, to the same level of quality and to the same customer base as is provided by the existing copper access network".
See http://stakeholders.ofcom.org.uk/consultations/copper/value2/statement/ for more details.
[41] We have previously referred to this approach as the "technology neutral" approach.
[42] If a new technology changes cost structures, then once a new technology has been established, prices structures can gradually be moved to reflect the new technology.
[43] See Annex 7 in *Future broadband – Policy approach to next generation access,* Consultation, 26 September 2007, available at
http://stakeholders.ofcom.org.uk/binaries/consultations/nga/summary/future_broadband_nga.pdf

of scale and scope; and this is one reason why costs may initially rise when new technology is introduced. Under the anchor pricing approach, customers are protected from such increases in cost, and the firm is given appropriate incentives to recover them through subsequent efficiency gains.

Relevance of anchor product pricing approach to the LLU and WLR charge controls

3.25 Openreach's provision of LLU and WLR will be affected over the period of the charge control by the development of its Next Generation Access (NGA) network, initially alongside current generation copper access.

3.26 Openreach does not propose to fully migrate LLU and WLR services to its NGA network during the proposed life of the next LLU and WLR charge controls. However, some of the costs of providing these services are already affected by NGA development. We propose to employ anchor product pricing as a guiding principle in setting the charge controls to ensure that NGA investments do not result in the charges rising for existing products.

3.27 The adoption of a new platform – in this case, NGA - has the potential to offer significant cost savings, and we want the charge control to give the right incentives for Openreach to undertake such investment (where this benefits consumers in the long run). At the same time, the migration of services to a new platform poses significant challenges, as the costs and volume of that migration to the new platform are uncertain. Hence, there is still uncertainty over the costs and the full extent of roll-out of NGA. For the LLU and WLR charge controls, the relevance of anchor pricing is to ensure that charges for regulated products and services do not rise as a result of NGA deployment.

Anchor product pricing and the LLU/WLR charge control model

3.28 In some other charge controls set by Ofcom, we have implemented the anchor product pricing approach by using a hypothetical ongoing model of the current technology network.[44] Essentially, this methodology sets price ceilings with reference to existing technology by assuming no investment or migration to the new technology network. It therefore mimics current technology in an ongoing rather than end-of-life phase.

3.29 For the LLU and WLR charge controls, we have not created a hypothetical ongoing model. The modelling approach we have used for these controls is based on a detailed view of cost allocation, and abstracting from this to create a hypothetical view would not be straightforward. Therefore, we propose to use off-model calculations to ensure that our modelling outcomes are consistent with the anchor product pricing approach. These calculations are explained in Section 7.

3.30 We believe that the most appropriate application of the anchor product pricing principle in the setting of these charge controls is to set an upper bound for prices under charge control. In fact, as explained in Section 7, since the complex allocations in our model result in marginally lower levels of cost than the anchor product pricing cross-check, we believe it is reasonable to set the charge controls with reference to costs derived from the Cost Allocation model (CA model). As this is based on a comprehensive view of the allocation of costs in Openreach, it is likely to reflect the

[44] See for example, the Network Charge Controls.
http://stakeholders.ofcom.org.uk/consultations/review_bt_ncc/statement/

early stages of NGA roll-out. This approach has the advantage of including economies of scope which are already realised in the allocation of costs to NGA assets. The setting of charges with reference to this model can therefore be regarded as including a "technology dividend" in the form of these economies of scope, and is also consistent with the over-arching objective of anchor product pricing in that it ensures that prices will not rise as a result of technology change.

***Question 3.4**: Do respondents agree with our proposal to apply anchor product pricing as a guiding principle in setting the charge controls, whilst including economies of scope which result from the allocation of costs in our financial modelling? Please give reasons for your answer.*

Valuation of duct for the purpose of setting charge controls

3.33 Duct assets represent about a third of the asset base, with a quarter of LLU/WLR charges derived from duct related depreciation and the cost of capital. It therefore forms a substantial part of the costs in our pricing model.

3.34 Our document entitled "Valuing BT's Copper Network", [45] published in 2005, considered how BT's copper access network (including duct) should be valued in the context of price setting for copper access services.

3.35 The decision was that the current cost valuation approach, which had been used since 1997 to value BT's assets on a replacement basis, had led to BT receiving a higher level of return on capital on the old assets than was justified on economic grounds or the need to fairly compensate investors.

3.36 The main decisions in 2005 were that:

- Retaining a replacement cost valuation for all BT's assets was not appropriate as this could only be justified if it was expected that a new operator was considering building a new nationwide access network. As this was not the case, the replacement valuation approach over-compensated BT and led to inflated access service prices;
- in the near term we would put more weight on protecting customers whilst providing appropriate incentives for competition to develop in the medium term; and
- we would create a regulatory asset value for assets built before 1 August 1997 ("pre-1997") based on actual BT capital expenditure and value assets built after 1st August 1997 ("post-1997") on a replacement cost basis.
    - This ensured that investors were compensated on the basis under which the investment was made (i.e. pre-1997 on an HCA basis, post-1997 on a CCA basis);
    - While also ensuring that over-time as assets depreciated the balance of the valuation would increasingly be fully CCA.

[45] http://stakeholders.ofcom.org.uk/binaries/consultations/copper/statement/statement.pdf

3.37 We noted in the 2005 statement that we would consider the continued application of the pre-1997 adjustment in 2009/10.

3.38 With effect from 2009/10, following the negotiation of a new civil engineering contract maintenance and provision of ducts, BT updated the cost and national build discount elements of it's absolute valuation calculation for their duct assets. BT's 2009/10 RFS duct valuation increased to £6.5 billion, an increase of £1.8 billion compared to the 2008/09 equivalent valuation. The largest single reason for this increase is a much lower national build discount. The discount was previously set at 45% and is now assessed by BT to be 14.5%, based on data provided by the new single contractor.

3.39 BT has also argued that the RAV treatment of pre-1997 investment is no longer appropriate. It argues that the competition that we were seeking to promote in 2005 (based on WLR, SMPF and MPF) has now been established. In addition, encouraging investment into the local access market is now a key government and regulatory objective, and a regulatory ruling which imposes charges for legacy assets significantly below replacement cost reduces the returns which can be made from such investment.

3.40 One key consideration at the heart of these arguments is that the relationship to the pricing of duct access within the Physical Infrastructure Access (PIA) remedy. Duct access is one of the competition remedies designed to promote investment in NGA which will in future compete with LLU and WLR. Competition between current and next generation infrastructure could be distorted if the former is priced too low.

3.41 Clearly, there is scope for substantial changes to regulated charges from either a change in the RAV approach or the adoption of the proposed revised valuation. If the BT valuation is fully adopted under current RAV rules, we estimate that the impact on rental charges for both MPF and WLR would be an increase of £3-4 per annum per line. We estimate that, if the RAV adjustment of pre-1997 assets was to be removed, this would add an additional £9-10 per annum per line on the basis of BT's current valuation. Therefore, we estimate that the combined impact would be of the order of £12-14 per annum per line.

3.42 Annex 5 sets out our detailed review of the 2005 RAV decision and BT's valuation. Our provisional conclusions are set out below. In summary we consider that the decision on the treatment of duct assets set out in the 2005 review remains sound. We further consider that the revised valuation BT has proposed for post-1997 assets cannot be reconciled with expenditure over that period and that for the purposes of this charge control the value should be based on an indexation of post-1997 expenditure, with allowance for BT's estimate of the economies of scale for large scale construction.

RAV treatment of pre-1997 assets

3.43 Since 2005 we have conducted two related market reviews, Wholesale Narrowband Analogue Access in 2009 and Wholesale Line Access in 2010. Our conclusions on market power and competitive infrastructure provision are that the competitive landscape has not changed significantly since 2005. BT remains the dominant provider of access and will continue to hold this position for at least the next 3 years. SMP conditions for the provision of duct access do not change this conclusion. They were imposed in response to an assessment that competitive entry in duct provision remained highly unlikely. Competitive provision of access services enabled by LLU, WLR and PIA are all based on regulatory intervention to address this lack of competitive duct provision.

3.44 BT has argued that, in order to get the appropriate incentives in place for NGA investment, it is necessary to remunerate the existing assets on the basis of a full CCA valuation. However, efficiency is properly served if prices are set on the basis of forward-looking opportunity costs (strictly, marginal cost), and sunk costs play no part in this measure of cost. This argument is particularly applicable where NGA investors can use existing BT ducts (as is likely to be the case). If space exists in BT's ducts, the most efficient way of providing NGA is likely to be to use this. Moreover, one effect of an unexpected return to full CCA valuation of all assets could be to undermine the business cases of the LLU operators. It could create a perception that further changes of this sort could occur in future and that regulation would not be consistent over time, with the risk that future competitive investment would be stifled.

3.45 In the 2005 treatment of pre-1997 assets we sought to strike a balance between the treatment of sunk costs, and ensuring appropriate incentives for forward investment. It is appropriate to allow BT a reasonable return on pre-1997 investment. This is achieved by the RAV adjustment. It is not necessary to allow higher returns in the form of windfall gains which arise simply as a result of a change in the accounting convention used to value BT's duct assets.

3.46 We agree that consistency between LLU and WLR charges and PIA charges is desirable, not least because all can be used to provide voice and broadband services and are therefore, to some extent, substitutes at the wholesale level. However, for consistency it is relative prices, not the absolute level of prices, that matter and we do not consider that the appropriate response is to raise copper access prices above an economically efficient level.

3.47 We would expect that the difference between the charges for MPF and PIA should be at least as great as the difference in their respective incremental costs. So if we maintain the RAV adjustment in copper based access services, we would expect that any assessment that we make of duct access charges would reflect a consistent approach to asset valuation, recognising the RAV adjustment. In reaching this view, we have taken utmost account of the European Commission's recommendation on NGA which states that NRAs should regulate access prices to civil engineering infrastructure consistently with the methodology used for pricing access to the unbundled local copper loop'[46].

Post-1997 assets

3.48 The rationale for allowing a CCA valuation of post 1997 assets was twofold:

- The post-1997 assets had been consistently valued on a CCA basis throughout, so there was no concern, at the time, about windfall gains on these assets; and

- It was felt that, in the longer term, "concerns over incentives to invest in access infrastructure have merit, (and)….the approach Ofcom is taking will, in the longer term, restore the asset base to its CCA value in line with Ofcom's previously stated view on the appropriateness of CCA as a basis for encouraging infrastructure investment."

3.49 Clearly concerns about the effect of changes to valuation methodologies on investor confidence remain appropriate for this current review of duct.

[46] Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32010H0572:EN:NOT

3.50 With respect to future competitive entry, there are two questions:

- whether it is necessary to price services using the existing assets on the basis of full costs (i.e. including sunk costs), in order to give the right signals for competitive entry; and
- whether such entry is likely.

3.51 For competitive entry to be efficient, it is necessary for the costs of the entrant to be lower than the forward-looking opportunity costs of the incumbent. Where there is spare capacity and the duct network is unlikely to require replacement, full replacement valuation would overstate this forward-looking cost. However, as we argued in 2005, competitive entry in duct investment is not considered likely in the forward look period of our recent market reviews, though it may become so in the longer-term future. Allowing post-1997 assets to be valued on a CCA basis now allows the total duct valuation to move towards an appropriate valuation for promoting competitive investment without the need for step changes in value or charges.

3.52 We note that if future competition was never to emerge, embedding full CCA valuations into the charge control valuations may lead to more volatility in charges than would be necessary simply to ensure a reasonable return to investors. We have not undertaken a detailed long term assessment of future competition but it will be appropriate to consider this for the future. We propose to include a consideration of this issue as part of our next set of market reviews.

3.53 Accordingly, we consider that CCA remains the appropriate approach for post 1997 valuation for this review.

Valuation of post-1997 assets

3.54 In its calculation of the duct valuation used in the RFS, BT uses an "absolute" valuation method that at its core is formed of two parts as set out below.

Figure 3.1: BT Absolute Valuation Methodology

Duct Inventory	Cost of work	Total Asset Value
Measure: Length/type of duct plus manholes etc	**Measure**: Contract rates for duct renewal	Additional calculations then used to derive the values of assets over 40 years old, depreciation and values pre/post 1997
Source: BT's electronic operational asset records	**Source**: Current contractor rates	

3.55 The 36% valuation increase in 2009/10 is almost wholly due to an increase in the cost part of this calculation.

3.56 This is not however due to an increase in contractor's rates, of which we have evidence of a recent reduction, but to BT's assessment of the scale economy of a national rebuild of the duct network which has moved from c45% to c15%.

3.57 Consistent with the 2005 decision, for the purpose of setting prices, assets acquired after 1997 should be valued on a current cost basis. Therefore, to the extent that

BT's new valuation represents a robust basis for estimating a current cost valuation of post-1997 duct assets, our starting point would be that we should take it into account when setting charges.

3.58 However, as explained below and in more detail in Annex 5, we do not consider that BT's valuation represents a robust basis for estimating a current cost valuation of post-1997 duct assets.

3.59 BT's RFS are audited by PwC. In discussions with PwC they have made is clear that they only consider duct as a component element in their overall audit of BT's statements on returns in the regulated markets.

3.60 We also asked PwC to provide some clarification of the extent to which the audit of the RFS considered the basis of BT's valuation of post-1997 assets. As set out in PwC's response of 14 March 2011 (published with this consultation at Annex 16), it explained that, *"...audit procedures in connection with one valuation method and performed for one purpose are not designed to, and cannot be assumed to provide any comfort or assurance over another valuation method for another purpose, e.g. the valuation of post 1997 duct assets on a stand-alone basis for the purpose of the RAV model".*

3.61 In light of this, we do not consider that PwC's audit of the RFS means that we should accept BT's valuation for the purpose of setting the charge controls.

3.62 BT does not attempt to directly determine an absolute valuation for post-1997 duct. Instead, we understand that the value is derived from the absolute valuation of the duct asset in the following way.

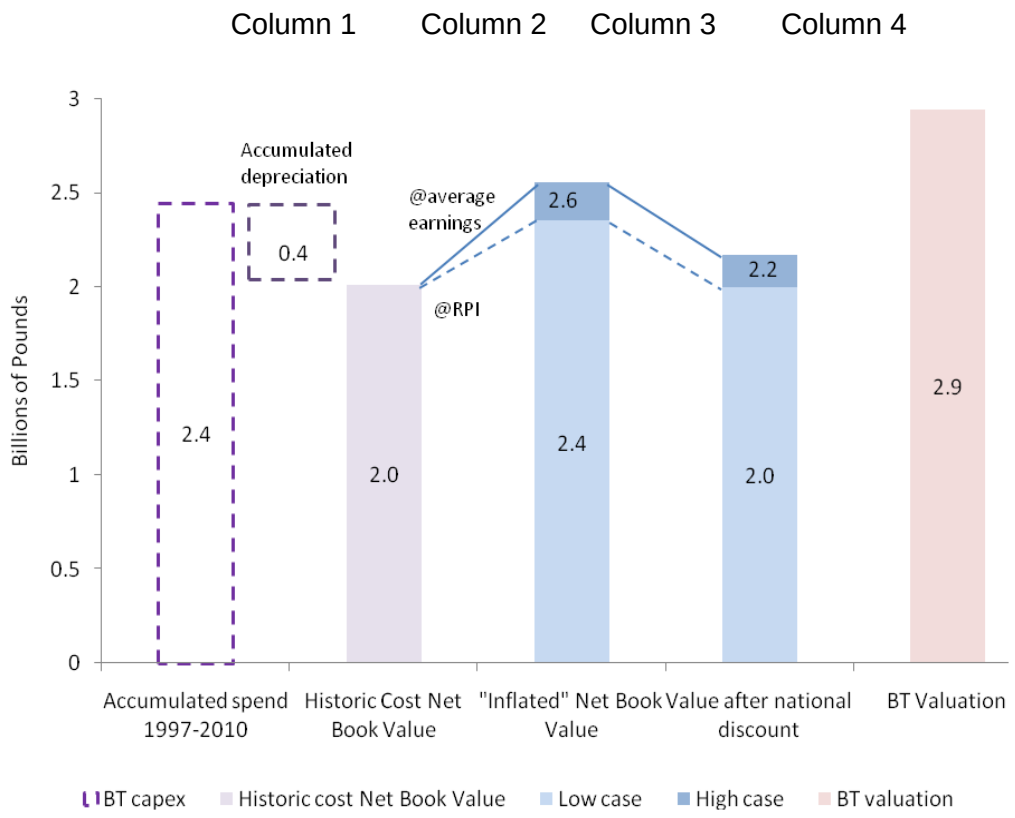
- BT compares the current valuation with historic expenditure.
- It then derives an inflation index that would inflate historical expenditure to be equal to the new valuation.
- This index is used to inflate post 1997 expenditure.
- The resultant value for post 1997 expenditure is then adjusted for depreciation.

3.63 We have identified significant discrepancies between BT's valuation of post 1997 duct and our analysis using BT's actual capital expenditure over the same period. It includes a valuation gap of approximately £1bn between BT's post 1997 valuation and alternative valuations based on actual capital expenditure inflated by RPI or industry indices.

3.64 We would not expect that duct capital expenditure in recent years to diverge so far from a valuation using inventory data.

3.65 However, as illustrated in the Figure 3.2 below, BT's estimate of the Net Replacement Cost of the post-1997 duct assets appears to be significantly more than would be expected based on historical spend, even before adjusting the historical spend to reflect the national discount.

Figure 3.2: Project of replacement cost for post-1997 duct



3.66 The graph sets out information on the amount actually spent on the duct assets since 1997, as follows:

- In column 1, the total spend on duct assets since 1997 of £2.4 Billion less the accumulated depreciation on those assets, of £0.4 Billion;
- In column 2, the net book value of those assets, on an HCA basis, of £2.0bn.

3.67 The graph then projects how these values might be expected to have changed since they were actually incurred, as follows:

- In column 3, we estimate how costs might have been affected by inflation on two simple bases. If duct build costs had increased in line with general inflation, we would expect the net replacement cost to be around 17% higher than the net book value (at £2.4 Billion). If costs had moved in line with average wages, we would expect the net replacement cost to be around 27% higher (at £2.6 Billion).
- In column 4, we reduce these values by 14.5% to reflect the the effect of BT's estimated national discount, thus making our simple estimate consistent with the basis on which BT's own CCA Net Replacement Costs are produced and ensuring comparability.

3.68 On this basis, we would have expected that, absent any significant changes to the cost of building duct, the net replacement cost of the post-1997 duct to be around £2billion.

3.69 On this basis, BT's estimated net replacement cost of £2.9billion was significantly higher than we might have expected.

3.70 BT has offered a range of reasons why duct costs may have increased in real terms. BT quoted data from the Office of National Statistics supporting BT's belief that "the type of activity involved in the construction of duct has been less amenable to efficiency improvements than in most other market sectors". BT also noted that duct construction activity is likely to incur relatively higher costs for implementing and ensuring compliance with health and safety legislation and legislation on streetworks and traffic management (BT quoted the New Roads and Streetworks Act 1991 and the Traffic Management Act 2004 as examples).

3.71 This may explain some of the increase; we have calculated that the General Building Cost Index ("GBCI") published by Royal Institution of Chartered Surveyors ("RICS") equates to approximately RPI plus 1.35% for the post-1997 period indicating that the costs of constructing ducts over this period could have increased at a rate in excess inflation as measured by RPI.

3.72 However, we estimate that duct costs would need to have increased by an average annual rate of approximately 3.4% above RPI for the cost of replacing the duct acquired during the post-1997 period to be so much higher than the original cost of acquiring it.

3.73 We do not think that BT's explanations provide sufficient evidence to demonstrate that its proposed value is reasonable.

3.74 Instead, the main reason why BT's approach delivers a higher valuation than might be expected based on our approach, appears, to a significant extent, to be a consequence of arithmetic rather than evidence that supports a difference in the underlying value of the assets.

3.75 BT's approach, as explained above, considers the extent to which the cost of replacing *all* assets has changed since the assets were acquired. It then allocates a proportion of that total change to the cost of acquiring the post-1997 assets, based on the proportion of total spend (in the last 40 years) that was incurred after 1997.

3.76 The risk with this approach is that newer expenditure is over-inflated compared to older expenditure. In effect, BT's approach assumes that changes in the cost of replacing assets (compared with the historical cost of acquiring those assets). On this basis, the replacement cost of assets acquired a year ago is derived by inflating last year's spend by the same ratio that is applied to derive the replacement cost of assets acquired 20 years ago.

3.77 To illustrate this point, we have considered the impact of BT's approach on the duct assets acquired in the two most recent years (2008/09 and 2009/10).

3.78 In the absence of any major changes to the cost of building duct in the last year or so, we would expect that the cost of replacing the duct bought in the last two years to be very similar to the cost of building that duct in the first place (as there would be no reason for it to have changed much in that short period). After applying the national discount, we would therefore expect the replacement cost of the duct acquired in the last two years to be significantly less than the actual cost.

3.79 We, therefore, do not consider that the cost of replacing the post-1997 duct assets can have increased by as much as BT's valuation suggests. In addition to the analysis set out above we also note that:

- The run rate of recent capital expenditure (approximately £206m per annum over the last 5 years) compares to a CCA depreciation charge of £311m in 2009/10. The size and direction of this difference for a relatively stable and long lived asset base indicates that the CCA valuation may not be robust. There are a number of possible explanations for such a difference such as a) the condition of the duct network is not in a steady state or that b) repair and renewal investment is cyclical. We have found no evidence to suggest these conditions exist.

- We commissioned BDO LLP to carry out an independent assessment of BT's valuation process[47]. Their report shows that BT's valuation process is complex involving the extraction and processing of large quantities of physical and financial data. Throughout the process it is necessary for BT to make judgements and estimates in the detailed methods used at each stage in the process. There would appear therefore to be an inherent potential for substantial change in the valuation from year to year. A non-confidential version of this report will be published in the near future.

3.80 Our view is that in the absence of clear evidence to suggest there are exogenous increases in costs in the provision of duct since 1997, the claimed increase in the value of post-1997 investment cannot be considered robust. This position is supported by contributions from various stakeholders on the question of the valuation of BT's ducts. In a report on Cost Accounting and Price Controls commissioned by UKCTA (the UK Competitive Telecommunications Association, which represents BT's main competitors), Towerhouse Consulting provide an analysis of duct valuation. This point is also addressed in a Frontier Economics report on Openreach's next price controls, commissioned by Sky and the Talk Talk Group. Extracts from the conclusions of these reports are set out in Annex 5.

3.81 It is worth noting that we do not specifically challenge the valuation of the total duct asset included in the audited RFS, but note that the methodology used in the determination of the total value and the attribution to the post 1997 assets is sensitive to a large number of assumptions, which if varied, give substantially different outcomes.

Alternative valuation approaches

3.82 Analysys Mason undertook a review of how such assets are valued elsewhere and the pros and cons of alternative approaches. It's assessment was that a CCA approach remained appropriate and that an absolute valuation was desirable. However, it notes that in the absence of a robust absolute valuation, indexation is an acceptable second best method, ideally with the index derived from industry costs. It does note that continued use of indexation to estimate CCA values is likely, over time, to lead to a variation from a 'true' replacement value.

3.83 Therefore, given our concerns over BT valuation of post-1997 assets and the absence of an alternative absolute valuation method we have considered alternatives based on indexation of BT post-1997 expenditure.

47The review focussed on BT's methodology and BDO were not asked to undertake an independent valuation of BT's duct or to validate the current valuation.

3.84 However, we consider that any approach should, as far as possible, remain consistent with the principles of valuation used in the past, so that we will not solely draw on indexation, but also consideration of how a true 'replacement' network would be provided. Accordingly, our approach includes the use of an economy of scale national roll out discount, as has traditionally been used by BT in its estimate. For the purposes of this consultation, in the absence of a clearly defined alternative for this discount, we have used BT's current estimate of 14.5%.

3.85 As set out in Annex 5, we have drawn on the work of Analysys Mason in selecting an appropriate index for use in our estimation. We have selected the General Construction Services Index (GCSI)[48] as the most appropriate index for the value estimation in this charge control.

3.86 In Annex 5 we set out the possible range of values for the assets with the range defined by the degree to which BT's costs are below the national average, as we have some evidence that BT's buying power gives them an negotiating advantage when dealing with suppliers. The upper end of the range defined by the GCSI applied each year less 14.5% and the lower end defined by GCSI – 1% applied each year less 14.5%.

Ofcom estimate of CCA for post-1997 assets	**Low case**	**High case**
	£Bn	**£Bn**
Net Replacement Cost	**2.0**	**2.2**

3.87 We have used £2.1Bn as the base case for our charge control model.

3.88 We have also noted in Annex 5 how this range might be reconciled with BT valuation of its duct network under more consistent application of duct cost inflation assumptions over the last 40 years.

3.89 We consider that this indexation based approach is appropriate for this charge control. However, as Analysys Mason has noted continued use of indexation risks significant deviations from true replacement values. Accordingly, we consider that in addition to any future consideration of the appropriateness of the 2005 Review approach to duct valuation, as noted above, we should also consider the extent to which replacement values for duct can be estimated if a CCA approach is continued.

***Question 3.5**: Do you agree with our assessment that the decision on the treatment of pre-1997 duct assets set out in the 2005 Valuing BT's Copper Network remains appropriate for this set of charge controls? If not, why do you consider that the basis of valuing pre-1997 assets should change and what valuation basis should be used?*

***Question 3.6**: We note that we would expect that the difference between the charges for MPF and PIA should be at least as great as the difference in their respective incremental costs. Thus, if we maintain the RAV adjustment in copper based access services, we would expect that any assessment that we make of duct access charges would reflect a consistent approach to asset valuation, recognising the RAV adjustment. In reaching this view we have taken utmost account of the European Commission's recommendation on NGA. Do you*

[48] The General Building Cost Index is published by the Building Cost Information Service (BCIS), a service of the Royal Institute of Chartered Surveyors. Information on the GBCI and the GBCI data, including 5-year forecasts, are available from BCIS at http://www.bcis.co.uk/

agree with this assessment of the need to recognise the RAV adjustment in the setting of duct access charges? If not, please give your reasoning.

***Question 3.7**: Do you agree that it remains appropriate to value post-1997 assets on a replacement/CCA basis? If not, please give your reasoning.*

***Question 3.8**: Do you agree with our assessment that as BT's recent valuation of post-1997 assets is not consistent with alternative estimates of replacement values it does not form a appropriate basis for setting charges? If not, please give your reasoning.*

***Question 3.9**: Do you agree with our proposal to include a valuation of duct in the charge controls based on indexation of post 1997 expenditure? If so, should this indexation be based on RPI; GCSI or GCSI adjusted for either productivity, scale economies or both (the detailed examination of these indices is set out in Annex 4? Please give reasons for your answer.*

***Question 3.10**: Do you agree with our proposal to discount the indexed valued by an estimate of a national roll out of duct? If so, do you consider BT's estimate of 14.5% to be appropriate? If you disagree with our approach please give your reasons.*

***Question 3.11**: Our range for the duct value is defined by the degree to which BT is able to establish contracts with cost below the national average? Do you consider that it is reasonable to expect BT to achieve below national costs on average?*

Use of glide paths to align charges with costs

3.90 As part of our charge control assessment, we have considered whether to make any one-off adjustments to prices. We explain below why our general preference is to adopt a "glide path" approach, whereby the charge control would bring about a gradual convergence of prices and unit costs over the period of the control. We also explain that some adjustments could be justified at the start of the control to prices which are markedly out of line with cost.

General preference for glide-paths

3.91 In setting charge controls, particularly where the controls replace similar existing controls (as is the case for the LLU and WLR charge controls), we have a strong preference for glide paths, rather than one-off adjustments, to align charges to costs. This is largely for incentive reasons, as we explain below.

3.92 One of the features of price cap regulation is that profits may diverge from the level expected at the time when the control was set. Any such divergence may be taken into account when X is reset in the next price control review. In principle, one way in which this could be done is by a one-off adjustment to prices, which would bring the firm's expected rate of return to an acceptable level in the first year of the new cap. The main alternative is a "glide path" approach, which would set the control so that

the expected rate of return reaches an acceptable level by the end of the price control period.

3.93 The benefit of the glide path approach is that it approximates more closely than one-off reductions to the workings of a competitive market in which excess profits tend to be gradually eroded as rivals improve their own efficiency. It also avoids discontinuities in prices over time and leads to a more stable and predictable background against which investment and other decisions may be taken, by both suppliers and customers, in the telecoms market.

3.94 This approach also has greater incentives for efficiency improvement as it allows the firm to retain the benefits of cost reductions made under a previous charge control for longer. A key difference between price control and rate of return control, in terms of their incentive properties, arises from the longer regulatory lag in the former. This means that cost reductions feed into price reductions only after a period during which the firm receives the benefit of increased efficiency. One-off adjustments to prices would reduce the effective regulatory lag, and hence the incentives to reduce costs.

3.95 Whilst the above discussions relate to one-off cuts to prices, one-off increases would similarly raise concerns about incentives for efficiency. Allowing a rapid rise in charges (i.e. via one-off price adjustments) would signal to Openreach that cost increases would quickly be followed by price rises. Therefore, if cost increases resulted in swift price increases this could reduce the incentive to control costs. Indeed, one-off adjustments upwards could create an expectation that other one-off adjustments – up or down – will be made in future, and this could also have adverse effects on incentives.

Consideration of one-off reductions under some circumstances

3.96 While the above suggests a general preference for the glide path approach in the context of RPI+/-X controls, this does not mean we should rule out one-off reductions where there are good reasons to introduce them. In the context of the LLU and WLR charge controls, it is useful to understand the circumstances under which we might consider one-off reductions. This might include, for example, scenarios where:

- There are strong allocative efficiency arguments for bringing prices into line with cost sooner (such as where BT's prices of particular services are out of line with cost-orientation requirements).

- The previous charges were unregulated or are not subject to charge control and where Openreach's charges are high relative to costs.

- There is a need to align the charges for corresponding ancillary services provided alongside MPF and SMPF where the charges for MPF and SMPF variants are materially out of line and this may have a distorting effect on the market.

3.97 Therefore, if prices of individual services are materially out of line with costs we may need to address this through one-off reductions. However, in assessing possible one-off reductions, we would need to balance this against alternative (and potentially more proportionate) regulatory approaches.

3.98 Individual services for which we have considered one-off adjustments in the proposed LLU charge controls are discussed in Section 4.

***Question 3.12**: Do respondents agree with our preferred approach to use glide paths to align charges with costs except in the circumstances discussed above where one-off adjustments may be preferable? Please give reasons for your response.*

Charge control compliance

Compliance

3.99 Compliance with the current charge controls is currently monitored by Ofcom on the basis of data submitted by Openreach within three months of the ending of each relevant year.

3.100 We propose to maintain the same arrangements for compliance and requirements for provision of data in the new charge controls. These requirements are set out in Annex 13 (draft Legal Instruments), in particular, at draft Conditions FAA4(A).3, FAA4(A).4, FAA4(A).5 and FAA4(A).14 and draft Conditions AAAA4(WLR).3, AAAA4(WLR).4 and AAAA4(WLR).9 for LLU and WLR respectively.

***Question 3.13**: Do you agree with Ofcom's proposal to impose the arrangements for charge control compliance and requirements for provision of data set out in Annex 13? Please give reasons for your answer.*

RPI as the appropriate index for price control

3.101 Ofcom's approach to indexation in both retail and wholesale price caps has been to use the retail price index (RPI) measure of inflation. We recognise that there are alternatives measures of inflation – e.g. the consumer price index (CPI) which focuses to a greater extent on household consumption of goods than RPI does, and also RPIX which calculates the RPI excluding mortgage interest payments.

3.102 In our view RPI remains an appropriate means by which to index-link this set of charge controls. RPI remains a widely used measure of general inflation and is the index typically used to set price caps in other sectors subject to economic regulation.

3.103 As for the current controls, we propose that the RPI indexation applied should be the amount of change in the RPI for the year, ending on 31 October before the start of the Relevant Year, expressed as a percentage rounded to two decimal places.

***Question 3.14:** Do you agree with Ofcom's proposal to use the RPI as the appropriate measure of inflation for indexation? Do you agree that change in RPI for the year to 31 October preceding the start of each Relevant Year should be used? Please give reasons for your answers.*

Use of prior year revenue weights

3.104 As in previous price caps and charge controls, we propose to use prior financial year revenue weights to calculate charge changes in the compliance model. In making this proposal, we have taken account of the need to ensure that Openreach's customers and end users are adequately protected against manipulation of regulated charges, and whether a change to the system of prior year weighting is necessary for

this. This is discussed in detail – including a question for consultation – in Section 4 which deals with safeguards against gaming of the controls.

Provision for "Carry-Over"

3.105 The current controls (and other controls applied to wholesale services) enable carry-over, i.e. correcting adjustments to the controls are made in the subsequent year if the regulated firm sets charges above or below the level allowed by the cap in any Relevant Year. As well as being a safeguard mechanism, this ensures that the regulated firm has the ability to recover its relevant and efficiently incurred costs across the life of the controls.

3.106 We propose to retain these provisions in the new Conditions in order to ensure flexibility in the compliance arrangements to enable adjustments to prevent under or over-recovery of costs across the life of the controls.

***Question 3.15**: Do you agree with Ofcom's proposal to retain provisions for "Carry Over" in the new controls? Please give reasons for your answer.*

Implementation of the controls at the start of the charge control period

3.107 Condition FAA.6, established in the WLA market review, requires that changes to charges for existing Network Access (including LLU services) be notified with at least 90 days notice.[49] Likewise Condition AAAA6(a), established in the WFAEL market review, requires that the changes to charges for the WLR rental service should be notified with at least 90 days notice (other WLR services are subject to a 28 day notification requirement).[50]

3.108 However, because the new charge controls will not be in place until summer 2011 at the earliest, this means that the first period of the control will be considerably shorter than a full year and a 90 day notice period would eat further into this period, we have considered whether a shorter minimum notice period is appropriate for any charge changes made under the new controls before April 2012.

3.109 In assessing this issue we have balanced the need for there to be sufficient time for industry to adapt to new prices (e.g. for business planning and 'backing off' new charges in downstream contracts), with the need to ensure that the efficient charge changes can be made as quickly as possible, especially given that the first period of the control will be considerably shorter than a year.

3.110 Our preference is to allow any charge changes made under the new controls prior to April 2012 to be made with a minimum 28 days notice. We recognise that this is significantly shorter than the 90 day period required by Conditions FAA.6 and AAAA6(a). In reaching this judgment, we have taken into account that industry will be able to anticipate the new charges through the consultation process which establishes tight ranges for the new controls. We have also taken into account that 28 days notice was given for rental charges at the start of the last LLU controls under similar circumstances.

[49] http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf
[50] http://stakeholders.ofcom.org.uk/binaries/consultations/review-wholesale-fixed-exchange/statement/statement.pdf

3.111 For LLU ancillary services in the last review, we decided that a period of 90 days notice was appropriate. In coming to this conclusion we recognised that the nature of the basket structure adopted for these services may not allow a CP to predict what an individual charge within the basket may be with any confidence. However, under this review, we are proposing to remove five of the largest volume services from the baskets and charge control these individually. The services that we propose should remain in the basket are not used as frequently. We therefore consider that a 28 day notice period is proportionate for these services.

3.112 We have also considered whether the controls for rental and other services proposed to be individually controlled (i.e. key LLU migration services – see Section 4) should be set with reference to explicit charge ceilings rather than a controlling percentage in the first period of the new controls (i.e. the period between the first day of the new controls and 31 March 2012). Whilst this would be a departure from usual price cap compliance arrangements, it has the benefit of providing certainty, both for Openreach and its wholesale customers about the charges for key services in the first period of the controls. It would also require that the date of the first charge changes be fixed. The draft conditions in Annex 13 have been drafted such that the first charge changes for these services would be made 28 days after the start of the controls.

3.113 We would welcome stakeholder views on these proposals.

Question 3.16*: Do you agree with Ofcom's proposal that charge changes made under the new controls prior to April 2012 should be made with a minimum 28 days notice? Please give reasons for your answer.*

Question 3.17*: Do you agree with Ofcoms proposal that charge ceilings for key services should be set for the 1st period of the new controls – i.e. the period between the first day of the new controls and 31 March 2012? Please give reasons for your answer.*

Section 4

LLU charge control structure

Introduction and summary

4.1 In this section we discuss our approach to setting the charge controls on LLU rental and ancillary services.

4.2 For the next charge control, we are proposing separate individual controls for MPF and SMPF rental.

4.3 We propose the following controls for ancillary services:

- Charge controls on three baskets of ancillary services as in the previous control. The basket of services will be grouped around the underlying rental services (MPF, SMPF) and comingling services. However, unlike the previous control, we will impose individual price caps on each of the baskets of ancillary services instead of a single control applied to each basket.
- Separate treatment of five key migration services.
- Inertia clauses, which limit the permitted change on individual charges from one year to the next. We are proposing to set tighter inertia clauses than in previous controls and are consulting in the range 2.0% - 7.5%.
- Alignment of the charges for some equivalent service variants for MPF and SMPF.

4.4 In the sections below we set out our reasoning. We discuss in turn:

- principles for setting charge controls;
- factors determining the proposed scope of the charge controls.
- proposals for the charge control of LLU line rental;
- the proposed treatment of ancillary services, including key migration services;
- proposals to prevent gaming of prices within baskets; and.
- proposals for treatment of services on which issues have been raised during this review - low volume services, time related charges (TRCs), special fault investigation (SFI), electricity charges, expedite connections, and enhanced care options.

Principles for setting charge controls

- We have suggested some principles that guide our approach to imposing charge controls on ancillary services which we discuss below.[51] We consider that these

[51] These principles are consistent with what we said when setting the current LLU charge control. See statement on Openreach Financial Framework paragraph 6.10
http://stakeholders.ofcom.org.uk/consultations/openreachframework/statement/

principles are consistent with our statutory duties set out in the Act, in particular that Ofcom must have regard to the principles under which regulatory activities should be transparent; the desirability of promoting competition in relevant markets; and the desirability of encouraging investment and innovation in relevant markets.

These principles are:Charge controls should encourage efficiency in service provision and enable Openreach to recover efficiently incurred costs.

- Charge controls should not give the regulated firm incentive or opportunity to manipulate prices to favour its own downstream operations or unfairly enhance profitability by raising the charges for services with growing volumes ('gaming').

- Charge controls should be easy to understand and straightforward to implement.

Factors determining the scope of the charge controls

4.5 In this section we describe our approach to setting the scope of the current charge control and the application of other pricing remedies already established in the WLA market review. We also explain our proposals for application of the cost orientation obligations imposed by the WLA market review.

4.6 The framework of regulatory controls on LLU set by the WLA market review[52] provides general safeguards which allow Ofcom to intervene in the event that these services are provided on a basis that is not fair and reasonable. In particular, Openreach has obligations to provide network access and new network access on fair and reasonable terms and conditions (Condition FAA1), to provide LLU (Condition FAA9), to notify charges, terms and conditions (Condition FAA6), to ensure that charges are cost oriented (FAA4) and not to unduly discriminate (Condition FAA3). These conditions provide that:

- In the case of Condition FAA3, Openreach cannot discriminate unduly between persons or a particular description of persons in relation to matters connected with Network Access.

- In the case of Condition FAA4, that Openreach must ensure that charges are 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.

- In the case of Condition FAA6, Openreach must give notice of charge changes at least 28 days (and in many cases 90 days) before they are implemented.

- In the case of Condition FAA1 and FAA9, access services provided within this market must be on fair and reasonable terms and conditions.

4.7 This framework offers some protection for consumers. However, we would be concerned that Openreach would be able excessively to increase prices of services within the SMP markets defined in the market review absent explicit price regulation or a pricing constraint from another regulated product.

[52] http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf published on 7 October 2010.

4.8 Therefore, in addition to these general conditions, the WLA market review concluded that a charge control should be implemented. The detail of the scope and form of the charge control is the subject of this consultation[53].

4.9 In practice the charge control can apply to any or just a subset of the services within the scope of the cost orientation condition. In the current control we imposed different types of regulation on LLU services:

- A charge control was imposed on the core rental and some ancillary services (the latter were also subject to a cost orientation obligation).
- The remainder of services which were within the scope of SMP condition FA9 (now FAA9) (for example as they are reasonably necessary for the provision of LLU) were subject to general remedies, including a cost orientation requirement.

4.10 In some cases, there are good reasons why it may be appropriate to rely only on general remedies, without including those services in charge controls. For instance:

- **A prescriptive control can stifle innovation.** The dominant provider may have more scope to innovate around the supply of certain services (for example levels of care or discretionary features) than others (for example the core rental and ancillary services necessary for the core rental service). A strict charge control obligation on the provider's services might limit its scope and incentive to invest in innovative products or offer responsive solutions to customers' needs which create significant additional value for customers. Therefore, in general it may be appropriate to use less restrictive forms of price regulation on genuinely new and innovative services.

  In practice this means it can be helpful to consider whether a service is genuinely new (i.e. satisfying a new demand or satisfying demand in a genuinely new and innovative way). Here a prescriptive charge control may be inappropriate. By contrast a charge control would be more appropriate to control the price of existing services in markets where Openreach has longstanding SMP.

- **Practical limitations.** In some cases there are practical impediments to imposing a charge control. For example, where volumes of services are low it may not be possible to forecast costs accurately and therefore to robustly estimate an appropriate charge.

  It may also be difficult to charge control truly new products (i.e. products which meet a new demand and do not partially or fully replace existing products). This is because it could be difficult to accurately assess their demand and costs.

  Furthermore, the costs of providing certain services may be difficult to observe directly. For example, the costs of providing expedited services include the cost of additional systems and management costs required to plan services at short notice or the additional engineering capacity required to be able to offer services at short notice.

  Sometimes these practical difficulties can to some extent be addressed by charge controlling the service within a wider basket of goods. In some cases,

[53] The imposition of any charge control obligation is also subject to the tests set out in the Act, in particular in section 47 and section 88. The factors here clearly feed into that assessment.

however, it may be more appropriate to rely solely on a cost orientation requirement.

- **Existing regulatory pricing constraint.** In some cases a charge control may be unnecessary where the dominant provider's pricing is constrained by the availability of a product which is already subject to a specific control. In the current WLR charge control[54] we noted that some customers of higher levels of service care ("enhanced care") for WLR services had the opportunity to switch to the level of care associated with the core rental which was supplied at regulated prices. Together with other factors, this led Ofcom to conclude that further price regulation was unnecessary.

4.11 In practice, when determining the scope of the charge control, Ofcom has to balance the pros and cons of different types of regulation. A prescriptive charge control provides greater certainty that prices will reflect costs and offers explicit incentives for Openreach to secure cost efficiencies over the charge control period. However, prescriptive controls can harm incentives to develop new and innovative products, as there is limited scope to adjust prices. Charge controls can also be practically difficult to implement for new or low volume products (though a basket control can in some cases mitigate these difficulties). Whereas less restrictive forms of price regulation provide Openreach with greater flexibility to price and respond innovatively to consumer demand, they also provide customers with less certainty over individual prices. Ultimately, in determining the appropriate balance, Ofcom must act in accordance with its statutory duties and its final decision must meet the various tests set out in the Act.

Line rental charge

4.12 Line rentals are the largest MPF and SMPF services in terms of Openreach's revenues. In the 2010 RFS[55], Openreach reported revenues of £188m for external MPF rentals £62m for external SMPF rentals.

4.13 We are proposing that the charges for MPF and SMPF rental should each be separately controlled to protect downstream markets and consumers from pricing distortions. This is consistent with the approach taken in the previous controls and will ensure that CPs and Openreach have maximum clarity of the prices of the core rental.[56]

4.14 As with the previous charge control we propose that the MPF and SMPF line rental charges will be set such that the price of MPF and SMPF rentals will each be equal to their forecast FAC costs by the end of the charge control.

4.15 As explained in paragraphs 4.109 – 4.115 we propose to set the charges for MPF and SMPF cease services to zero, and recover the long run incremental costs that are currently allocated to these services from the core LLU line rentals. Therefore, in

[54] See section 4: http://stakeholders.ofcom.org.uk/binaries/consultations/wlr/statement/wlr_statement.pdf

[55] http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2010/CurrentCostFinancialStatements2010.pdf

[56] We also intend to continue the current framework in which the basis of charges obligation (cost orientation) is dis-applied from the MPF rental charge to ensure that there is no inconsistency with the RAV adjustment. A draft Direction to ensure continuation of this is included in Annex 13. Note that this draft Direction is included for completeness and avoidance of doubt as cost orientation is already dis-applied from MPF rental by virtue of Condition FAA4(A).2.

setting the charge controls for rental services, we will include the incremental costs of relevant cease activities in the analysis of rental charges.

***Question 4.1**: Do you agree that we should set separate line rental charge controls for (i) MPF rental and (ii) SMPF rental?*

Ancillary services baskets

4.16 In this section we set out how we propose to charge control ancillary services offered alongside MPF and SMPF. In 2008/09 Openreach generated £276m in revenues for 139 ancillary services which were charge controlled. Of these services five key migration services were subject to a sub-cap. The remaining services accounted for £109m in Openreach's revenues.

4.17 We set out in turn our reasoning for:

- basket controls being preferable to individual controls;
- the structure of the baskets;
- applying basket specific controls to each basket;
- controls to prevent gaming of prices in the baskets; and
- proposing that the starting charges for certain services within baskets should be aligned.

Basket controls

4.18 In principle, specific charge controls on each individual service could have some advantages over basket controls in that they provide certainty over prices, impose a lesser monitoring burden and minimise opportunities for gaming.

4.19 Individual controls would provide maximum clarity to OCPs and Openreach which would ensure all parties could plan with certainty. By contrast, basket controls provide less certainty for OCPs, as, while the control ensures that by the end of the control forecast costs will not be over-recovered across the basket, the price of individual items within the basket might change in relation to each other. Individual controls would also minimise the administrative burden to Ofcom and Openreach of monitoring compliance.

4.20 In addition, individual charge controls eliminate opportunities to game the control, which may be possible with basket controls. Individual controls would ensure that the charge for each service is set such that its price reflects expected costs, over the charge control period.

4.21 However, we consider there would be practical difficulties in implementing individual controls. Many of the services are low in volume and it would be difficult to robustly identify costs and set individual controls in these services. In addition, it would not be appropriate or proportionate to separately control such low volume services. Of the ancillary services that were subject to a charge control only 30 products had

revenues of £500k or more[57]. Given the lack of cost data for these smaller services it would not be possible to set a robust individual control on the vast majority of ancillary services which are low in volume.

4.22 Furthermore, basket controls provide scope for Openreach to set prices efficiently. This is for two reasons. First, it can recover common costs more efficiently than might be possible with inflexible controls on each service by adjusting prices to account for changes in demand. Flexibility to adjust prices in response to changes in demand can allow Openreach to more efficiently recover common costs from its customers and therefore increase output and consumer welfare. Second, it can adjust prices to reflect divergence between forecast data on costs and volumes outturn data.

4.23 On balance, we believe the practical and efficiency properties of basket controls mean they are preferable to individual controls for most ancillary services. We recognise that basket controls, theoretically speaking, can enable Openreach to engage in gaming. However, this risk can be addressed by basket design. Therefore we set below how we will design the controls to mitigate the risks of gaming (see paras 4.33 – 4.76).

Three basket structure for ancillary services

4.24 BT Wholesale is the biggest buyer of SMPF products and its major competitors (such as Sky and TTG) tend to buy MPF products. There is therefore a risk that Openreach could adjust prices to favour BT's downstream operations over its competitors.

4.25 In the previous charge control we structured the baskets in such a way as to prevent Openreach from adjusting prices to favour its downstream operations. We grouped the ancillary services into three baskets built around the underlying core line rentals. By grouping services in this way we prevented Openreach from reducing prices of products which are disproportionately used by BT (such as SMPF) and increasing prices of products such as MPF used by some OCPs, and thereby distorting competition in BT's favour. In this charge control we propose to maintain the three basket structure though, as we discuss elsewhere, we are also proposing to remove some migration services from the ancillary services baskets, so the size and scope of the MPF and SMPF ancillary services baskets will change under our proposals.

4.26 The proposed baskets are as follows.

- MPF ancillary services: These are services which are used only with MPF.
- SMPF ancillary services: These are services which are used only with SMPF.
- Comingling services: These are services used by purchasers of both MPF and SMPF services, including services required to locate their equipment at Openreach's local exchanges.

4.27 Openreach will have some scope to adjust the relativities of prices within the baskets, subject to meeting the overall basket control. However, Openreach will be unable to favour its downstream operations by trading off increases in the MPF basket against decreases in the SMPF basket as each basket will be separately controlled.

[57] Ofcom analysis of data contained in attachment to email ("Openreach LLU 2009 2010 Compliance Statement v1c (2).xls") from Francine Ravetllat of Openreach to David Brown of Ofcom entitled "LLU Basket Reporting - Openreach Compliance Statement 09/10".

Question 4.2: *Do you agree that separate baskets for MPF ancillary services, SMPF ancillary services and co-mingling ancillary services is appropriate and proportionate to mitigate the opportunity for gaming while providing Openreach some flexibility to efficiently adjust prices?*

Basket-specific controls

4.28 We propose that each basket should be subject to a separate control such that by the end of the charge control period *each basket* will recover its costs and a reasonable return through the RPI+/-X control.

4.29 In the previous charge control we set a single X across all baskets which ensured that by the end of the control period Openreach was able to recover its efficiently incurred costs. Setting a single X across all baskets enabled a more robust estimation of the basket control than would be possible with a basket specific X. This was because we estimated the control based on the projected costs and volumes across all products. While there may be unobservable errors in forecasts of costs and volumes for individual items, in aggregate these are likely to cancel each other out, at least to some degree. In contrast, if we put products into smaller baskets, we would have less confidence that unobservable errors would offset one another, and there would be a greater risk of error at the basket level.

4.30 However, setting a single X across all baskets had a disadvantage in that it will tend to perpetuate over and under recovery of costs in individual baskets. This is because some baskets were over-recovering costs at the start of the period while other baskets were under-recovering. This problem was identified by the CC in its determination on the LLU charge control appeal where it found that Ofcom had erred in setting a single X across all baskets.[58] The CC considered that this misalignment of costs and revenues would disadvantage some CPs at the expense of others.

4.31 Having considered the relative merits of a single X across all baskets and individual Xs, and taking into account the conclusions of the CC, we propose to set discrete Xs for each basket in the new controls, to enable the alignment of costs and revenues within each basket to FAC by the end of the charge control period.

Question 4.3: *Do you agree that we should set basket-specific controls as opposed to a single control which is applied to all baskets?*

Proposals to prevent gaming

Prior year weighting

4.32 The basket control limits the maximum weighted average increase in prices in any given year. When Openreach sets prices each year we need to consider whether the weights are based on the previous year's revenues or a forecast of the current year revenues weighting.

4.33 In the previous charge control statement prior year revenues were used as weights to set each year's prices. The reasoning was that this enabled Openreach to plan its

[58] See CC determination on LLU appeal paragraph 3.202.

prices in a given year with confidence that it will meet the overall basket control to within a small margin of error.[59]

4.34 In its determination of the LLU appeal, the CC identified a shortcoming with using prior year volumes. The CC noted that when prices are weighted by revenues and volumes of the previous year, there is scope for the regulated business to out-perform the price cap by imposing larger price increases for products that are increasing in volume relative to other products in the basket. Consequently, the CC noted in relation to the co-mingling basket, that Openreach may be able to increase prices on growing volume products and decrease prices on declining volume products to achieve higher average price increases across the basket than would have been possible had the changes in prices been weighted by current revenue and that Openreach had an incentive to manipulate prices in this way. The CC did not find that this was a concern for the MPF basket and the SMPF basket since the application of the sub-caps on key migration services, on top of the basket controls, restricted Openreach's flexibility to set prices and therefore to engage in any gaming by differentially adjusting prices.[60]

Approach in other Ofcom charge controls

4.35 The use of prior year weightings in the previous charge control was consistent with our approach to other charge controls. For example:

- In the leased lines charge controls the TI basket, equipment and infrastructure (TI) basket, ancillary services (TI) basket, AI basket, accommodation (AI) basket and the ancillary services (AI) basket all used prior year revenue weights[61].
- In the network charge control the call origination basket, the call termination basket, the interconnection basket and the product management, policy and planning basket all used prior year revenue weights.[62]
- In the mobile call termination charge controls the weighted average termination rates for each of the five Mobile Network Operators were based on prior year volume rates.[63]

4.36 In the consultation on mobile call termination Ofcom consulted on moving from a control on a weighted average of charges for termination rates (across different times of day throughout the year) to setting a single charge ceiling for all mobile termination rates[64]. This was in response to clear evidence that the charge control was being gamed by "flip-flopping" [65] prices[66]. This resulted in frequent changes in the prices of

[59] In practice Openreach must notify CPs of changes to prices 90 days in advance therefore when setting prices Openreach relies on revenue data from the first nine months of the year and forecasts for the final three months. However, if forecast current year weights were used it would base prices on forecasts up to fifteen months in advance.
[60] CC determination ¶3.191-3.202. Given we have propose to remove the key migration services from the MPF and SMPF baskets, and so increase the price flexibility in these baskets, this concern could equally apply to the MPF and SMPF baskets in the current control.
[61] See for example Statement on Lease Lines Charge Control, Annex 9, Schedule 1. http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/llccannex.pdf.
[62] See for example Statement on the Network Charge controls, Annex 1 Schedule 1-3. http://stakeholders.ofcom.org.uk/binaries/consultations/review_bt_ncc/statement/nccstatement.pdf.
[63] See for example Statement on the Mobile Call Termination Charge Controls Annex 20, schedule 1. http://stakeholders.ofcom.org.uk/binaries/consultations/mobile_call_term/statement/statement.pdf.
[64] See consultation on Mobile call termination: A simpler pricing rule. http://stakeholders.ofcom.org.uk/consultations/mtr/
[65] The term "flip flopping" describes where an MNO makes frequent changes to rates to exploit the difference in the number of weekends in each month in any given year compared to the previous year. The issue is described

mobile call termination rates which led to volatile prices, and resulted operators earning more revenues than were envisaged when the charge controls were set.

4.37 In its appeal of the current controls, TTG argued that Ofcom should have required price changes to be corrected based on actual year volume rather than prior year volume[67] in order to safeguard against Openreach's ability to charge excessive prices by manipulating prices within the co-mingling basket. As explained above, the CC noted that this would, in principle, protect against Openreach engaging in the gaming described above.[68] However, in imposing a remedy for the error the CC identified, the CC did not recommend that current year weightings be used to set prices. It instead proposed that, given the short time remaining until the expiry of the control, the appropriate remedy for the co-mingling error was to require that Openreach should not make any further upwards price changes to any of the products in the co-mingling basket until the end of the current charge control.

4.38 The CC stated that in order to consider the appropriate and proportionate approach to the correct the error that it found (i.e. that Ofcom had not set a control which would have prevented gaming) it would have to address each of the following:

> " *(a)* The identification of the appropriate safeguards.
>
> *(b)* How the appropriate safeguards would work in practice (e.g. the related price control formulae and calculation methodologies including the relevant legal instruments).
>
> *(c) [...] e*nsure that the appropriate safeguard does not have unintended consequences."[69]

4.39 In light of the CC's determination, we have considered the most appropriate and proportionate way to mitigate the risk that Openreach could increase the average price by more than is implied by the control (by increasing prices of products growing in volume relative to other products). In undertaking the analysis, we have had regard to our duties under the Act.

4.40 We first assess the likelihood and magnitude of the risk. We have identified a number of safeguards which could prevent or mitigate the risk of gaming. We have considered how each safeguard could work in practice and considered for each whether it would result in any unintended consequences. We assess in turn:

- Use of current year weightings to measure compliance against basket controls.
- Individual controls instead of basket controls.
- Use of prior year weightings and reliance on other controls to mitigate risk of over recovery either individually or in combination. Other potential controls include:

---

at paragraphs 9.114 to 9.127 of the consultation on the Wholesale mobile voice call termination market review Volume 2. See: http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/summary/wmvct_consultation.pdf.

[66] An example of the volatility of termination rates is set out in Figures 15 and 16 of the consultation on the Wholesale mobile voice call termination market review Volume 2. For example weekend termination rates varied frequently throughout 2009 from a low of 2ppm (in April, June, July, September and November) up to a high of 15ppm in May. See: http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/summary/wmvct_consultation.pdf.

[67] See TTG Notice of Appeal paragraph 117.4.

[68] CC determination ¶3.201.

[69] CC Determination in the LLU appeal paragraph 5.319.

- o A tighter inertia clause.
- o Sub-caps on services within the baskets.
- o A requirement for all items to move in line with the baskets.
- o Tougher basket controls.

Likelihood and magnitude of the potential risk of Openreach manipulating prices using prior year basket weights

4.41 The current charge control uses prior year revenue weights to set prices consistent with the control. If prior year weightings are used to set prices and Openreach were able to accurately predict volume changes it would have the potential to engage in the manipulation of prices within the ancillary services baskets as identified by the CC. In order to engage in this type of manipulation Openreach would have to accurately predict which products within each basket are growing in volume compared to the forecasts and which are declining in volume compared to the forecasts in the three to fifteen months following a decision to change the price.[70]

4.42 Openreach's customers (including BT Wholesale) share information on future migration plans with Openreach to enable it to plan effectively. The CC found that this gave Openreach the ability to anticipate which services will increase by the most in volume and the incentive to manipulate prices within the co-mingling basket, although the CC does not cite any evidence of BT engaging in such behaviour.

4.43 However, although we agree with the CC that BT would have the ability to engage in manipulation, on the basis of the information available to Ofcom, we consider that, in practice, the scope to manipulate the control by increasing the price of products increasing in volume may be somewhat limited. The information currently shared between Openreach's customers and Openreach is relatively limited and in our view Openreach would have to elicit more detailed forecasts from its customers who may be unwilling to share this sort of information, or may even attempt to influence Openreach's price setting by providing misleading forecasts. Further, the charge control is proposed to end in 2014 and at that time (if another control is implemented) any substantial misalignment between prices and costs could be corrected in the next charge control.

4.44 Therefore, in considering what is the most appropriate and proportionate safeguard to address the risk identified by the CC, we have taken into account the likelihood and magnitude of this potential risk.

Use current year weightings to measure compliance against basket controls

4.45 As noted above the CC recognised in principle that one way to limit the scope for this type of manipulation would be to measure compliance of basket revenues against current year volumes rather than previous year volumes. There is a sense in which using current year volumes will practically eliminate Openreach's ability to manipulate prices within the ancillary services baskets. However, depending on how the approach is implemented, it can also introduce new possibilities for gaming, as discussed below.

[70] Openreach are obliged to notify any price changes to CPs with a 90 day notice period, hence in order to manipulate the control it would have to forecast demand between three and fifteen months in advance.

4.46 We have considered how a basket control with current year weightings would work in practice and assessed whether there are any unintended consequences. Our analysis (which we set out below) suggests that current year weightings do have some disadvantages: using current year weights is open to a different type of potential gaming by Openreach and/or its customers; it would increase the administrative burden to Openreach and Ofcom of ensuring compliance; and it would lead to greater instability in prices and hence reduce certainty during the charge control period.

Risk of gaming with current year weights

4.47 If Openreach sets prices based on forecasts of current year volumes it will have to recover any over or undercharging which results from divergence between forecast and actual volumes in subsequent periods. It could therefore have an incentive to overcharge in the short term and repay the overcharge in subsequent periods. It is also possible that some CPs could try to game the control and try to influence Openreach's pricing decisions by providing misleading forecasts. If CPs were able to influence Openreach in this way it could increase volatility in price setting.

4.48 Theoretically, this risk of gaming could be mitigated by applying an "incentive interest rate" to any over or under charge. In principle an incentive interest rate (if set at the right level) would reduce or remove any incentive for Openreach to "overcharge" or for CPs to try to influence Openreach's pricing to "undercharge".

4.49 The choice of interest rate could affect Openreach's incentive to ensure its forecasts are as accurate as possible. For example, if Openreach paid an interest rate on any over charge which was greater than its debit interest rate it would be penalised if it overcharged and therefore have an incentive to ensure its forecasts are as accurate as possible.

4.50 Given that any over or under charge may be due to unintentional errors in forecasting, it may be appropriate to set a symmetric interest rate for both over and underpayments (i.e. the same interest rate would be applied to any underpayment or over payment). However, applying an interest rate to over or underpayment would tend to exacerbate the magnitude of over or underpayment due to unintentional forecast error and hence could increase volatility in prices.

4.51 An alternative way to mitigate the risk of this type of gaming would be for Ofcom to review and comment on Openreach's volume forecasts. However, Ofcom is not well placed to know the extent to which Openreach's forecasts are accurate. Furthermore, this would impose a significant administrative burden on Ofcom and CPs as the necessary information would need to be gathered on an ongoing basis to enable Ofcom to review the forecasts.

4.52 Therefore, while the risk of gaming could to some extent be mitigated by applying an incentive interest rate to over and underpayments, we think this would result in an unnecessarily complex control, which could increase volatility in prices.

Administrative burden of adjusting prices based on current year volume weightings

4.53 Using forecasts of current year volume weightings to set prices would impose an administrative burden on Openreach and CPs in setting prices and monitoring volumes of services. Potentially Openreach could reset prices (one or more times) mid year to avoid a large price shock at the end of each year if actual volumes

diverge from forecasts. We would envisage that such an approach could involve the following process:

- Before the start of each year of the control Openreach would discuss with its customers their forecast demand for each of Openreach's ancillary services products to estimate overall forecasts of demand for the next eighteen months (i.e. up to the end of the of the following year). These discussions would have to begin sometime before the proposed price changes in order to give Openreach time to collate the responses, calculate new prices and give CPs 90 days notice of price changes.

- 90 days before the start of each relevant year Openreach would give notice of its changes in prices which meet the charge control based on its forecast current year volumes (possibly derived from discussions with its customers). The prices set before the start of year two and three would also reflect any over or under-charge as a result of actual volumes diverging from forecasts. In order to minimise any large price shocks Openreach could also vary prices mid-year to reflect emerging divergences of actual and forecast volumes or more accurate forecasts.

- At the end of the final year of the control there would not be scope to adjust the following year's control to correct for an over or under recovery of costs.[71] Therefore, Openreach could instead issue rebates to each of its customers as a result of any over charge or directly recover any underpayment from each of its customers in the previous year.

4.54 Therefore, although we recognise that setting charges based on current year volumes would provide more certainty that Openreach could not engage in the type of manipulation described above by increasing the price of products growing in volume relative to other prices, we think there are practical and implementation difficulties with this approach.

Volatility in prices

4.55 Using forecast current year volume weightings would lead to volatile movements in prices as charges are set, then later adjusted for over and under recovery of costs. This is because demand for ancillary services is volatile and forecast volumes are likely to vary from actual volumes. Changes in demand which are *unforeseen* by Openreach are likely to have a big impact on variation between outturn and forecast volumes and hence are likely to have a significant impact on whether the price changes meet the basket control. For example, as can be seen from Figure 4.1 in 2008/09 industry forecasts were for 20% more MPF single migrations than actually occurred; and a slight decline in numbers of SMPF single migrations between 2007/08 and 2008/09, whereas in fact there was a 16% increase.

[71] This is because Ofcom considers that it follows from the recent Court of Appeal judgment in *Vodafone v British Telecommunications Plc*[71] that there is no power to impose a subsequent price control adjusted for an over or under-recovery during the period of a prior price control.

Figure 4.1 : Volume of LLU services (000s)

	2007/08	2008/09	
	Actual	Forecast	Actual
MPF single migrations	851	813	680
SMPF single migrations	331	329	383

Source: Data sourced from BT response of 6 August 2010 to question 2 of Ofcom s135 dated 16 July 2010, forecast data provided by Openreach for the previous control modelling.

4.56 As set out above, the magnitude of volatility could be increased if Openreach's customers try to game the process of price setting.

4.57 The volatility in wholesale prices caused by the use of forecasts of current year volume weightings could be harmful to consumers. It would create uncertainty for Openreach's customers and limit their ability to plan. It could also lead to volatile retail prices and limit price transparency for consumers as retail prices are adjusted to reflect wholesale price changes.

Prior year weights and eliminate any pricing flexibility

4.58 An alternative approach to prevent gaming would be to eliminate any pricing flexibility. This could be achieved either by:

- setting individual controls;
- requiring all items to move in line with the basket control; or
- setting sub-caps on some services which restrict pricing flexibility.

4.59 Eliminating any pricing flexibility would provide certainty to CPs that Openreach would not manipulate the control and would minimise the administrative burden on Ofcom and Openreach of monitoring compliance with the charge control.

4.60 However, removing any flexibility for Openreach to adjust prices of each of the ancillary services removes one of the benefits of basket controls: that they allow Openreach to adjust prices to recover costs efficiently. A key principle in setting basket controls is to allow prices to be set to efficiently recover costs. As discussed above, this flexibility allows Openreach to efficiently adjust prices in response to unforeseen changes in costs or demand.

4.61 There are also practical limitations to each of the suggested ways of eliminating pricing flexibility for all ancillary services. As set out above, we would not be able to set individual controls as detailed data on costs and volumes for lower volume products are less certain. A requirement for all items to move in line with the basket control would tend to perpetuate over and under-recovery of costs for items within each basket. Finally, the application of layers of sub-cap, inertia clauses and basket controls has led to complexity in the operation of the current controls. In practice, whilst it prevented Openreach from adjusting prices to game the control, it also had the effect of preventing Openreach from having any flexibility to adjust prices to efficiently recover costs.

4.62 We therefore do not consider that this is an appropriate and proportionate approach to mitigate against this type of price manipulation.

Prior year weightings and set tougher basket controls

4.63 An alternative approach to mitigate the risk of over-recovery of costs would be to tighten the basket controls. The aim would be to adjust the RPI-X control to anticipate volume growth such that Openreach would only be likely to recover costs if it differentially adjusted its prices by increasing charges for products which are growing in volume relative to other products.

4.64 We recognise that in principle this approach could mitigate the risk of gaming. However, in practice it would be difficult to implement. First, in order to set the control Ofcom would have to accurately forecast the scope for Openreach to game the control by increasing the prices of products growing in volume across the whole portfolio of product. In practice, such forecasting would be difficult and prone to inaccuracy. This approach would therefore exacerbate the risk of under-recovery of costs by Openreach. Second, our volume forecasts would have to be adjusted for elasticity of demand in response to projected profit maximising price changes. There is no ready data on the elasticity of demand for each of the ancillary services. Third, the forecasts used by Ofcom to adjust the RPI-X could be gamed by both Openreach or CPs in order to influence the basket control. Fourth it could create uncertainty for Openreach and CPs.

4.65 We therefore consider that this complex approach to price setting would not be appropriate or proportionate, and potentially could be an inaccurate way to adjust the controls.

Prior year weightings and an inertia clause

4.66 Openreach's ability to manipulate the charge control in the way suggested above is currently limited by the inertia clause.[72] The inertia clause prevents Openreach from imposing significant changes in individual prices (over and above the basket control). In the previous charge control we set an inertia clause of 10% per annum.

4.67 We think the inertia clause has some benefits in restricting Openreach's ability to game:

- it is easy to understand and implement;
- it can be calibrated to mitigate the risks of gaming whilst allowing some pricing flexibility.

4.68 An inertia clause of 0% effectively means that all prices could only be adjusted by the rate of the basket control. As set out above this would eliminate any scope for gaming but would also eliminate pricing flexibility.

4.69 We believe that some tightening of the inertia clause is justified in order to mitigate the risk of gaming the control, but that Openreach should have some pricing flexibility. It is difficult to estimate the "correct" level of inertia clause which balances the benefits of allowing some flexibility to change prices against the risk of gaming. In the previous charge control we said that an inertia clause of 5% could "unduly restrict" Openreach from setting efficient prices. We are now reviewing this position. We are seeking the views of stakeholders on whether a tightening of the inertia

[72] The CC recognised that the inertia clause to some extent limited the scope for price increases at paragraph 3.196 of the CC determination.

clause is appropriate and proportionate. We are considering an inertia clause in the range 2% to 7.5%.

Conclusion on gaming control to over recover costs

4.70 We recognise that using prior year volume weights to set prices does not address the risk identified by the CC, that Openreach can over-recover costs while meeting the control, by increasing the price of products growing in volume. However, we do not believe that there is evidence that the risk of manipulation, by increasing the price of products growing in volume relative to other products, is significant given that it requires a greater degree of accuracy of forecasts than is provided now.

4.71 We have nonetheless considered the various options set out above to address this small risk. We have considered how potential controls would work in practice and whether they would have any unintended consequences as suggested.

4.72 We recognise the point made by the CC in its determination on the LLU appeal that the use of forecasts of current year weightings would, in principle, protect against price manipulation. However, we have identified a number of significant practical and administrative problems associated with the use of forecasts of current year volume weightings. These include:

- The risk that Openreach's customers could game the process of price setting;
- The additional administrative burden on Openreach to set, monitor and if necessary reset prices;
- The potential for volatile prices.

4.73 Therefore, we do not believe that using current year weights is an appropriate or proportionate approach to mitigate this risk.

4.74 Having considered the other options available set against the level of risk identified, we consider that using prior year weights alongside a tightening of the inertia clause is the most appropriate and proportionate solution. This is because it would substantially limit the scope for Openreach to engage in price manipulation whilst leading to a greater degree of price stability; and would incur a lower administrative burden in setting and monitoring prices than the other options available. Therefore, we propose to continue to use prior year weights in combination with tighter inertia clauses to mitigate the risk of price manipulation by Openreach.

4.75 We consider that a tightening of the inertia clauses is an appropriate and proportionate approach to mitigate the risk of gaming whilst providing Openreach with the ability to adjust prices to a limited degree to price efficiently. We are seeking views on inertia clauses in the range 2.0% - 7.5%..

Question 4.4: *Do you agree that measuring compliance of basket controls against prior year volumes (as opposed to current year volumes) is an appropriate and proportionate approach to charge controlling ancillary services?*

Question 4.5: *Do you agree that inertia clauses applied to the ancillary services baskets should tightened from their current level of 10%? Please give views on the the appropriate level of inertia clauses in the range 2% to 7.5%.*

Alignment of charges for equivalent services

4.76 There are a number of equivalent services in the MPF and SMPF ancillary services baskets. These are services which are essentially the same (in that they involve the same or closely similar underlying costs and processes), except that one is provided to MPF customers and the other to SMPF customers. In this sub-section we consider whether charges for equivalent services from the MPF and SMPF baskets should be aligned.

4.77 The structure of the baskets and basket controls ensure that, by the end of the charge control, the prices of ancillary services will, in aggregate, be reflective of FAC costs for the baskets as a whole. It is not our intention in this charge control to micromanage the charges of all ancillary services across the baskets. However, we would be concerned about misalignment of certain switching charges[73] even where, in aggregate, MPF and SMPF basket prices were reflective of costs. This is because a misalignment of switching charges, which did not reflect the underlying costs of provision, might distort competition or distort the choice between MPF and WLR plus SMPF to favour BT's downstream operations over its rivals.

4.78 There are price transparency reasons for aligning prices for similar services, even where the underlying costs might be slightly different. Openreach has indicated that it seeks to retain pricing relativity between comparable products and maintain the same price for MPF and SMPF variants of the same product, and that it considers this approach to be appropriate even where there are minor cost differences between similar products. [74]

4.79 The table below sets out groups of similar services and the current prices and describes any differences in the underlying activities or resources required to deliver the services. The charges for expedited connections, jumper removals and tie pair modifications are not aligned. The prices of other similar services are all currently aligned.

Figure 4.2: Prices of equivalent services controlled currently within MPF or SMPF baskets[75]

Note that the prices listed are current and do not include price changes announced by Openreach which will take effect on 1 April 2011.

Service	When used	Differences in activity	MPF price	SMPF price	MPF/SMPF differential
Expedited connections		Some jumpering and line test differences.	£158.40	£103.20	MPF- £55.20 (35%)

[73] The price of symmetric services may be mis-aligned at the beginning of the control or may diverge during the control period. This could be for various reasons: charges could diverge as Openreach chose to vary prices differentially (for example to recover different amounts of common costs from similar charges); or be because similar services will be controlled in different baskets with different basket controls.

[74] See slide 1 of "Ancillary services baskets slide pack" presented to Ofcom 11 October 2011.

[75] http://www.openreach.co.uk/orpg/home/products/pricing/loadPricing.do.

MDF remove jumper/hard cease	When a CP wishes to terminate a customer's service and requires Openreach to physically discomnnect the jumpers	Some jumpering and line test differences.	£16.80	£29.89	MPF+£13.09 (78%)
Tie pair modifications (next day working, re-termination)	When a CP requires Openreach to modify tie cables (for exampleto repair a fault on the CP's equipment	None	£46.80	£52.79	MPF+£5.99 (12.8%)
Tie pair modifications (multiple re-termination)		None	£34.80	£35.88	MPF+£1.08 (3.1%)
Tie pair modifications (3 working day lead time re-termination)		None	£39.25	£42.07	MPF+£2.82 (7.2%)
Bulk migration			£34.80	£33.14	MPF-£1.66 (4.8%)
Connections and transfers	Connect an existing line	Some jumpering and line test differences.	£38.64	£38.64	
Cancellation of orders		None	£11.74	£11.74	
Amend order		None	£14.35	£14.35	
Standard line test		None	£4.43	£4.43	
Right when tested (RWT)	Where a CP reports a fault on a line which Openreach has previously confirmed is not a fault.	None.	£81.60	£81.60	

4.80 We have considered in particular the difference in prices for expedited connection and jumper removal. This is for two reasons, first because both these services are switching services and therefore prices may have an impact on competition; and second, the difference in both charges is reasonably significant. In the paragraphs below we set out our approach to aligning these charges.

4.81 The difference in tie pair modification charges do not give rise to significant concern as these are not switching services and the scale of the misalignment is less significant. Furthermore the basket controls will ensure that in aggregate the prices of both MPF and SMPF services (including tie pair modification) will be reflective of FAC costs by the end of the control.

4.82 For other ancillary services within the baskets the charges are either aligned or there is no significant misalignment.

Starting prices of similar services which are within baskets

4.83 As set out above we have considered the misalignment of charges for expedite connections and jumper removal services.

Expedite connections

4.84 The prices of the MPF and SMPF expedite connection services are significantly different: the MPF charge is £158.40, whereas the SMPF version is £103.20. The relatively high charge for an MPF expedite could theoretically be a barrier to switching to an MPF CP which could favour SMPF users (including BT Wholesale). If this were true, it would only be an issue at the margins of the market as volumes for expedite connections are low - particularly for MPF where volumes are immaterial.

4.85 In principle, in order to ensure that the price differential does not lead to distortion of consumer choice in favour of SMPF CPs, the difference in prices should be reflective of the LRIC cost differentials. We have been unable to estimate the LRIC costs for MPF and SMPF expedite connections. Figure 4.3 below describes the difference in the activities required to deliver the services for MPF and SMPF expedite services. An SMPF connection requires the removal of an additional jumper, and MPF requires a TAM test whereas the SMPF connection does not.

Figure 4.3: Activity required to perform MPF / SMPF expedite connections

Product	Jumpers removed	Jumpers provided	TAM Test	Line Test	Other comments
MPF		2	Y	N	Assumes a MPF New Provide where no jumpers in situ.
SMPF	1	2	N	Y	Requires removal of the WLR jumper before SMPF connected.

4.86 In considering whether to align these charges, we have also taken account of charge levels for the standard connection services. However, a like for like comparison is difficult since there is no standard SMPF new provide service. Instead, SMPF new provides are provided at the standard SMPF connection rate (£38.64). The prices for connection (new provide) and expedite for MPF and SMPF are shown in Figure 4.4 below.

Figure 4.4: LLU connection (new provide) charges

Note that the prices listed are current and do not include price changes announced by Openreach which will take effect on 1 April 2011

	Connection (new provide)	Expedite
MPF	£62.11	£158.40
SMPF	£38.64	£103.20
MPF/SMPF price difference	£23.47	£55.20

4.87 Since the standard connection charges are not aligned, we do not think it is necessary to align the expedite variants. We have therefore considered whether we should align the differentials by setting the differential for the expedite services at £23.47 at the start of the controls. This may remove any competitive disadvantage which exists in MPF expedite as a result of a wider differential in the expedite than the standard connection services. However, given the different activities involved in the connection services, and the blending of prices for SMPF connection and new provide, we cannot be confident that such a competitive disadvantage exists.

4.88 We would be more concerned about the potential for competitive disadvantage if volumes of MPF expedite were large, but (as explained above) they are not material. Therefore we do not think it is necessary to intervene to equalise the pricing differential between the standard and expedite connection services.

4.89 As explained in paragraphs 4.139 – 4.142 below, we do believe some pricing protection for users of these services is appropriate and proprtionate, and therefore we are proposing that they be charge controlled in the respective MPF and SMPF ancillary services baskets.

***Question 4.6**: Do you agree that we should not align or intervene to narrow the differential in charges for MPF and SMPF expedite?*

Jumper removal

4.90 The jumper removal services can be a termination cost that CPs face when a consumer switches to a new supplier. Termination costs can act as a barrier to switching when they are passed through to consumers. By illustration, BT retail, for example, imposes a termination fee on its broadband customers[76] of £30 (inc VAT). Given that the SMPF jumper removal charge (currently £29.89) has historically been set higher than the MPF version (currently £16.80) we would be concerned if customers provisioned using SMPF services faced higher barriers to switching (which do not relate to the underlying costs of the service) than customers of its competitors.

4.91 The table below sets out that there are some differences in the activities required to perform an MPF and SMPF jumper removal service.

Figure 4.5:Activity required to perform jumper removal

Product	Jumpers removed	Jumpers provided	TAM Test	Line Test	Other comments
MPF	2	-	N	N	
SMPF	2	1	N	N	SMPF requires removal of the SMPF jumpers, and replacement of the WLR jumper.

[76] http://www.productsandservices.bt.com/consumerProducts/dynamicmodules/pagecontentfooter/pageContentFooterPopup.jsp?pagecontentfooter_popupid=26823&s_cid=con_FURL_ceasecharge

4.92 In this case we propose to align the MPF and SMPF starting charges for jumper removal. We propose to set the charge based on the current volume weighted average price for the SMPF and MPF jumper removal. In the case of the jumper removal we have cross checked that the resulting charge is aligned with our estimate of FAC costs. As with expedited connections, we will ensure that the change in the starting price for jumper removals is reflected in the estimate of the basket X's, to ensure that each basket does not over or under recover its costs.

Figure 4.6:Weighted average price for jumper removal

Note that the prices listed are current and do not include price changes announced by Openreach which will take effect on 1 April 2011.

	Jumper removal	
	MPF	SMPF
Current price	£16.80	£29.89
Volume	77,000	415,000
FAC (2010/11)	£26.85	£29.22
Weighted average price	£27.85	
Weighted average FAC	£28.85	

***Question 4.7**: Do you agree that we should align the price jumper removals?*

***Question 4.8**: Do you agree that we should use the weighted average of current prices to estimate the 2010 price of the service for jumper removals?*

Options for aligning charges throughout the control

4.93 We have considered whether it would be appropriate and proportionate to impose an obligation on Openreach to ensure that prices for equivalent services are aligned throughout the control. An obligation to ensure that prices of similar services are aligned would prevent any distortions which could result from misaligned prices and improve price transparency. However, when considering the appropriateness and proportionality of an alignment control we consider the principles guiding our approach to controls for ancillary services. One important consideration is the need to ensure that controls are simple to implement and easy to understand. The application of controls on certain services to ensure alignment (in addition to basket controls and inertia clauses) could have disadvantages. For example aligning controls could:

- increase the complexity of the baskets and therefore increase the costs to Openreach and Ofcom of implementing the control and monitoring compliance against the control.
- reduce the flexibility that Openreach has to adjust prices efficiently

4.94 We have therefore considered three options for aligning charges for similar services which are controlled within baskets.

- **Option 1: Ensure alignment of similar charges at the beginning of the charge control period but do not impose any further obligation on Openreach to keep charges aligned**. This option will remedy any misalignments in the first year of the charge control, but prices could diverge over the charge control period. However, any divergence would be limited to a certain extent by the inertia clause and, as noted above, Openreach might want to align these charges, and, therefore, further regulation may be unnecessary. This option is simple to implement and ensures that the basket controls are not excessively complex.

- **Option 2: Ensure that similar charges are aligned at the start of the charge control period and remain aligned throughout the control**. This could be achieved in two ways: we could set separate sub-caps on each "similar" service; alternatively, we could impose alignment constraints on each pair of similar services within the baskets. The former approach might in practice be difficult to implement robustly given the relatively low volume of services (compared with other services directly charge controlled) and the granularity of available data. The latter approach could increase the complexity of price setting, and limit Openreach's ability to adjust prices. However, we think it would be a workable option in the event that we thought charges for equivalent services would diverge over the life of the controls.

- **Option 3: Merge each pair of similar MPF and SMPF charges into single service and charge control all similar services within a single basket.** This approach would ensure that charges for similar services are aligned throughout the charge control period. However, we believe that this approach could be subject to gaming if there are some services which tend to be purchased more by BT group companies than by OCPs. If this were the case Openreach may have an incentive to raise the price of services to OCPs while decreasing the price of services bought more by other BT Group companies and distort competition in favour of BT.

4.95 Our proposed approach is Option 1. We consider that it is an appropriate and proportionate response given that most similar ancillary services are already aligned; and we believe it is likely that Openreach will keep the charges, of MPF and SMPF variants, of the same service, aligned. This option will reduce any distortion at the start of the control without imposing onerous obligations throughout the charge control period. We think this option is preferable to options 2 and 3. Option 2 would add complexity to the controls. Option 3 could create a risk of gaming.

Question 4.9: *Do you agree that option 1, that is ensuring alignment of similar charges at the beginning of the charge control period but not imposing any further obligation on Openreach to keep charges aligned, is the most appropriate and proportionate way to avoid competitive distortion caused by misalignment of prices?*

Key migration services charge controls

4.96 The prices of key migration services directly affect consumer switching costs and may therefore affect competition in the market. We are therefore concerned to ensure that these charges do not rise in a way that would increase switching costs in downstream markets. High switching costs could be beneficial to BT's own downstream businesses as it has a large installed subscriber base. High switching costs could raise barriers to entry, reduce competition, and therefore raise prices for consumers.

4.97 The importance of switching costs on competition has recently been highlighted in an Ofcom consultation on consumer switching.[77] The report set out the impact of high switching costs on the market and noted that, on balance, high switching costs are likely to dampen competition. [78] High wholesale migration charges would imply high switching costs for consumers which, on balance, would tend to increase prices and reduce consumer welfare.

4.98 When we designed the previous charge control we set sub-caps on key migration services which limited charge changes for these services within the overall basket constraint. The five key migration services were MPF new provide, SMPF and MPF connection (MPF Transfer) and SMPF and MPF cease. These services jointly accounted for around 85% of MPF and SMPF basket revenues. The sub-caps limited price increases but gave Openreach the flexibility to trade off lower charges for migration services (i.e. below the cap) and higher charges for other services within the basket.

4.99 We propose to continue to set specific controls on the key migration services to prohibit this distortion of competition. However, we will set separate charge controls on these services rather than set a sub-cap within the basket. This is because while the sub-caps provided a degree of clarity and protection to OCPs there were practical difficulties with controlling the price of key migration services using sub-caps within baskets:

- The sub cap on some services, whose price was significantly misaligned with costs, tended to dominate the basket control. This was true for MPF new provide where the sub-cap constraint within a basket resulted in charges becoming materially misaligned with costs. This was highlighted in the CC's determination on the LLU appeal where its remedy stated that the MPF new provide should be separately charge controlled outside the MPF basket.[79]

- The combination of the sub cap, basket control and the inertia clause inhibited BT's flexibility to adjust prices efficiently.

Approach to setting the charge control for key migration services

4.100 In this sub section we set out our approach to setting the charge control for the five key migration charges: MPF new provide, MPF transfer, SMPF connection, MPF cease and SMPF cease.

4.101 As set out in Sections 3 and 8, we have used FAC as the overall basis for setting charges for Openreach's products as BT regulated charges have been set using CCA FAC. However, this does not mean that every individual charge necessarily should be set equal to CCA FAC. In principle, charges that are in excess of distributed long run incremental costs (DLRIC) but less than Distributed Stand Alone Costs (DSAC) could be considered consistent with efficient prices provided that Openreach recovers all its efficiently incurred costs across its portfolio of services[80].

4.102 We consider that in the case of certain migration charges there may be a case to diverge from CCA FAC with the caveat that efficiently incurred costs associated with the migration charges are recovered in prices of other Openreach services. This is

[77] http://stakeholders.ofcom.org.uk/binaries/consultations/consumer-switching/summary/switching.pdf
[78] Ibid ¶ 5.42
[79] See CC determination paragraph 5.315.
[80] See the "Guidelines on the Operation of the Network Charge Controls from October 2001 to 7 December 2001" available at http://www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/pcr1201.htm

because setting prices of switching services below FAC and instead recovering costs from rental products can reduce switching costs and improve competitive conditions. This is particularly likely to be the case where charges are levied on end users when they terminate a service, or switch providers where charges at the wholesale level can be passed on to retail users and create or raise a barrier to switching. Hence, in these charge control reviews we are seeking to ensure that termination charges do not result in distortion to downstream markets, and are making specific proposals for this in relation to cease charges (see below). In the sub-section below we first consider whether similar key migration services should be aligned (both as between MPF and SMPF, and also where relevant between MPF and WLR)_because their underlying costs are similar, we then go on to set out our approach to setting the starting charge and glide path.

MPF new provide

4.103 'MPF new provide' is requested by CPs when a customer requires a new line to be installed into their home. The price of MPF new provide has declined significantly in recent years from £99.95 in August 2009 to the current price of £62.11. The price is above current FAC but only marginally above the forecast FAC in 2013/14. We therefore propose to set a glide path to bring the charge into line with FAC by the end of the charge control period.

4.104 The price of MPF new provide is only slightly above the price of WLR new provide. Given that there are slightly different underlying activities involved in delivering the services a small misalignment of prices may be justified. As set in Section 5 we propose to set a separate charge control on WLR new provide to ensure that its price reflects FAC by the end of the charge control period.

Figure 4.7: Current charges and FAC costs of MPF new provide

Note that the price listed is current and does not include price changes announced by Openreach which will take effect on 1 April 2011.

Service	Current charge	2010/11 FAC costs	2013/14 FAC costs
MPF new provide	£62.11	£49.16	£48.53

4.105 We are proposing an indexation in the range RPI-9.9% - RPI-12.9% (base case RPI-11.4%) for MPF new provide to enable charges to be aligned with CCA FAC by the end of the control period. For the first period of the control (from the start of the control to 1 April 20120 the base case charge would be £57.83.

***Question 4.10**: Do you agree that a charge control in the range RPI-9.9% - RPI-12.9% (base case RPI-11.4%) should be imposed on MPF new provide to bring the charge into line with CCA FAC by the end of the charge control period?*

Connection charges

4.106 CPs incur connection charges when a customer with an existing BT line wants to switch to a new broadband provider or commence a broadband service. Currently the prices of the MPF transfer and to a lesser extent SMPF connections are above their FAC costs. We therefore propose that charges for each of the services be brought into line with CCA FAC costs by the end of the charge control period. Further, as we set out above we propose to maintain alignment of the charges for MPF and SMPF

connections. In order to do this, we have created a weighted average of the forecast CCA FAC cost stacks for MPF transfer and SMPF connections. This will enable the charges to remain aligned through the charge control.

Figure 4.8: Current change and FAC costs of connection charges

Note that the prices listed are current and do not include price changes announced by Openreach which will take effect on 1 April 2011.

		Ofcom estimate	
Service	**Current charge**	**2010/11 FAC costs**	**2013/14 FAC costs**
MPF transfer/connection	£38.64	£37.14	£37.03
SMPF Connection (New Provide and Single Migration)	£38.64	£30.58	£30.24
Weighted average			£32.35

4.107 We are proposing an indexation in the range RPI-7.7% - RPI-10.7% (base case RPI-9.2%) for both MPF transfer and SMPF connection to enable charges to be aligned with CCA FAC by the end of the control period.

***Question 4.11**: Do you agree that charge controls in the range RPI-7.7% - RPI-10.7% (base case RPI-9.2%) should be imposed on MPF transfer and SMPF connection to bring the charges into line with CCA FAC by the end of the charge control period?*

Cease charges

4.108 MPF and SMPF flexi-ceases are provided when a CP requests to terminate an LLU service. The service is essentially the same whether provided for MPF or SMPF. The service is a data only change to Openreach's systems, which incurs minimal or no marginal activity for Openreach to initiate the service. If a CP requires that Openreach physically terminate the MPF or SMPF line then a jumper removal service is ordered. Around 80% of LLU singleton terminations are data only ceases with the remaining 20% jumper removals.

The impact of cease charges on competition

4.109 As with the other termination charges, we assess the impact on competition when assessing options for setting the charge control for the cease charge. As we set out above, Ofcom has highlighted the importance of switching costs to maintaining a healthy level of competition.[81] We have also recently published guidance on how we would interpret whether a cease charge was reasonable.[82]

[81] http://stakeholders.ofcom.org.uk/binaries/consultations/consumer-switching/summary/switching.pdf

[82] See our statement on guidance for additional charges. paragraphs 1.22 to 1.23 at http://stakeholders.ofcom.org.uk/binaries/consultations/addcharges/statement/Guidance.pdf. "The fairness test for cease charges
1.22 We consider cease charges are likely to be fair where the following conditions are fulfilled:
122.1 the terms relating to cease charges are transparent to consumers within the contract at the point of sale;
122.2 they reflect only the direct costs associated with ceasing service; and

4.110 Termination charges such as cease charges can be considered a particular type of switching cost. This is because at the retail level, when setting prices a gaining CP has an incentive to minimise consumers' switching charges in order to attract consumers. Often when a consumer switches to a new provider, the gaining CP does not directly pass through to consumers the charge that Openreach sets for connecting the consumer. Instead the CP chooses to recover the costs of connection from the ongoing line rental. However, in the case of termination charges the losing CP has an incentive to maximise the level of the charge as it acts as a barrier for consumers to switch away from the CP's service.

Proposal

4.111 As with other regulated charges, we have considered the charge for cease in relation to forecast levels of CCA FAC. We also consider the first order test for cost orientation – that charges should normally fall between DLRIC and DSAC measures of cost.[83]

4.112 The forecast cost information in Figure 4.9 shows the CCA FAC for these services to be £3.09, by the end of the control period. One option for charge control, therefore, is to set an indexation for cease charges to align them to CCA FAC at the end of the charge control period.

Figure 4.9: Current charge and FAC costs of flexi-cease services

Note that the prices listed are current and do not include price changes announced by Openreach which will take effect on 1 April 2011.

Service	Current charge	2013/14 forecast volumes	2013/14 FAC costs
MPF flexi-cease	£5.22	810,000	£4.22
SMPF flexi-cease	£5.22	1,120,000	£2.28
Weighted average			**£3.09**

Weights based on Openreach forecast volumes sourced from BT's response of 6 October 2010 to question 1 of Ofcom 2nd section 135 request' of 23 September 2010

4.113 However, there are doubts about this cost information as it forecasts substantially different costs for the MPF and SMPF variants of the same service. This seems unlikely to reflect the true underlying costs of the service because, as explained above, it is essentially the same activity for MPF and SMPF. In this case therefore, we prefer not to set a glide path to CCA FAC.

4.114 Instead, we think it is appropriate and proportionate to set cease charges at zero at the start of the control and allow recovery of any associated costs through rental charges. In developing this proposal, we have considered our normal approach to cost recovery and cost orientation. In this case, we do not have reliable information on the DSAC for MPF and SMPF flexi-cease. However, given that the service is provided using a data only change, we think it likely that the incremental cost of the activity is likely to be close to zero. In addition, as explained above, there are

122.3 there is no double recovery (via a cease charge and another charge (like an ETC)).
123. We are likely to take seriously the levying of cease charges that do not meet these conditions. Artificially high cease charges can affect switching costs, which impede competition in the market".
[83] See Guidelines on the Operation of the Network Charge Controls
http://www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/pcr1201.htm

important reasons to minmimise termination charges to mitigate the risk that CPs will levy them in retail markets to raise barriers to switching.

Question 4.12: *Do you agree that the charge for MPF and SMPF cease should be zero and costs recovered from rental charges?*

Proposed treatment of low volume services, time related charges (TRCs), special fault investigation (SFI), electricity charges, expedite charges, and enhanced care options

4.115 During our review of the LLU charge controls, stakeholders have raised concerns in relation to certain ancillary services. In particular, we have been asked to review regulation of low volume services, time related charges, special fault investigation, electricity charges, and enhanced care options. We have also reviewed the treatment of expedited connections because of the different treatments of MPF and SMPF variants under the current controls.

4.116 In the following sections we set out our reasons for the following proposals:

- low volume co-mingling ancillary services should continue to be charge controlled;
- to the extent they are required to be provided pursuant to Condition FAA1 and/or FAA9, TRCs are covered by general remedies and should not be charge controlled;
- SFI services are covered by general remedies and should not be charge controlled;
- MPF and SMPF expedited connections should be charge controlled within the MPF and SMPF baskets;
- we propose to continue to rely on general remedies to regulate electricity charges, but we will explore how we can improve transparency of Openreach's costs and revenues;
- LLU enhanced care services should be explicitly aligned to the same services for WLR.

Low volume co-mingling ancillary services

4.117 There are 70 products which are charge controlled within the co-mingling basket which Openreach supplies at very low volumes. Arguably, a simpler basket structure which excluded these products would lower the administrative burden to Ofcom and Openreach associated with setting and monitoring the basket charge control.

4.118 However, by imposing a cost orientation obligation on its own, with no charge control, Openreach, and if necessary Ofcom, would still incur the administrative burden of assessing whether the prices of the services are cost oriented (as this is part BT's SMP condition).

4.119 We therefore consider that it is appropriate and proportionate for low volume products to be charge controlled within the co-mingling basket. As explained above (paras 4.67 – 4.76) we also propose that the inertia clause should apply to provide an

additional safeguard for individual charges within the control. We do not believe that removing the services from the basket would significantly reduce Openreach's and Ofcom's administrative burden, while it could increase the risk that Openreach over recovers its costs, particularly if there is significant volume growth for any of these services.

Question 4.13: *Do you agree that the 70 low volume products in the co-mingling basket should continue to be charge controlled within the co-mingling basket?*

Time related charges

4.120 Openreach offers a range of services which are collectively known as time related charges (TRCs). The services include repairs of faults to non LLU equipment and provision of services out of normal working hours which are not covered within Openreach's service level agreements[84]. TRCs are provided across Openreach's portfolio of products and not just for LLU services.

4.121 In theory many of these services can be provided by any telecoms engineer and do not have to be provided by Openreach. However, this is not true in all cases, and we do not consider it appropriate or proportionate to divide the market between non-contestable and contestable TRCs. Also CPs have noted that there are economies of scope of providing TRCs alongside core Openreach LLU services which prevent third party operators from being able to effectively compete even where services may theoretically be contestable. These include efficiencies resulting from continuity of service (between TRCs and the core LLU service), ease of ordering directly from the existing Openreach ordering system, the degree of systems knowledge required to provide the services and the fact that Openreach assistance would be required if network problems arose.

4.122 Where these services are required to be provided pursuant to Condition FAA1 and/or Condition FAA9, they are subject to cost orientation obligations under SMP condition FAA4. We consider that a cost orientation obligation is the most appropriate and proportionate form of price regulation for these services. While they may to some extent be contestable, it is debatable how far some CPs are practically able to substitute to alternatives to Openreach. Therefore, we propose to rely on general remedies to regulate time related charges if necessary.

Reporting arrangements

4.123 The services provided are charged for on a per visit and per hour basis, and will largely relate to the cost of an engineer's time (including the direct and indirect costs – such as travelling costs and system management costs).

4.124 We do not believe that separate reporting arrangements for TRCs in Openreach's regulatory accounts would be appropriate or proportionate. This is for two reasons. First, it would be practically difficult and disproportionate to require Openreach to separately report costs and revenues for TRCs. This is firstly because it would require that Openreach identify whether each instance of a TRC is subject to the SMP condition, and secondly for which SMP market (if any) the service was supplied. Second, in practice, the structure of charges (based on the per visit or per hour cost of an engineer's visit), is clear to CPs. We think this provides relevant information for

[84] A description and prices of the services is set out here: http://www.openreach.co.uk/orpg/home/products/serviceproducts/timerelatedcharges/timerelatedcharges.do a2

CPs to assess whether charges are reasonable - for example by benchmarking these charges to their internal costs of engineers time.

4.125 Whilst this type of analysis could be used by CPs to make an assessment of whether charges for time related charges are cost oriented, Ofcom recognises that further guidance on the application of cost orientation requirements for these services would be helpful for Openreach and other CPs. We will therefore include consideration of this in our review of cost orientation guidance which is scheduled for 2011.

Question 4.14: *Do you agree that time-related charges should remain out of the scope of the charge control and subject to general remedies applied in the WLA market review?*

Special fault investigation

4.126 Special fault investigation (SFI) is a range of services which Openreach offers to MPF and SMPF customers[85]. These services are not charge controlled but where they are reasonably necessary for the provision of the LLU service they are currently subject to general remedies applied in the WLA market review.[86] CPs have expressed concerns about the cost to them of SFI services. We have therefore considered whether to include SFI services in the next charge control.

4.127 Like TRCs, SFIs are subject to cost orientation obligations under SMP condition FAA4 where these services are required to be provided pursuant to Condition FAA1 and/or Condition FAA9, and there may be SFIs which fall outside of this – for example, Openreach offers SFIs services covering customers wiring and customer equipment. However, we believe that most SFIs fall within the WLA market and hence are covered by general remedies.

4.128 The SFI product was priced at £144 between May 2001 and July 2010 when it increased to £160. In 2010 Openreach introduced a range of new SFI products (SFI2). These consisted of a range of "module" specific SFI services relating to the "base", "network", "frame", "internal wiring", "internal equipment", "coop" and the "frame direct" modules. The prices for these new services are between £35 and £95, and Openreach has announced price changes to take effect from 1 April 2011 which will result in a broadening of the range between £25 and £105 (in some case the base module price applies in addition to other module prices).

4.129 Given these recent developments in SFI services and pricing which enable more flexible options for customers, we do not propose to introduce a charge control for SFI services. However, as noted above, we recognise that these services represent a considerable cost item for some of Openreach's customers, and that further guidance on the application of cost orientation requirements for these services would be helpful for Openreach and other CPs. We will therefore include consideration of this in our review of cost orientation guidance which is scheduled for 2011.

4.130 The same SFI services are currently provided for MPF and SMPF, and charges are the same across the LLU portfolio. To ensure that competitive distortions do not arise as a result of differential charges, we propose to introduce a new provision to ensure that charges for equivalent SFI services available to both MPF and SMPF customers remain aligned for the duration of the new controls. We are proposing to implement our proposals on this through a new paragraph FAA4(A).11 in SMP condition FAA4.

[86] http://stakeholders.ofcom.org.uk/consultations/wla/?a=0

Question 4.15: *Do you agree that special fault investigations should remain out of the scope of the charge control and subject to general remedies applied in the WLA market review?*

Question 4.16: *Do you agree that the charges for special fault investigations should remain aligned between MPF and SMPF?*

Electricity

4.131 CPs buy electricity from Openreach to provide power to their equipment used for LLU. Currently, Openreach's charges for electricity are subject to general remedies. The prices that Openreach charges CPs for electricity depends on the wholesale price that BT itself is charged as a large proportion of the price is a pass-through of the underlying wholesale costs of electicity.

4.132 Inevitably, the prices Openreach charges for electricity fluctuate, reflecting variations in the prices at which it purchases electricity. For example, the price that Openreach charges its customers increased by 36% between 2007 and 2009. But the price is now lower than it was in 2007.

Figure 4.10: Charges for electricity usage per kWh (from the Openreach price list)[87]

Operative date	Until	Charge £ Exc VAT
09/02/2007	09/11/2008	0.082
10/11/2008	31/03/2009	0.0968
01/04/2009	31/12/2009	0.1118
01/01/2010	31/03/2010	0.1007
01/04/2010	30/08/2010	0.0862
31/08/2010		0.0812

4.133 We have considered whether to (i) charge control the service, within a basket or with a specific control or (ii) rely on general remedies set in the WLA market review and not set a charge control. We conclude that it is difficult to set specific charge control for electricity charges given its inherent price variability.

4.134 An alternative approach would be to control the proportion of the charge which does not include pass through of the raw electricity cost. However, a prescriptive price control could limit Openreach's flexibility to set prices and efficiently recover common costs. Furthermore, given the relatively low revenues associated with this part of the charge (✂), we do not think it is appropriate or proportionate to set a specific control on this service.

4.135 Given the practical difficulties of setting a charge control we consider that general remedies (including cost orientation) provides an appropriate and proportionate level of protection for consumers of this service. However, as set out below we will investigate whether CPs can be given greater reassurance that Openreach meets its cost orientation obligations by improving transparency.

87

http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=5aGuTJ%2Bu7bjhXjKH3sW9KvqqAFdbfkJJvFiM9%2FNj42QlMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIlSgtIFAKw%3D%3D

Reporting arrangements

4.136 Currently BT publishes the costs and revenues of power in its Regulatory Financial Statements (RFS). The data are currently contained in the table in section 7.10 - Wholesale Local Access and is reported within "MPF Hostel Rentals". In this case we consider that it may be appropriate that BT reports the data for power at a greater level of granularity within its regulatory financial statements in order to provide greater transparency for CPs. We therefore propose to explore with BT an amendment to separately report power and possibly other material WLA services currently aggregated in the MPF Hostel Rentals line in its financial statements for the next annual update (which would be implemented for the 2011/12 reporting year).

Cost orientation

4.137 We recognise that further guidance on the application of cost orientation requirements for electricity charges would be helpful for Openreach and other CPs. We will therefore include consideration of this in our review of cost orientation guidance which is scheduled for 2011.

Question 4.17: *Do you agree that electricity charges should remain out of the scope of the charge control but subject general remedies set in the WLA market review?*

Expedite connections

4.138 Openreach offers expedited connections for both MPF and SMPF services. The service enables CPs to order faster connection services than is provided with the normal MPF and SMPF connection. Currently the MPF expedite is charge controlled within a basket and but the SMPF service is not. We propose to align the regulation of these services. Given the similarity of these services we do not think there is a case to apply different price regulation obligations. As explained in paragraphs 4.85 – 4.90, we do not propose to align the charges for these services.

4.139 We have considered whether these services should be regulated within the basket controls or whether general remedies are sufficient. Given the market review found that Openreach has significant market power in the market for wholesale local access, we consider that some form of price regulation is appropriate for these services to ensure that Openreach does not set prices excessively.

4.140 General remedies provide some protection to CPs. We also note that the core connection services (which are charge controlled) may provide some constraint on the charges for expedite connections. However, we think this is likely to be a weak constraint as volumes for expedite connections are low, suggesting that it may only used when absolutely necessary and when the basic connection service is not an effective substitute.

4.141 On balance, therefore, we think the most appropriate and proportionate approach is to charge control expedite connections. Whilst we are proposing separate controls for some connection services for these controls, we think it is more appropriate and proportionate to include expedite connections in the respective MPF and SMPF ancillary services baskets. This is because expedite connections are not a core service (as main connection charges are), and because volumes are low. Treatment of expedited connections in this way will also allow Openreach some pricing freedom, subject to the inertia clauses for the MPF and SMPF ancillary services baskets.

Question 4.18: *Do you agree that both MPF and SMPF expedited connections should be charge controlled within the MPF and SMPF ancillary services baskets?*

Enhanced care services

4.142 In our statement on the WLA market review we stated that we would consult on whether cost orientation obligations should be removed from enhanced care services for LLU[88]. In the sub-section below we describe enhanced care services and their recent development. We then set out Ofcom's approach to regulating WLR enhanced care services before consulting on options for the current review.

Description of enhanced care services

4.143 Enhanced care services offer consumers higher levels of care (in response to reported faults) than are available to customers of the core line rental. Openreach has recently harmonised its enhanced care services across its portfolio of products[89]. Additionally, customers are able to choose a range of one-off expedited repair services. For example, a one-off expedited repair from service level 2 to Level 3 costs £500 or from service level 2 to Level 4 costs £735.

Figure 4:11: Price of enhanced care services (£ per month)[90]

Product	Service Maintenance Level 1	Service Maintenance Level 2	Service Maintenance Level 3	Service Maintenance Level 4
Description of service	Next working day + 1, fix Monday to Friday	Next working day, fix Monday to Saturday.	Report am fix pm, Report pm fix next am. Monday to Sunday.	6 hour repair anytime.
MPF	N/A	Included in line rental	37.20	48.00
SMPF	N/A	Included in product rental	37.20	48.00
WLR – Basic	Included in line rental	6.32	43.52	54.32
WLR – Premium	N/A	Included in line rental	37.20	48.00
ISDN 2	N/A	Included in line rental	37.20	48.00
ISDN 30 (per channel)	N/A	Included in line rental	25.20	27.20

Annual Rental Exc VAT

4.144 There are relatively few consumers of enhanced care services. BT Wholesale is by far the biggest single user of enhanced care services.

[88] Review of Wholesale Local Access Market Statement ¶6.39.
[89] For information on the service levels offered to LLU (and other) Openreach customers see: http://www.openreach.co.uk/orpg/products/cpp/downloads/Service%20Harmonisation%20Overview%20-%20May%20%202010.pdf.
[90] http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPrices.do?data=k9c3H94HYDNSzSoB129T9Vnqs1m6OcKz301sgolk8P2FdiaKKPEfrCsJCb3sZkzJ

Approach to regulation of WLR enhanced care services

4.145 In our charge control statement for WLR services we considered what form of price regulation should apply to WLR enhanced care services. Specifically we concluded on the question of whether the services should be subject to a cost orientation requirement or whether it was sufficient to regulate the core rental. The statement noted that at the time of writing Openreach was considering changing the structure of its WLR enhanced care products, and that therefore they were not suitable for a charge control.[91]

4.146 We concluded that we should not impose cost orientation obligations on WLR enhanced cares services. We stated that:

> "[we did] not consider that this decision [set] a precedent on the treatment of services in other markets. Each market and market remedy, including the basis of charges conditions, [had] to be considered on its own merits." [92]

4.147 The reasons for the decision to remove cost orientation for WLR enhanced care options were:

- The regulated price of the core rental would provide a constraint on the enhanced levels of care. "We considered that substitutability between WLR enhanced care options and the ability of some customers to opt out of enhanced care altogether [did] impose a market driven constraint on charges for these services."[93]
- A cost orientation obligation would not be well targeted given the wide range of prices that would satisfy the first order condition that a price is cost oriented (i.e. that the price lies between DLRIC and DSAC costs). In practice, given that the costs of providing enhanced care services are the costs of reprioritising existing resources it would be difficult to accurately assess the DLRIC floor and DSAC ceiling of costs[94].
- The pricing of enhanced care services would be subject to existing SMP regulation that ensured Openreach did not unduly discriminate between customers, that it gave notice of charge changes, and that its WLR services would be provided on fair and reasonable basis.[95]
- We also noted that there was a risk to innovation which could result from the imposition of an obligation that restricts or controls pricing[96].

4.148 This was confirmed in Ofcom's recent review of wholesale fixed analogue exchange lines markets consultation[97].

Options for regulation of LLU enhanced care

4.149 We have considered the following options for the regulation of prices for LLU enhanced care.

[91] Charge controls for WLR and related services, 26 October 2009, ¶4.17.
[92] Charge controls for WLR implementation and cost orientation, 23 February 2010, ¶4.26.
[93] Charge controls for WLR implementation and cost orientation, 23 February 2010, ¶4.5, 4.10, 4.42.
[94] Charge controls for WLR implementation and cost orientation, 23 February 2010, ¶4.43.
[95] Charge controls for WLR and related services, 26 October 2009, ¶4.39.
[96] Charge controls for WLR implementation and cost orientation, 23 February 2010, ¶4.13.
[97] ¶6.8. See: http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/

4.150 First, we have considered no change to the current requirement for cost orientation for these services (**Option 1**). We note that this requirement does not appear to have constrained Openreach's flexibility to create a harmonised framework of care level options for LLU and WLR services. Overall, there seems to be a reasonable level of satisfaction in industry with the current system and therefore it can be said to have worked well. However, as we noted in relation to WLR, a cost orientation requirement is not particularly well targeted given the difficulty of identifying costs associated with prioritisation of work, and the potentially broad range of prices which could satisfy the first order tests of DLRIC and DSAC.

4.151 Therefore, as indicated in the WLA market review, we have considered whether to remove the cost orientation requirements from LLU enhanced care options (**Option 2**). This would move the regulation of care level options to the same basis as WLR, and so would be an appropriate approach if the price of enhanced care level options were constrained by the core service – as we identified was the case with WLR.

4.152 However, this is not necessarily the case. LLU services are used for different downstream services such as business broadband services whereas WLR is used for single voice lines. Therefore, it is possible that faults with broadband services could have greater impact on businesses than voice only lines, such that retail consumers of LLU enhanced care would be unwilling to switch to a core level of care if the price of enhanced care was increased by a small amount.

4.153 We have gathered evidence from CPs on their use of LLU enhanced care and received differing views on whether enhanced levels of LLU care were substitutable for the core level of care.

4.154 Two CPs believed that its customers would not view the core level of care (level 2) as a reasonable substitute of the higher levels of care. For example, in response to an informal information request, KCOM Group's national business KCom told us that as it focuses on business customers it "very much regarded enhanced care as a must-have rather than something which is optional".[98] Another respondent, Cable and Wireless, said that it regarded business grade care levels as non-discretionary for access services for its retail customers; it noted that "business customers expect a business grade service wrap for their business critical services"[99]. It noted that the LLU business services that it provides are "in the majority critical to the functioning of the business and consequently enhanced care is seen as a non discretionary part of the service."

4.155 By contrast BT Wholesale had a different view[100]. It said that it did "not regard any care level other than LLU standard care as being a non-discretionary element of the SMPF or MPF service", indicating that its customers would consider switching between the core and enhanced product. Furthermore it stated that some of its "customers purchase broadband services with … standard care level ... and then add their own improved maintenance terms to supply to the retail market".

4.156 On balance, taking account of this evidence, we do not believe there is sufficient evidence of a demand side constraint on the pricing of enhanced care level options

[98] Email from KCom to Ofcom of 4 November 2010 in response to Ofcom informal information request of 13 October 2010.
[99] Email from Cable & Wireless to Ofcom of 1 November 2010 in response to Ofcom informal information request of 13 October 2010.
[100] Email from BT Wholesale to Ofcom of 29 October 2010 in response to Ofcom informal information request of 13 October 2010.

for LLU from the core service, to rely on this as a basis for the removal of existing regulation.

4.157 However, as we have noted above, a cost orientation obligation may not be a well targeted safeguard when applied to enhanced care services. Therefore, we have considered other potential solutions to maintain a pricing safeguard without a cost orientation obligation.

4.158 We have considered whether enhanced care level services could be directly charge controlled (**Option 3**). They could be included in baskets with the core rental controls, or added to MPF and SMPF ancillary services baskets. This would constrain charges and protect users from charge increases above the level allowed by the basket controls. There would be some practical difficulties with this approach as the inclusion of enhanced care services in separate MPF and SMPF controls could result in misalignment of prices which were recently aligned through Openreach's harmonisation initiative. This could be an unhelpful development when reaction to the harmonisation by Openreach's customers has generally been positive. Nevertheless we think basket control would be a credible option for enhanced care services in the event that other options are found to provide insufficient constraint on price behaviour.

4.159 An alternative approach would be to set a safe guard cap which limited further price increases (e.g RPI+0%). While this approach would provide protection to consumers it would tend to ossify the existing price structure throughout the charge control. This would make it harder for Openreach to make adjustments to the configuration of services and structure of prices to improve efficiency.

4.160 We have considered whether a new requirement to ensure that the charges for LLU enhanced care do not become misaligned from the same services applied to WLR (**Option 4**) would provide an adequate level of protection. As stated above, we believe that the charges for WLR enhanced care services are constrained by the regulated price of the core service. If an explicit requirement were created to ensure that enhanced care services for LLU services do not become misaligned from WLR services, the WLR core rental price would then become an 'anchor' constraining the level of charges for enhanced care services across WLR and LLU. In that case, the cost orientation requirement could be removed, and the 'chain of substitution' constraint provided by WLR core rental would protect LLU as well as WLR enhanced care services.

4.161 We think this approach has some advantages in that, as well as protecting customers from inappropriate price rises, it would also allow some pricing flexibility. It also seems consistent with the commercial impetus for service and price harmonisation which Openreach has already initiated for its enhanced care services.

4.162 However, we are also aware that the price of WLR core rental may not provide a perfect constraint. For example, Openreach may be able to unfairly enhance its profitability within this framework by increasing charges for enhanced care levels which are not heavily utilised by WLR customers (e.g. levels 3 and 4) but are an essential service element for some MPF and SMPF users. If Option 4 were implemented, we would therefore keep this in mind in assessing any large increases in the charges for enhanced care levels relative to other levels. General remedies requiring the provision of access on fair and reasonable terms and no undue discrimination would continue to apply, and we would assess any large increases in charges fo enhanced care levels against these tests.

Consultation

4.163 On the evidence available, we think that Option 4 would be the most appropriate and proportionate method of regulation of enhanced care services for LLU. In effect, it would extend the framework which currently applies to WLR and appears to be working well.

4.164 We would welcome the views of stakeholders on all the options for regulation of prices for LLU enhanced care services which we have identified in this section. In particular, we would be grateful for views on whether Option 4 would be a reasonable and effective constraint on the charges for LLU enhanced care services.

4.165 We have drafted the proposed legal instruments (Annex 13) on the basis of Option 4. However, we recognise that a different approach may be taken in our final statement following consultation, and that the draft conditions may therefore need to be changed.

Question 4.19: *Please indicate which of the Options 1 – 4 you think would be the most effective method of regulation of LLU enhanced care services. Please indicate whether you think Option 4 (removal of the cost orientation requirement and creation of a new requirement that the charges for LLU enhanced care should not be misaligned from those for equivalent WLR enhanced care services) would be an effective remedy.*

Treatment of new services which partially or fully replace existing services

4.166 Finally, we consider how 'new' services should be treated. We do not propose to include genuinely new services in the charge control structure. However, as a matter of policy, we would not wish Openreach to deliberately or inadvertently revise its service structure in such as way as to reduce the scope of services covered by the baskets and introduce these elements in a less regulated manner. We propose the following mechanism to deal with any material changes (other than to a charge) made by BT to any product or service subject to the charge controls. A "material change" would include the introduction of a new product or service wholly or substantially in substitution for that existing product or service.

4.167 In such a case, we propose that the charge controls would have effect subject to such reasonable adjustment to take account of the change as Ofcom may direct to be appropriate in the circumstances under SMP condition FAA4(A).13. Before giving such a direction, Ofcom would consult on its proposal in accordance with the process set out in section 49 of the Act. On giving such direction, BT would be required to comply with it under Condition FAA4(A).17.

4.168 In order to ensure that the baskets remain fully transparent going forward as to their products and/or services, should any changes be required from time to time, we would propose to exercise our power of direction under SMP condition FAA4(A).13 by amending the list of services covered by the basket in question as set out in Parts 1 to 3 of the Annex to Condition FAA4(A).

4.169 We would nonetheless expect Openreach to retain in each basket the full functionality presently contained within the basket defined in the Annex to Condition FAA4(A). In any event, we note that such 'new' services may fall within the relevant market and hence be covered by general remedies.

4.170 We would further note that the list of regulated services should not constrain Openreach from the development of new services. However, where new services are created which at least partly substitute for a product on which a control currently applies (either directly or within a basket) then we would expect Openreach to include the new services within the appropriate basket.

Question 4.20: *Do you agree that new services which partially or fully replace existing services should be included in the charge controls**?***

Section 5

WLR charge control structure

Introduction

5.1 This section sets out our approach to charge controlling WLR rental and related ancillary services. In the section below we set out our proposals on whether and, if so, how we set a charge control for each WLR service.

5.2 More specifically, we consider:

- The form of charge control on WLR rental
- The form of charge control on WLR transfer
- The form of charge control on WLR new connection[101]
- Whether the scope of the charge control should be widened to include other WLR services.

Summary of proposals

5.3 We propose the following:

- We will continue to set a charge control on the rental service.
- We will continue to set a charge control on the WLR transfer. We are consulting on options to cap further increases in its price and continue to recover a portion of the WLR transfer costs through the core line rental, or to allow charges to rise to the level of DLRIC over the life of the controls.
- We will set a charge control on WLR new connection to bring the price into line with CCA FAC by the end of the control.
- Other WLR services will continue to be subject to general remedies applied in the recent wholesale narrowband market review.[102]

5.4 We discuss our proposals and the reasoning behind them below.

Scope of the charge control for WLR services

5.5 In this section we consider the scope of the charge control for WLR services. In the wholesale narrowband market review[103] we established SMP conditions which imposed the following regulation:

- Openreach's WLR rental should be subject to a charge control[104].

[101] Openreach refer to this product as "supply of new line". In the previous charge control statement this product was referred to as "WLR new line connection".
[102] http://stakeholders.ofcom.org.uk/consultations/wla/?a=0
[103] Review of wholesale fixed analogue exchange lines markets, Condition AAAA10.1 and AAAA10.2. http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement

- Some ancillary WLR charges (such as migration services, calling and network features, pre-validation charges) are subject to other general remedies[105].

5.6 The market review left it to this consultation to consider the proposed form, level and duration of the new analogue WLR charge control and all other aspects of its implementation. In assessing these, we have considered whether Openreach would be able to exploit its market power against the interests of consumers or to impede competition. We would be particularly concerned about Openreach's ability to exploit its market power where the ancillary service is highly complementary to the core rental, or purchase of the service from Openreach is unavoidable from the CPs point of view.

5.7 We think that it is appropriate that some charges for certain switching services, namely WLR line transfer and new provide, fall within the scope of the charge control. This is because it is appropriate to ensure that Openreach is prevented from increasing switching costs to raise barriers to entry which would harm competition and lead to higher prices.

5.8 However, we recognise that a charge control may not be appropriate or proportionate for all services for a number of reasons. For example for reasons of practicality or proportionality, where there is an existing competitive pricing constraint, or where a control would unnecessarily stifle innovation.

5.9 Our starting point when considering the scope of the new charge controls are the services which are currently controlled: the WLR rental, WLR transfer and WLR new connection. We have then considered whether any other services which are subject to the SMP condition should be charge controlled, for example calling and network features, pre-validation or cancellation charges.

WLR rental

5.10 The statement on the previous charge control set out our reasoning for setting charges for a single rental service as opposed to separate controls for a premium and a basic rental service. Openreach's rental service which is available to all customers for residential and business lines is now well established, and so we intend to continue with a single control on the rental service, rather than reverting to separate controls for residential and business variants of WLR rental.

5.11 We have considered whether to include the rental service in a basket with other WLR services – e.g. connections. This would allow some flexibility in the setting of charges for services in the basket. When considering the appropriate structure of charge control for WLR services we need to ensure that the approach we take does not create any distortionary effects, as WLR and LLU can be alternative inputs used in the same downstream markets. In particular we would be concerned if a basket approach applied to WLR (with rentals and connections in the same basket) allowed Openreach to selectively lower WLR charges relative to LLU.

5.12 Moving to a basket approach would also increase uncertainty about the future pricing of the core rental service, and we are mindful that the current framework has worked well, and no stakeholders have lobbied for changes.

[104] Condition AAA3.2.
[105] Condition AAAA10.2

5.13 On balance, therefore we prefer to maintain the current framework of an individual control applied to the rental service.

5.14 Consistent with the principles set out in Section 3 we propose to set the price of the WLR rental on a glide path to ensure it recovers CCA FAC costs by the end of the charge control period.[106]

5.15 We are also proposing an amendment to SMP Condition AAAA10 to make clear that the obligation to provide WLR includes, when requested by a third party, such ancillary services as may be reasonably necessary for the use of WLR. This does not constitute a policy change, but merely clarifies the status of WLR ancillary services and, as now drafted, would make the SMP conditions for LLU and WLR consistent.

Question 5.1: *Do you agree that the core rental should be subject to a charge control which sets the price of the WLR core rental on a glide path to ensure it recovers CCA FAC costs by the end of the charge control period?*

WLR to WLR transfer

5.16 WLR to WLR transfer is a service which CPs purchase when an existing WLR retail customer transfers their services to another WLR provider. We currently charge control this service to prevent Openreach setting excessive prices on this switching service.

Background to current charge control

5.17 In the previous charge control review we set the charge for the WLR transfer below our estimate of FAC and allowed the charge for WLR transfer to rise in line with the control for the core rental service. This means that some of the common and incremental costs associated with the WLR charge are currently recovered through the charge for the core rental service.

5.18 In developing this approach, we considered that a WLR transfer charge control, capped at a low level, would continue to allow WLR CPs to offer voice only retail products which did not contain Minimum Contract Period (MCPs) or Early Termination Charges (ETCs), and would mitigate against CPs introducing up-front transfer charge recovered directly from the customer. This was because the one-off costs to CPs of gaining customers were small relative to the monthly line rental charge - the current charge of £3.09 is a little over a quarter of the average monthly retail line rental[107].

Options for charge control of WLR transfer charge

5.19 We have reviewed our approach to the WLR transfer charge. We believe it is still important to ensure that the level of wholesale charges does not distort downstream and retail markets – for example by encouraging the creation of new MCPs which

[106] We also intend to continue the current framework in which the basis of charges obligation (cost orientation) is dis-applied from the WLR rental charge to ensure that there is no inconsistency with the RAV adjustment. A draft Direction to ensure continuation of this is included in Annex 13. Note that this draft Direction is included for completeness and avoidance of doubt as cost orientation is already dis-applied from WLR rental by virtue of Condition AAAA3.2.

[107] In the 2010 Communications Market Review we reported that the average monthly line ("access") line rental for fixed lines was £11.91 in 2009. See Figure 5.36: http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/UK-telecoms.pdf.

raise barriers to retail switching and reduces the level of choice for consumers. At the same time, we note that MCPs are now quite common in retail voice markets – for example, BT's Unlimited Anytime plan has a 12 month MCP when you switch from another provider, its Unlimited Week-end plan has a 12 month MCP when you switch from another provider,[108] and Talk Talk's Talk UK Evening & Week-end and Talk UK Anytime packages both have 12 month MCPs.[109] By contrast, the Post Office offers a range of residential 'phone packages with no MCPs.[110] Ofcom would like to see no-MCP options continue to be available in retail fixed voice markets.

5.20 Our general approach to price regulation where cost orientation applies is that a first order test of cost orientation is whether a charge lies between its DLRIC and DSAC. Openreach's reported LRIC and SAC[111] of the transfer charge in 2009/10 was £10.09 and £24.28 respectively[112]. The current level of charges (£3.09) is significantly below the reported estimated LRIC. Therefore, unless charges are raised to at least the level of LRIC, it may be appropriate to dis-apply the basis of charges (cost orientation) obligation that currently applies to this service. We do not think that removal of cost orientation in this case would result in a risk of excessive pricing, since WLR transfer will continue to be subject to an individual charge control.

5.21 However, it may be appropriate and proportionate to align the charges more closely with reported costs in the next charge control. The charge control model forecasts the CCA FAC for WLR transfer at around £16 in 2014. Reconciliation of charges with this estimate of costs by the end of the charge control period would clearly require significant increases to charges in each year of the control.

5.22 Therefore, if we followed this approach we would need to consider whether increases to transfer charges would have a disruptive or damaging impact in downstream voice markets. For example, we would be concerned if increases to the WLR transfer charge resulted in a reduction in the availability of residential 'phone services without MCPs, or a general lengthening of MCPs.

5.23 In reviewing our approach to the WLR transfer charge, we have also considered our treatment of other transfer and connection services (migration charges). In Section 4, we explained proposals to enable new provide, connection and transfer charges for MPF and SMPF to align to CCA FAC during the new control period. Clearly, the current level of the WLR transfer charge results from a different treatment of this migration service. We have therefore considered applying the same standard of aligning to CCA FAC to all transfer charges across WLR and MPF. The problem might be the level of price adjustment required to align charges to modelled CCA FAC. Figure 5.1 below shows the adjustments required.

[108] http://www.productsandservices.bt.com/consumerProducts/displayCategory.do?categoryId=CON-HOME-PHN-R1
[109] http://broadband.talktalk.co.uk/products/phone-line
[110] http://www2.postoffice.co.uk/broadband-phone/home-phone-broadband/home-phone
[111] We consider that Openreach's estimate of LRIC to be a reasonable proxy for DLIRC in this case.
[112] See Section 7.3 of Current Cost Financial Statements for 2010.

Figure 5.1: Percentage adjustments to align migration service charges to CCA FAC.

Service (all prices in nominal terms)	Charge at 31/3/2011	Forecast 2013/14 CCA FAC	% adjustment to align
MPF transfer	£38.64	£37.03	- 4.2
SMPF connection	£38.64	£30.24	- 21.7
MPF new provide	£62.11	£48.53	- 21.9
WLR transfer	£3.09	£16.30	+ 427.5

5.24 Figure 5.1 clearly shows that the adjustment required to align WLR transfer charges to CCA FAC is far greater than that required to align the LLU migration service charges. Such a large price adjustment over a 2.5 year period would carry a risk of disruption in the market and downstream in the retail market. Therefore, if we adopt an approach of aligning charges for WLR transfer more closely to cost, we believe a more gradual transition is appropriate - for example, alignment of the charge to an estimate of DLRIC over the life of the next controls would result in a shallower glide path.

5.25 We would welcome the views of stakeholders on the following options for the treatment of the WLR transfer charge:

- **Option 1**: maintain the current approach of maintaining a low WLR transfer charge (below reported LRIC), applying an indexation of RPI to allow charges to rise in line with inflation.

- **Option 2**: allow charges to rise over the life of the control to a level conistent with DLRIC. Our model does not forecast DLRIC values, but BT's published LRIC floor for WLR transfer could be a reasonable point of reference. The LRIC floor in the 2009/10 RFS is £10.09. Indexation at 3% over 3 years results in a forecast LRIC for 2013/14 of £11.00. Enabling charges to rise to this level would require very significant increases in each year of the control.

5.26 Since neither of these approaches would result in an immediate alignment of charges to reported costs, we are also consulting on whether the current cost orientation obligation should be removed from WLR transfer. If this happens, we would review whether the obligation should be re-applied at the next appropriate market review. This could be appropriate if Openreach were identified as having SMP in relation WLR transfer at a future market review, and charges were at a level to cover LRIC.

5.27 We have drafted the proposed legal instruments (Annex 13) on the basis of Option 1. However, we recognise that a different approach may be taken in our final statement following consultation, and that the draft conditions may therefore need to be changed.

Question 5.2: *Do you agree that WLR transfer should be subject to a separate charge control? Please give reasons for your answer.*

Question 5.3: *Do you think that Ofcom should adopt Option 1 or 2 above as its approach to the pricing of WLR transfer during the next charge control? Please give reasons for your answer.*

Question 5.4: *Do you think that the cost orientation obligation should be removed from WLR transfer services? Please give reasons for your answer.*

WLR New Connection

5.28 WLR New Connection is a service provided to customers switching to a WLR service who do not have an existing line. As with other switching services we propose to continue to charge control this service to prevent Openreach from imposing excessive price rises, and increasing switching costs, that could distort competition in downstream markets.

5.29 In the last WLR charge control statement we found that the price of WLR New Connections was significantly in excess of FAC. We therefore proposed a one-off adjustment (which reflected half the difference between cost and price), and a separate control to bring the charge into line with costs.

5.30 We have reviewed the current charge and costs to ensure that the price remains on course to meet costs, at the end of the charge control period, along a glide path. The current charge is shown against CCA FAC estimates for 2010/11 and 2013/14 in Figure 5.2 below. Given the current charge is reasonably close to the FAC costs we do not believe that there is a need for a further one off adjustment.

Figure 5.2: Charge and underlying costs for WLR New Connection

Price from 31 March 2011	£55.74
CCA FAC 2010/11	£50.67
CCA FAC 2013/14	£51.53

Question 5.5 *: Do you agree that the price for WLR new provide should be subject to a separate control which ensures that the price is aligned with FAC by the end of the charge control period?*

Services outside scope of charge control

5.31 We have considered whether there are other WLR services which are currently outside the scope of the current charge control which should be charge controlled. In particular, we have considered: MPF to WLR transfer, calling and network features, pre-validation charges, ISDN to WLR transfer and cancellation charges and TRCs.

MPF to WLR transfer

5.32 In the previous charge control statement we did not impose a specific charge ceiling on MPF to WLR transfer but said the charge should remain cost orientated. The MPF to WLR transfer is incurred by the gaining WLR provider when a consumer switches from an MPF provider. If the customer requires a broadband service as well as a voice service then the WLR provider will also pay an SMPF connection charge.

5.33 In the previous charge control we stated that the low volumes of MPF to WLR meant that we had low confidence in the robustness of setting a specific charge[113]. We said that given the MPF to WLR conversion service and the WLR to MPF service involved similar (though not identical) engineering inputs we would expect that the prices should be similar. However, we said that the charges did not necessarily have to be the same given the processes involved were slightly different.

5.34 We would be more concerned if the current differential between the charges for conversion from MPF to WLR and WLR to MPF led to competitive distortions. This could occur for example if the price of switching services tended to favour BT's downstream operations rather than other MPF competitors.

5.35 The charge that a CP pays when gaining a new customer depends whether the losing CP is a WLR or MPF provider and whether the consumer wishes to take broadband or voice only. Table 5.3 sets out the charges that CPs pay when consumers switch between WLR and MPF in different circumstances.

Table 5.3: Migration charges (at 1 April 2011)

	Voice only customers	Voice and broadband customers
MPF to WLR (& SMPF)	£34.86	£39.79 + £34.86 = £74.86
WLR (& SMPF) to MPF	£39.79	£39.79

5.36 Though the price of MPF to WLR (voice only) is lower than the symmetric charge for WLR (voice only) to MPF, we do not think there is a strong case to align the prices. This is for two reasons. First, as stated above, although the services are similar they are not exactly the same; therefore, some differential between the prices may be appropriate. Second, we do not think that the differential causes a significant competitive distortion in favour of BT's downstream operations. This is because, on the one hand, BT faces lower switching costs attracting a voice only subscriber from an MPF competitor than MPF operators face attracting a WLR (e.g. BT) customer. However, BT faces higher switching costs when attracting a broadband customer from an MPF competitor than MPF operators face attracting a WLR (e.g. BT) broadband customer.

5.37 Given the current low volume of MPF to WLR conversions (Openreach estimated there were around 85,000 MPF to WLR conversions, in 2009/10[114]) and the fact that there does not appear to be a significant competitive distortion caused by current prices we consider that it is appropriate cand proportionate to continue to rely on existing general remedies applied in the wholesale narrowband market review[115] than to apply any new charge control.

Question 5.6: *Do you agree that a charge control would not be practical for MPF to WLR conversion given the low volume of services?*

[113] WLR Charge control statement and consultation 26 October 2009. Paragraph 6.61
[114] Openreach response of 24 December 2010 to question 4i of Ofcom request for information of 10 December 2010.
[115] http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement

Question 5.7: *Do you agree that charges for MPF to WLR conversion should not be aligned precisely to the charge for WLR to MPF?*

Calling and network features

5.38 Calling and network features are add-on services provided alongside core WLR rentals[116]. There are around 50 network features and around 30 call features that Openreach charges for. During 2009 Openreach conducted a trial of lower prices for these services which resulted in the price falling in most cases except for call waiting, caller display and three-way calling, which remained at their pre-trial pricing.

5.39 In the previous charge control statement we noted that we had asked Openreach to provide us with volume and demand data for the features which demonstrated the impact of the trial pricing on take-up. During the trial period, while some features showed a modest increase in demand at the lower pricing levels (and indeed volumes for some features actually decreased), call waiting, caller display and three-way calling showed a stronger increase in demand in response to the price change. Openreach reverted its pricing for these services back to the pre-trial levels. Openreach advised Ofcom that significant incremental capital expenditure would be required to support the additional demand for these services at the lower (trial level) price points, which would be difficult to justify given this is a legacy system.

5.40 We said that in light of this information provided by BT, and taking account of Openreach's permanent price reductions for many calling and network features, we considered that these services would, therefore, not be subject to charge control.

5.41 It appears to us that the continued historically low prices for most network and calling features imply that a prescriptive charge control is not necessary, and that general remedies have been sufficient to control prices.

5.42 In practice it may be difficult to identify the specific costs associated with the provision of these services, which are features of the network architecture and do not incur incremental activity. Therefore, it would be practically difficult to set a robust charge control on these services. An alternative control might be a safeguard cap. However, this type of control could limit the ability and incentive for Openreach to further adjust prices to efficiently recover costs.

5.43 Therefore, on balance, we consider it is appropriate and proportionate to continue to rely on existing general remedies applied in the wholesale narrowband market review[117] than to apply any new charge control.

Question 5.8: *Do you agree that charges for calling and network features should not be charge controlled? Please give reasons for your answers.*

Prevalidation charges

5.44 The prevalidation charge applies to all WLR lines and enables a CP to confirm prior to a 'like for like' order being placed, how the end user's line is configured and whether there are products connected that are incompatible to the WLR offering. The

[116] For example call features include: call diversion , call barring, bypass number, call waiting, call sign, caller display, reminder call, ringback. Network features include: call diversion by admin control, change of divert to number, outgoing calls barred, incoming calls barred.
[117] http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement

current prevalidation charge is £2. We do not propose to include this charge within the scope of the charge control. The £2 charge has remained unchanged since 2006. In the circumstances we consider it is appropriate and proportionate to continue to rely on existing general remedies applied in the wholesale narrowband market review[118] than to apply any new charge control.

Question 5.9: *Do you agree with that pre-validation charges should not be charge controlled? Please give reasons for your answer.*

ISDN to WLR conversion charge

5.45 The ISDN to WLR conversion charge applies when customers who currently have an ISDN line wish to convert to a single WLR analogue line. The current ISDN to analogue conversion charge is £70. The level of conversions from ISDN to analogue is very low and it would seem disproportionate, given the frequency of these conversions, and difficulty of identifying robust cost data, to impose new charge control regulation. Therefore, we consider it is appropriate and proportionate to continue to rely on existing general remedies applied in the wholesale narrowband market review.[119]

Question 5.10*: Do you agree with that ISDN to WLR conversion charge should be subject to cost orientation obligation but should not be charge controlled? Please give reasons for your answer.*

Cancellation charges

5.46 With regard to charges for cancellation of orders[120], where Openreach has incurred costs involved in preparing to deliver a service, we consider it is reasonable for Openreach to recover these costs through reasonable cancellation charges.

5.47 Openreach set two tiers of cancellation service:

- Orders cancelled before 4pm on the day prior to the date when the customer requires the service are charged at £3.50.
- Orders after 4pm of the day prior to the date when the customer requires the service are charged at full order price (for example in the case of a WLR new provide this could be £48.22).

5.48 Openreach has informally told Ofcom that the price of cancellations prior to 4pm of the day before service initiation reflects the fact that the service centre and resourcing costs required to initiate the order have already been incurred. This is because staff cannot be redeployed after 4pm on the day prior to the order. Furthermore, in some cases the cancellation at this point may entail incremental work as it has to 'reverse' work already completed as part of the initial order.

5.49 We do not believe any new charge control is appropriate for cancellation charges, and prefer to continue to rely on existing general remedies applied in the wholesale

[118] http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement
[119] http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement
[120] Set out here:
http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=PgMT6eI2nnlo4hhO70Yda27EtHRtVUAuOBA%2F5MusDN1UNeIS4WkJBRh6z%2FRUAIt8maxtgrEro1A7%0Aw5V8nzAZpQ%3D%3D

narrowband market review[121]. In this case we would interpret the cost orientation obligation as meaning that we would not expect the cancellation charge to exceed the charge of the original order. We do not think that there is a need to charge control the cancellation charge which is constrained to some extent to the level of the regulated price for the initial order.

Question 5.11: *Do you agree with that cancellation charges should not be charge controlled? Please give reasons for your answer.*

Time-related charges (TRCs)

5.50 In Section 4 (on the LLU charge controls) we set out our proposed approach for regulating a range of time-related charges (TRCs). In doing so we noted that Openreach uses TRCs across it's portfolio of products –including WLR. As with LLU, TRCs are charged for WLR services when Openreach performs work that is not covered under the terms of its service level agreements (e.g. out of normal hours work).

5.51 We propose to take a consistent approach across both LLU and WLR services. As such, we consider that where TRC services are required to be provided by virtue of the requirements established by the WAEL market review, including the cost orientation obligation under SMP condition AAAA3. We consider that a cost orientation obligation is the most appropriate form of price regulation for these services. While TRCs may to some extent be contestable, it is debatable how far some CPs are practically able to substitute to alternatives to Openreach. Therefore, we propose to rely on the cost orientation obligation and other general remedies to regulate time related charges if necessary.

5.52 In terms of reporting arrangements, we are also proposing a consistent approach for WLR services as proposed for LLU (in section 4). To re-cap, we do not believe that separate reporting arrangements for TRCs in Openreach's regulatory accounts would be proportionate. This is for two reasons. First, it would be practically difficult and disproportionate to require Openreach to separately report costs and revenues for TRCs. This is firstly because it would require that Openreach identifies whether each instance of a TRC is subject to the SMP condition, and secondly for which SMP market (if any) the service was supplied. Second, in practice, the structure of charges (based on the per visit or per hour cost of an engineer's visit), is clear to CPs. We think this provides relevant information for CPs to assess whether charges are reasonable - for example by benchmarking these charges to their internal costs of engineers time.

5.53 Whilst this type of analysis could be used by CPs to make an assessment of whether charges for time related charges are cost-oriented, Ofcom recognises that further guidance on the application of cost orientation requirements for these services would be helpful for Openreach and other CPs. We will therefore include consideration of this in our review of cost orientation guidance which is scheduled for 2011.

Question 5.12: *Do you agree that time related charges should remain out of the scope of the charge control and subject to general remedies applied in the WAEL market review?*

[121] http://stakeholders.ofcom.org.uk/consultations/review-wholesale-fixed-exchange/statement

Section 6

Approach to Disclosure of Charge Control Models

Introduction

6.1 In this section we describe the approach we have taken to transparency and model disclosure in this particular review.

6.2 In developing our proposals for the LLU and WLR charge controls explained in this document, we have considered carefully the confidential nature of certain of the data which inform our proposals and the need to ensure appropriate transparency, including in relation to the financial modelling underlying our proposals.

Approach to charge control modelling and disclosure

6.3 In developing our charge control proposals, we have undertaken modelling which:

- establishes the capital base for the calculation of the charge controls by adjusting the valuation of some of the costs of infrastructure included in the cost stacks for LLU and WLR in the regulatory financial statements (RFS) to create the Regulated Asset Valuation (RAV) (the "RAV Model");
- forecasts Openreach's operational costs over the period of the control (the "Cost Forecast model"); and
- allocates these costs to products provided by Openreach (the "Cost Allocation model").

6.4 These models are described in more detail in Section 7.

6.5 The modelling undertaken as part of this review contains data supplied by Openreach with respect to its business which has been obtained under the Act. There is a general restriction under the Act on Ofcom disclosing such information without consent unless an exception applies[122]. Ofcom has engaged closely with Openreach on model disclosure to obtain Openreach's consent to allow underlying data to be disclosed, including testing Openreach's assertions on confidentiality. The charge control models contain highly disaggregated Openreach data, much of which Openreach considers is commercially confidential or outside the scope of these charge control reviews. Consequently, Openreach has withheld its consent in relation to certain data underlying the models.

6.6 One of the exceptions under the Act permits Ofcom to disclose data without consent for the purpose of facilitating the carrying out of its functions, including its functions as to consultation.[123] In light of the level of disclosure consented to by Openreach, Ofcom has considered whether any further disclosure is required, including considering whether confidentiality concerns can be addressed by masking and/or aggregating data.

[122] Section 393 of the Act.
[123] Section 393(2)(a) of the Act.

6.7 In undertaking this excerise, we have also considered our framework for disclosure of charge control models.[124]

6.8 We have also engaged with stakeholders prior to this consultation to ensure that they understand our approach and how it has been developed, and have had the opportunity to contribute to it.[125]

The RAV model

6.9 Openreach has consented to the disclosure of the RAV model. Therefore, we are making the RAV model available to stakeholders who request it from today.

Cost Forecast model

6.10 As explained above, the Cost Forecast model contains detailed Openreach data, which Openreach considers is commercially confidential or outside the scope of these charge control reviews. Openreach has therefore, not consented to disclosure of that data.

6.11 We have had detailed discussions with Openreach on the confidential nature of this data. In doing so we had regard to our framework for model disclosure. We have considered whether any confidentiality concerns could be addressed by masking confidential data and providing data at a higher level of aggregation. As a result of this assessment, we are making available to stakeholders on request two non-confidential versions of the Cost Forecast model.

- From today, we are making available an "empty model" to those stakeholders that request it; that is a version of the Cost Forecast model from which all data has been removed but retaining full functionality. This model should enable stakeholders to understand and observe the underlying functionality, giving them visibility of how costs are allocated.

- We also propose to make available a further non-confidential version of the Cost Forecast model which has been redacted, data aggregated and functionality removed to protect confidentiality. We will make this available as soon as possible, and we will notify stakeholders when this is available.

6.12 We consider that this approach takes account of the confidentiality of the underlying data while enabling us to consult effectively.

6.13 As well as making available these non-confidential versions of the Cost Forecast model, Ernst & Young have undertaken an audit of the full version of the Cost Forecast model. This should provide stakeholders with confidence as to the validity of the information withheld.

Cost Allocation model

6.14 As with the Cost Forecast model, the Cost Allocation model contains detailed Openreach data, which Openreach considers is commercially confidential or outside the scope of these charge control reviews. Openreach has therefore, not consented to disclosure of that data.

[124] '*Framework for Disclosure of Charge Control Models*' published in October 2010 http://stakeholders.ofcom.org.uk/binaries/consultations/784024/Charge_control.pdf.

[125] This has included meetings with Openreach and with the UK Competitive Telecoms Association (UKCTA). We have also held bilateral discussions on this issue with OCPs who have requested it.

6.15 Again, we have had detailed discussions with Openreach on the confidential nature of this data. In doing so we had regard to our framework for model disclosure. We have considered whether any confidentiality concerns could be addressed by masking confidential data and providing data at a higher level of aggregation. As a result of this assessment, we are making available to stakeholders on request two non-confidential versions of the Cost Allocation model.

- From today, we are making available an "empty model" to those stakeholders that request it; that is a version of the Cost Allocation model from which all data has been removed but retaining full functionality. This model should enable stakeholders to understand and observe the underlying functionality, giving them visibility of how costs are allocated.

- We also propose to make available a further non-confidential version of the Cost Allocation model which has been redacted and data aggregated and functionality removed to protect confidentiality. We will make this available as soon as possible, and we will notify stakeholders when this is available.

6.16 We consider that this approach takes account of the confidentiality of the underlying data while enabling us to consult effectively.

Conclusion

6.17 In addition to the model disclosure that we outline above, we include an extensive description and explanation of the charge control modelling in Section 7 and supporting annexes. This includes an explanation of the methods used in the models and the sources of the key parameters, assumptions and underlying relationships used insofar as these are not disclosed in the non-confidential modelling.

6.18 It is Ofcom's view that the non-confidential models made available, taken together with the description in Section 7 of this document and supporting annexes, provide the level of transparency necessary to allow those consulted to give intelligent consideration and an intelligent response.

Access to the models

6.19 To obtain copies of the non-confidential versions of the charge control models, contact Ciaran MacCann ciaran.maccann@ofcom.org.uk.

Section 7

Calculation of charge controls

Introduction

7.1 The Purpose of this Section is to:

- set out our estimates of the cost of providing the service that fall within the scope of this review;
- explain the basis for estimating those costs, including the general approach taken and assumptions used;
- demonstrate that the cost estimates are consistent with our anchor pricing approach;
- show how we have adjusted these cost estimates for the purpose of setting prices; and
- show how we used these adjusted cost estimates to derive the proposed price controls.

7.2 This section draws on information explained in more detail in the supporting annexes. Specifically, this section explains how we have forecast costs based on the volume forecasts set out in Annex 6 and taking account of the efficiency assumptions explained in Annex 7. We then allocate those costs to products using the bases set out in Annex 8. The product costs are considered in more detail in Annex 9. We consider our treatment of assets in Annex 10 and Annex 11, which deals with our general approach to estimating the Regulatory Asset Value. Our proposal for the valuation of BT's duct assets is considered in detail in Annex 5.

Cost estimates

7.3 As explained in Section 3, we propose that the controls should run to 31 March 2014 and be set using current cost accounting fully allocated costs (CCA FAC) with an adjustment to the regulatory asset value (the "RAV adjustment") to establish the cost base. Similarly, subject to the issues considered below as part of our review of anchor pricing, we consider that it is appropriate to model these costs on the basis of the cost of delivering the service using the existing technology.

7.4 As a first step to setting the price controls, it is therefore necessary to estimate the CCA FAC of providing the in-scope services in the year to 31 March 2014 (2013/14).

7.5 To do so, it has been necessary to make a series of assumptions relating to Openreach's costs and how costs will change over time. As explained in more detail below, we are seeking stakeholders' views on these assumptions.

7.6 Forecasting costs is not an exact science, particularly where future variables are relatively uncertain. For many of the parameters that drive our cost forecasts, such as expectations for efficiency gains and inflation, there is no single assumption that can be said to be "correct" with all others being incorrect. Instead, there is a range of plausible assumptions from which it would be reasonable to draw the assumption

used in our cost modelling. However, to inform stakeholders' responses we have estimated the CCA FAC of the services using a "base-case" set of assumptions which we set out later in this section. We consider that this represents a coherent set of assumptions taken from the ranges of reasonable assumptions and either represents our best estimate for each of the assumptions, or it is a point around the middle of our plausible range. We consider the sensitivity of moving assumptions from our "base case" later in this section.

7.7 Using our base case, we have estimated that the unit cost of providing the rental services in 2013/14 would be as set out in the table below, shown alongside the current prices for comparison:

Figure 7.1: Ofcom estimate of base case unit costs (2013/14) and current prices for LLU and WLR Rental services

	MPF rental	WLR rental	SMPF rental
	£	£	£
Cost estimate for 2013/14	90.89	98.25	9.14
Current prices (2010/11)	89.10	103.68	15.04

7.8 As explained in more detail at the end of this section, for the purposes of setting prices, however, we propose that we should adjust these cost estimates, as follows:

Figure 7.2: Ofcom estimates of *adjusted* base case unit costs (2013/14)for LLU and WLR services

	MPF rental	WLR rental	SMPF rental
	£	£	£
Base case cost estimate	90.89	98.25	9.14
Reallocation of TAMs costs	(2.31)		1.68
Inclusion of costs relating to ceases	0.51		0.28
Inclusion of costs relating to transfers		2.37	
Restated cost stacks for pricing purposes	**89.09**	**100.62**	**11.10**

7.9 As explained in Section 4, we propose that individual controls should be applied to a number of ancillary services. Using the same set of base-case assumptions, we estimate that the unit cost of providing these ancillary services in 2013/14 would be as set out in the table below, shown alongside the current prices for comparison:

Figure 7.3: Base case unit cost estimates (2013/14) and current prices for LLU and WLR Ancillary services

	MPF New provide	PSTN Basic New Connection	SMPF New Provide	MPF Single migration	SMPF Single migration
	£	£	£	£	£
Cost estimate for 2013/14	48.53	51.53	29.87	37.03	34.55
Current prices (2010/11)	62.11	55.75	38.64		

7.10 In connection with SMPF New Provide, MPF Single Migration and SMPF Single Migration, we have calculated the blended cost to be £32.35 in 2013/14 to determine a single price control.

7.11 We have provided detailed breakdowns of the unit costs for the CRS in Annex 10, together with information on the costs for the baskets.

7.12 In addition, we will make non-confidential extracts from our cost models available to stakeholders on the basis and to the extent explained in Section 6.

Basis for cost estimates

7.13 For the purposes of the 2009 Consultation, we considered that Openreach's internal forecasting models provided a useful starting point for own analysis of Openreach's costs.

7.14 We explained at the time that the cost modelling was performed in two stages, as follows:

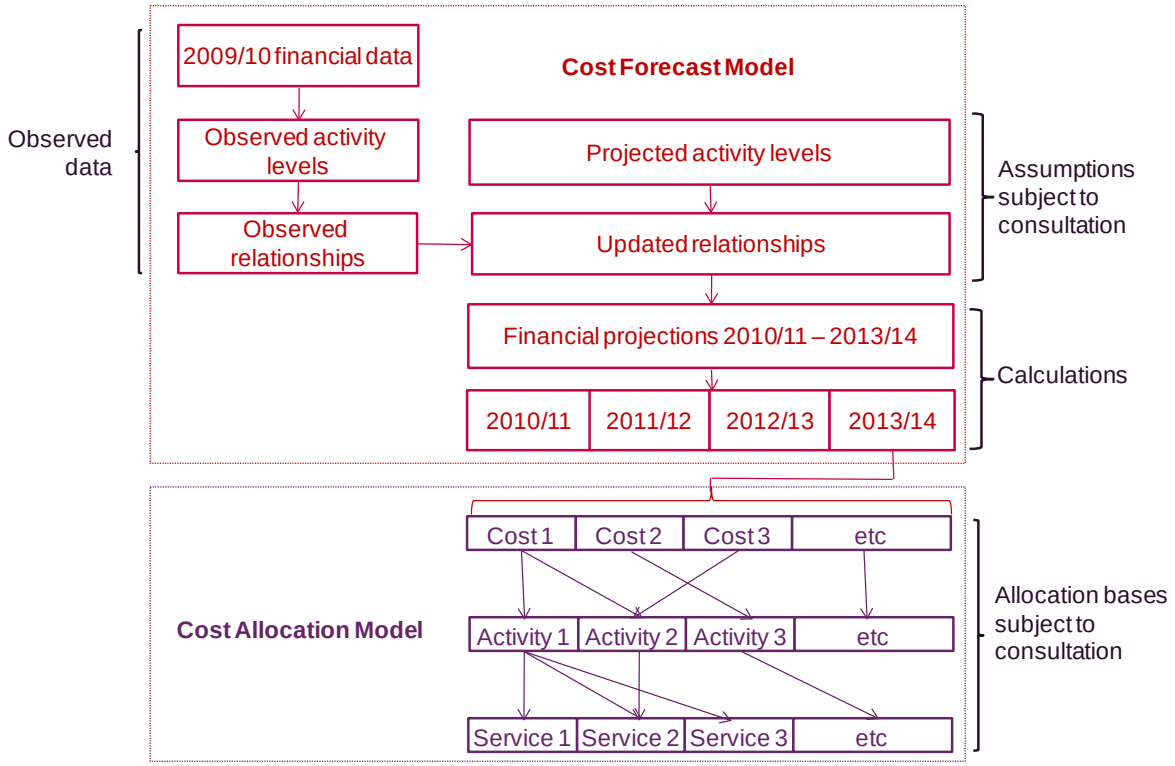
- First, operating costs and capital expenditure were forecast at an Openreach level (in a "Cost Forecast" model). These were calculated using an activity based costing model, using data based on historically observed activity levels and costs together with estimates of future level of demand.

- Second, these costs were allocated to individual services cost and asset data was allocated to services to derive unit cost estimates (in a "Cost Allocation" model).

7.15 The Cost Allocation model also draws on a calculation of the forecast asset values and depreciation, for Copper and Duct, provided by a separate model. This model (the "RAV" model) also applies a regulatory adjustment (the regulatory asset value adjustment, or RAV adjustment) previously applied by Ofcom.

7.16 The main components of the Cost Forecast and Cost Allocation models are illustrated in the diagram, below.

Figure 7.4: Main components of Cost Forecast and Cost Allocation models



7.17 This approach and the costs it generated were subject to significant scrutiny during the 2009 LLU appeal. The adjustments to prices that followed the appeal were not a consequence of any errors in our overall modelling approach. We therefore consider that it is appropriate to follow a similar approach for the purposes of estimating costs to inform the next round of price controls.

7.18 For the purpose of this consultation, we have built our own models based on the models used in the 2009 consultation. Specifically, we have

- Modified the Cost Forecast model and extended it to include 2013/14. The model was audited by Ernst & Young.
- Arranged for Ernst & Young to modify and extend the Cost Allocation model on our behalf.

7.19 As part of this modelling exercise, we updated the base year to 2009/10 (in line with the most recent audited Regulatory Financial Statements) and extended the models to 2013/14, in line with the proposed duration of this control. Both the Cost Forecast model and the Cost Allocation model were initially populated with data obtained from Openreach under Ofcom's information gathering powers under section 135 of the Act. Ofcom then analysed that data and where appropriate made adjustments to the data and underlying assumptions. The models therefore provide an Ofcom forecast of Openreach's costs for the period to 2013/14.

7.20 We have projected Openreach's costs based on our expectations of the assets that will be in use and the costs that will be incurred by Openreach. We believe that estimating costs by reference to the activities that Openreach is and will be performing provides a more robust starting point for our analysis than trying to project

the costs of a hypothetical Openreach delivering its services on a "modern equivalent" network that would be difficult to define and harder still to predict costs for. This approach has the advantage that the starting point can be reconciled to BT's regulatory accounts for the base year, 2009/10.

7.21 For the purpose of our cost modelling we have ensured that costs relating to the roll-out of NGA are not included in the cost stacks for the copper products. Cost categories that relate exclusively to NGA, in particular NGA equipments costs have been excluded from the cost model. Common costs have been allocated across services including NGA. This is different from a model of existing technology in which common costs would all be allocated to copper products.

7.22 As explained below, we have also carried out cross checks to ensure that prices do not rise as a result of NGA, consistent with our anchor product pricing approach. We find that the prices resulting from our main modelling are likely to be lower than those that would result from a hypothetical continuation of copper only technology, and therefore are consistent with our anchor product pricing approach.

7.23 For the purpose of our cost modelling, we have not included any expenditure that might be incurred in connection with the provision of Passive Infrastructure Access (PIA). We have also not attempted to allocate any costs to the provision of PIA. We consider that is approach is reasonable in the context of our overall methodology and in light of the current uncertainty around the likely scale and impact of PIA within the next three years. However, stakeholders' views are invited on if and how we should adjust our cost estimates to reflect the possible impact of PIA.

The Cost Forecast model

7.24 Ofcom's Cost Forecast model incorporates actual 2009/10 and budgeted 2010/11 BT data on the relationship of activity to task to service volumes, visit ratios, activity task times, labour categorisation (e.g. employee or contractor) activity rules, labour hours capitalisation rules, FTE numbers, rates and hours worked. The hours worked were measured in Kiloman hours (KMH). It also contains regulatory account data that enable capital expenditure to be allocated to the appropriate asset types. The base year of the model is 2009/10 and reflects the actual KMH spent on each activity.

7.25 The 2010/11 budgeted data is a mixture of actual time spent in the year to September 2010 (extracted from Openreach's monthly management accounting system) and forecast activity levels.

7.26 The cost forecasts are a function of assumed product volumes applied to product/activity relationships whilst the task times are subject to Ofcom's efficiency assumptions. The model uses effective annual hour and cost per employee assumptions (including training, fleet, stores etc). Volume parameters include orders, connections, number of lines, rentals, faults per lines and capital expenditure programmes.

7.27 The outputs of the Cost Forecast model (including labour hours, total volumes and total costs) are fed into the Cost Allocation model along with data from other sources (including data on the Regulatory Asset Value and transfer charges).

The Cost Allocation model

7.28 The Cost Allocation model uses this information (including financial and operational allocation data from the Cost Forecast model) combined with asset data, CCA adjustments and allocation rules to calculate unit costs on a CCA basis.

7.29 In the Cost Allocation model, costs are first allocated to "activities", broadly similar to the 'Cost Components' used in BT's Regulatory Financial Statements (RFS). Activities include the use of the exchange-side copper, use of the main distribution frame, line test equipment and various categories of repair.

7.30 Where it is possible to match costs to specific activities, the allocation basis reflects this. Activity costs are then allocated to products and services. Where the activity relates to a specific product, the activity cost is allocated directly to that product. In other cases, the costs are shared between the relevant products and services.

7.31 The unit cost projections include depreciation. The Cost Allocation model also adds a return on capital employed based on the assumed cost of capital.

7.32 The Cost Allocation model produces unit cost breakdowns split according to activity and according to cost category (e.g. pay, motor transport or accommodation). The allocation bases are reviewed in detail in Annex 8.

7.33 We consider that our models provide a sound basis for forecasting costs, because

- the models are based on models originally prepared by BT for internal planning purposes;
- these models were subject to close scrutiny during the appeal process and the adjustments to prices that followed the appeal were not a consequence of any errors in our overall modelling approach;
- the Cost Forecast model has been updated (and simplified) by Ofcom, and reviewed by E&Y; and
- the Cost Allocation model has been updated (and simplified) by E&Y.

7.34 We also required BT to demonstrate that the cost data it had provided to us was consistent with that in the RFS.

7.35 To this effect, we calculated aggregate and unit costs for 2009/10 by using data provided by BT in our model, making no adjustment for Ofcom assumptions but excluding the effect of the RAV adjustment (which is not reflected in the RFS) and excluding the effect of the duct revaluation included in the RFS. We then compared our cost estimates with cost estimates calculated by BT using the same data in its own cost modelling (described by BT as Openreach Cost Stacks, or "OCS").

7.36 BT's reconciliation of the aggregate costs to the RFS is set out below. The reconciliation is set out in four parts: (i) the data in the RFS; (ii) adjustments to that data; iii) the data in the cost modelling (the sum of parts (i) and (ii));and (iv) supporting calculations for those adjustments.

Figure 7.5: BT reconcialiation of aggregate costs to the RFS

2009/10 Regulatory Financial Statements	WLR £m	Local Access £m
Revenue	2,420	439
HC Costs	1,798	364
CCA adjustments	(482)	(55)
CCA Costs	1,316	309
Return	1,104	130
ROCE	13.9%	13.7%
MCE	7,953	952

Total Adjustments	WLR £m	LLU including Internal £m
Revenue	(71)	361
HC Costs	(28)	250
CCA Adjs	3	(14)
Total CCA Costs	(25)	236
Return	(46)	125
MCE	(768)	180

Openreach Cost Stacks 09/10 (OCS)	WLR	LLU inc Internal
	£m	£m
Revenue	2,348	800
HC Costs	1,770	614
CCA Adjs	(479)	(69)
CC Costs	1,291	545
EBIT	1,057	255
ROCE	14.7%	22.5%
MCE	7,185	1,131

Adjustments	WLR	LLU including Internal
	£m	£m
Revenue Adjustments		
Other non SMP Markets		375
Northern Ireland	(69)	(14)
Roundings	(2)	0
Total	(71)	361

HC Cost Adjustments		
Other non SMP Markets		274
Northern Ireland	(59)	(22)
Addtion LLU power		17
Cost of Capital on BTO Eqpt	35	6
Other Allocation Differences	(3)	(25)
Total HC Costs	(28)	250

CCA Adjustments		
Other Markets	0	(17)
Northern Ireland	18	3
Less BTO assets	(9)	0
allocation differences	(7)	1
Total CCA Adjustments	3	(14)

Mean Capital Employed		
Other non SMP Markets		321
Northern Ireland	(241)	(29)
Less BTO Assets in Cost of Sales	(345)	(62)
Less:Group Assets	(270)	(86)
Allocation Diffs	86	35
Total MCE Adjustments	(770)	180

7.37 At Ofcom's request, BT also provided a comparison of the unadjusted unit cost estimates to the figures in the RFS, as set out below. Note that because these unit cost estimates include the holding gains on the duct reflected in the RFS (which reduce the cost stacks in the year they are incurred), the 2009/10 unit costs included in the reconciliation are lower than they would otherwise have been and these should not be seen to represent a steady state for future unit costs.

Figure 7.6 :Total Reconciliation Between Regulatory Financial Statements (RFS) and Openreach Cost Stacks (OCS) for Key Products - 09/10

	Wholesale PSTN premium rentals (external)	Wholesale PSTN basic rentals (external)	Local Loop Unbundling rentals	Shared Metallic Path Facility (SMPF) rentals	Wholesale ISDN30 rentals (external)
	£/ unit	*£/ unit*	*£/ unit*	*£/ unit*	*£/ unit*
HC Costs / unit	74.06	76.26	73.52	12.29	54.44
CC Adjs / unit	(21.01)	(22.10)	(21.34)	0.22	0.29
Cost of Capital	34.86	36.13	33.32	0.99	14.97
RFS Unit Cost	**87.90**	**90.28**	**85.49**	**13.50**	**69.71**
Reconciling Differences					
Northern Ireland Impact	(0.54)	0.36	(0.67)	(0.16)	(0.14)
Line Length Adj	1.28	(0.54)	1.07		
General Cost Allocations (see below)	0.29	(1.18)	1.07	(0.58)	(1.70)
Total adjustments	**1.03**	**(1.36)**	**1.46**	**(0.75)**	**(1.83)**

OCS Unit Cost	**88.93**	**88.92**	**86.96**	**12.76**	**67.87**
General Cost Allocation Differences					
CCA – BTO	(0.70)	(0.70)	0.00	0.00	(0.27)
Group Assets	(1.25)	(1.13)	(0.94)	(0.16)	(0.92)
Other cost allocations differences	2.24	0.47	2.40	(0.59)	(0.64)
General Cost Allocations	**0.29**	**(1.36)**	**1.46**	**(0.75)**	**(1.83)**

7.38 Inevitably, the cost modelling used to generate these estimates cannot replicate exactly the detailed allocation bases used to derive the RFS. It is therefore not unexpected that there are some differences that have been attributed to the choice of cost allocation basis. Nevertheless, over the course of this consultation, we will obtain further details on the reconciling items to provide additional confidence that the base year data is consistent with the RFS.

7.39 We have provided detailed disclosure of the outputs from the model in this Consultation Document to inform Stakeholders' assessment of the results. Additionally, we will make non-confidential extracts from the models available to stakeholders on request to add to stakeholders' understanding of our approach on the basis set out in Section 6.

***Question 7.1**: Do you agree with our general approach to estimating costs?*

Key assumptions

7.40 To model current and forecast costs, it is necessary to make assumptions about:

- the services that will be delivered;
- the activities that will be undertaken to deliver those services, and the time taken and costs incurred to complete those activities.
- the extent to which the time taken and costs incurred will change over time (due to, for example, increased efficiency and the extent to which it will be offset by increased input costs)
- the assets that will be used by these services, the value to be placed on those assets and the way the value of these assets is reflected in the cost calculations (through depreciation and a reasonable rate of return on those assets);
- how these costs should be allocated to individual services; and
- the extent to which these costs should be adjusted or excluded for the purposes of setting prices.

7.41 Our key assumptions in our cost modelling, explained in more detail in the supporting annexes listed here, are summarised in the discussion below.

Figure 7.7: Ofcom key assumptions

Parameter	Assumption	Basis
Volumes and mix	Demand for fixed lines falls by 0.7m lines over three years, demand for MPF to increase by 1.4m lines, with 1m decline in demand for SMPF	Annex 6
Efficiency, including fault rates	5% gross annual saving across all cash payments, equivalent to 4.5% net.	Annex 7
Inflation (non-pay)	2.5% annual increase in all cash payments	Section 7
Inflation (pay)	3% annual increase in pay costs	Section 7
Pension costs	Annual charges to meet future liabilities are included in our assessment of recoverable costs, but regulated charges should not include any contribution to the funding of the pension deficit	Section 7
Light user scheme	None of the cost of the LUS has been included in regulated products	Section 7
Cost allocation	Various	Annex 8
Asset prices	We have re-based post 1997 copper asset values in line with current market prices as at January 2011. Duct is subject to indexation in line with RPI.	Annex 10
Cost of Capital	Pre-tax nominal rate of 8.6% (applicable to Openreach's copper business)	Annex 12
Holding gains	Forecast Average RPI	Annex 10
Fault Rates	Allocated on the incidence of actual faults rather than reported or estimated faults	Annex 7
TAMs and evoTAMs	For cost purposes, allocated on cost causality basis	Section 7

Sensitivity of cost estimates to key assumptions

7.42 To inform stakeholders' responses to this consultation by illustrating the sensitivity of our cost estimates to our key assumptions, the table below illustrates the approximate effect of changing the key assumptions on our estimated cost stacks for the LLU and WLR Rental services.

Figure 7.8: Sensitivity of cost estimates to key assumptions for LLU and WLR Rental services

Assumption	Sensitivity	MPF	WLR	SMPF
		£	£	£
Base case		**90.89**	**98.25**	**9.14**
Volumes	100,000 change in aggregate volumes in 2011/12 (inc 43k fall in SMPF)	0.40	0.40	<0.10
Mix	100,000 shift from WLR+SMPF to MPF	<(0.10)	0.10	<0.10
Efficiency, including fault rates	0.5% change in net efficiency gains per year from 11/12	(0.70)	(0.60)	(0.10)
Inflation (non-pay)	0.5% (increase) change in general inflation assumption	0.20	0.20	<0.10
Inflation (pay)	0.5% (increase) change in pay inflation	0.20	0.20	<0.10
Light user scheme	Inclusion of light user scheme costs	2.20	2.20	-
Rejection of RAV	All assets restated at CCA	2.30	2.30	-
Duct valuation	Accept BT's valuation	3.50	3.50	-
Copper valuation	5% reduction in opening value of copper assets	(1.40)	(1.40)	-
Cost of Capital	0.5% (decrease) change in cost of capital	(1.70)	(1.60)	<(0.10)
Holding gains	0.5% (increase) change in holding gains from 10/11 (inc Copper and duct)	0.50	0.50	<0.10

The services that will be delivered

7.43 Our volume assumptions are set out in Annex 6. They take account of information from a number of sources including Openreach and other industry forecasts, and are consistent with observable broader economic and industry trends as explained in Annex 6.

The activities required to deliver these services

7.44 Expressed in simple terms, the Cost Forecast model builds up costs by multiplying (i) the number of tasks that would need to be undertaken to deliver the forecast volumes by (ii) the expected time it would take to complete each task and (iii) the costs that would be incurred.

7.45 For 2009/10, the Cost Forecast model reflects the actual volumes delivered and the costs incurred, the actual tasks performed and the time spent on each task.

7.46 The model then uses this data to derive the cost relationships that can be applied to forecast volumes to generate cost forecasts (which are added to forecast overheads and asset-related costs to generate cost forecasts for Open reach).

7.47 The table below sets out the estimated duration of the key tasks associated with the key services within the scope of this review in 2009/10. These were supplied by Openreach under formal powers and we have used them in our modelling. Subject to comments from stakeholders we propose to accept these base year task times.

Figure 7.9 : Estimated duration of the key tasks associated with the key services within the scope of this review (2009/10)

Activity		2009/10 Task time (minutes)
WLR Provide		25-30
WLR Cease		15-20
LLU Provide		25-30
LLU Cease		20-25
LLU Migration		30-35
Field Provision		150-180
Non Network Fault	]	
Exchange Fault	]	
End User Fault	] weighted average	150-180[126]
Network Fault	]	

7.48 In our cost forecasts, these task times will be reduced in line with the annual efficiency assumption. This is considered in more detail below.

***Question 7.2**: Do you consider the task times to be reasonable? If not, please provide your reasons and alternative view, together with supporting evidence where possible.*

7.49 In addition to these volume related costs, a significant proportion of these costs are in the form of Group overheads that are picked up by Openreach in the form of transfer charges. These are considered in Annex 8 along with other Openreach overheads.

How might these costs change over time?

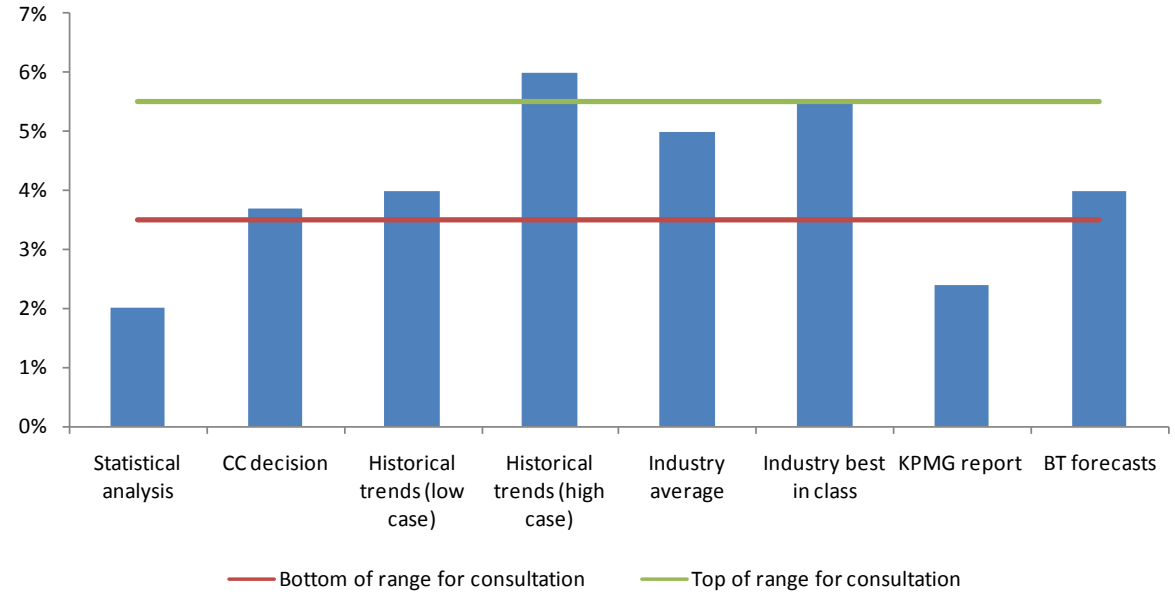
7.50 As explained above, the Cost Forecast model projects costs by multiplying the number of tasks that would be undertaken to deliver the forecast volumes by the cost of completing those tasks. It is therefore necessary to consider how the number and cost of those tasks might change in the future due to the effects of efficiency and inflation.

Efficiency gains

7.51 As explained in Annex 7, we propose that an average net efficiency target of 3.5% to 5.5% per annum across all costs would be reasonable. This net efficiency assumption is based on a review of a range of evidence (explained in more detail in Annex 7), as summarised in the graph below.

[126] This task time is a weighted average of the following activities: Non Network Faults, Exchange Fault, End-user Fault and Network Fault

Figure 7.10 :summary of range of evidence for efficiency



7.52 For the reasons given in Annex 7, we have not attempted to separately model the effects of changes in fault rates, task times or general efficiency gains, nor have we tried to reflect the varying scope for efficiency gains across different cost categories by applying different efficiency targets to different cost categories. Instead, we have applied a single rate, to all costs, intended to capture the effects of all efficiency gains, regardless of how they might be achieved.

7.53 For the purpose of modelling costs, we have applied a gross efficiency assumption of 5% across all costs, which we estimate is equivalent to a net efficiency assumption of around 4.5%, after allowing for redundancy costs.

***Question 7.3**: Do you have any views on our proposed assumptions regarding Openreach's ability to reduce costs through efficiency gains.*

Inflation

7.54 In the past, we have used RPI as a reasonable basis for forecasting cost inflation. This has the advantage of being reasonably well understood and widely used. While there is unlikely to be a perfect correlation between the general rate of inflation – as indicated by RPI – and a company's actual rate of inflation, it has nevertheless been considered to provide a reasonable proxy.

7.55 In the 2009 Consultation, we explained that, while the use of RPI may provide a reasonable basis for forecasting cost inflation in the longer term, it was less appropriate in the short term as the cost movements taken into account to determine RPI do not provide an appropriate proxy for short term movements in Openreach's costs.

7.56 We consider that similar circumstances apply today. However, while the effect in 2009 was that short term RPI forecasts were likely to understate Openreach's input cost inflation (due to recent reductions in mortgage interest rates and VAT rates), current RPI forecasts are now likely to overstate Openreach's input cost inflation (as they include the effect of the increase in the VAT rate in January 2011 and longer

term forecasts reflect an expectation that mortgage interest rates will rise). Overall, we estimate that the effect of these two factors mean that in the period to 2013/14, RPI forecasts are, on average around 0.5%pa higher than they would have been, had VAT been expected to remain constant and mortgage interest rates remain relatively stable.

7.57 We have therefore assumed that Openreach's costs will increase at a rate below that currently forecast for RPI. RPI is difficult to forecast precisely, as illustrated by the range of independed opinions collated by HM Treasury. However, based on HM Treasury forecasts, we consider that an average rate of around 3% per annum is reasonable. Therefore, for the purpose of our base case, we have assumed an underlying rate of 2.5% for Openreach's costs for the next three years.

7.58 In our cost modelling, we have applied this rate to all costs, except pay costs, which we consider are likely to increase at a higher rate, rent, which inflates at a contractual 3% and some other costs we consider fixed in nominal terms . Historically, pay costs have tended to be more closely related to RPI (even if they are not explicitly linked). For the purposes of our cost modelling, we have assumed an average annual rate of 3%.

***Question 7.4**: Do you have any views on our proposed assumptions regarding the impact of inflation on Openreach's costs through efficiency gains.*

What assets will be used to deliver these services?

7.59 As explained above, we have estimated Openreach's costs based on a projection of the services we forecast Openreach to be delivering, using the assets we forecast will be in place; we have not attempted to project costs on the basis of an undefined "modern equivalent" network.

7.60 Against this background, we need to consider the following issues:

- Our proposal to continue with the RAV approach to valuing assets.
- Our proposed approach to the opening valuation of the two most significant classes of assets, specifically copper and duct;
- How we have projected capital expenditure; and
- How we have predicted changes in asset values over the control period.

7.61 In Section 3, we explained why we intend to continue with the RAV approach to valuing assets for the purpose of this price control and set out our options for estimating the CCA value of post-1997 duct assets.

7.62 Our final decision will reflect the valuation basis as determined at the end of this consultation. However, for the purpose of illustrating the effect of determining the CCA value of post-1997 duct assets by reference to a price index, we have used RPI. We consider that this provides a sensible base case for our cost modelling and should deliver an answer that is broadly similar to the effect of indexation linked to GBCI-2%, offset by the holding loss on the capex in the final year if the national discount was applied.

How have we treated copper assets in our calculations?

7.63 During the 2009 Consultation, there was a high degree of volatility in copper prices, marked by a significant decline in copper prices in late 2008. When determining the charge control, we concluded that the most up to date valuation should be reflected in the underlying unit cost.

7.64 For the purpose of the cost modelling that informed the current controls, we considered that a valuation based on the most recent balance sheet date, which at the time of our decision was March 2009, was appropriate. On this basis, we reduced the MCE associated with an MPF line by around 7%. Since March 2009, copper prices have increased significantly and are now at levels above their 2008 peak

7.65 Consistent with our approach taken in 2009, we intend to use a valuation based on the most recent balance sheet date (i.e. March 2011) when setting the new charges. The base case reflects a valuation as at January 2011. This would suggest that Copper prices have increased by 12% since April 2010, which would equate to a 5.2% holding Gain for Copper assets in 2010/11.

Question 7.5: *Do you have any comments on our proposed approach to dealing with the changes in the cost of replacing the copper assets?*

How have we projected capital expenditure in our calculations?

7.66 For the purposes of forecasting Openreach's costs we have projected Openreach's future capital expenditure in the Cost Forecast model on the basis described below.

7.67 We obtained from Openreach, the following data;

- the amount of actual and forecast labour time spent on non-volume driven operational capital programmes (termed Complex Kiloman Hours, or "KMH"), for example on FVR – (Fault Rate Reduction);
- Openreach provided Ofcom with the product volume to Operational activity usage factors and the 2009/10 capitalisation ratios for each Operational activity (including Complex KMH). We assumed these ratios to be fixed going forward to 2013/14; and
- the mapping of Capitalised Operational activity (including Complex KMH) to Capex Programmes

7.68 Applying this information to our KMH forecasts, built up from our volume forecasts and Openreach forecast Complex KMH, we forecast Operational Capex KMH, converted these KMHs into costs using FTE assumptions and then allocated the costs to Capex programmes using the mapping provided by Openreach.

7.69 We then compared the labour element of the 2009/10 and 2010/11 Capex programmes with the total programme costs which were provided by Openreach which were consistent with the RFS. As expected, in most cases Openreach incurs additional costs to labour. This is because for example, when laying Duct, in addition to the labour cost of Openreach's employees, there is the cost of using contractors to dig up where the Duct is being laid and the material cost of installing the PVC pipes, pumps etc. Dividing total costs by labour costs produced a 'gross up' factor. The 'gross up' factors for 2009/10 and 2010/11 were compared and discussed with

Openreach. In our modelling we concluded that the 2010/11 'gross up' factors were appropriate to apply to our forecast labour Capex Programme costs through to 2013/14. The resultant Total Capex driven by Operations is set out in Figure 7.11 below.

7.70 In addition, in response to a request made under Ofcom's information gathering powers under section 135 of the Act, Openreach provided its forecast Programme Capex not driven by Operations, set out in the table below for the forecast years.

Figure 7.11: Total Capex driven by Operations 2011/12 to 2013/14

Total Capex driven by ops – Ofcom Forecast	**2011/12 £'m**	**2012/13 £'m**	**2013/14 £'m**
Final Drop	129.25	122.84	114.80
Other volume driven copper	118.86	62.16	59.01
Network Health and resilience	136.49	136.04	131.47
LLU	61.18	20.58	20.14
Other	23.52	23.52	23.52
Fibre	[✂]	[✂]	[✂]
	[✂]	**[✂]**	**[✂]**
IT Capex	[✂]	[✂]	[✂]
Evo TAMs	[✂]	[✂]	[✂]
Total Capex not driven by ops – Openreach Forecast	**175.05**	**117.69**	**99.44**
Total Programme Capex	**[✂]**	**[✂]**	**[✂]**

7.71 The next step in the modelling was to convert the Programme Capex costs into Fixed Asset categories in order to forecast asset and depreciation costs. To do this BT supplied, again in response to a request made under the Act, the allocation mapping used in the 2009/10 RFS to allocate Programme Capex to Classes of Work (COW- such as LDC - D side Copper) and the subsequent mapping of these COWs to Fixed Asset categories. We assumed these 'gross up' factors would remain the same through to 2013/14 and used them to calculate Fixed Asset Capex values that were output into the CA model.

7.72 Finally for the Cost Forecast model, Openreach supplied RFS data, also in response to a request under the Act, on the asset life of each COW and the forecast depreciation charge for legacy assets. Incremental depreciation on Capex calculated in the model was combined with the legacy depreciation and the aggregated depreciation charge output to the CA model.

How have we reflected future changes in asset values?

7.73 Under a CCA approach to setting prices, assets are valued by reference to the cost of replacing the asset at today's prices – their current cost - rather than their original, or historic, cost. If prices go up, the asset value is higher than it otherwise would have been. As a result, the annual depreciation charge would increase as it is based on a higher asset value. However, over the lifetime of the asset, this increase in the annual depreciation charge – which would cause costs to increase - is offset exactly by the holding gain (the gain made by holding the asset while it increases in value).

7.74 Asset inflation also affects the calculation of the mean capital employed and increasing asset prices causes the assessment of the reasonable return on those assets to increase.

7.75 It is therefore necessary to predict how asset values might change during the control period.

7.76 As explained above, we are proposing that it remains appropriate to use the RAV approach to valuing pre-1997 assets that we adopted in the 2005 cost of copper review. In accordance with that 2005 decision, the indexed HCA value of the pre-1997 assets will be projected forwards in line with RPI. For the purpose of this calculation we have assumed an average annual rate of 3%.

7.77 In respect of the post 1997 assets:

- As explained above, duct assets will be rolled forward based in line with our RPI forecast., which we have assumed to be an average annual rate of 3% from 2011/12.

- All other post 1997 assets will be rolled forward in line with our RPI forecast.

7.78 Our capital expenditure forecasts and asset valuations are considered in more detail in Annex 10.

***Question 7.6**: Do you have any comments on Ofcom's approach to projecting costs relating to Openreach's assets.*

Regulatory adjustments

7.79 We have made a series of regulatory cost adjustments in line with similar adjustments made in previous price controls. These are summarised below.

Pension

7.80 We have considered the treatment of contributions to BT's pension scheme in two parts; ongoing pension costs and additional annual payments required to address a funding shortfall in BT's pension scheme.

7.81 In our 2009 review, we included an estimate of ongoing contributions to meet future liabilities but excluded the additional payments. However, we explained that, to inform future regulatory decisions we would consult on whether this approach would remain appropriate in the longer term.

7.82 We published the conclusions of this consultation, in a Statement, dated 15 December 2011 (the "Pension Review")[127].

7.83 As set out in the Pension Review, we concluded that, when considering how pension costs should be treated, in the context of setting BT charge controls, pension deficit payments should be disallowed (and any pension holidays should be ignored).

[127] http://stakeholders.ofcom.org.uk/binaries/consultations/btpensions/statement/statement.pdf

7.84 Therefore, in our cost forecasts, we have included the cost of ongoing contributions only (at a rate of 19.5% of pensionable pay, with 6% met by the employees) with no amount included in respect of pension deficit payments.

Dropwire adjustment

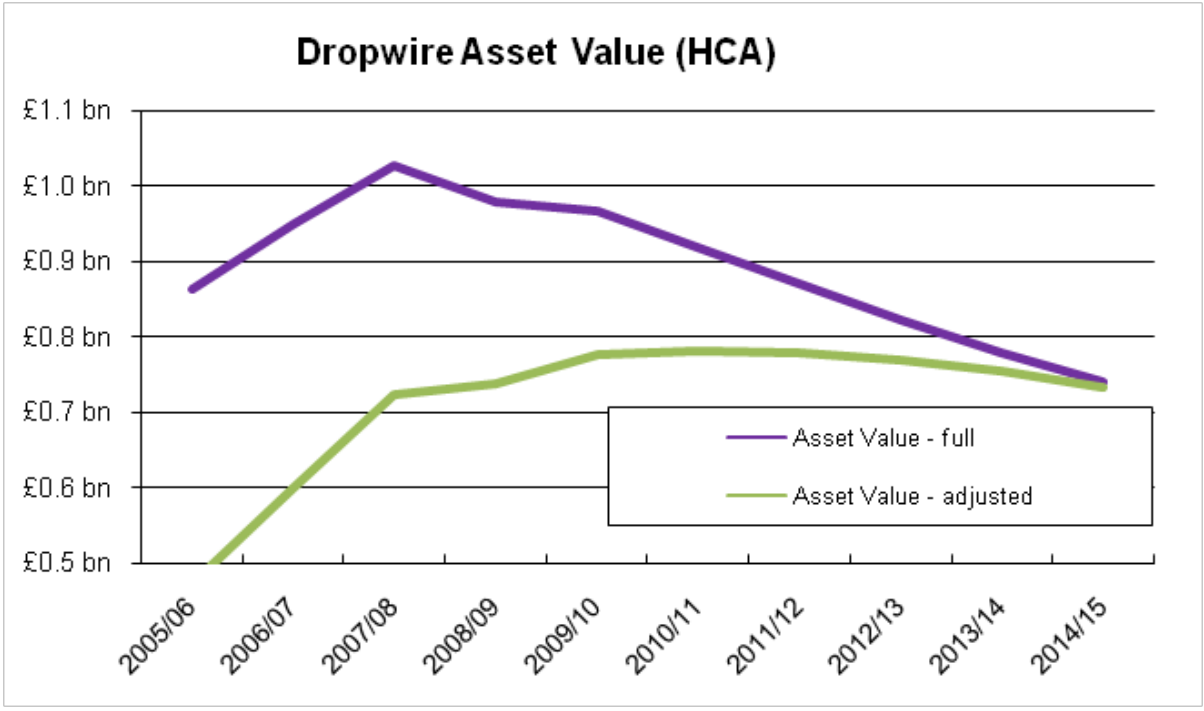
7.85 Dropwire costs relate to the depreciation of the copper pair and NTE that links the end user NTE premises to the distribution point.

7.86 Up until 2001, BT expensed the capital cost of dropwires as they were incurred. In 2001 the policy changed to one where the cost was capitalised and written off over 10 years.

7.87 BT has always recovered Dropwire costs through Copper Access Rental Charges. Prior to December 2005 these were controlled at the retail level through the Retail price Control that had been set in 2003. This was based on the fully expensed cost. In December 2005, we removed the retail price control and in 2006 set Wholesale Price Controls for Copper Access products.

7.88 The Dropwire costs were based on BT's capitalised costs. We however recognised that dropwires in use at December 2005 had already been paid for once through the Retail Price control and that those Capital costs should be disallowed to prevent double recovery. The Dropwire adjustment is the adjustment that removes the pre 2006 dropwires from the asset base. As can be seen in the chart below, the difference between the full and the adjusted value (used for setting rental prices) falls until all the pre 2006 dropwires are written off in 20014/15.

Figure 7.12: HCA Dropwire Asset Value



7.89 As in previous controls, we therefore propose to excluded a proportion of capital costs, relating to residential dropwires installed prior to 2006

7.90 Previously we allocated an average 15% more adjustment to WLR residential lines than MPF lines. This was because at the time MPF prices were originally set it was assumed on a higher proportion of the WLR lines were pre 2006 as MPF was a nascent product. As the number of MPF lines has increased we don't think this assumption remains valid. We have therefore changed the basis for allocating this adjustment to be the same for MPF and WLR lines. The impact of this change, particularly in 2013/14 is fairly small.

Light User Scheme (LUS

7.91 The LUS provides a reduced line rental to lower income customers of BT retail as mandated by Ofcom and the Universal Service Directive. Openreach no longer allocates the cost of administering the scheme (and any revenue foregone) to regulated products.

***Question 7.7**: Do you have any comments on the proposed regulatory adjustments to be made in determining the recoverable costs?*

7.92 In addition, we are considering one further adjustment subject to gaining a fuller understanding of the issues concerning the deployment, usage and charging arrangement for evoTAMs, as explained below.

EvoTAMs

7.93 The above capital expenditure forecasts currently include expenditure on evoTAMs.

7.94 EvoTAMs are test equipment that enables the testing of the broadband frequencies over SMPF. Without an evoTAM, broadband services that are delivered using SMPF can only be tested via the WLR test equipment that tests only the voice frequencies.

7.95 Our cost projections for Openreach currently include the projected costs associated with BT's proposed roll-out of evoTAMs. As explained in Annex 8, we have allocated these costs to SMPF services, such that the unit cost for all SMPF lines includes a proportion of the total cost (even though not all lines will be connected to evoTAMs).

7.96 However, there may be grounds for excluding these costs from the cost stacks used to inform the price control applied to the SMPF service.

7.97 We understand that CPs may choose to opt into the test access product for SMPF and will incur an additional connection charge to do so. On this basis, it might be argued that the cost of the evoTAM should not appear in the core rental of products which do not include it. This argument would appear to be made stronger if it is likely that BT will be the main purchaser of the test access product for SMPF.

***Question 7.8:** What issues should we consider when deciding whether to exclude costs relating to evoTAMs from the regulated cost stacks? If you consider that the costs should be excluded, please provide your reasons. If you consider that they should be included, how should they be allocated across services?*

Forecast of Openreach's Costs

7.98 Based on the approach and assumptions described above, we have forecast aggregate costs for Openreach as follows.

Figure 7.13: Ofcom forecast of Openreach costs

	2009/10	2010/11	2011/12	2012/13	2013/14
	£'m	£'m	£'m	£'m	£'m
Current Pay	885	819	782	767	781
Other Operating Costs	187	195	161	150	134
Transfer Charges	1,280	1,127	1,088	1,052	1,019
Internal Cost of Sales	1,054	962	934	903	866
Other Operating Income	-143	-125	-93	-86	-86
Operating Cost	**3,264**	**2,978**	**2,873**	**2,787**	**2,713**
Depreciation	1,018	736	820	845	861
Holding Gains	-310	-89	-59	-59	-59
Operating Cost inc Depreciation	**3,972**	**3,625**	**3,636**	**3,573**	**3,515**

7.99 These costs are broken down in more detail in Annex 9.

Cost of capital

7.100 As explained in Annex 12, we propose an estimate of Openreach's cost of capital copper of between 7.9% and 9.4%. For the purpose of our base case, we have used the mid-point of 8.6%.

Question 7.9: *With reference to Annex 12, do you have any comment on our approach to calculating Openreach's cost of capital.*

Allocation of costs to services

- The basis for allocating costs to products is described in detail in Annex 8. The product costs are considered in Annex 9.
- Stakeholders' views are invited on all aspects of our approach to cost allocation.

Question 7.10: *With reference to Annexes 8 and 9, do you have any comment on our approach to allocating costs*

Results of cost modelling

7.101 Our estimate of the costs for each of the core rental services (WLR, SMPF and MPF) in 2012/13 using our base case assumptions as set out above, are summarised below, alongside the current prices.

Figure 7.14: Ofcom estimate of the costs for LLU and WLR *Rental* services (using base case assumptions) and current prices

	MPF rental	WLR rental	SMPF rental
	£	£	£
Cost estimate for 2013/14	90.89	98.25	9.14
Current prices (2010/11)	89.10	103.68	15.04

Figure 7.15:Ofcom estimate of the costs for LLU and WLR *Ancillary* services (using base case assumptions) and current prices

7.102 The cost calculations for the ancillary services are as follows;

	MPF New provide	PSTN Basic New Connection	SMPF New Provide	MPF Single migration	SMPF Single migration
	£	£	£	£	£
Cost estimate for 2013/14	48.53	51.53	29.87	37.03	34.55
Current prices (2010/11)	62.11	55.74	38.64		

7.103 Our summary basket costs are as follows;

Figure 7.16: Ofcom MPF basket costs

MPF Basket	2009/10	2010/11	2011/12	2012/13	2013/14
	£'m	£'m	£'m	£'m	£'m
Current Pay	10	7	4	2	2
Other Operating Costs	1	2	1	1	0
Transfer Charges	7	5	3	2	2
Internal Cost of Sales	0	0	0	0	0
Other Operating Income	-1	0	0	0	0
Internal Capitalisation	0	0	0	0	0
Depreciation inc holding gains	1	1	0	0	0
ROCE (@8.6%)	0	0	0	0	0
Total cost	**18**	**15**	**8**	**5**	**4**

7.104 This basket includes MPF Mass Migrations, MPF Jumper Removals, MPF Single Reterminations, MPF Bulk Reterminations and MPF Expedite Connections.

Figure 7.17: Ofcom SMPF basket costs

SMPF Basket	2009/10	2010/11	2011/12	2012/13	2013/14
	£'m	£'m	£'m	£'m	£'m
Current Pay	24	32	25	19	15
Other Operating Costs	3	8	5	4	3
Transfer Charges	15	21	17	13	11
Internal Cost of Sales	0	0	0	0	0
Other Operating Income	-1	-2	-1	0	0
Internal Capitalisation	0	0	0	0	0
Depreciation inc holding gains	2	3	3	2	2
ROCE (@8.6%)	1	1	1	0	0
Total cost	**44**	**63**	**50**	**38**	**30**

7.105 This basket includes SMPF Bulk Migrations, SMPF Jumper Removals, SMPF Single Reterminations, SMPF Bulk Migrations, and SMPF Expedite Connections.

Figure 7.18: Ofcom comingling basket costs

Comingling Basket	2009/10	2010/11	2011/12	2012/13	2013/14
	£'m	£'m	£'m	£'m	£'m
Current Pay	3	2	2	2	2
Other Operating Costs	1	1	0	0	0
Transfer Charges	18	14	13	13	12
Internal Cost of Sales	35	44	48	51	53
Other Operating Income	0	0	0	0	0
Internal Capitalisation	0	0	0	0	0
Depreciation inc holding gains	10	13	14	15	15
ROCE (@8.6%)	13	13	13	12	12
Total cost	**80**	**87**	**90**	**93**	**95**

7.106 This basket includes New Points of Presence, Comingling rentals, Initial tie cable standard Installs and Initial tie cable enhanced installs.

Figure 7.19: Ofcom LLU migration basket costs

Migration Basket	2009/10	2010/11	2011/12	2012/13	2013/14
	£'m	£'m	£'m	£'m	£'m
Current Pay	83	72	70	63	62
Other Operating Costs	11	17	15	13	12
Transfer Charges	46	41	42	39	39
Internal Cost of Sales	0	0	0	0	0
Other Operating Income	-5	-3	-1	-1	-1
Internal Capitalisation	0	0	0	0	0
Depreciation inc holding gains	7	5	6	7	6
ROCE (@8.6%)	2	2	2	1	1
Total cost	**144**	**134**	**134**	**122**	**119**

Consistency with the anchor pricing approach

7.107 As explained above, we consider that our models provide a sound basis for forecasting costs.

7.108 As explained in Section 3, we propose to adopt an anchor product pricing approach that ensures prices do not rise above the level implied by the hypothetical continuation of existing technology. In this section we describe how we have estimated what the charges would be with a hypothetical continuation of the existing (copper) technology, without any NGA investment.

7.109 As explained below, the allocations in our model result in marginally *lower* levels of cost than our best estimate of hypothetical continued use only of copper. We therefore consider that the prices resulting from the cost allocation model are consistent with the anchor product pricing approach. On this basis, we believe it is reasonable to set the charge controls with reference to costs derived from the cost allocation model.

7.110 The current rental charges for the Rental services were set relatively recently, in the spring of 2009, based on estimated unit costs in 2012/13. The MPF calculations were reviewed during the LLU Appeal.

7.111 The 2009 cost estimates were updated in light of the CC's determination. These estimates were based on a model of Openreach that include little NGA activity. We can therefore use these revised estimates as a first order test of prices in a non-NGA world and as such provide a benchmark for our anchor-pricing cross check.

7.112 As shown in the table below, our latest cost estimates for MPF are lower than our updated 2009 estimates by the end of the period under review.

Figure 7.20: Ofcom MPF cost estimates in this review vs previous review

	2009/10	2010/11	2011/12	2012/13	2013/14
Per 2009 review	£87.29	£89.89	£92.99	£94.03	NA
Per 2011 review	£104.34	£90.63	£91.99	£90.17	£90.89

7.113 Although the 2009 estimate of 2012/13 costs are lower in our 2011 estimate than in our revised 2009 estimate, it was possible that changes in assumptions that pushed the estimates down were concealing the effect of NGA costs pushing costs up.

7.114 To check that this is not the case, we have rolled the 2009 estimates forward, as follows:

- we took the 2009 forecasts of the unit costs, on which the current prices were based, as adjusted to take account of the CAT determination of the LLU Appeal;
- updated the 2009 unit cost forecasts, for known changes in 2009/10 that were not captured in the forecast, using estimates to give a revised cost estimate for 2009/10 on a basis that is consistent with our latest forecasts and cross-referenced this back to the 2009/10 audited RFS; and
- adjusted the 2009/10 cost estimates for known changes in 2010/11 and adjusted these costs to reflect expected changes between now and 2013/14

7.115 As set out above, in 2009, we estimated that the unit cost of an MPF line would be around £87 in 2009/10. However, based on more recent information, it now appears that this estimate may have been lower than actual costs, for two main reasons, as follows:

- Although Openreach delivered larger efficiency savings than we forecast, in terms of the cost of delivering MPF, these savings were more than offset by the effect of increased systems costs and the impact on costs of the greater than expected shift to MPF (and loss of contribution from SMPF); and
- As set out in Annex 8, we have updated our assumptions regarding the use of frames by MPF and SMPF and we consider that some costs were under-allocated to MPF in 2009 as a result. Allocating costs on a basis that is consistent with the actual frame usage, on the basis proposed in this consultation, would have increased the proportion of frame costs allocated to MPF.

7.116 Taking these issues into account, we estimate that the unit cost of MPF in 2009/10, calculated on a basis that is consistent with this the cost information and allocation bases adopted for the purposes of this price control, would have been around £92.

7.117 This estimate does not appear inconsistent with BT's estimate of the FAC of £85 for MPF, as reported in the 2009/10 Regulatory Financial Statements. The figure of £85 is distorted by the unusually large holding gains reported in the year. Replacing these gains with a "normalised" gain (similar to that reflected in our current estimate) results in a unit cost in excess of £95. Adjusting this estimate for the effect of the regulatory adjustments reflected in our 2009 estimate but not included in the Regulatory Financial Statements, results in a unit cost close to the above estimate of £92 for 2009/10.

7.118 To compare this figure with our base case cost estimate for 2013/14, we estimated how this estimate might have changed – absent NGA – in the period to 2013/14. Certain factors will put upward pressure on these costs, including the recent increases in copper prices, price inflation between 2009/10 and 2013/14, the further shift in mix towards MPF, and the unwinding of regulatory adjustments, such as the RAV and dropwire adjustments. Other factors will work to reduce costs, notably future efficiency gains and other cost savings. Additionally, the 2009/10 cost estimate is based on a cost of capital of 10.1%. As explained above, for the purposes of our calculations in this consultation, we have used a base case estimate of 8.6%. Restating the 2009 estimate on this basis therefore reduces the estimated cost stack.

7.119 On this basis, we estimate that updating the 2009 estimate for more recent information (ie calculated based on the technology in place in 2009, rather than on the technology reflected in our current modelling) would give a unit cost estimate for MPF in 2013/14 of around £95.

7.120 As set out above, our 2013/14 cost estimate is slightly below this level. This indicates that the approach adopted is not systematically overstating the costs allocated to the copper services, and is consistent with the anchor product pricing approach.

7.121 In fact it seems likely that the opposite is the case. Specifically, by reference to the pay costs picked up by each unit of the core rental services, it is evident from the analysis in Annex 9 that unit costs are reduced as NGA activities draw away an increasing proportion of engineers' time and related costs.

Adjusted cost stacks for pricing purposes

7.122 The above cost figures represent our base case estimate of the cost of providing the core rental services. However, for the purpose of setting prices, we consider that it is appropriate to make some small adjustments to these cost estimates, as follows:

Reallocation of Test Access Matrix (TAMs) costs

7.123 TAMs are testing equipment used by MPF lines.

7.124 As explained in Annex 8, for the purpose of our cost modelling we have allocated all of the cost of TAMs across all MPF lines, on the basis that it is only MPF lines that use this equipment.

7.125 In our 2004 Statement on LLU pricing, we explained that some of the costs might be considered to represent system set up costs. These represented the costs incurred by BT to develop and implement the systems and software necessary to provide LLU services of a reasonable quality. We considered that the cost of developing and rolling out an automated testing system (i.e. the TAMs), fell within this category of costs.

7.126 When considering the six principles of cost recovery to these costs, we concluded that, where possible, system set up costs, such as the cost of TAMs, should be recovered across all local loops used to provide DSL services.

7.127 For the purpose of setting charges, we have therefore adjusted the cost stacks to spread the TAM costs across all DSL lines.

Recovery of costs of WLR transfers

7.128 In the 2009 Statement[128], Ofcom considered that it was appropriate to continue with the approach adopted in 2002 by Oftel when the original charge ceiling was set. There was a concern that high transfer charges might act as a barrier to switching, which resulted in some of the costs of a transfer being recovered from the line rental charge.

7.129 We set out in Section 5 three options to calculate the cost transfer. For the purposes of this consultation we have used the Option 1 methodology but have not indexed the price from 31 March 2011. The cost transfer under this proposal was set to ensure costs equalled revenues. For pricing purposes there is a cost transfer of £37m, to WLR rentals in 2013/14.

Recovery of costs of SMPF ceases

7.130 As set out in Section 4 we consider setting the SMPF Cease Charge to zero and recovering the costs through the SMPF rental charge to be the most appropriate charging principle. For pricing purposes there is a cost transfer of £2m, to SMPF rentals in 2013/14

Adjusted cost stacks

7.131 Having taken account of these adjustments, we consider that the following adjusted cost estimates provide a reasonable base case to inform our proposed price controls.

[128] Charge Controls for Wholesale Line Rental and related services http://www.ofcom.org.uk/consult/condocs/wlr/

Figure 7.21: Ofcom Adjusted base case cost estimates for LLU and WLR Rental services

	MPF	WLR	SMPF
	£	£	£
Base case cost estimate	90.89	98.25	9.14
Reallocation of TAMs costs	(2.31)		1.68
Inclusion of costs relating to ceases	0.51		0.28
Inclusion of costs relating to transfers		2.37	
Restated cost stacks for pricing purposes	**89.09**	**100.62**	**11.10**

***Question 7.11**: Do you agree with the proposed adjustments to the cost stacks for pricing purposes?*

Deriving Xs from the cost estimates

7.132 As explained in Section 3, we consider it appropriate to set prices by reference to the unit cost stacks in 2013/14. As explained in Section 3, we consider it appropriate for prices to move by reference to a glide path and consider it appropriate to set the glide path by reference to the current prices set in accordance with the price control (that will expire on 31 March 2011) rather than by reference to the prices that BT has voluntarily undertaken to adhere to which will apply from 1 April 2011.

7.133 For the purpose of the price control, we propose that RPI will be taken from the October in the preceding year. The RPI figure from October 2010 was 4.5%. Consistent with our underlying inflation forecasts (which are linked, but not equal, to RPI), we have assumed that RPI will be around 3% in October 2011 and 2012. On this basis, a price control linked to RPI would deliver an increase of just under 11% over three years before adjusting for the X, equivalent to an average annual increase of around 3.5%.

7.134 The calculation of the X required to deliver a glide path that should move the prices for the rental services into line with our base case cost estimates over the next three years (rounded to the nearest 0.1%) is summarised below.

Figure 7.22: Ofcom calculation of Xs for LLU and WLR rental services

	MPF	WLR	SMPF
a) Current price (to 31 March 2011)	£89.10	£103.68	£15.04
b) Base case cost estimate	£89.09	£100.62	£11.10
c) Change required (b/a – 1)	-0.0%	-3.0%	-26.2%
d) Annual rate required to deliver change (c^(1/3))	-0.0%	-1.0%	-9.6%
e) RPI as at October 2010	+4.5%		
f) Assumed annual RPI 2012/13 onwards	+3.0%		
f) X required to deliver annual change from 2012/13	**-3.5%**	**-4.5%**	**-13.1%**

Figure 7.23: Ofcom calculations of Xs for MPF new provide and WLR new connection

7.135 The table below provides similar calculations for the ancillary services.

	MPF New Provides	WLR New Connection
a) Current price (to 31 March 2011)	£62.11	£55.74
b) Base case cost estimate	£48.53	£51.53
c) Change required (b/a – 1)	-21.9%	-7.5%
d) Annual rate required to deliver change (c^(1/3))	-7.9%	-2.6%
e) RPI as at October 2010	+4.5%	
f) Assumed annual RPI 2012/13 onwards	+3.0%	
g) X required to deliver annual change from 21012/13	**-11.4%**	**-6.1%**

7.136 The table below shows the calculation of the basket X's are as follows. The LLU migration charge is based on the blended weighted revenues and costs for MPF Single Migration, SMPF New Provide and SMPF Single Migration.

Figure 7.24: Ofcom calculations of Xs for LLU basket ancillary services

	MPF	SMPF	Comingling	LLU Migration
	£m	£m	£m	£m
a) Revenues (@ 31 March 2011 price)	5	38	69	142
b) Base case cost estimate	4	30	95	119
c) Change required (b/a – 1)	-11.7%	-20.8%	+36.5%	-16.3%
d) Annual rate required to deliver change (c^(1/3))	-4.1%	-7.5%	+10.9%	-5.8%
e) RPI as at October 2010	+4.5%			
f) Assumed annual RPI 2012/13 onwards	+3.0%			
g) X required to deliver annual change	**-7.5%**	**-10.9%**	**+7.5%**	**-9.2%**

Question 7.12: *Do you agree with our approach for deriving the glide paths?*

Section 8

LRIC differentials

Introduction and summary

8.1 In Section 3, we said that there were advantages to setting charges on the basis of CCA FAC. These include that it is a well understood concept, has been used in the past, it allows overall cost recovery, and uses data that can be reconciled to the regulatory financial statements (RFS), which are published and independently audited. These advantages make CCA FAC particularly good for setting controls on average prices for a group of services.

8.2 However, we recognise that CCA FAC may not necessarily lead to the most efficient outcome in all cases, and this is particularly the case for setting relative prices within a group of services. Relative prices can matter for efficiency, particularly where two services are close substitutes. In this Section, we therefore check whether the CCA FAC-derived rental charges proposed in this consultation document are likely to lead to inefficiencies, through distorting relative prices and hence choice.

8.3 Our assessment focuses on the differentials between (a) MPF and WLR and (b) MPF and WLR+SMPF. We regard the latter differential as particularly important because MPF and WLR+SMPF are alternative wholesale inputs for providing voice and broadband retail services[129]. Our analysis indicates that the differentials on the basis of CCA FAC are likely to be at least as great as the differentials on the basis of LRIC, for both MPF vs WLR+SMPF and MPF vs WLR. Given this, our preliminary conclusion is that there are no reasons for departing from CCA FAC for the rental services.

8.4 The approach to setting the differentials was a key aspect of Talk Talk Group's (TTG) appeals of the 2009 LLU and WLR controls (the "Appeals")[130]. TTG argued that our approach to considering an efficient differential was flawed, and also that our application of our own approach was flawed. The Competition Commission rejected TTG arguments.[131] In doing so, it attached significant weight to our assessment of the differences in the LRICs. In this Section we refresh this analysis, drawing heavily on the earlier reviews. In doing so we have ensured that our approach is consistent with the Competition Commission's determination in the Appeals.

[129] In contrast, we consider that the MPF vs WLR differential is less important because we consider it unlikely that MPF would be used for voice-only services, because it would be likely to be more expensive. This means that MPF and WLR may not in practice be alternative wholesale inputs for providing a retail voice-only service, and there would not necessarily be any productive inefficiency if the differential were out of line with LRIC. The Competition Commission was satisfied that the lack of any demand for MPF for voice-only services currently was a consequence of a pricing structure that broadly reflected the relative costs of providing the services (see paragraph 3.207 of the Competition Commission's WLR Determination). We recognise that if take-up of Generic Ethernet Access were high, then there could be a large number of lines affected by the decision of whether to provide voice-only services through WLR or MPF. But we still think the MPF vs WLR differential would be less important because we consider it unlikely that MPF would be used for voice-only services.

[130] See http://www.catribunal.org.uk/files/1149_Carphone_Warehouse_CC_Determination_310810.pdf and http://www.catribunal.org.uk/files/1.1111_Carphone_Warehouse_CC_Determination_310810.pdf

[131] Paragraphs 3.10 (on page 3-2) to 3.158 (on page 3-30) of the Competition Commission's WLR Determination summarise TTG's claims and the Competition Commission's assessment of those claims. Paragraph 3.16 (on page 3-4) says "We do not consider that Ofcom erred in the calculation of the LRIC differentials as a cross check of its CCA FAC approach". The Competition Commission's WLR Determination also says "In our view, the appropriateness of Ofcom's CCA FAC basis is largely determined by the reliability of its estimates of the LRICs required for the cross-check approach" (paragraph 3.9).

8.5 The rest of this Section is structured as follows:

- Different efficiency considerations;
- Conclusion on efficiency considerations;
- Estimating the LRIC differentials for MPF vs WLR+SMPF/WLR;
- Use made of MPF;
- Summary of Ofcom's assessment of LRIC differentials;
- BT's LRIC figures for 2009/10; and
- Adjustments for WLR Transfer and LLU ceases.

Different efficiency considerations

8.6 There are different aspects to economic efficiency:

- 'Allocative efficiency' is achieved when prices are close to cost. This ensures that all consumers who value a product at more than its cost are able to purchase it;
- 'Productive efficiency' means that the costs of production are minimised;
- 'Dynamic efficiency' means that firms have the correct incentives to invest (e.g. in new infrastructure) and to innovate (e.g. to generate new products). Greater reliability and other quality improvements, and the creation of new products and services, are critically-linked to investment and innovation.

8.7 Because we consider that the rental services are alternative wholesale inputs for the same broadband and voice retail markets, we consider that the main efficiency consideration is to induce an efficient choice of wholesale inputs, so as to minimise overall costs. We consider that these productive efficiency considerations point to differentials between products that reflect the absolute differences in LRIC.[132]

8.8 We consider that allocative efficiency considerations at the retail level are far less relevant because the rentals are used to supply the same downstream retail markets. Attempting to recover more common costs from one set of wholesale inputs over the other would to a very considerable extent be undermined by arbitrage, especially in the longer term.

8.9 We recognise that the rentals may not be perfect substitutes at the wholesale level, especially in the short term. In theory an optimal set of prices may put some weight on allocative efficiency, in the sense of recovering common costs in the way that

[132] This can be illustrated with a hypothetical example. Suppose a company produces two intermediate products whose only use is for the same retail market, and there are fixed and common costs involved in the production of these two products. Because both products are for the same retail market, the only consideration is maximising productive efficiency. Suppose one of the intermediate products is closer to the finished product than the other, and hence has higher incremental costs. Buyers of these intermediate products must choose between (a) buying the cheaper product and doing more work themselves, or (b) buying the more expensive product and doing less work themselves. Only when the differential between the prices of the intermediate products is equal to the difference in incremental costs is the 'make or buy' decision right and static efficiency achieved.

least distorts retail choices.[133] However, we do not consider it feasible to attempt to optimise economic efficiency in a very precise way because of the extent of the information required to undertake such an exercise and the difficulty of measuring some of the parameters with any degree of accuracy.[134]

8.10 Dynamic efficiency can be enhanced by increased competition. During the previous reviews and the Appeals, TTG argued that we should deliberately promote MPF-based competition by setting a very large differential between MPF and WLR charges. In general, we consider that promoting competition by assisting a particular type of competitor (such as a new entrant) can sometimes be justified. For example, while this may raise costs in the short term, it may be in consumers' interests if it results in lower prices and more choice in the longer term. We consider that this needs to be considered on a case by case basis.

8.11 In this case, we do not see a strong argument for setting the MPF charge lower than we otherwise would so as to stimulate deeper competition in voice or broadband services at this time. We already regard the provision of wholesale broadband as being competitive in the majority of the UK.[135] Similarly for voice, there is already competition at the retail level through the use of WLR. While voice-only competition provided using MPF may allow competition over more of the value chain, we do not believe that the long term gains to consumers from promoting this type of competition would outweigh the costs. This is especially the case given that we understand that the differential between MPF and WLR would have to be significantly higher than it is currently in order to attract voice-only use of MPF. To set a larger differential would entail significant entry assistance, with an increased risk of encouraging inefficient entry.[136] An increase in WLR to promote MPF-based competition would tend to increase retail prices for WLR users, which we do not consider to be justified.

8.12 While we regard effective LLU services to be important for competitive downstream broadband provision, we therefore do not see a need to adjust charges to create stronger investment signals. This is the same conclusion we reached in May 2009. We consider that, if anything, the case for setting charges to promote MPF-based competition is now weaker than it was in May 2009. This is because of increasing investments and momentum for fibre-to-the-premises (FTTP) and fibre-to-the-cabinet (FTTC). In the longer term, these investments may make MPF-based competition less relevant.

8.13 We also consider that using CCA FAC to set particular charges may help dynamic efficiency to the extent that it is consistent with decisions in previous charge control reviews. This should help to provide confidence in the stability and predictability of the regulatory framework.

[133] The full theory on setting access prices to optimise productive and allocative efficiency is set out in Armstrong, Doyle and Vickers, "The access pricing problem: a synthesis", The Journal of Industrial Economics, June 1996, pp 131-150.

[134] A full optimisation would include estimating, amongst other things, elasticities of demand for broadband and voice and the degree of substitutability between MPF and WLR. It would also need to consider how these factors changed over time.

[135] We differentiate between four geographical markets for the provision of wholesale broadband in the UK, reflecting the different competitive conditions in each area. For 'Market 3', which covers the large majority of premises in the UK, we consider that no operator has significant market power and the market is therefore effectively competitive. This competition relies on effective provision of LLU services.

[136] The Competition Commission reached the same conclusion in its WLR Determination. It said "CPW argued that MPF-based provision would result in stronger competition, given the great opportunities for CPs to reduce costs and offer better services, which would be beneficial to customers. We were not, however, persuaded that the current level of competition in the retail markets for narrowband and broadband services was such as to warrant such intervention" (paragraph 3.269). See also paragraphs 3.253 to 3.270.

Conclusion on efficiency considerations

8.14 Given the measurement difficulties and informational constraints of trying to set optimal prices, we consider the best that can realistically be achieved to promote efficiency is to review the pricing differentials resulting from the way we have set prices based on CCA FAC estimates to ensure that the differences in charges should not be less than the differences in the respective LRICs. If the differential were less than LRIC, then MPF-based competition may be disadvantaged in a way that would be productively inefficient. Similarly, we do not think the differential should be significantly greater than LRIC.

8.15 Figure 8.1 below shows the differentials between the base case for the charges we propose to set, together with estimates of the likely LRIC differentials. These figures are all in nominal terms. The derivation of the LRIC estimates is set out in the rest of this section.

Figure 8.1: Differentials for MPF vs WLR/WLR+SMPF

2013/14, £ per line per annum	MPF vs WLR	MPF vs WLR+SMPF
Proposed differences in charges	£12	£23
Estimated LRIC differences	£0 to £8	£8 to £15

8.16 As the differentials between the proposed charges are unlikely to be less than the LRIC differentials, our preliminary conclusion is that there are not strong economic efficiency reasons for moving away from the charges we propose based on CCA FAC.

8.17 The charges in Figure 8.1 incorporate adjustments we have made to the CCA FAC figures. In particular, we may make an adjustment for WLR Transfer, so as to set it below CCA FAC, with an associated slight increase in the WLR Rental. For MPF and SMPF, this is because we propose to remove the cease charges and hence set the rental charges slightly above CCA FAC to recover the cease costs. As explained at the end of this section, these adjustments have a minor affect on the rental charges.[137]

8.18 In formulating our approach we have taken into account the Competition Commission's determination of the WLR appeal ("WLR Determination"[138]) and we consider that our proposals are consistent with that. We do not consider that there have been any changes in the intervening period since the Competition Commission reached its WLR Determination in September 2010 that would suggest that a different approach is now appropriate.

8.19 The Competition Commission's findings included that it did not find that Ofcom erred by placing greater weight on productive efficiency considerations than allocative or dynamic efficiency considerations.[139] The Competition Commission also agreed with us that to determine a set of prices that reflected the various efficiency considerations

[137] The proposed charges in Figure 8.1 also include the adjustment we propose to make for the reallocation of TAM costs.
[138] http://www.catribunal.org.uk/files/1.1111_Carphone_Warehouse_CC_Determination_310810.pdf
[139] See, for example, paragraphs 3.176 on page 3-34 and 3.190 on page 3-37 of the Competition Commission's WLR Determination.

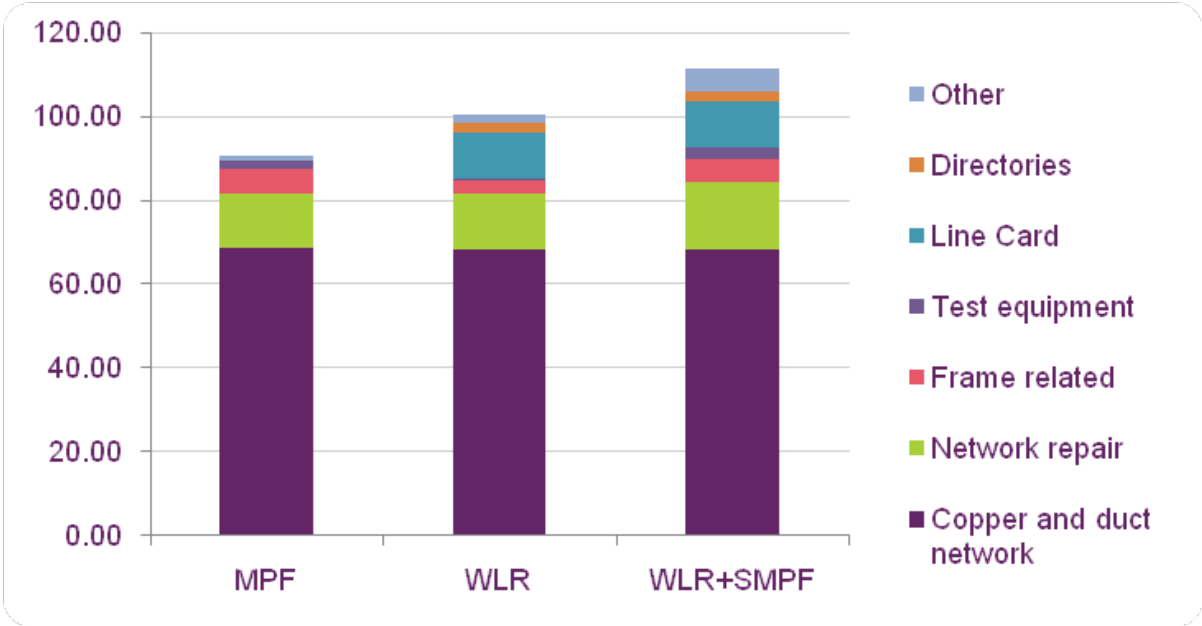
was practically very difficult and that there are substantial risks associated with getting this wrong.[140]

Question 8.1: *Do you agree with Ofcom's proposal to base charges on CCA FAC provided that this results in differentials between the core rental charges that are not less than the likely differences in LRIC and not significantly greater than the likely differences in LRIC?*

Estimating the LRIC differentials for MPF vs WLR+SMPF/WLR

8.20 Figure 8.2 shows our central estimates of the complete CCA FAC cost stacks for MPF, WLR and WLR+SMPF as discussed in Section 7. We have also included in these cost stacks the adjustments we propose to make for test equipment. That is, the test equipment costs shown here involve an adjustment to spread Test Access Matrix (TAM) related costs over both MPF and SMPF. EvoTAM costs are also included in SMPF and WLR in these figures. In Figure 8.2, the return on capital employed has been broken down and allocated to the relevant category to which it relates. For example, the copper and duct network costs include the return on capital employed in the copper and duct network.

Figure 8.2: 2013/14 cost stacks for MPF, WLR and WLR+SMPF



8.21 This shows that the bulk of the cost stack used for setting charges, which relates to copper and duct, is common to MPF and WLR.

8.22 From the point of view of economic efficiency, we are interested in the LRIC differentials between MPF and WLR/WLR+SMPF. In the rest of this section, we set out how we have estimated these. We first set out our own estimates of the LRIC differentials. We then consider BT's (unaudited) LRIC estimates.

8.23 In our own consideration of LRICs we concentrate on the *differences* in the LRICs of the products, and as such ignore all the elements of cost that appear in both LRICs.

Our approach is:

[140] See paragraph 3.274 of the Competition Commission's WLR Determination.

- first, to identify and categorise the actual differences between the two products (for example, WLR involves a 'line card' and MPF does not); and

- second, to consider the likely LRIC difference for each of the categories identified, drawing on the CCA FAC numbers and other sources if possible.

8.24 The main differences between the two products are:

- line card costs (WLR includes a line card, whereas MPF does not);

- exchange wiring and line test equipment (the wiring and line test equipment is different depending on the services provided);

- directories (WLR includes a directory or phone book, but MPF and SMPF do not);

- fault repair and standard of care (both MPF and SMPF have a higher standard of care than WLR); and

- product management and other costs (each product has its own support costs though we consider these differences are likely to be minor).

8.25 We discuss these in turn below.

Line card costs

Overall approach

8.26 Line cards are the electronic equipment that copper telephone lines, running to properties, connect to in the local exchange. They represent an important input for WLR but do not form part of the provision of MPF by Openreach.

8.27 Currently, BT predominantly uses time division multiplex (TDM) technology, which involves PSTN line cards that only recognise voice traffic. When BT provides broadband it generally uses a separate piece of equipment (a DSLAM – DSL Access Multiplexer) that is connected to the line in addition to the PSTN line card. There is now equipment available which is capable of supporting both voice and broadband. This equipment is known as a multiple services access node (MSAN) and contains line cards that have both voice and broadband capabilities – known as combination cards (or combi cards). BT has deployed a limited number of MSANs in certain exchanges as part of a trial, as it planned to install MSANs as a single replacement to both its TDM and DSLAM technology. Within this trial BT only used the MSANs to support voice – the intention was to establish the MSAN voice platform before migrating the broadband services onto the MSAN. However, in March 2009, BT changed its plans and decided not to generally move its voice services off the TDM technology and onto MSANs. This meant that BT was left with the trial MSANs in its network being used to support voice only.

8.28 We consider that the line card costs should continue to be estimated based on TDM technology. This is in line with our 'anchor product pricing' approach, which is described in Section 3, in the context of NGA. This involves capping charges at what would be implied by the existing technology, so as to give good investment incentives for both BT and CPs to invest in new technology as and when it is efficient to do so. Also, we do not consider it is clear that MSANs would be lower cost overall, nor that they are the most efficient solution (particularly given that this technology may be overtaken by fibre-to-the-premises [FTTP] and fibre-to-the-cabinet [FTTC]).

8.29 This is consistent with the approach taken as part of the previous charge control reviews for LLU and WLR.

Calculation of line card costs

8.30 In our 2009 WLR Statement, we considered that a reasonable range for the LRIC of continued use of the TDM technology line card was likely to be £11 to £13 per line per year for 2012/13. This range was based on forecast line card costs and BT's regulatory accounts.[141]

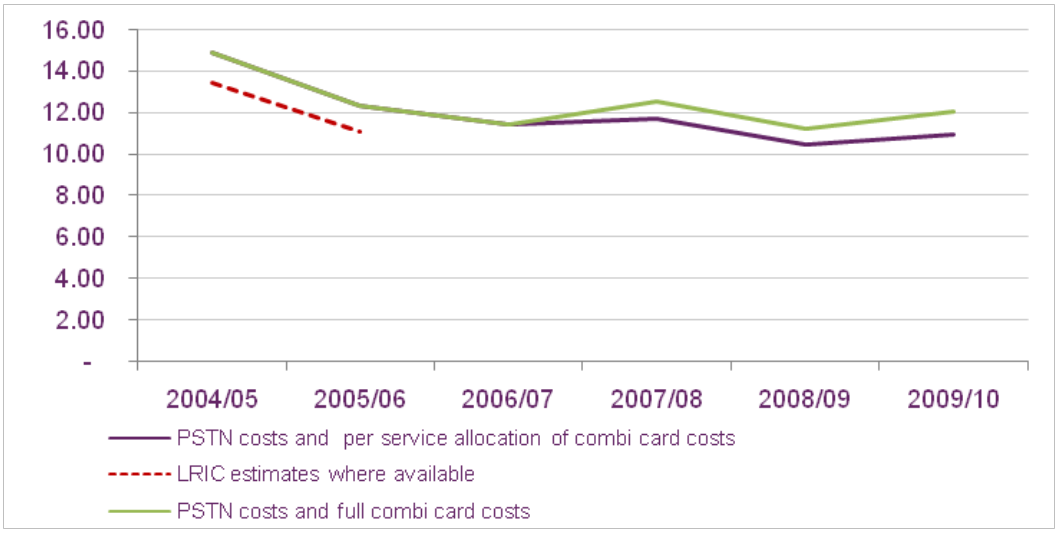
8.31 Figure 8.3 also shows the LRIC figures for line cards in BT's regulatory accounts for 2004/05 and 2005/06 (after which they were not shown in the regulatory accounts).

8.32 Figure 8.3 also shows CCA FAC figures for a line card derived from BT's regulatory accounts. Up until 2007/08, the figures relate purely to TDM technology. From 2007/08, there are no pure TDM line card cost estimates available in BT's regulatory accounts, because a minority of line cards are NGN combi cards. From 2007/08, we have shown the total CCA FAC line card costs calculated in two ways:

- We have added the PSTN line card costs to the full costs of the NGN combi cards and divided by the total number of voice lines, and
- We have added the PSTN line card costs to a 'per service allocation' for the NGN combi cards.

8.33 Given the NGN combi cards deployments were relatively limited, the difference between these two is relatively small. Line card costs are not available in BT's regulatory accounts before 2004/05.

Figure 8.3: Line card costs derived from BT's regulatory accounts and our forecasts



8.34 We note that the cost of capital used to calculate these line card costs was higher than we now propose. For example, in 2004/05, the return was 13.5% whereas we are proposing a range of 7.9% to 9.4%. If the mid-point of this range (8.6%) were used for the cost of capital it would have lowered the line card costs by around £1.25 in 2004/05, around £0.70 in 2005/06 and around £0.30 in other years.

[141] See paragraphs 5.32 to 5.46 of our 2009 WLR Statement http://stakeholders.ofcom.org.uk/binaries/consultations/wlr/summary/wlrcondoc.pdf

8.35 Given our anchor product pricing approach, we consider it would be inappropriate to use the full cost of the MSANs if this increased the price compared to using the old technology. Using the costs of PSTN costs and the full combi card costs would therefore tend to be too high as an estimate of the cost of line cards using TDM technology.

8.36 However, we recognise that we need to be careful in placing weight on recent CCA FAC estimates of line card costs, because these may involve some fully depreciated equipment. This could mean that they understate the true economic cost of providing voice services.

8.37 As the Competition Commission noted, there are two effects of Openreach continuing to use fully depreciated line cards. First, if many of the line cards being used are fully depreciated, the more recent CCA FAC figures for line cards would tend to underestimate the LRIC, as these would make no allowance for the cost of capital or depreciation of these assets. Second, because the economic life of the line cards had exceeded the length of time over which they were depreciated (which was ten years), historic CCA FAC figures may overstate the LRIC by depreciating the assets over too few years.[142]

8.38 Finally, we note that our LRIC line card estimate may be overstated from the point of view of setting a differential that gives efficient incentives for use of either MPF or WLR. The line card cost estimates discussed above are for ***all*** exchanges, rather than just for the exchanges where MPF is likely to be used. There are likely to be some economies of scale involved with the line card cost. These do not relate to the actual line card itself, but to the related costs that are included in the line card costs, such as the housing of the line cards and maintenance costs, which make up a material part of the line card costs. We would expect larger exchanges to benefit from greater economies of scale and to have lower line card costs (per line). Line card costs would be expected to be lower in unbundled exchanges than for all exchanges, because it is the larger exchanges that tend to be unbundled. That larger exchanges tend to be unbundled is clear from the fact that 36% of BT's exchanges have been unbundled, but these cover nearly 85% of premises.[143] However, data solely for unbundled exchanges is not easily assessable. Our estimates of the LRIC differentials therefore involve line card costs at all exchanges. This may mean that for unbundled exchanges the LRIC differentials are overstated, as the true cost of WLR in unbundled exchanges is likely to be lower than average.

8.39 On balance, we consider that the range of £11 to £13 per line card per year that we used at the last review remains reasonable for 2013/14. All the line card cost estimates include an allocation of the cost of the line card, accommodation and power costs for the housing of the line card ports, as well as maintenance costs.

Exchange wiring

Frame costs

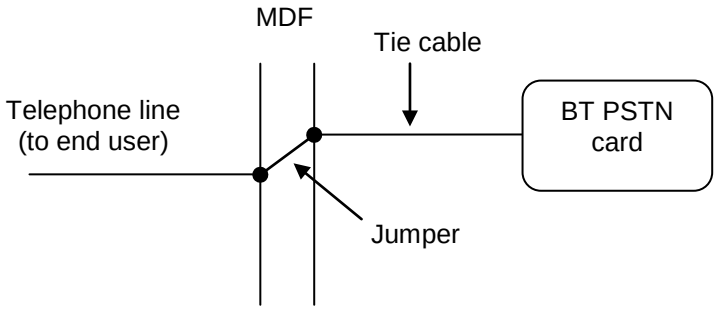
Wiring arrangements for different services

8.40 We would expect LRIC estimates for use of the Main Distribution Frame (MDF) to reflect the number of jumpers on that frame. This is because in the long run we would

[142] See paragraph 3.138 of the Competition Commission's WLR Determination.
[143] See Figure 5.33 in Ofcom's 2010 Communications Market Report
http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/CMR_2010_FINAL.pdf

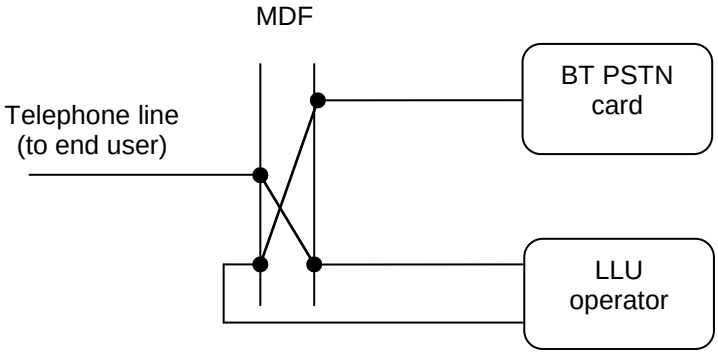
expect the size of the MDF will be determined by the number of jumpers. The wiring on the MDF is different for each of the core rental services. Stylised representations of the current wiring arrangements for WLR, WLR+SMPF and MPF are shown below.

Figure 8.4: Wiring arrangement for WLR



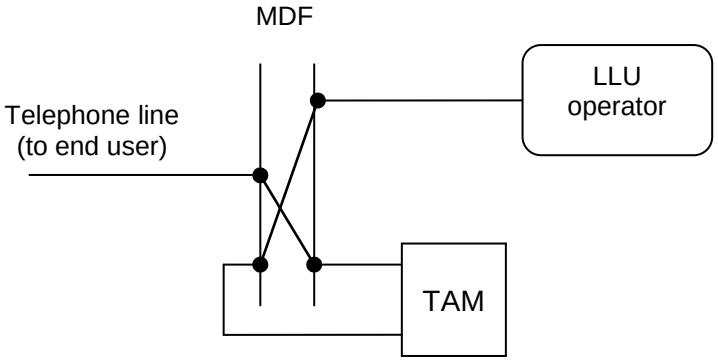
Source: Ofcom

Figure 8.5: Wiring arrangement for WLR+SMPF



Source: Ofcom

Figure 8.6: Current wiring arrangement for MPF



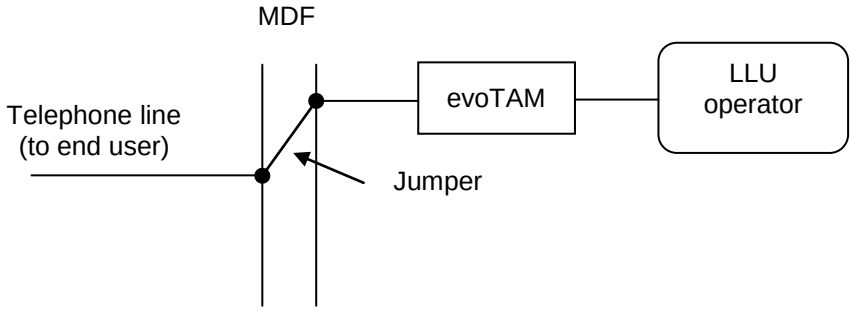
Source: Ofcom

8.41 We refer to the wiring arrangement for MPF as the 'current jumpering' approach. As can be seen in Figure 8.6, it involves two jumpers on the MDF, so as to enable Openreach to access its Test Access Matrix (TAM) for performing tests on the line.

Current jumpering vs single jumpering

8.42 TTG challenged the approach adopted for MPF wiring in the Appeals. It argued that Ofcom should have set charges assuming a very different wiring arrangement for MPF in the exchange. TTG considered that we should have set charge controls based on a jumpering arrangement that involved a single in-line evoTAM (the 'single jumpering' approach). TTG argued that this single jumpering approach would be cheaper overall. The single jumpering approach does not currently exist and there are different possible options for the wiring arrangements. One possible approach, which we believe represents what TTG argued for, is shown below. This involves less jumpering on the MDF, but involves a more expensive tie cable arrangement with an in-line evoTAM.

Figure 8.7: Possible single jumpering wiring arrangement for MPF



Source: Ofcom

8.43 We consider that it is not clear whether the single jumpering approach, as advocated by TTG, would be more or less costly than the current jumpering approach when all aspects of it are considered.[144] We also note that the current products (including the jumpering approach) were originally developed through close industry engagement involving BT and other CPs, including what was then Carphone Warehouse. The process was overseen by the Office of the Telecommunications Adjudicator ('OTA'), an independent body.[145] We consider that this supports the argument that it is not clear that the current jumpering arrangements are inefficient, especially in the absence of a detailed feasibility study into single jumpering.

8.44 The Competition Commission concluded that we did not err by assuming the current wiring approach for MPF, rather than a single jumpering approach. In reaching this conclusion, the Competition Commission noted that no operator had submitted a Statement of Requirement ('SoR') for a single jumpering approach to BT, and that a feasibility study into single jumpering had, therefore, not been carried out. Further, based on the evidence provided to it, the Competition Commission was not persuaded that single jumpering would be more cost-effective.[146]

8.45 In the period since the Appeals, TTG has raised a new requirement with the Copper Commercial & Product Group relating to a "TAM-less" MPF type connection. If TTG submits a formal SoR for a single jumpering approach we would expect Openreach to evaluate this product. When that process has been completed, we may have better information on the costs of the single jumpering approach.

[144] See paragraphs 2.316 to 2.337 of the Competition Commission's WLR Determination on the evidence submitted during the Appeals.
[145] http://www.offta.org.uk/index.htm
[146] See paragraphs 3.111 to 3.127 of the Competition Commission's WLR Determination, and also paragraphs 2.316 to 2.337.

8.46 If this process were to find single jumpering to be cheaper overall than the current jumpering approach, then there would be a question of whether to separately price MPF delivered with single jumpering, compared to when it was delivered with the current jumpering approach. TTG argued during the Appeals that if single jumpering were cheaper, the price of MPF should be lower even when it is jumpered in the current way. Although we would assess this argument as part of any future decision on this point, our current view is that it is likely to be inappropriate to price MPF delivered by current jumpering on the basis of single jumpering for the following reasons.

8.47 Firstly, pricing MPF delivered with current jumpering as if it were delivered through single jumpering would create significant distortions to incentives. The assessment of whether single jumpering is cheaper than current jumpering involves comparing the costs of both the MPF products itself and its associated tie cable costs. With single jumpering, the use of the frame is lower and there would be no TAM costs in the MPF product (so tending to reduce the MPF charge), but the tie cable costs would be higher because the tie cable would need to incorporate an evo-TAM[147]. If an MPF line were delivered through current jumpering but charged on the basis of single jumpering, the purchasing CP may be able to have the 'best of both worlds' - having the potential benefit of single jumpering without having the need to actually pay for the more expensive tie cable that would be needed to make single jumpering work. This would mean that CPs would have no incentive to actually move to single jumpering, and there could be a distortion in the choice of wholesale products.

8.48 Secondly, pricing MPF that involves the current jumpering approach as if it were single jumpered could mean that Openreach would be unable to recover its costs. Given that the current jumpering approach was developed and agreed with CPs, we do not consider that it is obvious that this would be appropriate.

8.49 If single jumpering were found to be more efficient for some CPs, then we would expect Openreach to develop such a product, and for CPs to be able to purchase that new MPF product for new connections and to migrate from the existing arrangements, if they wish.

8.50 In light of the above, we propose to set charges based on the current jumpering arrangement for MPF. This is because we remain of the view that it is not obvious that the single jumpering approach is cheaper overall, and consider that this will not become clear until this has been investigated through Openreach's normal arrangement for considering product variants. Moreover, even if it were cheaper, we consider it is unlikely to be appropriate to price MPF delivered by current jumpering on the basis of single jumpering; although we would clearly need to assess this by reference to the evidence at the time.

Approach to frame costs in previous charge control review

8.51 In our LRIC estimates in the previous charge control review, we considered that the current jumpering approach was most appropriate, but we also hypothesized on what an optimistic figure might be for single jumpering if it were cheaper (despite not necessarily considering that it would be cheaper).

[147] Because the utilisation of the evo-TAM has a direct impact on costs, the utilisation of the evo-TAM needs to be the responsibility of the CP, as it is the CP that affects utilisation. The likely utilisation of the evo-TAM is a key issue in the assessment of whether single jumpering would be likely to be more or less cost effective than current jumpering.

8.52 We now propose that it would be inappropriate to hypothesize about the costs of single jumpering. It is not clear whether single jumpering would be higher or lower than the current jumpering approach. Moreover, even if it were cheaper, it is not obvious that the MPF provided with the current jumpering approach should be priced on a single jumpering basis. We therefore only present estimates for the current jumpering approach.

8.53 We consider that this is consistent with the Competition Commission's WLR Determination, which found that Ofcom did not err in assuming the current jumpering approach.[148]

Resulting LRIC differentials for frame costs

8.54 Consistent with the wiring diagrams shown above, and assuming the current jumpering approach for MPF, the following table shows the number of jumpers on the MDF.

Figure 8.8: Comparison of LRIC cost differences

Ratios	MPF	WLR	WLR+SMPF
Jumpers on MDF	2	1	2

8.55 Both MPF and WLR+SMPF involve two jumpers on the main distribution frame. However, MPF involves twice as much jumpering as WLR. This suggests that the frame related costs for MPF are twice those of WLR. In BT's 2009/10 regulatory accounts, the ratios for the frame costs are in line with Figure 8.8 above. This is shown in Figure 8.9 below, where the frame related costs of WLR are £4.20 per line per year, whereas the frame related costs of MPF are double that at £8.50.[149]

Figure 8.9: Frame related costs in BT's 2009/10 regulated accounts (CCA FAC basis)

£ per line per year	MPF	WLR	WLR+SMPF
Local exchange general frames capital	4.81	2.41	4.82
Local exchange general frames current	3.59	1.79	3.58
Total frame costs	**8.50**	**4.20**	**8.50**

8.56 In the regulatory accounts for earlier years, the ratios of frame costs have not accurately reflected the use of the MDF of the different services.

8.57 Our CCA FAC estimates involve frame costs falling over time, with frame costs for WLR being £2.96 in 2013/14 per line per year, and £6.10 for MPF and £2.57 for SMPF. These figures include frame-related repairs. It is because these frame repair costs are based on usage factors for actual frame related faults that these ratios are not exactly in line with the number of jumpers. We would expect the difference between MPF and WLR on a LRIC basis to be less than on a CCA FAC basis, as the CCA FAC basis will also include allocations for overheads.

[148] See paragraph 3.120 of the Competition Commission's WLR Determination.
[149] See page 99 in BT's 2009/10 regulatory accounts http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2010/CurrentCostFinancialStatements2010.pdf

8.58 BT also produces unaudited LRIC figures[150], though the components of these are not published. The figures for the LRIC frame related costs are shown in Figure 8.10 below. These figures represent around 90 per cent of the CCA FAC figures.

Figure 8.10: BT's (unaudited) frame related LRIC figures costs 2009/10

£ per line per year	MPF	WLR	WLR+SMPF
Local exchange general frames capital	4.59	2.30	4.59
Local exchange general frames current	3.11	1.55	3.11
Totals frame costs	7.70	3.85	7.70

8.59 Given the reduction in the CCA FAC numbers, we assume it is likely that the LRIC figures would also fall compared to BT's LRIC figures for 2009/10. We assume they would be around £5.50 for MPF, £2.30 for SMPF and £2.70 for WLR. These are based on the CCA FAC estimates for 2013/14 and assuming the LRIC estimates are around 90% of those. These figures are broadly in line with the ratios we would expect frame-related costs, given the use made of the frame by the different products.

8.60 However, we make an adjustment to account for the "MDF licence fee". This is a charge levied per tie cable, which covers the rent of the space in the building for the part of the MDF that the LLU operator uses.[151] This is only a small part of the total costs of the MDF related costs and amounts to around 30p per user per year for MPF and around 60p for SMPF.[152] Our CCA FAC figures do not take account of this minor charge, and we have therefore adjusted them for the purposes of estimating the LRIC difference. This results in an estimate for frame costs (including frame repair[153]) of MPF being around £2.50 more than WLR for 2013/14 on a LRIC basis.[154]

8.61 For MPF compared to WLR+SMPF, we assume that MPF is around 80p more expensive than WLR+SMPF for frame related costs. This is partly due to the different assumptions about the frame related costs and partly due to the adjustment for the MPF licence fees. SMPF involves two MDF licence fees, whereas MPF only involves one.

Line test equipment

8.62 For the purposes of setting charges, we have proposed spreading the costs of the Test Access Matrix (TAM) over all MPF and SMPF services. However, it could be argued that, for the LRICs of the test equipment, we should differentiate between the test equipment used for different services.

[150] BT regards these numbers as pure LRIC figures rather than DLRIC figures.
[151] See paragraph 9.79 of http://stakeholders.ofcom.org.uk/binaries/consultations/rwlam/summary/rwlam2.pdf
[152] MDF licence fee is currently £27.19 per year per internal tie cable. Assuming a high utilisation rate, then this might amount to around 30p per end user per year for MPF. As SMPF involves two separately purchased tie cables rather than the one for MPF, we assume the MDF licence fee amounts to twice as much for SMPF.
[153] When we considered the LRIC differentials in 2009 we consider differences in frame repair costs under faults, but we have here considered it as part of frame costs.
[154] Calculated from an assumed LRIC difference of around £3.30 minus the adjustment we make for the MDF licence fee of £0.30.

8.63 As can be seen in Figures 8.6 above, MPF uses a TAM. But SMPF and WLR do not use a TAM. WLR has different testing equipment, partly associated with the line card equipment (though not included in the line card costs). The large majority of lines with SMPF do not use any test equipment that is addition to what is already there for WLR. However, some SMPF lines may use an evoTAM. In Section 7, we have discussed whether or not it might be appropriate to include evoTAM costs in SMPF when we consider CCA FAC. For the purposes of considering the LRIC differentials, we propose to ignore evoTAMs, because they are charged for separately.

8.64 If all the costs that were associated with the TAM were allocated to MPF, the costs would be around £2.30 higher, with a total line testing cost of around £4 per line per annum on a CCA FAC basis in 2013/14. This compares with the cost for WLR of £0.45 on a CCA FAC basis for 2013/14. In general, we might expect the LRIC estimates to be lower than the CCA FAC figure, because there will be some common costs included in CCA FAC. Also, it is possible that the CCA FAC figures for the WLR test equipment may include some fully depreciated assets. We consider there is uncertainty around the LRIC differential for testing equipment and have assumed a range of MPF being £1 to £3 more expensive than WLR (and also of WLR+SMPF) per line per annum in 2013/14.

8.65 In the assessment of the LRIC differentials in our 2009 WLR statement we did not include any differences related to test equipment. However, because the test equipment costs are different for MPF and WLR we consider it is likely to be appropriate to include this in the assessment of the LRIC differentials.

Tie cables

8.66 The earlier wiring diagrams show the number of tie cables involved in each of the core rental arrangements. If we just consider the current jumpering approach for MPF, then both MPF and WLR+SMPF involve three tie cables. However, only some of these tie cables are included in the rental price, other tie cables are paid for separately. For example, for MPF, CPs pay for one tie cable separately and two tie cables are included in the rental price.

8.67 Figure 8.11 below shows the total number of tie cables involved for each of MPF, WLR and WLR+SMPF (top row), the tie cables bought separately (middle row), and the tie cables included in the rental charges (bottom row). In terms of the rental charges on a LRIC basis, we would expect MPF to involve higher tie cable costs than WLR and also than WLR+SMPF, because it involves more tie cables included in the rental product.

Figure 8.11: Number of tie cables

	MPF	WLR	WLR+SMPF
Total tie cables	3	1	3
Tie cables paid for separately	1	0	2
Tie cables included in rental charge	2	1	1

8.68 In the 2009 WLR Statement, we assumed a tie cable may be of the order of £1 per line per annum. This was calculated based on similar assumptions to those used by TTG for amortising the connection costs of the extra tie cable and usage[155]. We have

[155] Using Openreach's price list, we included the rental price internal tie cables plus the connection cost amortised over ten years. We also allowed for some price inflation between 2010/11 and 2013/14. We assumed

retained this approximate estimate of the LRIC of a tie cable of £1. We therefore assume that MPF is £1 more than WLR and WLR+SMPF due to an extra tie cable.

Directories

8.69 The WLR service includes a contractual commitment for Openreach to provide a directory (or phone book) to each end user, whereas MPF and SMPF do not.[156]

8.70 In our 2009 WLR Statement, we included a rough estimate of the incremental cost for directories of £0.50 per line per year to cover the costs of printing and distributing a directory. This was based on an estimate of the incremental costs by TTG. We consider this seems a reasonable broad estimate and propose to retain this estimate.[157]

Fault repair and standard of care

8.71 In our 2009 review of the LRIC differentials, we estimated fault repair, product management and other costs jointly. We assumed that MPF was between £1 and £3 more expensive than WLR for fault repair, product management and other costs, and that MPF was £3 to £4 cheaper than WLR+SMPF. To improve transparency, we have broken this category down into two. We first consider fault repair and standard of care, and then turn to product management and other costs.

Fault repair

8.72 We have examined monthly fault rate data for (i) all MPF lines, (ii) WLR lines without SMPF, and (iii) WLR lines with SMPF for the period October 2009 to January 2011.[158] These fault rates include faults on the main distribution frame, the local access network and Openreach owned customer wiring. In all months there is a consistent pattern of more faults on MPF lines than lines with WLR without SMPF. On average, MPF had a fault rate that was over 15% higher than WLR without SMPF. From examining the components of this difference, it is caused by a very large difference in the exchange-related faults between MPF and WLR, as would be expected from the more complicated frame wiring of MPF. We have separately taken into account differences in frame repair costs when we considered frame-related costs. Here we are therefore interested only in differences in faults in the local network and Openreach owned consumer wiring.

8.73 There might be an expectation that MPF would have higher network and consumer wiring faults than WLR without SMPF. There is an additional service (broadband) on the line and broadband tends to be used for more hours per day than voice and will thus be exposed more to intermittent faults.

---

the LRIC of a tie cable was slightly less than the result of this calculation based on the price list, on the basis that the tie cable price would include some common costs.

[156] It could be argued that the directory cost allocation is not relevant when considering not distorting the choice of wholesale input. This is because directories are delivered by BT regardless of whether an end consumer is supplied with a service using MPF or WRL/WLR+SMPF. In fact, the directories are delivered to all households and businesses regardless of whether they have a BT line. BT's costs may therefore be the same whether a line uses MPF or WLR/WLR+SMPF. However, because there is a contractual commitment to provide a directory with WLR, we have included this cost for WLR but not MPF.

[157] See Ofcom's 2009 WLR statement paragraphs 5.70 to 5.72 http://stakeholders.ofcom.org.uk/binaries/consultations/wlr/summary/wlrcondoc.pdf

[158] The fault rates considered were the 'Access Plus' fault rates. These relate to the number of fault reports cleared per thousand exchange lines per annum. The fault rate measure we used is therefore of actual faults rather than reported faults. Some reported faults may be 'right when tested' and so would not be included in the fault rates we have used.

8.74 However, on the latest evidence available the differences in network and end user faults rates for WLR without SMPF and MPF appears relatively small (at around 3% on average). Also, the differences are not systematically in one direction, meaning that the average could be sensitive to the particular months selected for the comparison. Because the differences appear small and are not systematically in one direction, we currently propose to assume no material difference in the LRICs for MPF and WLR (without SMPF) for the rate of network and end user faults.

8.75 Lines with WLR+SMPF appear to have around 10% higher network and end user-related faults than MPF. It is not clear to us why WLR+SMPF has higher fault rates in the network and end-user equipment than MPF, as we expected them to have similar fault rates. In terms of dealing with the costs of the faults, it might be expected that WLR+SMPF would have somewhat higher costs than MPF because there will be two interfaces between Openreach and the CP(s) for repair issues rather than one.

8.76 In terms of the CCA FAC for network repair (excluding frame-related repair), our base case estimate of the costs for MPF is around £12.81 per line per year for 2013/14, and for WLR+SMPF is around £15.92. This implies that WLR+SMPF is around £3.11 more than MPF on a CCA FAC basis.

8.77 We consider that there is considerable uncertainty over the possible size of any such LRIC difference between MPF and WLR+SMPF, and have assumed a wide range of £1 to £3.

Differences in standard of care

8.78 In terms of standard of care, under Openreach's service harmonisation initiative, the service arrangements between LLU and WLR have been harmonised and made more comparable than was previously the case. WLR is subject to Service Level 1, whereas SMPF and MPF are subject to the higher Service Level 2. In terms of the price for different service levels, Service Level 2 is currently priced at £6.32[159] per line more than Service Level 1. A CP would therefore have to pay £6.32 more to make the standard of care for a WLR line the same as an MPF line. We consider that there is considerable uncertainty over the size of the LRIC differential for the standard of care. Given the uncertainty, we have assumed a wide range. We consider that the LRIC for MPF is probably between £1 and £5 more than for WLR per line per year.

8.79 Even when we take the value at the extreme of this range and assume that the LRIC for the standard of care is only £1 more for MPF than WLR, the differentials between the charges we have set for MPF and WLR/WLR+SMPF is still greater than the differences in LRICs.

8.80 Given that both MPF and SMPF enjoy the same standard of care, we might not expect material differences in LRICs between MPF and WLR+SMPF for the standard of care. For network fault-related differences, we have therefore only included the range of £1 to £3 discussed in the section above which is ultimately relating to differences in fault rates.

[159] http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=vZC%2BGHIiu80GtUKWLu%2BtzAfqMZEuYNVwUnHGezzgOd1UNeIS4WkJBRh6z%2FRUAIt8maxtgrEro1A7%0Aw5V8nzAZpQ%3D%3D

Product management and other costs

8.81 Finally, we consider differences in LRIC due to differences between product management, sales, systems and development and other minor costs.

8.82 For the comparison of MPF and WLR, we do not consider it is clear which of these would have higher product management and other costs on a LRIC basis. During the Appeals, TTG argued that WLR involves many more capabilities and features than MPF. It argued that the provision of WLR involves assets and resources that are additional to MPF. We saw MPF and WLR as two distinct products, each with its own product-specific costs. We accepted that there are some WLR-specific product costs. However, some of the WLR specific features are connected with providing voice features and will already be included in the line card costs. WLR is an established product with users who have fairly homogenous demands, leading to comparatively low product development and management costs. In contrast, MPF users tend to have diverse requirements, and accommodating these tends to increase product development and management costs. We consider that it is unclear whether WLR or MPF would have a higher LRIC for these types of activities and that any difference is anyway likely to be small. We have therefore not included any difference in our estimate of the LRIC difference between WLR and MPF for these items.

8.83 Turning to the comparison between WLR+SMPF and MPF, we might expect SMPF+WLR to have higher product management and systems costs than MPF as it involves two products rather than one, and hence is associated with two sets of such costs. We consider that there is considerable uncertainty over the possible size of any such difference and have assumed a wide range for the LRIC difference of £0.50 to £2.

Use made of MPF

8.84 It could be argued that when considering the differential between MPF and WLR, we should assume the MPF line is used only for voice services. This could matter if there were expected to be large differences in the costs of providing MPF for voice only service compared to voice and broadband. In particular, this argument might be made if faults in the network and consumer wiring were significantly higher when MPF were used for broadband and voice then when just used for voice.

8.85 However, it is not clear that there are large differences in fault rates between MPF and WLR within the network and end user equipment. It is therefore not obvious that MPF used for voice-only services would have materially different costs to MPF used for voice and broadband.[160] (We do find large differences in fault rates at the exchange, but they are driven by the more complicated wiring for MPF, which would be the case regardless of how MPF were used, under the current jumpering approach.)[161]

[160] Even if the underlying costs were different, for there to be two separate and distinctly priced MPF products (one for voice-only use and one for broadband and voice use) would require some way of preventing arbitrage between the two, that is to prevent the voice-only product being used to supply broadband. This could entail monitoring costs (potentially increasing the costs of the voice only product), or could even make having two separate product variants unworkable.

[161] For a discussion of MPF for voice only services (or xMPF) see also our January 2010 'Next Generation Networks Statement' (especially paragraphs 1.12 to 1.17): http://stakeholders.ofcom.org.uk/binaries/consultations/ngndevelopments/statement/ngn_statement.pdf

Summary of Ofcom's assessment of LRIC differentials

8.86 In the right-hand pair of columns in Figure 8.12 below, we summarise our estimates of the components of the LRIC differentials, from the discussion above. This shows that we now consider that WLR is likely to have a LRIC that is between £0 and £8 more than MPF per annum per line, and that for WLR+SMPF it is likely to between £8 and £15 more than MPF. We therefore consider that the differentials between the charges we have set are likely to be greater than LRIC.

Figure 8.12: Comparison of Ofcom's estimates of LRIC differences

	Ofcom – Oct 2009 (for 2012/13)		Ofcom – revised (for 2013/14)	
£ per line per year	**MPF vs WLR**	**MPF vs WLR+SMPF**	**MPF vs WLR**	**MPF vs WLR+SMPF**
Line card	£11 to £13	£11 to £13	£11 to £13	£11 to £13
Frames	-£2 to £0	£0 to £3	-£2.50	-£0.80
Line test equipment	-	-	-£1 to -£3	-£1 to -£3
Tie cables	-£1 to £1	-£1 to £1	-£1	-£1
Directories	£0.50	£0.50	£0.50	£0.50
- Network fault repair and standard of care			-£5 to -£1	£1 to £3
- Product management and other costs			-	£0.50 to £2
Sub total for fault repair, product management and other costs	-£3 to -£1	£3 to £4	-£5 to -£1	£1.50 to £5
Likely range for LRIC differentials	**£8 to £12**	**£15 to £20**	**£0 to £8**	**£8 to £15**

8.87 Figure 8.12 also shows how these estimates compare to our previous estimates of the LRIC differences in our 2009 review. Our current estimates of the LRIC ranges are significantly smaller than the ranges we produced in October 2009. This is mainly due to now assuming only the current wiring approach in exchanges and to now incorporating differences in use of test equipment.

Question 8.2: *Do you agree with Ofcom's assessment of the likely differences in LRICs between MPF and WLR/WLR+SMPF?*

BT's LRIC figures for 2009/10

8.88 BT's regulatory accounts provide LRIC figures for WLR, MPF and SMPF.[162] These figures are unaudited. While not published, BT has a breakdown of these figures, and this is shown in the first three columns of Figure 8.13 below. The last two columns show the resulting LRIC differentials.

[162] BT regards these numbers as pure LRIC figures rather than DLRIC figures.

Figure 8.13: Breakdown of LRIC figures in BT's 2009/10 regulatory accounts

	BT's LRIC figures			LRIC differentials	
£ per line per year	**MPF**	**WLR**	**SMPF**	**WLR-MPF**	**WLR+SMPF - MPF**
PSTN line cards	-	7.45	-	7.45	7.45
Local exchanges general frames capital	4.59	2.30	2.30	-2.30	-
Local exchanges general frames current	3.11	1.55	1.55	-1.55	-
E side copper capital	2.30	2.40	-	0.10	0.10
E side copper current	2.48	1.91	0.57	-0.57	-
D side copper capital	6.37	6.65	-	0.29	0.29
D side copper current	7.41	5.70	1.71	-1.71	-
Line test equipment	1.91	0.48	1.91	-1.43	0.48
Other	23.93	27.10	3.42	3.17	6.59
Total	**52.09**	**55.54**	**11.46**	**3.45**	**14.91**
LRIC differences (excluding copper)					
PSTN line cards				7.45	7.45
Local exchanges general frames capital				-2.30	-
Local exchanges general frames current				-1.55	-
Line test equipment				-1.43	0.48
Other				3.17	6.59
Total (excluding copper)				**5.34**	**14.52**

8.89 Figure 8.13 above shows that the LRIC difference between MPF and WLR was £3.45 per line per year in BT's 2009/10 regulatory accounts and that for MPF compared to WLR+SMPF was £14.91. Some of these differences are due to differences in the average amount of copper used for MPF lines compared to WLR lines. However, when considering a potential distortion in the choice of either MPF or WLR/WLR+SMPF for the same line, differences in copper costs are not relevant. Given that a key concern is avoiding distortions in the choice of wholesale product, we have ignored differences in copper in consider the LRIC differentials. As shown in Figure 8.13 above, this means that the relevant LRIC difference in BT's 2009/10 regulatory accounts between MPF and WLR was £5.34 per line per year and between MPF and WLR+SMPF it was £14.52.

8.90 In prior years the LRIC differences have been higher in BT's regulatory accounts, as shown in Figure 8.14 below.

Figure 8.14: Change LRIC differentials over time derived from BT's figures (and ignoring copper differences)

	2007/08	2008/09	2009/10
LRIC differential between WLR and MPF	11.39	6.01	5.34
LRIC differential between WLR+SMPF and MPF	26.35	16.68	14.52

8.91 We have explored the reasons for the reductions in the LRICs over time. The most important reasons are:

- Previously, frame costs had been driven to WLR, MPF and SMPF services using incorrect assumptions about jumpers on the exchanges. In the 2009/10 regulatory accounts, we consider that the ratios for frame costs are broadly appropriate as discussed above (though we do not think they fully take account of the separate MDF licence fee charge).

- Line card costs have decreased, reflecting the fact that assets are depreciating in value faster than the decline in volumes for this product resulting in a declining unit cost. Also, the PSTN line card cost only picks up PSTN line card costs, combi card costs are included in 'other'.

- The differences in the 'other' costs has fallen. Other costs includes, amongst other things, allocations of combi cards, system development, service centre and product management.

8.92 We prefer our own assessment of the LRIC differentials to using BT's figures. This is partly because BT's figures are unaudited and partly because our own estimates give us greater understanding of the components of the differentials. However, we believe it is helpful that the two approaches produce broadly consistent results (when we ignore differences in copper costs), i.e. the LRIC differences in BT's 2009/10 regulatory accounts are within the ranges of our estimates of the LRIC differences in 2013/14 (both estimates are prepared only on the basis of the current jumpering approach).

Possible adjustments for WLR Transfer and LLU Ceases

8.93 The actual charges we propose to set include adjustments we propose for WLR Transfer and for MPF and SMPF cease charges.

8.94 We are consulting on whether to set the WLR Transfer charge below CCA FAC. If we were to set it below CCA FAC, we would recover the difference in the WLR rental charge. This may increase the WLR rental charge by around £2.37 per line per year in 2013/14 compared to what it would otherwise be. The size of any adjustment will depend on exactly how the WLR Transfer charge is set.

8.95 We are also consulting on setting the MPF and SMPF cease charges to zero. If we were to do this, we would recover the difference in the MPF and SMPF rental charges. This may increase the MPF rental charge by £0.51 per line per year in 2013/14 and SMPF by £0.28, compared to if it were set on our forecast of CCA FAC.

8.96 While we have focussed on the rental charges in this comparison on LRICs (because they are the most important charges), ultimately the relevant comparison for avoiding a distortion in the choice of wholesale inputs is between WLR-related charges and MPF-related charges. Balancing setting the WLR Transfer charge slightly lower with a corresponding increase in the WLR rental charge does not change the WLR related charges overall. Similarly, balancing the possible removal of the LLU cease charge with an increase in the MPF and SMPF rental charges does not change the LLU related charges overall. There is no cease charge on WLR lines, so if the LLU cease charges were removed it may help to make the comparison of the rental products more meaningful.

8.97 We consider that strictly it may be appropriate to compare the LRIC differentials with what the charges would be *before* making these possible adjustments. However, in practice the adjustments are very minor and are offsetting, so for clarity we have focussed on the comparison of the headline rental charges without making these adjustments.

Section 9

Charge control implementation and legal tests

Introduction

9.1 In this section we explain how the proposed charge controls for LLU services and WLR services are structured and how the proposed conditions will work in practice. In particular we discuss the following:

- How the proposed conditions would work alongside other regulation;
- The effects of the proposed conditions and the structure of the "baskets" of services;
- How we calculate whether Openreach is complying with the proposed charge ceilings created by the proposed RPI-X style of controls, including;
    - How we determine what the overall change of prices has been for each service or group of services; and
    - What information we require from Openreach to enable us to monitor their compliance with the controls;
- How the proposed conditions allow for corrections where there has been over or under recovery.

9.2 We also explain in this section how the proposed legal instruments satisfy the legal tests set out in the Act.

9.3 In proposing the charge controls we have also had regard to the proposals made in relation to the WBA and ISDN30 charge controls. We have proposed an RPI-X control that is consistent in its application and effect with those controls proposed in these other reviews.

9.4 We are also consulting on our proposals for 10 weeks. This reflects our guidance for "category 1" consultations as a major policy initiative.

Interaction with other remedies

9.5 The Wholesale Line Access andWholesale Line Rental (WAEL) market reviews imposed a number of SMP conditions on Openreach in the wholesale local access market and the wholesale fixed analogue exchange lines market respectively. These conditions currently place a number of obligations on Openreach in relation to how they offer wholesale services in these markets. For example, Openreach are required to:

- provide network access on reasonable request (FAA1 and AAAA1(a));
- not to unduly discriminate in relation to matters connected with network access (FAA3 and AAAA2);

- publish a reference offer (FAA5 and AAAA5);
- notify charges and technical information (FAA6, FAA7, AAAA6(a) and AAAA6(b));
- publish Key Performance Indicators ('KPIs') (AAAA7 and KPI Direction (WAEL only)); and
- provide local loop unbundling services (FAA9) and wholesale line rental services (AAAA10).

9.6 The above mentioned obligations will therefore work alongside the charge controls proposed by this review.

The proposed conditions

9.7 The SMP services conditions FAA4(A) and AAAA4(WLR) will, as proposed, have three key effects; they will each:

- set charge controls until 31 March 2014 for the services specified;
- ensure that average charges for services subject to charge controls do not change by more than the value of 'X' as specified; and
- require Openreach to provide information annually to Ofcom to enable compliance monitoring.

9.8 In addition, for LLU services condition FAA4(A) provides for:

- the charges levied for individual services in the baskets to be restricted by an inertia clause;
- the charge made for the each MPF SFI service to be equal to the charge made for the equivalent SFI service provided in respect of SMPF; and
- the charge made for each level of LLU enhanced care service to be equal to the charge made for the equivalent level of enhanced care service in respect of WLR.

9.9 The proposed conditions FAA4(A) and AAAA4(WLR) are set out in full at Parts I and IV of Annex 13.

Basket Structure

9.10 In Section 4 we have discussed our proposal for three separate baskets for LLU ancillary services.

9.11 We have structured the condition FAA4(A) to effect those proposals. We have decided to propose a control on each of the three separate baskets of LLU ancillary services which are separately identified in SMP condition FAA4(A).1(a), (b) and (c) as SMP Ancillary Services, MPF Ancillary Services and Co-Mingling Services, respectively. This proposed structure means that the aggregate charges for each basket of services will be subject to a separate RPI-X charge control.

The proposed values of X

9.12 The proposed values of 'X' for service or basket are set out in Table 1.1 and in Sections 4 and 5.

We have set formulae to show how the Percentage Change will be calculated for each service

9.13 We have proposed controls on single product services and, for LLU services, multi product baskets.

9.14 At each of FAA4(A).5 and AAAA4(WLR).4 we have set out the formula that we will use (and expect Openreach to use) to determine the Percentage Change for single product services. For the First Relevant Year, various products are subject to charge ceilings rather than having a Percentage Changes applied and these ceilings are set out at FAA4(A).2.

9.15 In relation to multi-service baskets (which are only relevant to LLU), as set out at FAA4(A).4, the formula is necessarily more complex in order to take account of the number of products/service within the basket. As we have discussed in Section 4 we have proposed to monitor Openreach's compliance with the proposed controls using the prior-year revenue weight approach. The prior year revenue weight formula is shown at FAA4(A).4 in relation to the proposed basket controls for LLU ancillary services.

9.16 Each of the formulae are consistent with the approach we have taken in previous charge controls and in the proposed controls for WBA and ISDN30 services.

9.17 Additionally, we have at FAA4(A).3 and AAAA4(WLR).3, proposed that Openreach take all reasonable steps to secure that the revenue it accrues as a result of all individual Charge Changes during any Relevant Year shall be no more than that which it would have accrued had all of those Charge Changes been made on a fixed point in the year (generally, 1 April; adjusted for the First Relevant Year). In order to assist Openreach, we provide guidance as to how this would be satisfied if a single Charge Change is made within the year, setting out a formula that can be used to demonstrate compliance. If more than one Charge Change was made by Openreach, they would still need to ensure that they could show that they had satisfied this obligation.

LLU specific provisions

9.18 Condition FAA4(A) provides also provides for some specific controls on particular LLU services.

9.19 For the reasons explained in Section 4, condition FAA4(A).6 requires that each of the categories of service in the MPF Ancillary Services basket, the SMPF Ancillary Services basket and the Co-Mingling Services basket can be increased or decreased by no greater than a specified percentage, the level of which we are consulting on. FAA4(A).7 sets out a formula for the purposes of complying with the obligation in FAA4(A).6.

9.20 FAA4(A).11 imposes a requirement for the charges made for certain MPF SFI services to be the same as the charge made for the equivalent SFI service for SMPF. We explain our reasons for this in Section 4. This does not prevent the charges for the respective services being increased and/or decreased, only that if the charge

made for a specific MPF/SMPF service is changed, that the equivalent SMPF/MPF service is also changed to the same extent.

9.21 FAA4(A).12 similarly requires the price of certain LLU enhanced care services to be the same as the equivalent enhanced care service for WLR. Again the reasons for this are set out in Section 4. As with FAA4(A).11, this does not prevent Openreach from increasing or decreasing the charge made for WLR/LLU enhanced care provided that the charge made for the LLU/WLR enhanced care service of an equivalent level is also increased/decreased by a corresponding amount.

The proposed rules that Openreach needs to follow to determine compliance with the controls

Openreach is allowed to carry over differences in the average charge for a basket to the next charge control year

9.22 For charge controlled services, Openreach will be able to carry over any price reductions it makes in excess of the requirements of the charge control for that year. That is, if Openreach's average price change for these single charge categories and baskets at the end of the Relevant Year is lower than required by the associated RPI minus 'X' constraint, it will be able to carry over the difference into the following charge control years. This means that the benchmark for assessing Openreach's compliance with the control in the following year will be the level of charges Openreach was required to achieve, rather than the level it actually achieved. Conversely, if its average charge is higher than the required level, it has to take the excess into account in the following year. There is an exception to this general principle in the First Relevant Year in respect of those products where we have specified price ceilings rather than a controlling percentage.

9.23 Paragraphs FAA.9, FAA.10, AAAA4(WLR).6 and AAAA4(WLR).7 of the proposed conditions define the "Excess" and "Deficiency" scenarios set out above to give effect to our intention.

9.24 It should also be noted that FAA4(A).15 and AAAA4(WLR).10 provide for the case where, in the last year of the controls, if Openreach is likely to fail to secure that the change in price of a controlled service (the Percentage Change) does not exceed the relevant X (the Controlling Percentage), then Ofcom can direct that Openreach should make an appropriate adjustment of its charges.

We have set out the information Openreach is required to supply to Ofcom

9.25 We have set out at FAA4(A).14 and AAAA4(WLR).9 the information that we propose Openreach needs to supply to us in order for us to be able to monitor its compliance with the control. This information is required to be supplied by Openreach on an annual basis, by no later than the 31 June after the end of the relevant financial year (three months after 31 March). It should be noted that although the period of the control ends on 31 March 2014, the Condition itself would remain in force, in order to maintain the obligation to supply data (and should it be necessary to direct an adjustment of pricing in the event of non-compliance).

Legal tests

9.26 In the WLA market review and the WAEL market review, we considered respectively whether the imposition of a charge control on LLU and WLR would be consistent with

the relevant tests set out in the Act[163]. For the purpose of this consultation, in light of the reasoning in the market review, we have considered whether the specific form of the charge control in the case of each of LLU and WLR meets the relevant tests. We have also done this for the other legal instruments we propose.

9.27 To give regulatory effect to the proposals set out in this document, we propose two new SMP conditions, Condition FAA4(A) (in respect of LLU) and Condition AAAA4(WLR) (in respect of WLR). The text of those conditions are set out respectively in schedule 1 to the statutory notifications published under sections 48(2) and 86 of the Act in Part I and Part IV of Annex 13.

9.28 We are also proposing to make an amendment to SMP condition AAAA10 to make clear that the obligation on Openreach to provide wholesale line rental includes an obligation to provide such ancillary services as may be reasonably necessary for the use of wholesale line rental. The proposed amendment is set out in schedule 2 to the statutory notification published in Part IV of Annex 13.

9.29 We further propose to make directions disapplying certain cost orientation requirements in respect of MPF rental, MPF Cease, SMPF Cease and LLU enhanced care services, and in respect of Analogue Core WLR rental and WLF Transfer. These proposed directions are set out in Part II and V of Annex 13.

9.30 We also propose to consent to certain notification requirements being reduced from 90 days to 28 days in relation to the notification of the changes required following entry into force of Condition FAA4(A) and Condition AAAA4(WLR). These consents are set out in Part III and VI of Annex 13.

9.31 We are satisfied that this regulation meets our duties and the tests under the Act. Our reasoning for this view is set out below.

Part I of Annex 13: proposed Condition FAA4(A)

Schedule 1 to the notification

Aims and effects

9.32 The new proposed SMP condition FAA4(A) requires Openreach to ensure that its charges for the LLU rental services and associated ancillary services do not increase by more than RPI minus/plus a value of 'X' that varies according to each relevant basket and individually controlled service. The baskets and services with their respective values for 'X' are set out in the proposed SMP condition.

9.33 Ofcom's reasons for proposing to impose this particular form of control and the values for 'X' are set out above. It is proposed that the first year of the control for all charge controlled services will begin on a specified date (this being 28 days after publication of the final notification in respect of Condition FAA4(A)) and end on 31st March 2012, with the control period lasting for a further 2 years (the final year ending on 31st March 2014). As a general principle, our current policy aim is that prices should move towards the underlying FAC in the final year of the control.

[163] See the WLA market review, paragraphs 5.95 to 5.96 and the WAEL market review, paragraphs 7.14 to 7.21.

Our duties and policy objectives

9.34 We discuss our duties and objectives specific for this review in detail in Section 2 of this consultation document. Our opinion of the likely impact of implementing the proposals (as discussed throughout this consultation) is that the performance of our general and specific duties under section 3 and 4 of the Act is secured or furthered by our proposal to adopt the charge controls.

9.35 In particular, we consider that the charge controls will ensure that charges for wholesale services are set at a level that will enable CPs (other than Openreach) to compete in the provision of downstream services. Existing charge controls have promoted competition in this way to the clear benefit of consumers in respect of choice, price and quality of service and value for money. Our review provisionally confirms that such controls are necessary to sustain this level of competition.

9.36 We have had particular regard to the requirement to promote competition and to secure efficient and sustainable competition for the benefit of consumers, which are relevant to both sections 3 and 4. We have placed particular emphasis on the promotion of competition, which we consider is likely to be the most effective way of furthering citizen and consumer interests in the markets under review.

9.37 We have also borne in mind to seek the least intrusive regulatory measures to achieve our policy objectives.

9.38 In addition, we have taken into account further objectives, including:

- Prices: to ensure that services are available at prices that are reasonably related to the efficient costs of supply, preferably as a result of effective competition; and

- Investment and innovation: to promote efficient investment in the development of new and innovative services by Openreach and other communications providers.

Powers under sections 87 and 88

9.39 Section 87(1) of the Act provides that, where Ofcom has made a determination that a person (here, BT) has SMP in an identified services market (here, the wholesale local access services within the UK, but not including the Hull Area), Ofcom shall set such SMP conditions authorised by that section as Ofcom considers it appropriate to apply to that dominant provider in respect of the relevant network or relevant facilities and apply those conditions to that person.

9.40 Section 87(9) authorises the setting of SMP services conditions to impose on the dominant provider, including:

- such price controls as Ofcom may direct in relation to matters connected with the provision of network access to the relevant network, or with the availability of the relevant facilities;

- such rules as they may make in relation to those matters about the recovery of costs and cost orientation;

- obligations to adjust prices in accordance with such directions given by Ofcom as they may consider appropriate.

9.41 Linked to that matter is the requirement under section 88 of the Act in that Ofcom should not set a condition falling within section 87(9) except where it appears to it from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:

- promoting efficiency;
- promoting sustainable competition; and
- conferring the greatest possible benefits on the end-users of the public electronic communications services.

9.42 In proposing charge controls, section 88 also requires that we must take account of the extent of the investment in the matters it relates to by Openreach.

9.43 In our opinion, proposed Condition FAA4(A) satisfies section 88.

9.44 In the corresponding market review we confirmed that there is a real risk of adverse effects arising from price distortion by Openreach as it might fix and maintain some or all of its prices at an excessively high level or margin squeeze[164].

9.45 We also consider that the proposed charge control conditions are appropriate for the purposes of promoting efficiency and sustainable competition and conferring the greatest possible benefits on the users of public electronic communications services.

The proposed control promotes efficiency

9.46 We consider that the proposed SMP Condition is appropriate for the purpose of promoting efficiency.

9.47 In the absence of competitive pressures, we believe that Openreach would have limited incentives to seek to reduce its costs of providing LLU services. By proposing an RPI-X charge control Openreach is encouraged to increase its productive efficiency. This is achieved by allowing Openreach to keep any super-normal profits that it earns within a defined period by reducing its costs over and above the savings envisaged when the charge control was set. The benefits of any cost savings would potentially accrue to the regulated company in the short run and this would give Openreach incentives to make those efficiency savings. In the longer run, these cost savings could be passed to consumers through reductions in prices, either as a result of competition or through subsequent charge controls. This form of price regulation is also preferable to a rate of return type of control. In addition:

- By bringing prices more in line with costs, our charge control proposals will increase allocative efficiency.[165]
- When forecasting Openreach's forward looking costs for LLU services, we have assumed underlying efficiency gains of 3.5% to 5.5%. In coming to a view of the likely efficiency of Openreach's costs, we have looked at a range of evidence including benchmarks from other markets (section 88(4) of the Act) and we have had regard to the appropriate cost accounting methods (section 88(4)(b)).

[164] See paragraphs 5.54 to 5.92 of the 2010 WLA Statement.
[165] When prices better reflect the underlying costs of production, allocative efficiency is enhanced. Meeting demand at cost-reflective prices will result in resources being allocated to the goods or services that consumers value most.

9.48 By proposing baskets for each of MPF Ancillary services, SMPF Ancillary services and Co-Mingling services, we also provide Openreach the flexibility to change its prices to meet the necessary demand conditions by recovering common costs in the most efficient manner across these services.

The proposed control promotes sustainable competition

9.49 We also consider that the proposed charge controls are appropriate to ensure sustainable competition and to confer the greatest possible benefits on users of public electronic communication services.

9.50 Preventing excessive pricing via an RPI-X type charge control will promote sustainable competition.

9.51 Although part of our proposed charge control applies to baskets of services, we have proposed appropriate safe-guards to ensure that Openreach does not use the pricing flexibility offered to it in an anti-competitive manner to the detriment of any end-user.

Investment matters

9.52 When proposing the charge controls we have also taken into account the need to ensure that Openreach has the correct incentives to invest and innovate.

9.53 We think that our proposed charge control strikes a good balance between potential risk and reward. As the charge control is set for a fixed duration, Openreach can benefit under the control if it manages to increase market share or if outturn costs are lower than anticipated when the charge control was set.

The section 47 tests

9.54 In addition to above-mentioned matters, Ofcom must be satisfied that Condition FAA4(A) satisfies the test in section 47(2) of the Act, namely: objectively justifiable; not unduly discriminatory; proportionate; and transparent.

9.55 We are satisfied that this test is met in relation to the proposed condition FAA4(A).

The proposed controls are objectively justifiable

9.56 As regards objective justification, BT's SMP in the access markets allows it to set charges unilaterally and, in the absence of any controls, Openreach would have the ability to set prices above the competitive level. This would have adverse impacts on both the ability of companies to compete in the downstream provision of services and on consumer choice and value for money. Openreach is unlikely to be incentivised to reduce its costs or set prices at the competitive level. Our charge controls have been structured to deliver the lowest possible charges to competitors for the wholesale services, while ensuring that Openreach is able to recover costs, including a reasonable return on investment. Additionally, we have reviewed each service within the market so that we have proposed an appropriate level of control for individual services where appropriate.

9.57 The structure of the controls are such that Openreach has an incentive to continue to seek efficiency gains and it is able to benefit from efficiency achieved that are in excess of that anticipated in the review.

9.58 The proposed controls are also objectively justifiable in that the benefits of RPI-X price controls are widely acknowledged as an effective mechanism to reduce prices in a situation where competition does not act to do so.

The proposed controls do not discriminate unduly

9.59 Secondly, the proposed charge controls will not discriminate unduly against a particular person or particular persons because any CP (including BT itself) can access the services at the charge levels fixed. The proposed charges are set to ensure a fair return and price level for all customer groups. In any event, Ofcom considers that they do not discriminate unduly against BT as it is the only CP to hold SMP in this market (for the UK excluding the Hull Area) and the proposed controls seek to address that market position, including Openreach's ability and incentive to set excessive charges for services falling within the controls.

The proposed controls are proportionate

9.60 Thirdly, the charge controls are proportionate because Openreach's obligations apply to the minimum set of charges required for the delivery the bottleneck services. They are focussed on ensuring that there are reasonable prices for those access services, which are critical to the development of a competitive market. Openreach is, however, allowed to recover a reasonable return on investment. Openreach will also have incentives to continue to invest and develop its access network. Moreover, the maximum charges Openreach is allowed to set over the period of the control has been formulated using information on Openreach's costs and a consideration of how these costs will change over time. We have also only imposed controls on services within the market that we consider need to be controlled.

9.61 We therefore consider that the proposed charge controls pursue our policy objectives and the means employed to achieve those aims are both necessary and the least burdensome to address effectively the concerns we have set out.

The proposed controls are transparent

9.62 Finally, for reasons discussed above, we consider that the proposed charge controls are transparent. We are consulting fully on our proposals for the proposed LLU charge controls in this document. Their aims and effects are clear and they have been drafted so as to secure maximum transparency. The proposed text of the condition has also been published with this consultation. Its intended operation is also aided by our explanations in this statement. Our final statement will set out our analysis of any responses and the basis for our final decision.

We have considered sections 3 and 4 of the Act

9.63 We also consider that the proposed charge control condition fits with our duties under sections 3 and 4 of the Act.

9.64 For the reasons set out above, we consider that the proposed charge control will, in particular, further the interests of citizens and of consumers in relevant markets by the promotion of competition in line with section 3 of the Act. In particular, the charge control seeks to ensure the availability throughout the UK of a wide range of electronic communications services. In imposing the charge control, we have had regard to the desirability of promoting competition in relevant markets, the desirability of encouraging investment and innovation in relevant markets and the desirability of

encouraging the availability and use of high speed data transfer services throughout the United Kingdom.

9.65 Further, we consider that, in line with section 4 of the Act, the charge control will, in particular, promote competition in relation to the provision of electronic communications networks and will encourage the provision of Network Access for the purpose of securing efficiency and sustainable competition in downstream markets for electronic communications networks and services, resulting in the maximum benefit for retail consumers.

Part II of Annex 13: proposed direction regarding removal of cost orientation obligation for MPF rental, MPF Cease and SMPF Cease

9.66 We are proposing to make a direction to dis-apply the cost orientation requirement in paragraph FAA4(A).1 of SMP condition FAA4(A) for MPF Cease, SMPF Cease and LLU enhanced care services. Although the cost orientation requirement in paragraph FAA4(A).1 of SMP condition FAA4(A) is already dis-applied for MPF rental by virtue of paragraph FAA4(A).2, for the sake of completeness and for the avoidance of doubt we propose to include a direction that the requirement is also dis-applied in respect of MPF rental. The proposed direction is set out at Part II to Annex 13.

9.67 In proposing any direction Ofcom must be satisfied that the direction is objectively justifiable, not unduly discriminatory, proportionate and transparent, in accordance with section 49(2) of the Act. We set out why we consider that the proposed direction fulfils those tests.

The proposed direction is objectively justifiable

9.68 For MPF Cease and SMPF Cease it is necessary to exclude the LRIC+ cost orientation requirement since we are proposing, for the reasons set out in Section 4 of this consultation, to set each of these charges to zero. This is therefore not consistent with SMP Condition FAA4(A).1 which requires Openreach to ensure that its charges for Network Access in the wholesale local access market are 'based' on LRIC+.

9.69 For LLU enhanced care services, as explained in detail in Section 4, if we impose a new requirement to ensure that the charges for LLU enhanced care are aligned to the equivalent services applied to WLR, we will need to remove the LRIC+ for cost orientation requirement. This is because the obligation to align LLU and WLR enhanced care charges will mean that the WLR core rental price will act as an 'anchor' to constrain the charges for LLU enhanced care services.

9.70 As explained above, the LRIC+ cost orientation requirement was excluded in relation to the MPF rental charge ceiling first in 2005 and again in the 2010 WLA Statement. The reasons for excluding cost orientation remain valid. That is, because one of the assumptions taken into account in setting the charge control is the Regulated Asset Value (RAV) adjustment and given that Openreach's pre-1 August 1997 copper access network assets account for a significant proportion of the costs that make up the MPF rental charge ceiling, the charge ceiling itself cannot be said to be 'based' on LRIC+. Therefore, on the face of it, this is therefore not consistent with SMP Condition FAA4(A).1 which requires Openreach to ensure that its charges for Network Access in the wholesale local access market are 'based' on LRIC+.

The proposed direction does not discriminate unduly

9.71 The proposed direction applies only to products provided by Openreach, so it affects all CPs and therefore their customers equally.

The proposed direction is proportionate

9.72 We consider that the proposed direction is proportionate as the approach we are taking to the charge control in this document makes it unlikely that MPF Cease and SMPF Cease meet the requirements of paragraph FAA4(A).1 of SMP condition FAA4(A). Therefore, it would be disproportionate on that analysis to continue to apply a remedy to these services. Further, for LLU enhanced care services, we believe that if we align LLU and WLR enhanced care charges, imposing cost orientation will be disproportionate. For MPF rental, we consider that these requirements are already excluded.

The proposed direction is transparent

9.73 We consider that the proposed direction clearly sets out the position as to how the basis of charges obligation should apply to this market. We consider that we have clearly identified the services that we propose should be exempted from the obligation in order to ensure that it is clear and unequivocal as to when the obligation does not apply.

Part III and Part VI of Annex 13: notification under section 49 of the Act of proposed consent to reduce price notification period

9.74 We deal with both Parts III and VI together as the reasons for issuing the notification in each case are the same.

9.75 As with a direction, in proposing any consent Ofcom must be satisfied that the direction is objectively justifiable, not unduly discriminatory, proportionate and transparent, in accordance with section 49(2) of the Act. We set out why we consider that the proposed consent fulfils those tests.

The proposed consent is objectively justifiable

9.76 For the reasons explained in Section 3, we propose that the notice period for notifying the proposed charge controls should be reduced from 90 days to 28 days (where the 90 day period currently applies). We believe that this is objectively justifiable as communications providers are aware of the proposal to change charges and will be given formal notification of the new charges in the final statement.

The proposed consent dies not discriminate unduly

9.77 We consider that our proposed notice period will not be unduly discriminate as it will apply to all parties. We believe that given the involvement of stakeholders in this consultation, they will be in a position to respond to the revised notification equally.

The proposed consent is proportionate

9.78 We believe that our proposals are proportionate. Following publication of this consultation, all parties are aware of the proposed changes. The reduced period of notification will allow a quick adjustment of charges to the appropriate level. Given we are proposing a smooth transition of charges over a number of years we do not

believe that the new charges will be unduly disruptive and, therefore, a quick introduction is proportionate to the impact.

The proposed consent is transparent

9.79 Our changes are transparent. We are consulting fully on our proposals for the revised notification period.

Part IV of Annex 13: proposed Condition AAAA4(WLR)

Schedule 1 to the notification

Aims and Effects

9.80 The proposed SMP condition AAAA4(WLR) requires Openreach to ensure that its charges for WLR rental services and ancillary services do not increase by more than RPI -/+ X that varies according to each individually controlled service. The range of proposed values of X are set out in the proposed condition.

9.81 Ofcom's reasons for imposing this particular form of control and the values of X are set out above. It is proposed that the first year for the control will run from on a specified date (this being 28 days after publication of the final notification in respect of Condition AAAA4(WLR)) to 31 March 2012, with the control period lasting for a further 2 years (the final year ending on 31 March 2014). As a general principle, our current proposal is that prices should move towards FAC in the final year of the control.

Our duties and policy objectives

9.82 As indicated above, we discuss our duties and objectives specific for this review in detail in Section 2 of this consultation. Our opinion of the likely impact of implementing the proposals (as discussed throughout this consultation) is that the performance of our general and specific duties under section 3 and 4 of the Act is secured or furthered by our proposal to adopt the charge controls.

9.83 In particular, we consider that the proposed charge controls are designed to ensure that charges for wholesale line rental services can be set at a level that will enable other CPs (other than Openreach) to compete in the provision of downstream services. As for LLU services, existing charge controls have promoted competition in this way to the clear benefit of consumers in respect of choice, price and quality of service and value for money. Our review provisionally confirms that such controls are necessary to sustain this level of competition.

9.84 We have had particular regard to the requirement to promote competition and to secure efficient and sustainable competition for the benefit of consumers, which are relevant to both sections 3 and 4 of the Act. We have placed particular emphasis on the promotion of competition which we consider is likely to be the most effective way of furthering citizen and consumer interests in the markets under review.

9.85 We have also borne in mind the need to seek the least intrusive regulatory measures to achieve our policy objectives.

9.86 In addition we have taken into account further objectives, including

- Prices: to ensure that retail services are available at prices that are reasonably related to the efficient costs of supply, preferably as a result of effective competition; and

- Investment and innovation: to promote efficient investment in the development of new and innovative services by Openreach and other communications providers.

Powers under sections 87 and 88

9.87 Section 87(1) of the Act provides that, where Ofcom has made a determination that a person (here, BT) has SMP in an identified services market (here, wholesale fixed analogue exchange lines services within the UK, but not including the Hull Area), Ofcom shall set such SMP conditions authorised by that section as Ofcom considers it appropriate to apply to that dominant provider in respect of the relevant network or relevant facilities and apply those conditions to that person.

9.88 As indicated above Section 87(9) authorises the setting of SMP service conditions, including price controls and the setting of rules in relation to recovery of costs and cost orientation. Further, where Ofcom seek to set an SMP condition falling within section 87(9) Ofcom is also required to comply with the requirements of section 88 which are set out above.

9.89 In our opinion, proposed Condition AAAA4(WLR) satisfies section 88.

9.90 In the corresponding market review we confirmed that there is a real risk of adverse effects arising from price distortion by Openreach as it might fix and maintain some or all of its prices at an excessively high level or margin squeeze[166].

9.91 We also consider that the proposed charge control conditions are appropriate for the purposes of promoting efficiency and sustainable competition and conferring the greatest possible benefits on the users of public electronic communications services.

The proposed control promotes efficiency

9.92 We consider that the proposed SMP Condition is appropriate for the purpose of promoting efficiency.

9.93 In the absence of competitive pressures, we believe that Openreach would have limited incentives to seek to reduce its costs of providing WLR services. By proposing an RPI-X charge control Openreach is encouraged to increase its productive efficiency. This is achieved by allowing Openreach to keep any super-normal profits that it earns within a defined period by reducing its costs over and above the savings envisaged when the charge control was set. The benefits of any cost savings would potentially accrue to the regulated company in the short run and this would give Openreach incentives to make those efficiency savings. In the longer run, these cost savings could be passed to consumers through reductions in prices, either as a result of competition or through subsequent charge controls. This form of price regulation is also preferable to a rate of return type of control. In addition:

- By bringing prices more in line with costs, our charge control proposals will increase allocative efficiency.[167]

[166] See paragraphs 7.3 to 7.21 of the 2010 WFAEL Statement.

- When forecasting Openreach's forward looking costs for WLR services, we have assumed underlying efficiency gains of 3.5% to 5.5%. In coming to a view of the likely efficiency of Openreach's costs, we have looked at a range of evidence including benchmarks from other markets (section 88(4) of the Act) and we have had regard to the appropriate cost accounting methods (section 88(4)(b)).

The proposed control promotes sustainable competition

9.94 We also consider that the proposed charge controls are appropriate to ensure sustainable competition and to confer the greatest possible benefits on users of public electronic communication services.

9.95 Preventing excessive pricing via an RPI-X type charge control will promote sustainable competition.

9.96 Although our proposed charge control applies to baskets of services, we have proposed appropriate safe-guards to ensure that Openreach does not use the pricing flexibility offered to it in an anti-competitive manner to the detriment of any end-user.

Investment matters

9.97 When proposing the charge controls we have also taken into account the need to ensure that Openreach has the correct incentives to invest and innovate.

9.98 We think that our proposed charge control strikes a good balance between potential risk and reward. As the charge control is set for a fixed duration, Openreach can benefit under the control if it manages to increase market share or if outturn costs are lower than anticipated when the charge control was set.

The section 47 test

9.99 In addition to above-mentioned matters, Ofcom must be satisfied that Condition AAAA4(WLR) satisfies the test in section 47(2) of the Act, namely: objectively justifiable; not unduly discriminatory; proportionate; and transparent.

9.100 We are satisfied that this test is met in relation to the proposed condition AAAA4(WLR).

The proposed controls are objectively justifiable

9.101 As regards objective justification, BT's SMP in the access markets allows it to set charges unilaterally and, in the absence of any controls, Openreach would have the ability to set prices above the competitive level. This would have adverse impacts on both the ability of companies to compete in the downstream provision of services and on consumer choice and value for money. Openreach is unlikely to be incentivised to reduce its costs or set prices at the competitive level. Our charge controls have been structured to deliver the lowest possible charges to competitors for the wholesale services, while ensuring that Openreach is able to recover costs, including a reasonable return on investment. Additionally, we have reviewed each service within the market so that we have proposed an appropriate level of control for individual services where appropriate.

[167] When prices better reflect the underlying costs of production, allocative efficiency is enhanced. Meeting demand at cost-reflective prices will result in resources being allocated to the goods or services that consumers value most.

9.102 The structure of the controls are such that Openreach has an incentive to continue to seek efficiency gains and it is able to benefit from efficiency achieved that are in excess of that anticipated in the review.

9.103 The proposed controls are also objectively justifiable in that the benefits of RPI-X price controls are widely acknowledged as an effective mechanism to reduce prices in a situation where competition does not act to do so.

The proposed controls do not discriminate unduly

9.104 Secondly, the proposed charge controls will not discriminate unduly against a particular person or particular persons because any CP (including BT itself) can access the services at the charge levels fixed. The proposed charges are set to ensure a fair return and price level for all customer groups. In any event, Ofcom considers that they do not discriminate unduly against BT as it is the only CP to hold SMP in this market (for the UK excluding the Hull Area) and the proposed controls seek to address that market position, including Openreach's ability and incentive to set excessive charges for services falling within the controls.

The proposed controls are proportionate

9.105 Thirdly, the charge controls are proportionate because Openreach's obligations apply to the minimum set of charges required for the delivery the bottleneck services. They are focussed on ensuring that there are reasonable prices for those access services, which are critical to the development of a competitive market. Openreach is, however, allowed to recover a reasonable return on investment. Openreach will also have incentives to continue to invest and develop its access network. Moreover, the maximum charges Openreach is allowed to set over the period of the control has been formulated using information on Openreach's costs and a consideration of how these costs will change over time. We have also only imposed controls on services within the market that we consider need to be controlled.

9.106 We therefore consider that the proposed charge controls pursue our policy objectives and the means employed to achieve those aims are both necessary and the least burdensome to address effectively the concerns we have set out.

The proposed controls are transparent

9.107 Finally, for reasons discussed above, we consider that the proposed charge controls are transparent. We are consulting fully on our proposals for the proposed LLU charge controls in this document. Their aims and effects are clear and they have been drafted so as to secure maximum transparency. The proposed text of the condition has also been published with this consultation. Its intended operation is also aided by our explanations in this statement. Our final statement will set out our analysis of any responses and the basis for our final decision.

We have considered sections 3 and 4 of the Act

9.108 We also consider that the proposed charge control condition fits with our duties under sections 3 and 4 of the Act.

9.109 For the reasons set out above, we consider that the proposed charge control will, in particular, further the interests of citizens and of consumers in relevant markets by the promotion of competition in line with section 3 of the Act. In particular, the charge control seeks to ensure the availability throughout the UK of a wide range of

electronic communications services. In imposing the charge control, we have had regard to the desirability of promoting competition in relevant markets and the desirability of encouraging investment and innovation in relevant markets.

9.110 Further, we consider that, in line with section 4 of the Act, the charge control will, in particular, promote competition in relation to the provision of electronic communications networks and will encourage the provision of Network Access for the purpose of securing efficiency and sustainable competition in downstream markets for electronic communications networks and services, resulting in the maximum benefit for retail consumers.

Schedule 2 to the notification

9.111 In Schedule 2 to the notification we propose amending SMP condition AAAA10 to make clear that the obligation imposed on BT by paragraph AAAA10.1 to provide wholesale line rental includes, where also requested by a third party, such ancillary services as may be reasonably necessary for the use of wholesale line rental. We also propose a further consequential amendment to make clear that such ancillary services are to be cost orientated.

9.112 Although we consider that the obligation in condition AAAA1(a), which requires that BT shall provide Network Access where this is reasonably requested by a third party, is wide enough to include such ancillary services as may be reasonably necessary for the use of wholesale line rental, we are proposing to amend SMP condition AAAA.10 to make this explicit. This will also make the position consistent with the obligation to provide LLU services (SMP condition FAA9).

9.113 We consider that the propose modification in particular furthers the interests of citizens in relation to communications matters and further the interests of consumers in relevant markets by the promotion of competition in line with section 3 of the Act. We also consider that the proposed modification meets the Community requirements as set out in section 4 of the Act.

9.114 When modifying an SMP condition, Ofcom must be satisfied that the modification is objectively justifiable, not unduly discriminatory, proportionate and transparent, in accordance with section 47(2) of the Act. We set out why we consider that our proposal fulfils those tests.

The proposed modification is objectively justifiable

9.115 We believe the proposed modification is objectively justifiable. Where Openreach is obliged to provide wholesale line rental, it should also provide those ancillary services necessary for the use of that service. Otherwise those CPs purchasing wholesale line rental would not be able to make full use of that product.

The proposed modification does not discriminate unduly

9.116 The proposed modification applies only to BT who has been found to have SMP in the relevant market.

The proposed modification is proportionate

9.117 We consider that the proposed modification is proportionate as it is necessary to enable competition but it is not unduly burdensome on Openreach. Further, the proposed modification should not impose a greater burden on Openreach since we

consider that the obligation already imposed on BT in condition AAAA1(a) is wide enough to include such ancillary services as may be reasonably necessary for the use of wholesale line rental.

The proposed modification is transparent

9.118 We consider that the proposed modification improves transparency since it makes the position explicit.

Part V of Annex 13: proposed direction regarding removal of cost orientation obligation for Analogue Core WLR rental and WLR Transfer

9.119 We are proposing to make a direction to dis-apply the cost orientation requirements in paragraph AAAA3.1 of SMP condition AAAA3 and paragraph AAAA10.2 of SMP condition AAAA10 for WLR Transfer. Although the cost orientation requirement in paragraph AAAA3.1 of SMP condition AAAA3 and paragraph AAAA10.2 of SMP condition AAAA10 is already dis-applied for Analogue Core WLR rental by virtue of paragraph AAAA3.2, for the sake of completeness and for the avoidance of doubt we propose to include a direction that the requirement is also dis-applied in respect of Analogue Core WLR rental. The proposed direction is set out at Part VI of Annex 13.

9.120 In proposing any direction Ofcom must be satisfied that the direction is objectively justifiable, not unduly discriminatory, proportionate and transparent, in accordance with section 49(2) of the Act. We set out why we consider that the proposed direction fulfils those tests.

The proposed direction is objectively justifiable

9.121 Irrespective of which of our proposals for WLR Transfer we eventually adopt, it will be necessary to exclude the LRIC+ cost orientation requirement since we are proposing, for the reasons set out in Section 4 of this consultation, to set this charge below LRIC for the period of the charge control. This is therefore, not consistent with SMP Conditions AAAA3 and AAAA10 which require Openreach to ensure that its charges for Network Access in the wholesale fixed analogue exchange lines market are ‘based’ on LRIC+.

9.122 As explained above, the LRIC+ cost orientation requirement was excluded in relation to the Analogue Core WLR rental charge ceiling in 2005. Namely, for reasons discussed in the Openreach Pricing Framework Statement, one of our assumptions taken into account in assessing the cost bases that applied to copper access products (MPF and WLR) was the RAV adjustment. Given that Openreach’s pre-1 August 1997 copper access network assets account for a significant proportion of the costs that make up the Analogue Core WLR rental charge ceiling in the first control year (and then followed by indexation of that ceiling in subsequent years), the charge ceiling itself cannot be said to be ‘based’ on LRIC+.

The proposed direction does not discriminate unduly

9.123 The proposed direction applies only to products provided by Openreach, so it affects all CPs and therefore their customers equally.

The proposed direction is proportionate

9.124 We consider that the proposed direction is proportionate as the approach we are taking to the charge control in this document makes it unlikely that WLR Transfer

meets the requirements of paragraph AAAA3.1 of SMP condition AAAA3 and paragraph AAAA10.2 of SMP condition AAAA10. Therefore, it would be disproportionate on that analysis to continue to apply a remedy to this service. For Analogue Core WLR rental, we consider that these requirements are already excluded.

The proposed direction is transparent

9.125 We consider that the proposed direction clearly sets out the position as to how the basis of charges obligation should apply to this market. We consider that we have clearly identified the services that we propose should be exempted from the obligation in order to ensure that it is clear and unequivocal as to when the obligation does not apply.