



Review of the wholesale local access market

Identification and analysis of markets, determination
of market power and setting of SMP conditions
Explanatory statement and draft notification

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Section 1

Summary

A new regulatory regime

- 1.1 A new regulatory framework for electronic communications networks and services entered into force on 25 July 2003. The framework is designed to create harmonised regulation across Europe and is aimed at reducing entry barriers and fostering prospects for effective competition to the benefit of consumers. The basis for the new regulatory framework is five new EU Communications Directives. Four of these Directives were implemented in the UK via the Communications Act (the “Act”) on 25 July 2003. The fifth Directive was implemented by Regulations which came into force on 11 December 2003.
- 1.2 The new Directives require national regulatory authorities (“NRAs”), such as Ofcom, to carry out reviews of competition in communications markets to ensure that regulation remains proportionate in the light of changing market conditions. A series of market reviews has been carried out over the last twelve months and this review of the wholesale local access market is one of the final reviews to be conducted.

Scope of this review

- 1.3 Ofcom currently intends to limit this review to setting out the overall framework for regulating the provision of wholesale local access services and co-location (by way of the proposed general remedies) and determining appropriate charges for specific services. Local loop unbundling (“LLU”) services fall within the wholesale local access market and co-location.
- 1.4 Ofcom is aware that LLU processes do not appear, in their current state, to be fit for scaling and 'industrialisation' and that this is a major challenge if the UK is not to be left behind in broadband development. However, Ofcom considers that these issues may be dealt with more appropriately outside of this review and therefore is not intending to examine any non-charge related issues in detail within the review.

Summary of proposals

- 1.5 Ofcom has identified the following markets for the purposes of assessing competition and imposing appropriate regulatory remedies:
 - wholesale local access in the UK excluding the Hull Area; and
 - wholesale local access in the Hull Area.
- 1.6 Ofcom’s preliminary conclusion is that BT holds a position of SMP in the wholesale local access market in the UK excluding the Hull Area, and that Kingston holds a position of SMP in the wholesale local access market in the Hull Area.
- 1.7 Ofcom has also identified co-location as an appropriate technical area for the purposes of imposing appropriate regulatory remedies.
- 1.8 Given the position of SMP held by BT and Kingston, Ofcom proposes the following SMP services conditions in the wholesale local access market and in respect of co-location:

- requirement to provide Network Access on reasonable request;
 - requirement not to unduly discriminate;
 - basis of charges (i.e. cost orientation);
 - requirement to publish a reference offer;
 - requirement to notify charges and terms and conditions; and
 - requirement to notify technical information.
- 1.9 Ofcom proposes the following SMP services conditions on BT only in the wholesale local access market and in respect of co-location:
- quality of service;
 - requests for new Network Access; and
- requirement to provide Local Loop Unbundling Services.
- 1.10 In addition, Ofcom proposes to impose regulatory financial reporting obligations on both BT and Kingston in the wholesale local access market and in respect of co-location.

Local loop unbundling

- 1.11 While broadband uptake and roll-out has improved significantly in the last two years, there remains limited competition in terms of broadband delivery at the network or wholesale level. Competition based on LLU is one way of delivering competition in the broadband market and is particularly vital in providing competitors with opportunities for innovation and product and price differentiation.
- 1.12 The economics of LLU has improved substantially through new technology, reduced equipment prices, higher demand and (in some countries) lower LLU prices. These effects have played out in a number of other European countries. As a result of much reduced prices, France has a LLU market that is growing very rapidly, at around 40,000 lines each month, and is providing an increasingly broad, innovative and higher bandwidth range of products and services. Germany has well over 1 million unbundled lines (substantially used for narrowband traffic). Italy and Spain are also increasingly attracting investment in LLU.
- 1.13 Ofcom recognises that the UK has fallen some way behind the UK's most successful EU counterparts in relation to both take-up and the level of charges for LLU. In contrast to other EU countries, the UK has only about 11,000 unbundled lines. The current LLU operators in the UK are primarily catering for metropolitan business and high end consumers, for whom system reliability, advanced products and price, relative to leased-line alternatives, are the attractions. In the small business and residential consumer market, there is a general consensus that UK prices are significantly adrift from European best practice.
- 1.14 Ofcom intends to examine fully the case for LLU in the UK using experiences in other countries to inform its analysis. Ofcom considers that LLU has a significant part to play in establishing competitive broadband markets and is therefore committed to ensuring that appropriate regulation is put in place to provide the most positive environment for the success of LLU.

- 1.15 As part of this review, Ofcom intends to propose charges and/or charging principles for specific LLU services. These charging proposals will be set out in a second consultation in August 2004. To inform its analysis in this area, Ofcom is consulting in this document on how it intends to apply the proposed LRIC+ methodology and on proposals for the recovery of LLU costs. In particular, Ofcom proposes that LLU system set-up costs (the costs incurred by BT to develop and implement the systems and software necessary for it to have the capability to provide LLU services, such as the costs of setting up a dedicated operational support system (“OSS”)) should be pooled together with BT’s equivalent DSL system set-up costs and recovered across all local loops used to provide DSL services. The basis of recovery for LLU per service costs (the costs of unbundling individual local loops such as the costs for installation, jointing and maintenance of tie cables, wholesale costs in relation to the provision of LLU services and depreciation of ducts and copper pairs) is less clear. On balance, Ofcom proposes that where these LLU per service costs differ from those incurred by BT for equivalent DSL activities, these should be pooled together with equivalent BT DSL costs and recovered across all local loops used to provide DSL services.

Next steps

- 1.16 Consultation on the proposals in this document closes on 25 June 2004. When Ofcom has considered the representations made in response to the draft proposals set out in this document, it will publish a further consultation document in August 2004 that will set out its final proposals. These will include any changes made as a result of responses to this consultation and, to the extent that it is considered necessary to do so, Ofcom’s proposed charges for specific services in the wholesale local access market and in respect of co-location. Under section 48 of the Act, the process which Ofcom must follow to set SMP services conditions includes the publication of a notification specifying the relevant proposed conditions for comment by the European Commission, other National Regulatory Authorities (“NRAs”) and interested persons. The August consultation will include such a notification that will, if Ofcom considers it appropriate in the light of the responses to this consultation, specify the particular conditions and directions Ofcom is proposing to impose in the wholesale local access market and in respect of co-location.

Section 2

Introduction

A new regulatory regime

2.1 A new regulatory framework for electronic communications networks and services entered into force on 25 July 2003. The framework is designed to create harmonised regulation across Europe and is aimed at reducing entry barriers and fostering prospects for effective competition to the benefit of consumers. The basis for the new regulatory framework is five EU Communications Directives:

- Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (the “Framework Directive”);
- Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (the “Access and Interconnection Directive”);
- Directive 2002/20/EC on the authorisation of electronic communications networks and services (the “Authorisation Directive”);
- Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services , (the “Universal Service Directive”); and
- Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (the “Privacy Directive”).

2.2 The Framework Directive provides the overall structure for the new regulatory regime and sets out fundamental rules and objectives which read across all five Directives. Article 8 of the Framework Directive sets out three key policy objectives which have been taken into account in the preparation of this consultation document, namely promotion of competition, development of the internal market and the promotion of the interests of the citizens of the European Union. The Authorisation Directive establishes a new system whereby any person will be generally authorised to provide electronic communications services and/or networks without prior approval. The general authorisation replaces the former licensing regime. The Universal Service Directive defines a basic set of services that must be provided to end-users. The Access and Interconnection Directive sets out the terms on which providers may access each others' networks and services with a view to providing publicly available electronic communications services. These four Directives were implemented in the UK on 25 July 2003. This was achieved via the Communications Act 2003 (the “Act”). The Privacy Directive establishes users' rights with regard to the privacy of their communications. This Directive was adopted slightly later than the other four Directives and was implemented by Regulations which came into force on 11 December 2003.

Market reviews

2.3 The new Directives require national regulatory authorities (“NRAs”), such as Ofcom, to carry out reviews of competition in communications markets to ensure that regulation remains appropriate and proportionate in the light of changing market conditions. A series of market reviews has been carried out over the last twelve months and this review of the wholesale local access market is one of the final reviews to be conducted.

2.4 Each market review has three stages:

- definition of the relevant market or markets;
- assessment of competition in each market, in particular whether any undertakings have significant market power (“SMP”) in a given market; and
- assessment of appropriate regulatory obligations where there has been a finding of SMP.

2.5 More detailed requirements and guidance concerning the conduct of market reviews are provided in the EU Communications Directives, the Act and in additional documents issued by the European Commission and Oftel. As required by the new regime, in conducting this review, Ofcom has taken the utmost account of the two European Commission documents discussed below.

Recommendation on relevant product and service markets

2.6 The European Commission has identified in its recommendation on relevant product and service markets, adopted on 11 February 2003 (the “Recommendation”), a set of product and service markets within the electronic communications sector, in which ex ante regulation may be warranted.¹ The Recommendation seeks to promote harmonisation across the European Union by ensuring that the same markets are subject to a market analysis in all the EU Member States. However, NRAs are able to regulate markets that differ from those identified in the Recommendation where this is justified by national circumstances and where the Commission does not raise any objections. Accordingly, NRAs are to define relevant markets appropriate to national circumstances, provided that the utmost account is taken of the markets listed in the Recommendation.

Guidelines on market analysis and the assessment of SMP

2.7 The European Commission has also issued guidelines on market analysis and the assessment of SMP (the “SMP Guidelines”).² Ofcom is also required to take the utmost account of these guidelines when identifying a services market and when considering whether to make a market power determination under section 79 of the Act. Oftel produced additional guidelines on the criteria to assess effective competition, which can be found at http://www.ofcom.org.uk/static/archive/oftel/publications/about_oftel/2002/smpg0802.htm.

Scope of this review

2.8 Ofcom currently intends to limit this review to setting out the overall framework for regulating the provision of wholesale local access services and co-location (by way of the proposed general remedies) and determining appropriate charges for some specific services. Local loop unbundling (“LLU”) services fall within the wholesale local access market and co-location.

¹ Commission Recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services.

² Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03)

- 2.9 Ofcom is aware that LLU processes do not appear, in their current state, to be fit for scaling and 'industrialisation' and that this is a major challenge if the UK is not to be left behind in broadband development. However, Ofcom considers that these issues may be dealt with more appropriately outside of this review and therefore is not intending to examine any non-charge related issues in detail within the review.

Question 2.1 *Do you agree that non-charge related issues are dealt with more appropriately outside of this market review?*

Existing regulation

- 2.10 The following obligations currently apply in relation to the provision of wholesale local access services and co-location.

Requirement to provide access network facilities - Condition 83

- 2.11 Condition 83 of BT's licence issued under section 7 of the Telecommunications Act 1984, requires the following:

- the provision of LLU, tie cables, co-location and ancillary services;
- the publication of a reference offer;
- the provision of information on the availability of LLU and co-location;
- cost oriented prices on the basis of long run incremental costs with an appropriate mark-up for common costs and a reasonable return on capital employed;
- no undue preference or undue discrimination; and
- the publication of regulatory financial information.

- 2.12 Condition 83 has continued to be in effect in relation to BT pursuant to paragraph 9 of Schedule 18 of the Act pending the outcome of this review. Further details on the continuation regime can be found at: http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/cont_notices/index.htm. Condition 83 will be discontinued when Ofcom concludes this market review. Further details on the discontinuation of licence conditions can be found at: <http://www.ofcom.org.uk/static/archive/oftel/publications/licensing/2003/discontinue1103.pdf>.

LLU regulation

- 2.13 Regulation 2887/2000/EC on unbundled access to the local loop requires dominant providers in the fixed public telephone network and services market, currently BT and Kingston, to meet reasonable requests for unbundled access to local loops and related facilities on fair and transparent and non-discriminatory conditions, to publish a reference offer and to have cost oriented prices. This Regulation, and determinations made pursuant to it, will cease to apply to BT and Kingston when Ofcom concludes this market review.

Directions and determinations

- 2.14 Oftel issued a determination in December 2000 setting the charges for fully unbundled loops and internal tie cables (this determination was rolled over in March 2002) and a determination in October 2001 setting the charges for shared loops.

Oftel subsequently issued further determinations setting charging principles for external tie cables and escorted access, and setting charges for power. Oftel did not set charges for those ancillary services that are either bespoke or whose characteristics are subject to significant variation from one location to another (e.g. co-location).

2.15 Oftel issued non-charging determinations covering the following:

- the bow wave process;
- terms and conditions of the reference offer;
- co-mingling;
- service level commitments and compensation; and
- access to BT exchanges.
-

2.16 As noted above, these determinations will cease to have effect when Ofcom completes this market review.

Next steps

2.17 Consultation on the proposals in this document closes on 25 June 2004. When Ofcom has considered the representations made in response to the draft proposals set out in this document, it will publish a further consultation document in August 2004 that will set out its final proposals. These will include any changes made as a result of responses to this consultation and, to the extent that it is considered necessary to do so, Ofcom's proposed charges for specific services in the wholesale local access market and in respect of co-location. Under section 48 of the Act, the process which Ofcom must follow to set SMP services conditions includes the publication of a notification specifying the relevant proposed conditions for comment by the Commission, other NRAs and interested persons. The August consultation will include such a notification that will, if Ofcom still considers it necessary in the light of the responses to this consultation, specify the particular conditions and directions Ofcom is proposing to impose in the wholesale local access market and in respect of co-location.

Section 3

Market definition

Introduction

- 3.1 Section 79(1) of the Act provides that before a market power determination may be considered, Ofcom must identify the markets which are, in its opinion, the ones which, in the circumstances of the United Kingdom, are the markets in relation to which it is appropriate to consider such a determination and to analyse that market. In identifying relevant markets, Ofcom is required to take the utmost account of all applicable guidelines and recommendations issued by the Commission.
- 3.2 Ofcom considers that the appropriate starting point for the wholesale local access market definition is to consider the wholesale supply of access to the metallic local loops which connect most end user premises to wider communication networks, enabling transmission and receipt of voice and data messages. Ofcom's assessment will consider, in particular, the extent to which alternative means of connection, such as those offered by the cable TV companies, represent effective substitutes for local access services provided over metallic loops.

Product description

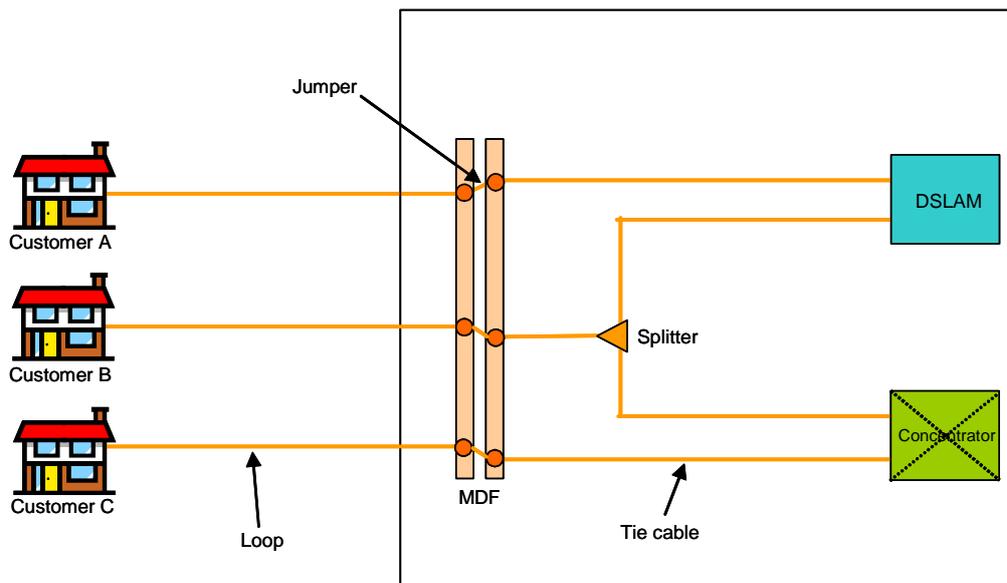
Metallic local loops

- 3.3 The fixed local access connection to the majority of end user premises is currently made using a twisted metallic pair, i.e. a local loop connection. This runs from the network termination point at an end user's premises to a main distribution frame ("MDF") at a MDF site. An individual loop is connected to an operator's equipment, such as a DSLAM or concentrator equipment, within the MDF site, using flexible jumpers and tie cables.³ The combination of loop, jumpers and tie cables which completes a local access connection, together with any supplementary services associated with providing the connection, are the focus of this review.
- 3.4 Local access connections, comprising local loops, flexible jumpers, and tie cables, are illustrated in a range of configurations in Figure 3.1 below. For Customer A, the local access connection is made with DSLAM equipment that provides a broadband-only service. For Customer B, the local access connection supports both broadband and narrowband services.⁴ For Customer C, the local access connection is used to support narrowband-only services.

³ In a small number of cases, the metallic loop connection to an end user within BT's network ends at the PCP (roadside cabinet), with onward connection made over fibre. DSL-based broadband services cannot be provided over fibre.

⁴

Figure 3.1 Product description



Broadband and narrowband services

- 3.5 A local loop connection can support both broadband and narrowband services.
- 3.6 A broadband service is one which is always-on and which provides the end user with high data transfer speeds, notably when compared with dial-up connection. DSL technology allows broadband services to be provided over metallic local loops.
- 3.7 A distinction can be made between asymmetric and symmetric broadband services.
- 3.8 The key feature of any asymmetric broadband service is that the maximum data transfer speed obtainable in one direction is higher than the maximum data transfer speed available in the opposite direction. In most cases, asymmetric broadband is set up to allow faster downstream data transfer, reflecting the fact that most consumers value an ability to download information from the internet more than an upload capacity. BT currently offers ADSL products over its loops which provide download speeds of up to 2 Mbit/s, while LLU operators currently market products providing download speeds of up to 8 Mbit/s. Significantly, asymmetric DSL services allow simultaneous broadband (data) and narrowband (voice) communication, though, in practice, the high bandwidth ADSL services offered by some LLU operators operate over dedicated, fully unbundled loop connections.
- 3.9 *Symmetric* broadband provides data transfer to and from the end user at a rate which is the same in both directions. Such services may be used to provide symmetric internet access, and also a range of business data services with leased line characteristics. BT currently offers symmetric DSL services up to a speed of 2 Mbit/s, while some LLU operators offer speeds of up to 4 Mbit/s. Narrowband services cannot be provided simultaneously over a metallic loop that is used to provide symmetric DSL broadband access.
- 3.10 While a broadband service is most often used to provide high-speed data communication, it can also be used to provide voice communication, via voice-over-broadband technologies.

- 3.11 Despite the growth of broadband use, most local access connections continue to be used to support narrowband services only. Narrowband services include voice telephony and relatively low speed dial-up data transfer. Simultaneous data and voice communication is not possible using a single narrowband-only connection.

Alternative local access connections

- 3.12 The UK cable TV companies, ntl and Telewest, have established cable connections to many end user premises within their service areas. These cable connections consist of so-called Siamese cables, which combine traditional twisted metallic pairs with a co-axial cable capable of supporting high bandwidth television and broadband delivery.
- 3.13 In principle, these cable connections are able to offer a number of options for supporting broadband and narrowband communication. For instance, broadband services could be provided either over the co-axial cable, as is currently the case, or, in theory, using DSL technology over the twisted metallic pairs.
- 3.14 A local access connection might also be provided, among other means, using a fibre connection direct to the end user's premises, using a fixed wireless link between the end user's premises and the operator's equipment, or using mobile technology.

The market definition process

- 3.15 There are two dimensions to the definition of a relevant market: the relevant products to be included in the same market and the geographic extent of the market. Ofcom's approach to market definition follows that used by the UK competition authorities (see Office of Fair Trading Market Definition Guideline, OFT 403, March 1999), which is in line with the approaches adopted by the European Commission (as set out in its *Notice on the definition of the relevant market for the purposes of Community competition law*) and US authorities.

SSNIP methodology

- 3.16 The purpose of the market definition exercise is to identify the relevant constraints on the price setting behaviour of firms. There are two main competitive constraints to consider, namely:
- the extent to which customers will substitute other services for those in question (demand-side substitution); and
 - the extent to which suppliers will switch, or expand, production to supply the relevant products or services (supply-side substitution) in response to a price increase.
- 3.17 The concept of the 'hypothetical monopolist' or SSNIP test provides a useful tool to identify demand-side and supply-side substitutes which constrain pricing sufficiently.

The hypothetical monopolist test

- 3.18 A product or group of products is considered to constitute a separate market if a hypothetical monopoly supplier of that product group could profitably impose a small but significant, non-transitory increase in price ("SSNIP"). Conventionally, a 5% to 10% price increment is considered. If such a price rise would be unprofitable, because customers would switch to other products, or because suppliers of other

products would begin to compete with the hypothetical monopolist, then the market definition should be expanded to include the substitute products.

- 3.19 A supplier response constitutes effective supply-side substitution only if it can be initiated quickly, and at low cost, by virtue of an existing position in the supply of other services. However, even if supply-side responses do not provide a sufficient constraint to inform market definition, they may nevertheless limit the exercise of market power. Such constraints are considered at the SMP assessment stage.
- 3.20 In applying the hypothetical monopolist test, it is usual to begin with a fairly narrow view of the relevant market and then expand that market to include effective substitutes.

Benchmark price

- 3.21 To implement the SSNIP methodology, it is first necessary to identify the relevant benchmark price, to which the hypothetical price increment is applied. For the purposes of the current exercise, the appropriate benchmark price is the competitive price.
- 3.22 As the European Commission states at paragraph 42 of its SMP guidelines, *“in principle, the ‘hypothetical monopolist test’ is relevant only with regard to products or services, the price of which is freely determined and not subject to regulation.”* If the benchmark price is above the competitive price level, then this may result in an over-estimation of the scope for substitution, resulting in an excessively broad market definition. Conversely, if the benchmark price adopted is below the competitive price level then this may result in an overly narrow market definition.
- 3.23 The European Commission has also stated that its *“working assumption will be that current prevailing prices are set at competitive levels. If, however, a service or product is offered at a regulated, cost based price, then such price is presumed, in the absence of indications to the contrary, to be set at what would otherwise be a competitive level”*. In undertaking this market definition exercise, Ofcom has been mindful that some current (regulated) local access prices may not represent a good proxy for competitive price levels. In particular, the regulated access charges for LLU were determined when these services were in their infancy. As a result they drew heavily on forecasts, broad comparisons with other services, and data generated by a very small sample of observations.

Existing regulation

- 3.24 To undertake the market analysis without controlling for the impact of existing regulation in that market would also risk distortion, potentially undermining the basis for on-going regulatory intervention. Under the EU Directives, regulation which responds to market power can only be implemented where a finding of SMP is made. If SMP is eliminated by existing regulation, undertaking the market analysis with regulation in place would lead to a finding of no SMP. This would then imply that regulation should end, which in turn might allow the original SMP, and any adverse consequences arising from it, to persist. It is therefore important that Ofcom begins the market definition process by assuming an absence of regulation in the market under review.

Retail and wholesale markets

- 3.25 This review concerns the supply of services at the wholesale level. Moreover, the local access services under consideration are at the most upstream end of the value chain, and are generally used as inputs to other wholesale products.
- 3.26 However, in undertaking the relevant market definition exercise, it is informative first to consider competition at downstream levels, since demand for the relevant wholesale products is ultimately driven by downstream wholesale demand and ultimately by retail demand.
- 3.27 This approach is consistent with the Commission's Recommendation. Recital 7 of the Recommendation states that the starting point for market definition is a characterisation of the retail market over a given time horizon, taking into account the possibilities of demand and supply-side substitution. The wholesale market is identified subsequent to this exercise being carried out in relation to the retail market. This approach is repeated at paragraph 3.1 of the Explanatory Memorandum accompanying the Recommendation.

Retail market definition

Introduction

- 3.28 The local access products considered in this review are inherently wholesale-level products. Final customers do not purchase these products on a stand-alone basis. However, they represent a significant component of most retail services.
- 3.29 The demand for a local access connection is ultimately driven by the demand for the various communications services which are delivered over such a connection. A fixed line local access connection continues to be an integral element in the delivery of voice telephony, as well as data services, for most users. Indeed, the overwhelming majority of local loop connections continue to be used to provide voice and dial-up internet access only.
- 3.30 Nevertheless, the use of broadband continues to grow. There are now over three million lines providing broadband internet access. These broadband connections are largely used to provide asymmetric broadband internet access. The extent to which local access is currently used to provide symmetric broadband internet access via SDSL technology is currently small. As such, it does not require further consideration here since, given the relative scale of this source of demand, it has no impact on relevant market definition or market analysis
- 3.31 Among the various retail market analyses undertaken by Ofcom, and previously by Oftel, the most relevant as far as this review of wholesale local access is concerned are those which have examined fixed narrowband exchange line services and, in order to inform the analysis of relevant wholesale markets in the review of wholesale broadband access, retail asymmetric broadband internet access.

Fixed narrowband retail exchange lines markets

- 3.32 As noted above, the overwhelming majority of local access connections are used by final customers to support narrowband services only. Indeed, in most cases where end users decide to take broadband services, they continue to take narrowband services over the same local loop and therefore the fundamental local access connection is provided as part of a narrowband exchange line service. While

additional flexible jumpers and tie-cables are required to upgrade the loop-based local access connection to enable broadband, the local loop between the end user premises and the MDF is typically the same as used to provide exchange line services only.

3.33 A relevant exchange line product comprises:

- the local loop or analogous local access connection;
- the equipment connected to either end of the local loop (such as the NTE, the remote concentrator and line cards); and
- a range of supplementary services associated with that loop (such as call waiting and “1471” service).

3.34 A local access connection, which is the subject of this review, is therefore a substantial component part of any retail exchange line services product.

3.35 In its analysis of the markets for fixed narrowband retail services, Oftel identified a number of distinct retail product markets for exchange line services, namely:

- residential analogue exchange line services;
- residential ISDN2 exchange line services;
- business analogue exchange line services;
- business ISDN2 exchange line services; and
- ISDN30 exchange lines services.⁵

3.36 The majority of exchange line services are analogue or ISDN2. Local loops provide the local access component of most of the more than 30 million analogue and ISDN lines in service, though cable does account for a significant number of analogue exchange lines too. Only a very small percentage (substantially less than 1%) of lines are used for ISDN30 services. Furthermore, a significant number of these are provided over fibre. As such, ISDN30 accounts for a negligible fraction of overall local loop demand.

3.37 The fixed narrowband retail services market review identified retail exchange line services as distinct, in market definition terms, from:

- mobile access;
- broadband internet access; and
- leased lines.

3.38 The narrowband review also concluded that it was appropriate to define separate exchange line services markets for residential and business users on the grounds that:

- business and residential users typically require a different range of exchange line services;

⁵ See Oftel’s *Fixed Narrowband Retail Services Market: Final Explanatory Statement and Notification*, 28 November 2003.

- it is possible to identify residential and business users and sustain prices which discriminate between them; and
 - operators serving residential and business customers may be expected to be located in different areas.
- 3.39 Separate markets were identified for analogue, ISDN2 and ISDN30 on the basis of the different functionalities provided over each and price differentials.
- 3.40 For each of the exchange line product markets identified, separate geographic markets were defined to encompass:
- the UK excluding the Hull Area; and
 - the Hull Area.
- 3.41 The basis for this conclusion was the observation that BT sets uniform prices for the relevant services throughout the UK excluding the Hull Area, either as a commercial decision or because it is required to do so under universal service obligations. This ensures that the effect of competitive pressures in one area is spread throughout the UK despite the limited opportunities for demand- or supply-side substitution between local areas. The Hull Area is not subject to this constraint, since BT does not operate in this area. Symmetric arguments apply to Kingston in the Hull Area.

Asymmetric broadband internet access

- 3.42 The retail market for asymmetric broadband internet access was considered as part of the wholesale broadband access market review, in order to inform the relevant wholesale level analysis.⁶ The distinctive features of asymmetric broadband internet access services are that they:
- are always on, i.e. they do not require dial-up;
 - allow simultaneous use of voice and data services; and
 - have faster downstream speeds than dial-up services.
- 3.43 The provision of asymmetric broadband internet access requires a local access connection to the end user's premises. In almost all cases, that local access connection is made using a local loop, supporting DSL broadband technology, or a cable connection. As noted above, in most cases the connection itself will be provided already as part of an exchange line service, though some additional work may be required to enable broadband services.
- 3.44 In analysing asymmetric broadband internet access for the wholesale broadband access market review, Ofcom considered that the relevant market for these services was separate from the markets for:
- narrowband internet access;
 - symmetric broadband internet access; and
 - mobile internet access.

⁶ Review of the *Wholesale Broadband Access Markets: Final Explanatory Statement and Notification*, 13 May 2004.

- 3.45 Ofcom also considered that, on balance, the market would encompass the provision of asymmetric broadband internet access to both residential and business customers. While recognising that there are currently differences in the services provided to these customer groups, Ofcom identified grounds for believing that this distinction might become blurred. Ofcom believed that, a forward-looking approach suggested a broader market definition.
- 3.46 Ofcom's analysis of the geographic scope of the market identified a common pricing constraint across the UK excluding the Hull Area, suggesting a single market, though one displaying local characteristics. Analogous arguments suggested a distinct, single market for the Hull Area.

Wholesale market definition

Introduction

- 3.47 In general, it is not clear whether suppliers of local loop connections, or potential substitutes, would actually make local access products available at the wholesale level in the absence of regulation. Although BT provides a wholesale local access product to other operators, this is a requirement of existing regulation. It is unclear whether it would choose to do so in the absence of such regulation. The cable operators, for instance, do not provide such services on a stand-alone basis, choosing instead to offer a vertically integrated product only.
- 3.48 The relevant downstream wholesale markets, which provide the link between the local access connections themselves and the retail markets described above, are those for wholesale exchange line services and wholesale broadband access. It is appropriate to consider the wholesale markets that lie immediately downstream of wholesale local access, since demand for wholesale local access connections will be mediated through the demand for these wholesale products.

Fixed narrowband wholesale exchange lines services

- 3.49 Wholesale exchange line markets analogous to those identified at a retail level were defined as part of Oftel's analysis of fixed narrowband wholesale services markets.⁷ Specifically, distinct product markets were identified for:
- wholesale residential analogue exchange line services;
 - wholesale residential ISDN2 exchange line services;
 - wholesale business analogue exchange line services;
 - wholesale business ISDN2 exchange line services; and
 - wholesale ISDN30 exchange lines services
- 3.50 The arguments set out for the retail level analysis were deemed to apply equally at the wholesale level too.
- 3.51 Oftel also concluded that, for each of the product markets identified, separate geographic markets should be defined for:
- the UK excluding the Hull Area; and

⁷ *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets*, 28 November 2003

- the Hull Area.

Wholesale broadband access markets

- 3.52 Asymmetric broadband origination extends from the end user's premises to the first suitable point of interconnection with the core network. Asymmetric broadband origination therefore represents a more extensive segment of the vertical supply chain than local access alone, including backhaul. However, a local access connection that is capable of supporting asymmetric broadband services is an essential component of asymmetric broadband origination.
- 3.53 Ofcom has identified a distinct relevant wholesale product market for asymmetric broadband origination. This market encompasses loop-based (ADSL) and cable-based broadband origination services, though the relevant constraint maybe indirect rather than direct, since the cable operators do not currently offer such services.
- 3.54 The wholesale market defined includes services for both residential and business customers, as Ofcom considered that, irrespective of any retail market distinctions, a common origination input was used.
- 3.55 With regard to the geographic dimension of relevant market definition, Ofcom noted that BT chose, on the basis of its own commercial judgement, to set nationally uniform prices, suggesting a common constraint operated across its service area. This constraint did not extend to the Hull Area. Ofcom therefore concluded that separate geographic markets should be defined for:
- the UK excluding the Hull Area; and
 - the Hull Area.

Wholesale local access product market

- 3.56 As noted above, the wholesale local access services under review here are upstream from the wholesale exchange line and wholesale broadband access markets considered above.
- 3.57 It is appropriate to begin this market definition exercise by hypothesising a relatively narrow wholesale local access product market, and then considering whether this should be broadened. This analysis therefore begins by asking whether a distinct wholesale market exists for loop-based local access connections only. The majority of connections to end user premises involve such loops.

Local access substitutes

- 3.58 There are a number of candidate substitutes for local loops in the provision of wholesale local access. The most plausible of these are:
- cable;
 - fibre;
 - fixed wireless; and
 - mobile.

3.59 Each of these possibilities is considered in turn below.

Cable

- 3.60 The Siamese cable connections used by the cable TV operators enables them to provide simultaneous narrowband and broadband local access connections to end user premises. Once a connection is made, it is useful for both types of application.
- 3.61 However, the cable operators have not provided wholesale local access as a stand-alone product, though they do provide intermediate level products to support the dial-up internet access services offered by a number of ISPs and some of AOL's broadband offerings are provided over ntl's cable infrastructure.
- 3.62 Nevertheless, even if it is assumed that this situation will endure, this need not necessarily imply that cable-based local access does not provide an effective constraint on the wholesale pricing of loop-based local access. Where cable-based and loop-based downstream products that depend on local access are effective substitutes, indirect substitution may constrain the pricing conduct of a hypothetical monopoly wholesale supplier of loop-based local access.
- 3.63 In practice, as noted already, most retail customers who purchase a loop-based connection do so as part of a loop-based exchange line service, even where this is adjusted to provide broadband services too. Consequently, most purchases of wholesale local access will be made by providers of wholesale exchange lines services. Analysis of the exchange line markets is therefore particularly relevant to the analysis of the wholesale local access markets.
- 3.64 As noted already, Oftel has defined a number of relevant residential and business exchange line markets. Most loops are currently used to provide residential analogue exchange line services. As also noted, an exchange line product comprises: (i) the local loop or analogous local access connection, (ii) the equipment connected to either end of the local loop; and (iii) a number of supplementary services associated with that loop.
- 3.65 Local access is therefore a substantial component part of the exchange line services product identified above. The difference between a local access service and a basic exchange line service is comparatively small, as are the costs associated with the additional elements that make up the exchange line service. Moreover, it is straightforward for these elements to be stripped away to leave a basic connection product.
- 3.66 The basis for defining (retail and wholesale) exchange line service markets that encompass cable-based and loop-based products, as was done in the relevant Oftel market reviews, is that the profitability of a 5%-10% increase in loop-based services alone would be undermined by customers switching to cable-based services. In other words, loop-based and cable-based exchange line products, which are little more than local access connections, are substitutes.
- 3.67 To the extent that any increase in wholesale loop-based access prices would be passed through to loop-based exchange line service prices, this could be expected to reduce retail demand for those services and therefore reduce wholesale demand for loop-based access. If sufficient switching of retail demand away from loop-based products materialised, then it would undermine the profitability of the initial wholesale level price increase (SSNIP). In this case, a broader wholesale local access market definition would be appropriate.

- 3.68 The extent to which such an indirect substitution effect would effectively undermine a hypothetical price increase for wholesale loop-based local access is affected by:
- the degree to which the wholesale SSNIP would be passed through to retail customers by the relevant service provider; and
 - whether the scale of the resulting reduction in (derived) wholesale demand would be sufficient to render the original wholesale price increase unprofitable.
- 3.69 Ofcom believes that, since local access is a substantial component of an exchange line product, any SSNIP for wholesale loop-based local access would be substantially passed through to the prices for retail exchange line service under competitive conditions. Under those conditions, the wholesale local access charge could be expected to account for a very substantial portion of the costs of any competitive exchange line service. Faced with a 5% to 10% increase in the wholesale charge, a retailer would need to pass on a substantial portion of the price increase in order to cover its costs. A profit maximising retailer could therefore be expected to pass through in large part the original increase in the wholesale charge.
- 3.70 Given the scope for substitution between cable-based and loop-based services at the retail level, as identified in the retail product market analysis above, such pass-through could be expected to lead to a significant switch in retail demand in cabled areas away from the loop-based products. Ofcom is of the view that, overall, the extent of the resulting reduction in derived demand for loop-based access at the wholesale level would be sufficient to render the original wholesale price increase unprofitable.
- 3.71 An alternative way of considering whether cable-based and loop-based wholesale local access are in the same market would be to focus on the relevance of a direct constraint at the wholesale level. In principle, the cable operators could offer access to the metallic loop component of the Siamese cables, which would enable other operators to provide narrowband and broadband services to specific end users. In a competitive market, the cable operators' upstream and retail divisions could be expected to each earn a 'normal' return. If the opportunity arose for the upstream divisions to make additional returns by extending the services offered to accommodate wholesale customers switching away from loop-based wholesale local access products, then it is possible that they would do so.
- 3.72 Nevertheless, the possibility of using cable-based local access as an alternative to loop-based local access depends on an ability to gain practical and economic access to the cable connections and to install the equipment required to provide services.
- 3.73 The provision of DSL-based broadband services over the cable networks would require a relatively extensive and disaggregated deployment of equipment, since the metallic pair components of the 'Siamese' connections to end users' premises are aggregated and transferred to fibre at a relatively local level. Consequently, any DSL equipment could be used to provide services to a comparatively small number of end users only. It would also have to be combined with an extensive backhaul solution too.
- 3.74 Given current technologies, the implications for the scale of investment required, and the need to obtain the facilities required to operate the required equipment, it therefore appears unlikely that access to the twisted copper pair component of the cable infrastructure would provide an effective substitute for BT's loop-based access products, even if it were available.

- 3.75 Offering disaggregated connection to individual end users at the cable head-ends, where the cable operators' own broadband equipment is located, would not appear to be easily done. However the cable operators could offer a wholesale interconnection product at this point, and it is possible that they would do so under competitive conditions. Based on the evidence set out in the related narrowband and broadband market reviews, in particular the definition of wholesale exchange line and asymmetric broadband origination markets which include cable products, Ofcom believes that such products would compete effectively with loop-based alternatives.
- 3.76 An increase in the price of loop-based wholesale local access above the competitive level would then be likely to induce a significant volume of demand in cabled areas to switch to cable-based wholesale alternatives. Again, this suggests that the market for loop-based wholesale local access products should be expanded to include cable-based alternatives.
- 3.77 Ofcom's preliminary conclusion is therefore that the wholesale market for local access should be broadened to include both loop-based and cable-based local access products.
- 3.78 In any case, even supposing that the constraints provided by both the substitution mechanisms described above were ineffective, and that it was appropriate to define a narrow wholesale market for loop-based local access only, this could only affect the SMP conclusions if BT was found not to hold a position of SMP in the broader market. If, however, BT has SMP under the broader market definition, this conclusion would only be strengthened by a narrowing of the wholesale market definition to include loop-based local access only. Similar reasoning applies to Kingston within the Hull Area.

Fibre

- 3.79 In some instances, local access to communications services is provided to business end users by means of fibre connections, often as the basis of a leased line service. Such connections are capable of supporting narrowband and broadband services, though not DSL-based technology, which operates over metallic connections. This raises the possibility that fibre might be used in place of local loops or cable connections to provide local access, which might imply fibre-based local access is part of the same relevant wholesale market as loop-based and cable-based local access.
- 3.80 In practice, residential premises are not connected to fibre.⁸ Moreover, even for business users, the number of applications where loop-based and fibre-based local access are deployed as alternatives is very small.⁹ Since the cost of the end user

⁸ As noted above, there are some BT residential customers for whom the connection to the local exchange is transferred to fibre at an intermediate point. Moreover, the connections between end users' premises and a cable operator's equipment at the cable head end are transferred to fibre at an intermediate point.

⁹ Loop-based symmetric DSL ("SDSL") services and fibre-based leased line services may be regarded as substitutes in the provision of some symmetric broadband services, essentially for business use. However, the proportion of loops for which this is the case is very small. Ofcom understands that the take-up of SDSL service is currently extremely limited. Moreover, in the context of the overall costs of such relatively high value services, a 5% to 10% increase in loop charges is unlikely to lead to a substantial switch in demand. BT has recently announced the delivery of symmetric broadband services under the Broadband Advanced brand. Prices begin at a connection charge of £595 (including the installation of a new loop connection) and a rental charge of £170 per month for a 500 kbit/s service. LLU operator Easynet advertises symmetric broadband from £149 per month, for example.

equipment required to utilise fibre, typically over £1,000, is substantially higher than for a loop-based connection, fibre is used only for a relatively small number of high value applications.

- 3.81 Moreover, even where fibre infrastructure exists in the vicinity of end user premises, there are unlikely to be enough fibres available to replace loop-based connections to even a small fraction of residential or business premises, unless a significant investment in local multiplexer equipment were made. Furthermore, fibre does not exist in the vicinity of many residential premises currently served by loop-based or cable-based connections
- 3.82 Consequently, Ofcom believes it is reasonable to conclude that a 5%-10% increase in the wholesale price of loop-based and cable-based local access would not induce a significant switch to fibre-based local access provision because demand from retail customers would not switch, given the costs incurred in doing so, even if the increase in loop-prices was fully passed-through.
- 3.83 Ofcom has therefore reached the preliminary conclusion that fibre-based access does not currently constrain the pricing of loop-based and cable-based local access, and therefore should be excluded from the relevant wholesale product market. Moreover, Ofcom does not believe that this situation will change appreciably over the 2 to 3 year horizon relevant to this review.

Fixed wireless

- 3.84 The availability of fixed wireless local access connections offers three distinct substitution possibilities which could constrain increases in the wholesale pricing of loop-based and cable-based local access. Specifically:
- operators with locally-positioned equipment could use fixed wireless links directly in place of loops or cable to provide connections with end users;
 - downstream retailers, such as ISPs, might switch their purchases of wholesale service packages which include local access from loop or cable providers to fixed wireless operators; or
 - as a result of the impact of wholesale loop price increases on retail prices, end users may switch their retail demand to fixed wireless local access.
- 3.85 However, in the absence of a willingness or ability to switch to fixed wireless technology on the part of a sufficient number of retail customers, an increase in the wholesale price for loop-based access would not induce a significant reduction in demand for such access.
- 3.86 Where end user premises are located within the catchment area of a fixed wireless network, and have the appropriate aerial equipment installed, they could obtain broadband access via a wireless connection in place of line-based local access.
- 3.87 In practice, both roll-out and take-up of fixed wireless have been very limited to date. The proportion of the UK population that have access to a wireless network stands at about 12%. Furthermore, Oftel estimated that at the end of September 2003 there were only approximately 2,500 fixed wireless connections in total.¹⁰ In itself, this suggests that the current scope for substituting fixed wireless based local access for line-based local access is unlikely to constrain the pricing of the latter.

¹⁰ Oftel Internet and Broadband Brief, October 2003.

- 3.88 Moreover, the charges for installing the required equipment at end user's premises are currently relatively substantial when compared to the charges for providing a broadband service using DSL or cable modem technology.¹¹
- 3.89 On the basis of this evidence, it does not appear to Ofcom that fixed wireless can currently be regarded as an effective substitute for loop-based or cable-based local access. Ofcom's preliminary conclusion is therefore that fixed wireless local access is not part of the relevant market under consideration in this review.
- 3.90 Furthermore, even from a forward looking perspective, Ofcom does not believe that circumstances are likely to change sufficiently over the 2 to 3 year period relevant to this review, particularly in terms of the availability and possible take-up of fixed wireless, to warrant a different conclusion at this point in time.
- 3.91 However, the costs of providing fixed wireless technology have fallen significantly in recent years. Moreover, there appears potential scope for fixed wireless to exploit developments in low cost WLAN technology, raising the possibility of greater convergence between fixed line and wireless options in the future. While this potential is unrealised at present, it does not provide a relevant constraint on line-based local access prices.
- 3.92 Ofcom's preliminary conclusion is therefore that fixed wireless local access is not currently part of the same wholesale local access market as loop-based and cable-based local access.
- 3.93 While, as noted above, the costs of providing fixed wireless technology have fallen significantly in recent years and further significant development is quite possible, Ofcom does not believe that such developments will materialise on a sufficient scale and with sufficient rapidity to affect wholesale market definition for the purposes of the current review. Nevertheless, over the longer term, fixed wireless may develop into a credible and effective alternative to fixed line access, and Ofcom will continue to monitor such developments.

Mobile

- 3.94 In principle, the use of mobile technology can provide a technical alternative to fixed local access, though mobile functionality is currently relatively limited. Substitution could occur directly, with a mobile connection replacing the fixed link between the end user and an operator's local equipment (e.g. a DSLAM at an MDF site) similar to fixed wireless access, or indirectly, with downstream mobile voice and data services substituting for similar services provided over fixed networks.
- 3.95 The downstream substitutability of fixed and mobile services at a wholesale level has been considered in the market reviews covering wholesale fixed narrowband services, wholesale broadband access, and mobile access and call origination services undertaken by Oftel/Ofcom. Those reviews have concluded that mobile and fixed services are not in the same markets. In other words, the profitability of a 5% to 10% increase in the price(s) of the relevant wholesale fixed service would not be defeated by substitution to mobile services. Ofcom similarly believes that the wholesale provision of mobile local access services would not constrain the profitability of a 5% to 10% increase in wholesale fixed local access prices.

¹¹ The DTI's *Achieve Best Practice in Your Business: Broadband* guideline, for instance, compares estimates of connection charges for wireless technologies in the range £200 to £400 to typical ADSL and cable modem connection charges of £50 and £30 respectively.

Moreover, Ofcom does not believe that this conclusion will change appreciably over the 2 to 3 year period relevant to this review.

- 3.96 Ofcom's preliminary conclusion is therefore that mobile local access is not part of the same relevant wholesale market as loop-based and cable-based local access provision.

Analogue and ISDN lines

- 3.97 The differences between analogue and ISDN lines (and private circuit local ends where these are delivered over copper) are concentrated in the equipment connected to either end of the local loop and in the supplementary services supplied. At the wholesale local access level, that is, in the local loop or analogous local access connection itself, there is no significant difference. Therefore Ofcom believes it is appropriate to define a single market for wholesale local access including lines which are used for analogue, ISDN and private circuit local ends.

Residential and business

- 3.98 Ofcom believes that there are plausible arguments both for and against defining separate wholesale local access product markets for business and residential use.
- 3.99 On the one hand, the loop and cable connections used for residential applications are essentially identical to those used for business use. In this respect, provision of the local access product is different to provision of exchange line services, where business and residential customers might be expected to have different demands for supplementary services.
- 3.100 On the other hand, the provision of local access is, by definition, an inherently localised activity. Therefore, to the extent that business and residential customers are located in distinct areas, an operator serving business customers might not have infrastructure in place at the right locations to be able to serve a sufficient proportion of residential customers to constrain any price increase. A similar argument could apply to a residential operator's ability to serve business customers.
- 3.101 Ofcom's view is that, on balance, it is appropriate to define a single wholesale local access market for supply to both residential and business customers. It does not intend to set different charges for wholesale local access to business and residential lines and so it could be argued that they are subject to a uniform pricing constraint.
- 3.102 In practice, Ofcom does not believe that the choice between a single and separate residential and business markets would affect the overall conclusions of its market analysis. The arguments set out in the sub-sections above apply more-or-less equally to both business and residential use. Moreover, the choice of market definition would not affect the conclusions of the market power assessment set out in Section 4.

Conclusion on relevant wholesale product market

- 3.103 In summary, Ofcom's preliminary view is that it is appropriate to define a relevant wholesale product market for loop-based and cable-based local access.

Forward look

- 3.104 Paragraph 3.1 of the Explanatory Memorandum accompanying the Commission's Recommendation states that because market analysis is forward-looking, markets are defined prospectively taking account of expected or foreseeable technological or economic developments over a reasonable horizon linked to the timing of the next market review.
- 3.105 Ofcom believes that if a change in the definition of the relevant product market occurs, it is most likely to arise because either fixed wireless or mobile local access services begin to exert an effective competitive constraint on loop-based and cable-based local access. However, as discussed above, Ofcom currently believes that it is unlikely that the strength of these constraints will change sufficiently greatly over the next 2 to 3 years to affect the relevant market definition appropriate for this review.

Wholesale geographic market

- 3.106 The geographic boundaries of the relevant market, like those of the product market, are defined by identifying all relevant competitive constraints.
- 3.107 The hypothetical monopolist test can be applied to geographic market definition, as well as to product market definition. Again, it is conventional to begin with a relatively narrowly defined hypothesised market. The profitability of a SSNIP by a hypothetical monopoly supplier of services in a particular geographic area would then be undermined if it induced:
- a sufficient switch of customer demand to suppliers outside the area; or
 - a sufficient supply-side response within the area from suppliers currently operating outside the area.
- 3.108 Since the provision of a local loop or cable connection to particular premises is an inherently local activity, there is little scope for direct demand-side substitution to loops offered elsewhere. By definition, a customer can only purchase a relevant loop or cable connection from a supplier who can provide a connection to that end user's premises. It follows too that the practical scope for supply-side substitution is likely to be limited to suppliers who have made infrastructure investments in the vicinity of the end user's premises.
- 3.109 Some overlap in the 'catchment' areas that can be served by the infrastructure at a given location may arise, with substitution then hypothetically possible for at least those consumers in the overlap between catchments. Where multiple overlaps of catchments arise in this way, chains of substitution may result in a single geographic market encompassing areas which are broader than indicated by direct substitution possibilities alone. Nevertheless, this mechanism is unlikely to result in an extensive broadening of the relevant market.
- 3.110 However, in the current context, this narrow approach to market definition may fail to capture adequately the competitive constraints operating on supply in a particular geographic area. Specifically, the hypothetical nature of the SSNIP test takes no account of the geographic pricing constraints faced by specific firms in reality.
- 3.111 Where firms choose, in practice, to adopt uniform pricing across local areas, local competitive pressures will have an impact only to the extent that they affect that single overall price. Moreover, to the extent that local factors do influence that price,

the effect will be transmitted beyond the particular area where the competitive pressure originally arose.

- 3.112 For some wholesale services, BT's charges are currently set by regulation at a level which does not vary with geography. In such cases, it cannot be automatically assumed that uniform pricing would continue in the absence of that regulation. Nevertheless, for other wholesale products, BT chooses to set uniform prices across its service area, even though it is not currently required to do so by regulation. This is the case, for example, for BT's DataStream wholesale broadband origination service, for which local access represents a significant component.
- 3.113 On this basis there appear to be strong grounds for believing that BT would implement geographically uniform prices for local access even in the absence of regulatory constraints. In this context, Ofcom believes that restricting attention to a narrowly defined geographic area is unlikely to identify all the sources of relevant competitive constraint affecting local access pricing in that particular area. Instead, a service-area wide perspective is appropriate.
- 3.114 There are a number of other factors which also support this conclusion. Firstly, customers purchasing wholesale local access are unlikely to do so to supply very small individual local areas but to supply services to customers on a broader geographic basis, creating pressure for tariffs that apply across wider geographic areas than a very local perspective might suggest. Second, a number of BT's and Kingston's own retail tariffs are required to be set uniformly across their service area.
- 3.115 It is significant, too, that even the cable operators, who are not themselves subject to regulatory constraints, have adopted uniform pricing throughout their service territories.
- 3.116 Further, the Competition Commission's 2000 analysis of the proposed merger between ntl and the cable business of Cable & Wireless is also informative.¹² In that case, a national player (BSkyB) was found to price its pay-TV services uniformly despite facing competition from the cable companies which varied from area to area, as each cable company operates in a different area and many areas have no cable provider at all. The Commission identified the relevant market as national in scope. An analogous structure holds in the wholesale local access market being reviewed here, with a national service provider (BT) again competing primarily with the cable companies.
- 3.117 Since BT does not operate a local access network in the Hull Area, the impact of its uniform pricing policy will not extend across to that area. Symmetrically, Kingston's uniform pricing constraint will not materially affect locations outside the Hull Area.
- 3.118 Ofcom's view is therefore that two distinct wholesale geographic markets are relevant for the purposes of the current review, namely:
- the UK excluding the Hull Area; and
 - the Hull Area.
- 3.119 Nevertheless, as with the retail geographic market definition considered above, Ofcom recognises that the broad UK geographic market is characterised, to some extent, by local characteristics including some variation in the degrees of competitive

¹² See *Competition Commission (2000): NTL Incorporated and Cable & Wireless Communications Plc: A report on the proposed acquisition*.

pressure. Such variations in competition within broadly defined geographic markets will be taken into account as part of the market power assessment and, where SMP is found, in the appraisal of appropriate remedies.

Conclusion on relevant wholesale geographic market

3.120 Ofcom's view is that the wholesale geographic markets relevant for the purposes of the current review are:

- the UK excluding the Hull Area; and
- the Hull Area.

Forward look

3.121 As set out in the retail market analysis, Ofcom does not believe that material developments with regard to geographic market definition will arise within the 2 to 3 year horizon relevant for the current review.

Conclusion on relevant market definition

3.122 Ofcom has provisionally concluded that the markets which are relevant to the current review are:

- wholesale local access in the UK excluding the Hull Area; and
- wholesale local access in the Hull Area.

The relationship between the market definition and the European Commission's Recommendation

3.123 In Section 2, it has been explained that Ofcom must take the utmost account of the Commission's SMP Guidelines and Recommendation.

3.124 The Commission has, in its Recommendation (point 11 of the Annex), defined the following as a relevant market in accordance with Article 15(3) of the Framework Directive:

"Wholesale unbundled access (including shared access) to metallic loops and sub-loops for the purpose of providing broadband and voice services."

3.125 This definition appears to include access to metallic loops supplied by cable operators but not to other physical media such as coaxial cable or fibre used by such operators to provide broadband services.

3.126 Ofcom has given careful consideration to the Commission's market definition. Given the substantial deployment of cable systems in the UK market and the competitive constraint, albeit currently indirect, this places on wholesale services offered by local loop providers, Ofcom considers it appropriate to include cable connections in the relevant product market. It considers that its market definition corresponds closely to that set out in the Recommendation, taking account of national circumstances.

The relationship between this market review and the Competition Act 1998 and Enterprise Act 2002 investigations

- 3.127 The economic analysis carried out in this consultation document is for the purposes of determining the relevant market(s) and whether an undertaking or undertakings have SMP in the relevant market(s). It is without prejudice to any economic analysis that may be carried out in relation to any investigation pursuant to the Competition Act 1998 (relating to the application of the Chapter I or II prohibitions or Article 81 or 82 of the EC Treaty) or the Enterprise Act 2002.
- 3.128 The fact that economic analysis carried out for a market review is without prejudice to future competition law investigations and decisions is recognised in Article 15(1) of the Framework Directive which provides that:
- "The recommendation shall identify...markets...the characteristics of which may be such as to justify the imposition of regulatory obligations...without prejudice to markets that may be defined in specific cases under competition law..."*
- 3.129 This intention is further evidenced in the European Commission's SMP Guidelines, which state:
- Paragraph 25: *"...Article 15(1) of the Framework Directive makes clear that the markets to be defined by NRAs for the purpose of ex ante regulation are without prejudice to those defined by NCAs and by the Commission in the exercise of their respective powers under competition law in specific cases." (This is repeated at paragraph 37)*
- Paragraph 27: *"...Although NRAs and competition authorities, when examining the same issues in the same circumstances and with the same objectives, should in principle reach the same conclusions, it cannot be excluded that, given the differences outlined above, and in particular the broader focus of the NRAs' assessment, markets defined for the purposes of competition law and markets defined for the purpose of sector-specific regulation may not always be identical."*
- Paragraph 28: *"...market definitions under the new regulatory framework, even in similar areas, may in some cases, be different from those markets defined by competition authorities."*
- 3.130 In addition, it is up to all communications providers to ensure that they comply with their legal obligations under all the laws applicable to the carrying out of their businesses. It is incumbent upon all operators to keep abreast of changes in the markets in which they operate, and in their position in such markets, which may result in legal obligations under the Competition Act 1998 (either relating to the Chapter I or II prohibitions or Article 81 or 82 of the EC Treaty) or Enterprise Act 2002 applying to their conduct.

Question 3.1: *Do you agree with the proposed market definitions?*

Question 3.2: *Do you agree that it is appropriate to define a single market for residential and business use?*

Question 3.3: *Is there evidence that might support alternative market definitions?*

Section 4

Market power assessment

Introduction

- 4.1 Section 45 of the Act details the various conditions that may be set under the new regime. Section 46 details those on whom conditions may be imposed. In relation to SMP services conditions, section 46(7) provides that they may be imposed on a particular person who is a communications provider or a person who makes associated facilities available and who has been determined to have significant market power in a “services market”, i.e. a specific market for electronic communications networks, electronic communications services or associated facilities. Accordingly, having identified the relevant market, Ofcom is required to analyse the market in order to assess whether any person or persons have significant market power as defined in section 78 of the Act (in line with Article 14 of the Framework Directive).
- 4.2 Under section 78(1) of the Act and Article 14 of the Framework Directive, SMP has been defined so that it is equivalent to the competition law concept of dominance. Specifically, the Framework Directive states that "An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers."
- 4.3 The Framework Directive and the Commission’s SMP Guidelines state that a market shall be deemed effectively competitive if no communications provider in that market, either individually or collectively, has SMP.
- 4.4 SMP may be held by only one company in the market (single dominance) or by more than one company together (collective dominance). The SMP assessment in this review focuses on single dominance as Ofcom does not believe that there is a realistic possibility that SMP is held by more than one company in the local access markets considered (since no more than one communications provider has a share of more than 10% of any of the markets defined, for example). As a consequence, none of the criteria to assess collective dominance will be reviewed further in this analysis.
- 4.5 The assessment of dominance focuses on assessing the strengths of three distinct sources of actual or potential competitive constraint, namely:
- existing competitors;
 - potential competition (i.e. the entry threat); and
 - countervailing buyer power.
- 4.6 Each of these factors is considered in turn below for each of the markets identified above.
- 4.7 In assessing whether any undertaking has SMP within these relevant markets, Ofcom has taken the utmost account of all relevant recommendations and guidelines

by the European Commission, including the Commission's SMP Guidelines, as well as Oftel's equivalent guidelines.

The wholesale local access market for the UK excluding the Hull Area

Existing competitors

4.8 At the present time, only BT and the cable operators, ntl and Telewest, have any significant presence in the supply of the wholesale local access services defined above in the UK excluding the Hull Area.

Shares of supply

4.9 Market share information provides a summary measure of the historic competitive effectiveness of the various operators on the market in question. An analysis of the shares of wholesale supply of the relevant local access connections achieved by the various operators (including operators' supplies to their own downstream operations as well as to other wholesale customers) shows that BT retains an overwhelming share, at around 85%, of relevant connections for the UK excluding the Hull Area.

4.10 Moreover, these market shares have remained stable for some time, as the evidence set out in the table below confirms. This suggests that BT's current market position has endured, and will continue to do so over the timeframe relevant to this review.

4.11 This market share information in itself provides a strong indication that BT possesses market power in the relevant market.

Table 4.1 Local access connection volume shares for the UK excluding the Hull Area

	02/03 Q1	02/03 Q2	02/03 Q3	02/03 Q4	03/04 Q1	03/04 Q2
BT	85%	85%	85%	85%	85%	85%
ntl	8%	8%	9%	8%	8%	8%
Telewest	7%	7%	7%	7%	7%	7%

Source: Ofcom estimates from operator data

4.12 The inferences to be drawn from market share information would not be affected if separate markets were defined for residential and business wholesale local access.

4.13 BT holds a share of residential local access connections of more than 80%. In comparison, each of the cable operators, which are the only significant alternatives to BT as providers of relevant local access supply, accounts for no more than 10% of residential connections, calculated on a market-wide basis.

Table 4.2 Residential local access shares for the UK excluding the Hull Area

	02/03 Q1	02/03 Q2	02/03 Q3	02/03 Q4	03/04 Q1	03/04 Q2
BT	83%	83%	83%	84%	84%	83%
ntl	10%	10%	10%	9%	9%	10%
Telewest	7%	7%	7%	7%	7%	7%

Source: Ofcom estimates from operator data

4.14 For the supply of loop-based and cable-based local access connections to business, BT's share is even higher, as shown in the table below. Again, the cable operators are the largest alternative providers.

Table 4.3 Business local access shares for the UK excluding the Hull Area

	02/03 Q1	02/03 Q2	02/03 Q3	02/03 Q4	03/04 Q1	03/04 Q2
BT	88%	87%	87%	87%	87%	87%
ntl	3%	3%	3%	2%	2%	3%
Telewest	5%	6%	6%	6%	6%	6%
Other	4%	5%	5%	5%	5%	5%

Source: Ofcom estimates from operator data

- 4.15 For the reasons set out in the discussion of market definition above, Ofcom believes that a relatively wide geographic perspective is appropriate, reflecting the reality of competition and pricing constraints. However, one consequence of this is that, since each of the cable operators is active in only a subset of the overall relevant geographic market, these shares will tend to understate their strength in those areas. At the same time, the scope for purchasers to switch to cable is limited to those areas. Nevertheless, data published by the cable operators indicates that they provide voice and data services to around a third of homes passed. This implies that even for the cable operators' franchise areas, BT retains a share of around two thirds of lines supplied, though local pockets of higher cable penetration arise.

Potential supply capability

- 4.16 The share data set out above provides information on the proportion of local access connections actually supplied by each of the major operators. However, in principle, such shares may understate the ability of an operator to compete to supply local access connections, and therefore the capacity of that operator to exert effective competitive pressure in the market. In particular, even where customers do not choose to obtain services from cable operators, the presence of a cable offering may constrain BT's wholesale pricing of local access products. A measure of the number of end-user premises that could be connected by the cable operators therefore provides an upper-bound on the extent of their competitive presence.
- 4.17 Telewest's Q4 2003 data indicates that its network passes around 4.9 million homes, while ntl's Q4 2003 results indicate that its network passes 8.4 million homes (of which around 6.8 million homes are marketable for broadband). The cable operators' networks are therefore capable of providing access to around 50% of residential premises throughout the UK. Consequently, cable-based access is an option for a substantially greater number of residential customers than are currently served by the cable operators.
- 4.18 Moreover, the cable operators experienced annualised churn for the final quarter of 2003 of around 13%, providing support for the view that a wider group of customers than currently served has found cable an attractive option at some point in time at least. Equally, BT presumably retains the capacity to provide service to those customers who have switched to the cable companies or other operators.
- 4.19 Nevertheless, despite the fact that the cable operators have made a largely sunk investment in infrastructure capable of serving a substantial number of residential premises, and are able to offer a package of conventional telephony, broadband and TV services, they currently serve substantially less than 50% of the available customer base. Furthermore, there is no evidence to suggest that this position will improve significantly over the period considered by this review.

Financial constraints

- 4.20 Given the financial difficulties recently experienced by both ntl and Telewest, their ability to access the finance that would be required to secure a substantially higher share of accessible customers, let alone extend their networks to provide greater coverage, is questionable, over the short term at least.

Conclusion on existing competition

- 4.21 Consequently, Ofcom is of the view that the constraint provided by the cable operators, which is anyway available in only 50% of BT's service area, will not be sufficient to constrain BT's market power during the period relevant to this review.

Entry and barriers to entry

- 4.22 Even where there is limited actual competition in a market, the operators in that market may be subject to effective constraint where there are ready opportunities for entry in response to any attempt to exploit market power.
- 4.23 Indeed, the European Commission states at paragraph 78 of its SMP Guidelines that the existence of a dominant position cannot be established on the sole basis of large market shares. At paragraph 80 of the SMP Guidelines, the Commission notes that a finding of dominance depends on an assessment of ease of market entry.
- 4.24 In carrying out its SMP assessment, Ofcom has therefore given consideration to the existence of barriers to entry in the relevant market.

Required scale of investment

- 4.25 The establishment of a new wholesale local access service would entail very significant capital investment. In particular, it is likely to require major investment in the provision of suitable ducting to house cables or wires, as well as providing the cable or wire itself. Given the scale of the work required to duplicate even a portion of BT's extensive network, implementation would take a considerable period of time. As such, Ofcom does not believe that entry of this sort could achieve sufficient scale to undermine BT's market power within the 2 to 3 year horizon relevant to this market review.

Sunk costs

- 4.26 The costs associated with investment in local infrastructure investment are largely sunk, i.e. irreversible. They cannot be recovered if the local access provider were to exit the market. Such sunk costs represent a significant barrier to entry.
- 4.27 The presence of sunk costs is especially relevant where existing operators have established networks offering plentiful capacity. In such cases, first-mover advantages are likely to be decisive. In the absence of regulation, such operators could be expected to respond to the threat of new entry and the prospect of underutilised capacity by reducing access prices where entry occurs. Any rational entrant contemplating investment would therefore base its decisions on likely post-entry prices, which might be substantially below prevailing price levels.
- 4.28 In those areas already served by the cable operators, as well as BT, it seems unlikely that any new entry into the provision of wholesale local access would be contemplated in the absence of technological developments which would be

substantial enough to undermine the competitive capabilities of the existing local access providers.

- 4.29 For those areas not currently served by cable, this fact alone suggests that new entry is unlikely to be an attractive proposition. Even if BT's ability to respond to competitive entry were constrained by regulation in the short-term, the long-term success of a non-niche entrant on a significant scale would likely bring more intense competition once SMP-based regulation of BT was withdrawn.

Economies of density

- 4.30 A local loop network, such as BT's, is made up of individual twisted copper pair connections between each household and a MDF. As such, there are few economies of scale in the provision of the loops themselves. However, other than over the last few metres to a particular site, the connection loops for several premises will share housing or ducting. Equally, density is critical to the economic provision of backhaul, establishing onward connection to a wider communications network. The connection infrastructure at the MDF too will be shared by many individual connections, while economies of density in the provision of maintenance services also arise.
- 4.31 Consequently, significant economies of density will operate in the establishment and operation of wholesale local access services. The economics of market entry therefore dictate that a wholesale local access service would need to provide high penetration of any area served to be viable.
- 4.32 It is significant to note that the cable operators have not sought to extend their networks to areas of lower population density, presumably because of the reduced opportunities for economies of density to be realised.

Benefits to ubiquity

- 4.33 Significant advantages are likely to accrue to a wholesale local access operator who can offer an ubiquitous service. Firstly, such a service operator is likely to benefit from scale economies in terms of overheads, marketing, and procurement. Secondly, wholesale and business customers in particular are likely to find it more attractive to negotiate terms for access across a broad geographic area with a single operator.

Vertical linkages

- 4.34 BT is a significant player at all stages of the vertical chain from wholesale local access provision through to retailing of narrowband and broadband services. This provides BT with distinct competitive advantages.
- 4.35 A wholesale local access operator will need either a direct or indirect mechanism for acquiring customers. This implies either that it develops its own retailing operations, or that it is able to secure demand from downstream operators with a sufficiently extensive customer base. BT is currently the major provider of retail services to end-users. As such it is in a strong position to consolidate the market position of its own local access business. It is unlikely to switch its demand for wholesale local access to a rival provider.

Economies of scope

- 4.36 BT is able to benefit from economies of scope due to the breadth of its operations.

- 4.37 Moreover, when the cable operators established their local infrastructure networks, they were able to do so offering a combination of pay-TV and telephony services. This allowed these operators to market a differentiated, bundled offering to end users and also to benefit from substantial economies of scope in delivering services. The Siamese cable connections utilised by the cable operators combine metallic pairs used for narrowband applications with co-axial cables which deliver TV and broadband.
- 4.38 Despite these advantages, the cable operators have not extended their networks to pass more than 50% of residential homes. Moreover, even in those areas where they are active, the cable operators have experienced difficulties delivering a commercially viable business.
- 4.39 Given this, it appears unlikely that an operator competing to provide broadband services only, for example, would succeed in developing a competitive local access network in the absence of a significant technological shift.

Conclusions on new entry

- 4.40 Ofcom's preliminary conclusion is that it is unlikely that a substantial new entrant into the market for wholesale local access can be expected to materialise over the foreseeable future. The possibility that the cable operators' might become more effective competitors within their existing franchise areas appears a much more likely source of increased pressure on BT.
- 4.41 More generally, the development of fixed wireless technologies appears a more likely route for new entry. However, as the analysis of market definition makes clear, Ofcom believes that a constraining effect from fixed wireless technology is unlikely to develop within the time horizon considered in the current review.

Countervailing buyer power

- 4.42 Paragraph 78 of the European Commission's SMP Guidelines states that one of the criteria which may be relevant in assessing SMP is the absence of or low countervailing buying power.
- 4.43 BT's ability to exploit its market position as a supplier of wholesale local access may be constrained by countervailing buyer power. However, for this to be the case, purchasers of wholesale local access must be able to credibly threaten to switch their demand away from BT.
- 4.44 In practice, by far the most substantial purchaser of wholesale local access services from BT is BT itself.¹³ It does not seem likely to Ofcom that BT's own downstream operations would utilise any buyer power they possess to undermine BT's market position at the upstream level.
- 4.45 While some wholesale customers, such as the ISPs, might be able to threaten to switch their service provision to using cable-based access, the extent of such switching, even if it were undertaken, would be limited, given BT's significant presence in the downstream markets, and the constraint that the cable networks can reach at most around 50% of homes. The potential demand for wholesale local

¹³ BT's overall share of retail local access connections is only slightly less than its wholesale local access share. This suggests that BT itself accounts for a very high proportion of the purchases of its own wholesale local access products.

access from buyers other than BT and the cable operators is not currently of the scale to support the development of a new local access network.

Forward Look

- 4.46 Given the relevant market analysis set out above, a change in the competitive conditions would require:
- a radical increase in the competitive appeal of the services provided by the cable operators;
 - the emergence of a credible new entrant in the supply of wholesale local access services; or
 - a transformation in the buyer side of the market.
- 4.47 While the growing importance of internet and general broadband demand may provide a significant stimulus to the market, it seems unlikely that this will induce a sufficient transformation of the relevant competitive landscape over the 2 to 3 year timeframe considered in the current review.

Conclusion on SMP for the UK excluding the Hull Area

- 4.48 Ofcom's preliminary conclusion is that BT holds a position of SMP in the wholesale local access market for the UK excluding the Hull Area, and that this position is unlikely to change over the timeframe relevant for this review.

The wholesale local access market for the Hull Area

Existing competitors

- 4.49 Ofcom understands that Kingston supplies around 100% of the relevant local access connections within the Hull Area. In other words, competitor supply is negligible. As such, Kingston faces no effective constraint from existing competitors.

Entry and barriers to entry

- 4.50 In general, the characteristics of the wholesale local access market as they apply across the UK excluding the Hull Area apply equally to the Hull Area too. The fundamental cost economics of establishing the local access infrastructure which connects to a particular concentrator site are essentially equivalent. In particular, the sunk nature of the investment concerned and the importance of economies of density carry across. In the Hull Area it is Kingston that possesses the decisive first-mover advantages held by BT elsewhere.
- 4.51 There are three potentially relevant differences in considering the possibility of entry in the Hull Area, namely:
- the market size is significantly smaller than that covering the rest of the UK;
 - the cable operators have not entered the Hull Area market to date;
 - BT is a potential entrant in the Hull Area.

- 4.52 As noted above, while the investment required to duplicate Kingston's local access network would be much smaller than required to duplicate BT's, the fundamental local cost economics remains the same.
- 4.53 from the rest of the UK suggests that the cable operators would be unlikely to provide an effective constraint on Kingston even if they were to enter the Hull Area market. It is unlikely that cable operators would consider establishing a network throughout the Hull Area, even if they were to enter some parts of the market. Moreover, the financial experience of the major cable network operators elsewhere suggests that any new entry is unlikely to be attractive.
- 4.54 BT does represent a very substantial potential entrant and already offers local access services in areas adjacent to the Hull Area. While BT may have infrastructure at the boundaries of the Hull Area which could be extended to provide connections within the Hull Area, such incremental expansion is unlikely to be substantial, and therefore is unlikely to constrain any market power held by Kingston. Under prevailing conditions, Ofcom believes it is unlikely that BT would find it attractive to establish a network which substantially duplicates that of Kingston across the Hull Area, given the latter's first-mover advantages.

Countervailing buyer power

- 4.55 Kingston is the only purchaser of wholesale local access, as defined above, within the Hull Area. Consequently, there is no independent buyer capable of constraining Kingston's market power in the wholesale local access market. Moreover, Kingston's downstream operations have no incentive to exert downward pressure on its local access charges where these might also benefit competitors. Forward Look
- 4.56 As noted above, a relevant change in the competitive conditions of the wholesale local access market in the Hull Area would require either the emergence of a credible new entrant in the supply of such services or a transformation in the buyer side of the market. Ofcom does not believe that such a shift in the relevant competitive landscape will be brought about over the 2 to 3 year horizon appropriate to this review.

Conclusion on SMP for the Hull Area

- 4.57 4.57 Ofcom's preliminary conclusion is that Kingston possesses SMP in the supply of wholesale local access in the Hull Area, and that this position is unlikely to change over the timeframe relevant to this review.

Question 4.1: *Do you agree with the SMP criteria used?*

Question 4.2: *Do you agree on the assessments of SMP?*

Question 4.3: *Do you have any comments on future developments that might affect these assessments?*

Technical areas – Co-location

Introduction

- 4.58 Co-location is the provision of space at a MDF site that enables a competing operator to locate equipment in order to connect to the dominant provider's network in order to purchase LLU services.
- 4.59 Physical co-location can include hostels (walled rooms shared by a number of operators), mini-hostels (rooms for less than five operators), bespoke walled rooms and co-mingling (physical co-location where an operator's equipment is fitted and operated in the same area as the dominant provider could or does house its own equipment, without a permanent barrier between them).
- 4.60 Ofcom considers that the provision of co-location includes the provision of ancillary services that are reasonably necessary for the use of co-location such as access to an MDF site and the provision of power.

Basis for regulation

- 4.61 In order to utilise LLU services, operators must be able to locate their equipment near to or at the relevant MDF site. While operators could deploy a distant location solution, this requires operators to find suitable accommodation near to the MDF building, in order to minimise the length of the tie cable required. This is not feasible in many cases. Therefore, Ofcom considers that the provision of co-location is critical to enable operators to purchase LLU services.
- 4.62 Ofcom has assessed the market for wholesale local access services and considers that BT has SMP in the wholesale local access market in the UK excluding the Hull Area and that Kingston has SMP in the wholesale local access market in the Hull Area.
- 4.63 To achieve an overall solution, Ofcom considers that it is also necessary to require and regulate the provision of co-location, in the absence of which, BT and Kingston would have no incentives to provide, or charge cost-based prices for, co-location. As operators must, in most cases, purchase co-location in order to purchase other LLU services, excessive prices for co-location would have the same effect as charging excessive prices for other regulated LLU services and would undermine the remedies that are being proposed by Ofcom.
- 4.64 The Commission has not identified a market for co-location in its Recommendation on relevant product and service markets. However, the third paragraph of section 3.3 of the Explanatory Memorandum to the Recommendation states that:

"...In dealing with lack of effective competition in an identified market, it may be necessary to impose several obligations to achieve an overall solution. For instance, it may often be the case that adjacent or related remedies are applied to technical areas as part of the overall obligation that addresses SMP on the analysed market. If specific remedies are thought to be necessary in a specific narrow technical area, it is not necessary or appropriate to identify each technical area as a relevant market in order to place obligations in that area. An example would be where an obligation to provide unbundled access to the local loop is complemented by related obligations concerning access to co-location facilities."

4.65 Ofcom considers that co-location should properly be considered as a technical area as set out by the Commission.

Question 4.4: *Do you agree that it is necessary and appropriate to regulate co-location as part of a package of remedies to address BT's and Kingston's market power in the wholesale local access market?*

Section 5

Approach to regulatory remedies

Legal framework

- 5.1 Section 87(1) of the Act provides that, where Ofcom has made a determination that a person is dominant in a particular market, it must set such SMP services conditions as it considers appropriate and as are authorised in the Act. This implements Article 8 of the Access and Interconnection Directive.
- 5.2 Paragraphs 21 and 114 of the Commission's SMP Guidelines state that NRAs must impose one or more SMP conditions on a dominant provider and that it would be inconsistent with the objectives of the Framework Directive not to impose any SMP conditions on an undertaking which has SMP. Thus, Ofcom is under an obligation to impose at least one appropriate SMP condition where SMP is confirmed.
- 5.3 The Act (sections 45-50 and 87-92) sets out the obligations that Ofcom can impose if it finds that any undertaking has SMP. Sections 87 to 92 implement Articles 9 to 13 of the Access Directive and Articles 17 to 19 of the Universal Service Directive. The obligations relevant to this market review are, in particular:
- the provision of Network Access;
 - no undue discrimination;
 - transparency;
 - cost recovery; and
 - cost accounting and accounting separation.

Communications Act tests

- 5.4 Section 4 of the Act sets out the Community requirements on Ofcom which flow from Article 8 of the Framework Directive. In considering which, if any, SMP services conditions to propose, Ofcom has taken account of all of these requirements. In particular, Ofcom has considered the requirement to promote competition and to secure efficient and sustainable competition for the benefit of consumers.
- 5.5 Section 3 of the Act imposes general duties on Ofcom, in carrying out its functions, to further the interests of citizens in relation to communications matters and of consumers in relevant markets, where appropriate by promoting competition. Ofcom considers that its proposed remedies fulfil these general duties under section 3 of the Act, having regard to the outcome expected to be achieved by such proposals. Section 3 also sets out certain matters to which Ofcom must have regard in performing its general duties. In considering which remedies to impose, Ofcom has had regard to these matters, in particular to the matters in section 3(4) of the Act, including the desirability of promoting competition in relevant markets, and the interests of consumers in respect of choice, price, quality of service and value for money, as required by section 3(5) of the Act. In this context, Ofcom also notes that section 3(6) of the Act requires it to prioritise its duties under section 4 of the Act, if these conflict with any of its general duties under section 3 of the Act.

- 5.6 As well as being appropriate (see section 87(1)), each SMP condition must also satisfy the tests set out in section 47 of the Act, namely that each condition must be:
- objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;
 - proportionate as to what the condition is intended to achieve; and
 - in relation to what it is intended to achieve, transparent.
- 5.7 It is Ofcom's view that the proposed remedies satisfy the relevant requirements specified in the Act and relevant EU Directives, as detailed above. This view is explained in detail in the following sections.

Joint ERG/EC approach on appropriate remedies in the new regulatory framework

- 5.8 The European Regulators Group and the Commission have recently jointly issued a document entitled Joint ERG/EC approach on appropriate remedies in the new regulatory framework, 23 April 2004, setting out practical guidance on the selection of appropriate remedies to be imposed on players with SMP. Ofcom participated fully in the preparation of that document and believes that the proposals set out below are fully compatible with the guidance provided by the ERG and the Commission.

Proposed remedies

- 5.9 Sections 6 to 8 set out Ofcom's proposed remedies in response to the preliminary findings of SMP set out in Section 4. The proposed conditions are attached to the draft Notification at Annex 1.
- 5.10 Ofcom welcomes views on each of the proposed remedy options in this consultation and in particular welcomes views on their likely impact.

Question 5.1: *What do you consider is the impact of each of the proposed options for remedies?*

Section 6

General remedies

Aims of regulation

- 6.1 A failure to regulate BT and Kingston in the wholesale local access market is likely to affect the development of competition in the provision of downstream (intermediate or retail) services. In the absence of regulation, BT and Kingston would have little incentive to provide wholesale services. Therefore, it is necessary to impose remedies to ensure the development of competition in the provision of downstream services, which, in turn, will ensure that the benefits of competition in terms of lower prices, wider choice of supplier and higher quality are available to consumers.
- 6.2 Ofcom consider that it is appropriate to apply regulation at the wholesale level as this addresses both SMP issues in the wholesale local access market and promotes competition in downstream markets. This is consistent with the requirement that NRAs take measures which meet the objective of encouraging efficient investment in infrastructure and promoting innovation (see Article 8(2) of the Framework Directive and section 4 of the Act). The regulation of wholesale markets encourages competing providers to purchase wholesale products and combine them with their own networks (or the networks of other providers) to create products that compete with those of BT and Kingston downstream.

Options for regulation

- 6.3 Ofcom has considered the following options for regulation:
- no ex ante regulation; and
 - general remedies.
- 6.4 In relation to the imposition of general remedies, Ofcom has considered the following options for SMP services conditions:
- Option 1: Requirement to provide Network Access on reasonable request;
 - Option 2: Requirement not to unduly discriminate;
 - Option 3: Basis of charges (i.e. cost orientation);
 - Option 4: Requirement to publish a reference offer;
 - Option 5: Requirement to notify charges and terms and conditions;
 - Option 6: Requirement to notify technical information;
 - Option 7: Quality of service; and
 - Option 8: Requests for new Network Access.

No ex-ante regulation

- 6.5 Recital 27 of the Framework Directive states that ex ante regulation should only be imposed where there is not effective competition and where competition law remedies are not sufficient to address the problem. Ofcom has, therefore, considered

the option of no ex-ante regulation and whether it would be sufficient to rely on competition law alone to address market failures in the wholesale local access market, while noting that Ofcom is under an obligation to impose at least one appropriate SMP condition where SMP is confirmed (as explained above).

Characteristics of communications markets in general

6.6 Generally, the case for ex-ante regulation in communications markets is based on the existence of market failures which, by themselves or in combination, mean that competition might not be able to become established if the regulator relied solely on its ex-post competition law powers established for dealing with more conventional sectors of the economy. Therefore, it is appropriate for ex-ante regulation to be used to address these market failures and entry barriers that might otherwise prevent effective competition from becoming established. By imposing ex-ante regulation that promotes competition, it may be possible to reduce such regulation as markets become more competitive and place greater reliance on ex-post competition law.

6.7 The European Commission has stated, in paragraph 3 of section 3.2 of the Explanatory Memorandum to its Recommendation, that ex-ante regulation is justified:

"[...] where the compliance requirements of an intervention to redress a market failure are extensive (e.g. the need for detailed accounting for regulatory purposes, assessment of costs, monitoring of terms and conditions including technical parameters etc) or where frequent and/or timely intervention is indispensable, or where creating legal certainty is of paramount concern.[...]."

6.8 This is the case for the wholesale local access market where BT and Kingston's persistent SMP leads to a risk of excessive prices and a need for intervention to set detailed terms and conditions for access to their networks.

Market dominance

6.9 Although some communications markets have become increasingly competitive over time, this is from a position in which most were controlled by a legacy monopoly operator. The increase in competition that has occurred inevitably reflects the imposition of ex-ante regulation. The legacy operators, BT and Kingston, remain, in Ofcom's view, dominant in the wholesale local access market and it is, therefore, appropriate to continue to impose ex-ante regulation in this market.

Network externality effects

6.10 The network externality effect, which means that the value of a network to its users increases more than proportionately with the number of subscribers, gives the large incumbent networks of BT and Kingston a great advantage over potential competitors. For example, the value of a large network might be little affected if it refused to deliver calls to or accept calls from a much smaller entrant, but the latter might find it impossible to attract subscribers as a result. As a consequence, this imbalance enables BT and Kingston to exclude rivals from the market by refusing to interconnect with them or doing so only on onerous terms.

6.11 General ex-post competition law powers may not be sufficient to address the effects of the network externality. This is because the network externality effect generally reinforces a dominant position and under general competition law there is no prohibition on holding a position of dominance in itself. Therefore, it is more appropriate to address the impact of network externality through ex-ante obligations.

Entry barriers

- 6.12 Economies of scale result from the fact that a high proportion of the costs of a local access network are fixed whilst marginal costs (the costs of an extra unit of output) are relatively low. Economies of scale means that a large network will tend to have lower average costs than a smaller one. Successful entry by new network operators will therefore require significant investment and most of the costs associated with this will be sunk costs (i.e. they will not be recoverable if the entrant decides to exit the market). Significant sunk costs create an asymmetry in the market between BT and Kingston and potential entrants that the former could exploit to deter entry, such as signalling to a potential entrant that post-entry market prices would be too low to cover sunk costs.

Conclusion

- 6.13 Where markets are effectively competitive, ex-post competition law is sufficient to deal with any competition abuses that may arise. However, without the imposition of ex-ante regulation to promote actively the development of competition in a non-effectively competitive market, it is unlikely that ex-post general competition law powers will be sufficient to ensure that effective competition becomes established. For example, this is because ex-post powers prohibit abuse of dominance rather than the holding of a dominant position. Ex-ante regulation is necessary to reduce the level of market power in a market, thereby encouraging effective competition to become established.
- 6.14 For the reasons outlined in Section 4, Ofcom considers that the wholesale local access markets identified in Section 3 are not effectively competitive. Therefore, Ofcom considers that the imposition of ex-ante regulation in these markets is justified.

Question 6.1: *Do you agree that, in general terms, ex-ante regulation is justified in the wholesale local access market and in respect of co-location?*

General remedies

Option 1: Requirement to provide Network Access on reasonable request

- 6.15 Section 87(3) of the Act authorises the setting of SMP services conditions requiring the dominant provider to provide Network Access as Ofcom may from time to time direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for Network Access are made and responded to and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions. When considering the imposition of such conditions in a particular case, Ofcom must have regard to the six factors set out in section 87(4) of the Act, including, inter alia, the technical and economic viability of installing other competing facilities and the feasibility of the proposed Network Access.
- 6.16 As the market analysis in Sections 3 and 4 has shown, considerable investment is needed to provide local access networks in competition with BT and Kingston. It may be economically viable to build local access networks in some areas. However, the level of investment that would be needed to achieve the same extensive coverage as BT and Kingston is prohibitive to entry into this market. Therefore, a requirement on BT and Kingston to provide access to their local access network is appropriate as it

facilitates competition in downstream markets by enabling competing providers to compete without the need to invest in a ubiquitous network.

- 6.17 Ofcom proposes that the obligation be framed in terms of the dominant provider being required to provide Network Access to its network to Third Parties on reasonable request. Network Access is a fairly broad term and includes interconnection services. It is defined in sections 151(3) and (4) of the Act. Third Party has been defined as a person providing a public electronic communications network or a public electronic communications service. Accordingly, providers of non-public electronic communications networks or non-public electronic communications services will not be entitled to Network Access under the condition.
- 6.18 Where communications providers already provide services using other BT wholesale products, such as IPStream and Datastream, Ofcom considers that this obligation obliges BT to migrate customers from these services to services within the local access market on fair and reasonable terms, conditions and charges.
- 6.19 Under this condition, Ofcom has the power to make directions. It is envisaged that this power will be used, where appropriate, to deal with issues relating to specific forms of Network Access or the particular terms and conditions on which Network Access is provided. This condition requires the dominant provider to comply with any such directions. Any contravention of a direction may therefore result in a contravention of the condition itself and thus subject to enforcement action under sections 94-104 of the Act.
- 6.20 Further guidance as to how Ofcom proposes to apply the Network Access obligation can be found in Imposing access obligations under the new EU Directives, September 2002 (the "Access Guidelines") and Interconnection of public electronic communications networks, May 2003 (the "Interconnection Guidelines"). These can be found at http://www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/acce0902.htm and http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/intercon0503.htm respectively.
- 6.21 It is proposed that the condition applies to the wholesale local access market in which BT and Kingston have been found to have SMP and in respect of co-location.

Communications Act tests

- 6.22 Ofcom considers that the condition (Conditions FA1 and FB1 for BT and Kingston, respectively, at Annex 1) meets the tests set out in the Act.
- 6.23 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for retail consumers by facilitating the development of competition in downstream markets.
- 6.24 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is objectively justifiable, in that it encourages greater access to BT's and Kingston's networks and therefore promotes competition to the benefit of consumers. It does not unduly discriminate, as it is proposed on both BT and Kingston and no other operator has SMP in these markets. It is proportionate, since it is targeted at addressing the market power that BT and

Kingston hold in these markets and does not require them to provide access if it is not technically feasible or reasonable. Finally, it is transparent in that it is clear in its intention to ensure that BT and Kingston provide access to their networks in order to facilitate competition.

- 6.25 Ofcom has also taken into account all the factors set out in section 87(4). In particular, the economic viability of building a local access network to achieve ubiquitous coverage, that would make the provision of Network Access unnecessary, and the need to ensure that requests for access are reasonable and therefore feasible to provide.

Question 6.2: *Do you agree that a requirement on BT and Kingston to provide Network Access on reasonable request should be imposed?*

Option 2: Requirement not to unduly discriminate

- 6.26 Section 87(6)(a) of the Act authorises the setting of an SMP services condition requiring the dominant provider not to unduly discriminate against particular persons, or against a particular description of persons, in relation to matters connected with the provision of Network Access.
- 6.27 Where providers with SMP are vertically integrated, like BT and Kingston, there are incentives for them to provide wholesale services on terms and conditions that discriminate in favour of their own downstream activities in such a way as to have an effect on competition. In particular, there are incentives to charge competing providers more for wholesale services than the amount charged to their own retail activities thereby increasing the costs of competing providers and providing themselves with an unfair competitive advantage. They might also provide services on different terms and conditions, for example with different delivery timescales, which would disadvantage competing providers and in turn consumers.
- 6.28 A requirement not to unduly discriminate is intended, principally, to prevent dominant providers from discriminating in favour of their own retail activities and to ensure that competing providers are placed in an equivalent position to their retail arms.
- 6.29 A prohibition of discrimination might have disadvantages if it prevented discrimination that was economically efficient or justified. However, the proposed condition provides that there should be no undue discrimination. Oftel's Access Guidelines note that the application of a condition prohibiting undue discrimination does not mean that there should not be any differences in treatment between undertakings, rather that any differences should be objectively justifiable, for example, by differences in underlying costs of supplying different undertakings. The Access Guidelines, however, also note that there is a rebuttable presumption that a vertically integrated SMP operator discriminating in favour of its own retail activities or between its own different activities would have an effect on competition (paragraph 3.9). It should be noted that Ofcom intends to consult on non-discrimination guidelines later on in 2004.
- 6.30 Ofcom therefore proposes to apply a non-discrimination obligation in the wholesale local access markets in which BT and Kingston have been found to have SMP and in respect of co-location. This accords with Recital 17 of the Access and Interconnection Directive, which states that non discrimination obligations ensure that undertakings with market power do not distort competition, in particular where they are vertically integrated undertakings that supply services to undertakings with whom they compete in downstream markets.

Communications Act tests

- 6.31 Ofcom considers that the condition (Conditions FA2 and FB2 for BT and Kingston, respectively, at Annex 1) meets the tests set out in the Act.
- 6.32 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefit of consumers by preventing BT and Kingston from leveraging their market power into downstream markets.
- 6.33 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. Ofcom considers that the condition is objectively justifiable, in that it provides safeguards to ensure that competitors, and hence consumers, are not disadvantaged by BT or Kingston discriminating in favour of their own retail activities or between its own different activities. It does not unduly discriminate, as it is proposed for both BT and Kingston and no other operator has SMP in these markets. It is proportionate since it only prevents discriminatory behaviour that is undue. Finally, it is transparent in that it is clear in its intention to ensure that BT and Kingston do not unduly discriminate. In addition, Oftel has given guidance as to how it might treat undue discrimination in its Access Guidelines and, as noted above, Ofcom intends to consult on specific non-discrimination guidelines later on in 2004.

Question 6.3: *Do you agree that a requirement not to unduly discriminate should be imposed on BT and Kingston?*

Option 3: Basis of charges

- 6.34 Section 87(9) authorises the setting of SMP service conditions imposing rules regarding the recovery of costs and cost orientation on dominant providers.
- 6.35 In a competitive market, the pricing of services on the basis of the commercial judgements of individual companies could be expected to deliver cost-reflective pricing. However, where competition cannot be expected to provide effective pricing constraints, ex-ante regulation is desirable to prevent excessive pricing. Such intervention should also have as its objective the aim of moving the market towards a position where effective competition is realised. Where the competition problem arises at an upstream stage in the production chain, it is likely to be appropriate to regulate the pricing of wholesale inputs, in order to allow effective competition to develop in downstream markets, rather than control downstream prices themselves.
- 6.36 In markets where competition is not effective, dominant providers are likely to set excessive prices, in order to maximise their profits and, where the dominant provider is vertically integrated, to increase the costs of competing providers. Higher wholesale charges are likely to mean higher retail prices and competing providers being less able to compete with the vertically dominant provider in the retail market. In the long-term this may result in market exit.
- 6.37 For the above reasons, Ofcom believes that it is appropriate to regulate the charges that the dominant operator levies for the supply of wholesale local access services. Ofcom considers that there are two plausible approaches that could be used as the basis for setting these charges, namely:

- retail minus; or
- long run incremental cost plus a reasonable return on capital and an appropriate mark-up for the recovery of common costs.

Retail minus

- 6.38 This pricing approach does not set the absolute level of the charges, but instead requires that a sufficient margin exists between each regulated charge and the relevant downstream price to allow the necessary additional costs of providing the downstream product to be covered. This enables other communications providers to purchase the regulated services and compete effectively against the dominant provider's downstream arm by ensuring that no margin squeeze takes place.
- 6.39 The retail minus approach should ensure that no discrimination takes place between the downstream arm of the regulated firm and competing providers, while also allowing the regulated firm to set the level of charges according to its commercial judgment. Therefore, if correctly applied, this pricing rule allows efficient entry at the retail level as, in order to compete with the dominant provider and cover its costs, a competing provider would have to have lower costs for the parts of the service it provides itself.
- 6.40 In addition, retail minus charges provide the dominant operator with some incentive to minimise costs at the upstream level since, if it reduced these costs, the gain thus obtained would not automatically be reflected in the charges set on a retail minus basis.
- 6.41 However, since this approach does not control the absolute level of the charges, it does not ensure that the charges are cost-oriented. Whilst a set of charges based on a retail minus approach might ensure that only providers who could use wholesale local access services more efficiently than the dominant provider would enter the retail markets, it could also serve to protect the dominant provider's revenues rather than exposing them to competition. Moreover, a retail minus approach does not ensure that end customers will face cost-reflective retail charges.
- 6.42 A retail minus approach is generally used in two sets of circumstances:
- where market power is not entrenched and effective competition is likely to develop; or
 - where the market is new and innovative and there could be a risk of deterring investment.
- 6.43 In the former case, retail minus is preferred to a cost based approach to pricing because, as competition grows stronger, competition would ensure that charges reflect costs. Relying on competition to avoid excessive charging by SMP operators, where possible, is preferable to a regulator's assessment of cost-based charges.
- 6.44 In the case of a new and innovative market, retail minus is preferable to a cost based approach because it is difficult to correctly assess the reasonable return on capital that should be included in cost-based charges. If charges were based on the regulator's estimate of costs, there is a risk that they may not provide a sufficient return for innovative and risky investments and that this may adversely affect incentives to invest and innovate, thereby slowing the development of competition. Hence, Ofcom considers that it is preferable not to attempt to set cost based charges when the market is new and innovative.

Efficient component pricing rule

- 6.45 Even if the circumstances for adopting a retail minus approach were satisfied, it would not be appropriate for setting charges for fully unbundled local loops. Since a fully unbundled loop could be used to provide both narrowband and broadband services, the relevant retail price basis from which the wholesale charge should be derived would involve a combination of retail prices for voice and DSL services. However, a characteristic of BT's current prices for retail narrowband services is that the revenue earned from residential line rentals covers all the incremental costs of access, but makes only a modest contribution to the recovery of the common costs of access and calls. The majority of these common costs are recovered through call prices¹⁴. This implies that retail narrowband prices are unbalanced.
- 6.46 A retail minus based local loop rental charge set using an unbalanced retail line rental would therefore not allow BT to recover all its common costs. It might also permit inefficient entry downstream as operators with higher (call) costs than BT could find it profitable to offer call services because BT's call prices are set to cover the common costs that are not recovered through BT's line rental. Under these circumstances, the efficient component pricing rule ("ECPR") offers an approach which addresses these issues.
- 6.47 This approach is based on retail prices, but takes account of the revenues a dominant provider makes from all the retail services carried over a line and from the provision of the line itself. If these revenues, net of costs, were fully reflected in the charge for a fully unbundled local loop, a dominant provider would be indifferent between using the local loop to provide its own services and providing the local loop to another operator. The ECPR would thus be likely to ensure that only providers who could use local loops to offer retail services more efficiently than the dominant provider would purchase a fully unbundled local loop.
- 6.48 However, in addition to the general drawbacks of using a retail minus approach for LLU charges, the ECPR would require the setting of a separate charge for each fully unbundled local loop, to take into account the specific profits the dominant provider makes on each line. In addition, this charge would have to be changed whenever the profitability of that line varied, which would be impractical.

Long run incremental cost plus a mark-up for common costs

- 6.49 Charges for regulated services can also be set so as to reflect long run incremental costs. This approach consists of setting the charges on a cost-oriented basis, where the costs included in the charges are:
- the forward-looking long run incremental costs efficiently and necessarily incurred by the regulated firm to provide the service to which the charge refers;
 - an appropriate mark-up to allow the recovery of common costs¹⁵; and

¹⁴ The current retail price control (in place until 2006) allows BT to raise line rental charges to cover the possible shortfall in common cost recovery, as call prices are driven down by competition. (For more details see Annex E in the Price Control Review published in March 2000.)

¹⁵ The costs incurred in the production of two or more products can be classified as:

- incremental costs - those costs which are incurred directly as a consequence of producing a specific good or service (i.e. there is an unambiguous relationship between these costs and the good or service in question); and
- common costs – those costs which arise in the production of two or more goods or services, and which are not incremental to the production of any specific one of these goods or services.

- a reasonable return on the capital employed.

This approach is usually referred to as LRIC+.

- 6.50 Long run incremental costs may be defined in general as the costs that are caused in the long run by the provision of a defined increment of output. It can also be seen as the costs that the regulated firm would avoid if it decided not to provide the regulated services any longer, taking a long run perspective.
- 6.51 Ideally for economic efficiency, charges should be set in a way which encourages buyers to take account of the resource costs of their purchasing decisions. The charges that prevail in a competitive market have this feature. In a regulated environment, LRIC+ based charges are the ones that most accurately reflect the resources consumed by the provision of services and, thus, correspond more closely to the charges that would occur in a fully competitive market. LRIC+ based charges also encourage efficient entry at the network level because they reflect replacement costs, which are the costs that would be faced by a new entrant.
- 6.52 LRIC+ is a widely used regulatory costing technique. Many NRAs in Europe and the FCC in the US employ this approach.
- 6.53 LRIC + charges, however, are not appropriate when the market is new and innovative, as it would be difficult for the regulator to assess the appropriate return to allow on capital employed and to forecast the correct utilisation factor of the assets. Setting incorrect charges, particularly if they are set too low, may deter efficient investment decisions and slow down the development of competition.

Preliminary conclusions on approach for setting charges

- 6.54 Ofcom's preliminary view is that the most appropriate basis for setting the charges for the services in the wholesale local access market in which BT and Kingston have been found to have SMP and in respect of co-location is LRIC+.
- 6.55 Ofcom considers that retail minus is not the appropriate methodology to be adopted in this market, since this approach does not determine the absolute level of the charges. Specifically, Ofcom is of the view that the market for wholesale local access is not moving sharply towards a competitive structure. Rather, competition is developing very slowly and Ofcom believes BT and Kingston will continue to enjoy a persistent position of market power for some time. Hence, competitive forces cannot be relied upon to maintain downward pressure on wholesale local access prices.
- 6.56 Further, Ofcom believes that this is an established market where there is sufficient certainty about the appropriate rate of return BT should earn (see paragraph 7.39 below) for Ofcom to be able to set a reliable cost-based charge without affecting the incentives to invest.
- 6.57 Ofcom believes that, since competition in this market is still limited and this is an established market, the main concern is that BT or Kingston might exploit their position of SMP to earn excessive profits. LRIC+ based charges correspond more closely to the charges that would occur in a fully competitive market and also encourage efficient entry at the network level.
- 6.58 Therefore, Ofcom is currently of the view that the charges for wholesale local access and co-location should be cost based and that LRIC+ is the most appropriate methodology.

Communications Act tests

- 6.59 Ofcom considers that the condition (Conditions FA3 and FB3 for BT and Kingston, respectively, at Annex 1) meets the tests set out in the Act.
- 6.60 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefit of consumers by ensuring that charges for wholesale services are set at a level that enable operators to compete downstream.
- 6.61 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. Ofcom considers that the condition is an objectively justifiable and proportionate response to the extent of competition in the markets analysed, as it ensures that BT and Kingston are unable to exploit their market power and enables competitors to purchase services at charges that will enable them to develop competing services to those of BT and Kingston in downstream markets to the benefit of consumers, whilst at the same time allowing BT and Kingston a fair rate of return that they would expect in competitive markets. It does not unduly discriminate, as it is proposed for both BT and Kingston and no other operator has SMP in these markets. Finally, it is transparent in that it is clear in its intention to ensure that BT and Kingston sets charges on a LRIC+ basis.
- 6.62 Ofcom considers that the tests in section 88 have been met. As noted above, there is a risk that, in situations where SMP is persistent, pricing will be distorted and above the competitive level, as dominant providers are likely to want to charge excessive prices in order to maximise profits and increase the costs of competing providers. The condition is appropriate in order to promote efficiency and sustainable competition and provide the greatest possible benefits to end users by enabling providers who compete with BT and Kingston in downstream markets to buy wholesale services at levels that might be expected in a competitive market.
- 6.63 The extent of investment of the dominant operator has been taken into account as set out in section 88(2), as the obligation provides for an appropriate return on the capital employed to be included in the charges.

Question 6.4: *Do you agree that LRIC+ is the most appropriate approach for setting charges given the characteristics of the wholesale local access market?*

Transparency

- 6.64 Section 87(6)(b) of the Act authorises the setting of SMP services conditions which require a dominant provider to publish all such information, and in such manner as Ofcom may direct, for the purpose of securing transparency. Section 87(6)(c) of the Act authorises the setting of SMP services conditions requiring the dominant provider to publish, in such manner as Ofcom may direct, the terms and conditions on which it is willing to enter into an access contract. Section 87(6)(d) also permits the setting of SMP services conditions requiring the dominant provider to include specified terms and conditions into the reference offer. Finally, section 87(6)(e) permits the setting of SMP services conditions requiring the dominant provider to make such modifications to the reference offer as may be directed from time to time.
- 6.65 This section considers the following transparency requirements:

- requirement to publish a reference offer;
- requirement to notify charges;
- requirement to notify technical information; and
- transparency as to quality of service.

Option 4: Requirement to publish a Reference Offer

- 6.66 A requirement to publish a reference offer (“RO”) has two main purposes, namely, to assist transparency for the monitoring of potential anti-competitive behaviour and to give visibility to the terms and conditions on which other providers will purchase wholesale services. This helps to ensure stability in markets and, without it, incentives to invest might be undermined and market entry be less likely.
- 6.67 The publication of a RO will potentially allow for speedier negotiations, avoid possible disputes and give confidence to those purchasing wholesale services that they are being provided on non-discriminatory terms. Without this, market entry might be deterred to the detriment of the long-term development of competition and hence consumers.
- 6.68 The condition requires the publication of a RO and specifies the information to be included in that RO (set out below) and how the RO should be published. It prohibits the dominant provider from departing from the charges, terms and conditions in the RO and requires it to comply with any directions Ofcom may make from time to time under the condition. The condition only applies where the dominant provider provides Network Access. Therefore, Kingston will only need to publish a RO as and when it provides Network Access in the wholesale local access market.
- 6.69 The condition also requires the dominant provider to publish information on the use of network components in providing wholesale local access services. Network components for wholesale local access services will be reviewed in the work stream referred to in paragraph 7.35 of the statement entitled *The regulatory financial reporting obligations on BT and Kingston Communications in markets where SMP has been demonstrated*, April 2004. Following this review, it is likely that Ofcom will direct changes to the current network component list to include appropriate network components for wholesale local access services. Once this anticipated direction is finalised, the obligation to publish this information will be more meaningful.
- 6.70 The published RO must set out such matters as:
- a clear description of the services on offer;
 - terms and conditions including charges and ordering, provisioning, billing and dispute resolution procedures;
 - information relating to technical interfaces and points of interconnection; and
 - conditions relating to maintenance and quality (service level agreements (“SLAs”) and service level guarantees (“SLGs”));
 - the amount applied to network components;
 - the location of MDF sites;
 - the availability of co-location;
 - conditions for site access; and

- safety standards.

- 6.71 Ofcom currently does not intend to consider the detail of SLAs and SLGs as part of this market review. However, Ofcom welcomes views on this and will consider specifying the contents of SLAs or SLGs should sufficient evidence be provided to demonstrate that this is best dealt within this market review.
- 6.72 It is proposed that the condition applies to the wholesale local access market in which BT and Kingston respectively have been found to have SMP and in respect of co-location.

Communications Act tests

- 6.73 Ofcom considers that the condition (Conditions FA4 and FB4 for BT and Kingston, respectively, at Annex 1) meets the tests set out in the Act.
- 6.74 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits of consumers by ensuring that providers have the necessary information to allow them to make informed decisions about purchasing wholesale local access services in order to compete in downstream markets.
- 6.75 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is objectively justifiable in that it requires that terms and conditions are published in order to encourage competition and provide stability in markets. It is proportionate, as only information that is considered necessary to allow providers to make informed decisions about competing in downstream markets is required to be provided. It does not unduly discriminate as it is applied to both BT and Kingston and no other provider has SMP in these markets. Finally, it is transparent in that it is clear in its intention to ensure that BT and Kingston publish details of their wholesale local access offerings.

Question 6.5: *Do you agree that a requirement to publish a reference offer should be imposed on BT and Kingston?*

Question 6.6: *Do you consider that Ofcom should specify the contents of the SLA or SLG for LLU services? Please provide evidence in support of your response.*

Option 5: Requirement to notify charges and terms and conditions

- 6.76 Notification of changes to services at the wholesale level can further assist competition by giving advanced warning of charge changes to providers purchasing wholesale services in order to compete with the dominant provider in downstream markets. This is important to ensure that competing providers have sufficient time to plan for such changes, as they may want to restructure the prices of their downstream offerings in response to charge changes at the wholesale level. Notification of changes therefore helps to ensure stability in markets and without it, incentives to invest might be undermined and market entry made less likely.
- 6.77 Notification of charges has certain disadvantages, particularly in markets where there is some competition. It can lead to a 'chilling' effect where other communications providers follow BT's or Kingston's downstream prices rather than act dynamically to

set competitive prices. On balance, however, Ofcom does not consider that this consideration undermines the imposition of this obligation. In the wholesale local access market, where SMP remains persistent, there is a high level of reliance by competitors on the provision of wholesale services to enable them to compete in downstream markets. The advantages of notifying charges are therefore likely to outweigh any potential disadvantages.

- 6.78 It is proposed that the condition applies in the wholesale local access market in which BT and Kingston have been found to have SMP and in respect of co-location.

Communications Act tests

- 6.79 Ofcom considers that the condition (Conditions FA5 and FB5 for BT and Kingston, respectively, at Annex 1) meets the tests set out in the Act.
- 6.80 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits of consumers by ensuring that providers have the necessary information sufficiently in advance to allow them to make informed decisions about competing in downstream markets.
- 6.81 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is objectively justifiable, in that there are clear benefits from the notification of changes in terms of ensuring that providers are able to make informed decisions within an appropriate time frame about competing in downstream markets. It is proportionate, as 90 days is considered the minimum period necessary to allow competing providers to plan for changes to existing Network Access and 28 days for new Network Access. It does not unduly discriminate as it is proposed for both BT and Kingston and there are no other providers with SMP in these markets. Finally, it is transparent in that it is clear in its intention to ensure that BT and Kingston provide notification of changes to their charge and terms and conditions.

Question 6.7: *Do you agree that BT and Kingston should be required to notify changes to charges and terms and conditions?*

Question 6.8: *Do you agree that changes to existing Network Access should be notified 90 days in advance and that charges, terms and conditions for new Network Access should be notified 28 days in advance?*

Option 6: Requirement to notify technical information

- 6.82 Under the proposed requirement to publish a RO, BT and Kingston are required to publish technical information. However, advance notification of changes to technical terms and conditions is important to ensure that providers who compete in downstream markets are able to make effective use of the wholesale services provided by BT and Kingston. It is therefore proposed that changes to technical information must be published in advance so that competing providers have sufficient time to prepare for them. For example, a competing provider may have to introduce new equipment or modify existing equipment to support a new or changed technical interface. Similarly, a competing provider may need to make changes to their network in order to support changes in the points of network access or configuration.

- 6.83 Technical information includes new or amended technical characteristics, including information on network configuration, locations of the points of Network Access and technical standards (including any usage restrictions and other security issues). Relevant information about network configuration includes information about the function and connectivity of points of access, for example, the connectivity of exchanges to end users and other exchanges. Technical information also includes the information provided currently in the Network Information Publication Principles (“NIPP”) and Access Network Facilities (“ANF”) agreement and will also include any other additional information necessary to make use of services provided in the wholesale local access market.
- 6.84 The condition requires the notification of new technical information within a reasonable time period but not less than 90 days in advance of providing new wholesale services or amending existing technical terms and conditions. Ofcom considers that 90 days is the minimum time that competing providers will need to modify their network to support a new or changed technical interface or support a new point of access or network configuration.
- 6.85 Ofcom considers that longer periods of notification may be appropriate in certain circumstances. For example, if BT or Kingston were to make a major change to their technical terms and conditions, a period of more than the 90 day minimum notification period may be necessary.
- 6.86 For other major changes, such as the move to Next Generation Networks (“NGNs”), Ofcom considers that consultation with industry through the Network Interoperability Consultative Committee (“NICC”) would continue to be the best way for BT to meet its obligations in relation to the provision of Network Access on fair and reasonable terms. Therefore, Ofcom considers that the onus is on BT to ensure that it provides longer notification and where appropriate, consults, on major changes so that it complies with the proposed requirement to provide Network Access on reasonable request as well as this condition.
- 6.87 The condition is proposed in the wholesale local access market in which BT and Kingston have been found to have SMP and in respect of co-location.

Communications Act tests

- 6.88 Ofcom considers that the condition (Conditions FA6 and FB6 for BT and Kingston, respectively, at Annex 1) meets the tests set out in the Act.
- 6.89 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and encouraging service interoperability for the purpose of securing efficient and sustainable competition and the maximum benefits for consumers by ensuring that providers have sufficient notification of technical changes to the local access network to enable them to compete in downstream markets.
- 6.90 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is objectively justifiable in that it enables providers to make full and effective use of Network Access to be able to compete in downstream markets. It does not unduly discriminate as it is proposed for both BT and Kingston and no other operator has SMP in these markets. It is proportionate in that 90 days is the minimum period that Ofcom considers is necessary to allow competing providers to modify their networks. Finally, it is transparent in that it is

clear in its intention that BT and Kingston notify technical information and the timeframe for such notification.

Question 6.9: *Do you agree that a requirement to notify technical information should be imposed on BT and Kingston?*

Option 7: Transparency as to quality of service

- 6.91 In relation to the requirement not to unduly discriminate, there is the potential for vertically integrated providers, such as BT and Kingston, to provide a quality of service to competing providers that is not equivalent to that provided to itself. This may disadvantage competing providers and give the provider with SMP an unfair advantage.
- 6.92 It may be possible to address this concern by requiring a dominant provider to provide wholesale services to competing providers using the same operational systems processes and interfaces that it uses to supply itself. However, the high cost of replacing legacy systems means that this will not always be practical, or indeed proportionate.
- 6.93 Instead, Ofcom considers that BT should publish data relating to the quality of service it delivers to itself and to other providers. By providing transparency, BT's competitors should be able to identify where potential discrimination exists. Ofcom considers that this will best be achieved through publication of a set of Key Performance Indicators ("KPIs").
- 6.94 The overall objective of KPI reporting is not to set an absolute standard for BT's performance, of the type that would normally be contracted in a SLA. The KPIs are not intended to be contractually binding commitments, nor should they be linked to compensation payments. The intention is that they will give an indication of BT's overall performance and ensure that the relative performance BT provides to its competitors is equivalent to the service offering it provides to itself. Ofcom recognises there may be practical difficulties in identifying an appropriate comparator, either because BT does not currently measure its own performance or because there may not be direct comparators available (although there may be similar processes involved).
- 6.95 Ofcom proposes that a quality of service condition should be imposed on BT but does not propose to set any specific KPIs relating to wholesale local access services at this time. The condition would allow Ofcom to specify a list of KPIs should it be appropriate to do so in the future. Ofcom does, however, expect BT to publish KPIs for those elements of performance that are key to the development of LLU, including provision and fault repair. For example, difficulties experienced in pre-ordering and ordering processes may result in increased transaction costs and act as a barrier to entry. Ofcom considers it important that competing providers are able to process orders effectively, which is likely to involve an automated ordering process, particularly if they are providing significant service volumes on a competitive basis.
- 6.96 Ofcom believes it is in the interests of all relevant parties to agree a set of KPIs relating to LLU services with BT, without the need for further regulatory intervention. Ofcom is, however, seeking views on both the efficacy of the current reporting process and the suitability of the selected KPIs to meet those desired objectives. The background to and problems identified with the current reporting process are outlined in Annex 3. Ofcom will take those views into account when assessing the potential

benefits that would arise from further regulatory intervention. These may include increased transparency, more timely provision of data, and a more comprehensive data set. Those benefits would need to be compared with the potential extra costs BT might incur in meeting those reporting requirements. Clearly, there would need to be sufficient volumes of transactions to ensure that the data was statistically meaningful.

- 6.97 The quality of service condition is proposed in the wholesale local access market in which BT has been found to have SMP and in respect of co-location.

Kingston

- 6.98 Ofcom does not propose that Kingston should be subject to this requirement because Kingston's supply of services in the wholesale local access market is of insufficient volume for the publication of KPI data to be statistically meaningful.

Communications Act tests

- 6.99 Ofcom considers that the condition (Condition FA7 at Annex 1) meets the tests set out in the Act.
- 6.100 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefit of consumers by ensuring that BT provides an equivalent quality of service to providers competing with it in downstream markets as it provides to itself.
- 6.101 Section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is objectively justifiable because the requirement is intended to ensure that there is no undue discrimination in the quality of service provided. The condition is proportionate because at this time Ofcom does not consider it appropriate to set any specific KPIs but rely on the industry process currently in place. Finally, it is transparent in that it is clear in its intention to publish data on quality of service.
- 6.102 Although an equivalent condition is not proposed for Kingston, it does not unduly discriminate as it is only appropriate to impose such a condition where there is sufficient demand for a wholesale service such that the data provided will be statistically meaningful. This is currently not the case in respect of Kingston.

Question 6.10: *Do you agree that a transparency as to quality of service requirement should be imposed on BT?*

Question 6.11: *Do you consider that Ofcom should specify KPIs in respect of LLU services? If so, what KPIs should Ofcom include and what would be suitable comparators for those KPIs to demonstrate that BT is providing an equivalent level of service? Please provide justification for your response.*

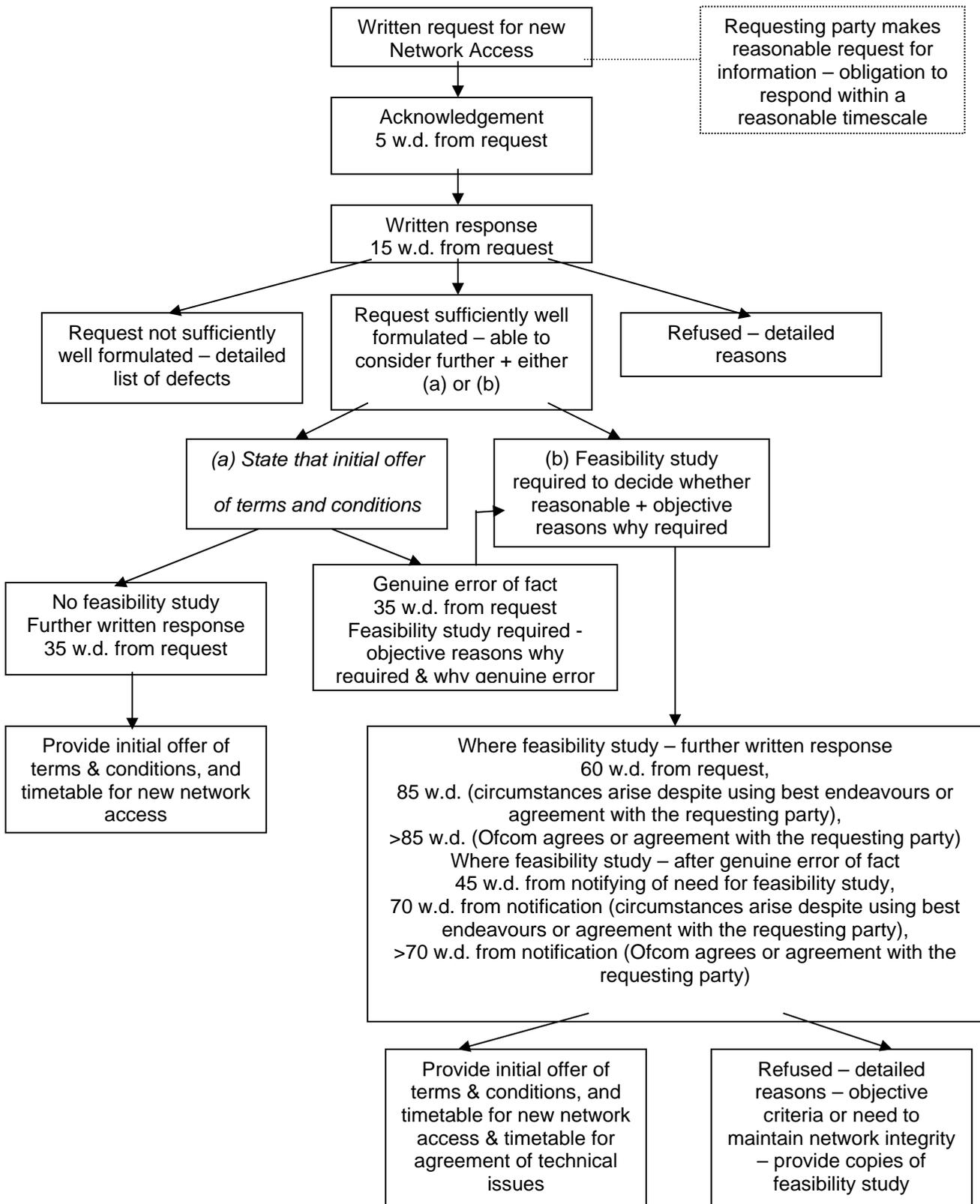
Option 8: Process for dealing with requests for new products

- 6.103 Other communications providers need clarity and certainty about the process for requests for new Network Access otherwise known as the statement of requirements ("SOR") process. Clarity as to necessary information for the purposes of making a request for new Network Access should speed up the SOR process to the benefit of

communications providers that require wholesale inputs from BT. An improved process will also enable BT to set a reasonable standard for requests and reject inadequate requests. It should also assist with the timely resolution of disputes, since the nature of the dispute should be clearer. Accordingly, Ofcom considers that ex ante regulation of BT's SOR process is appropriate.

- 6.104 Ofcom considers that the process should apply to modifications of existing Network Access as well as to completely new forms of Network Access. Ofcom would not, however, expect the process to apply to requests for standard Network Access products offered by BT but where the requesting provider does not already have the product. Ofcom also notes that requests for modifications of existing Network Access are likely to be less complex than requests for entirely new forms of Network Access and should be dealt with relatively quickly.
- 6.105 The regulated process set out is designed to accompany the obligation for BT to meet all reasonable requests for Network Access. The requirement to follow the process applies in relation to some modifications to existing forms of Network Access, such as requests for a new pricing structure or the provision of certain billing information. However, the process would not cover general requests for modifications, not associated with specific requests for Network Access, such as requests to modify general contractual terms.

6.106 A summary of the condition is as follows (a detailed explanation of this condition is set out in Annex 4):



- 6.107 The condition will apply to the wholesale local access market in which BT has been found to have SMP and in respect of co-location.

Kingston

- 6.108 Ofcom does not propose that Kingston should be subject to this condition because the level of demand for new Network Access in the Hull Area is insufficient for this condition to be appropriate or proportionate.

Communications Act tests

- 6.109 Ofcom considers that the proposed condition (Condition FA8 at Annex 1) meets the tests set out in the Act.
- 6.110 This condition is proposed pursuant to section 87(3) and 87(5) of the Act. Specifically, under section 87(5)(a) Ofcom considers that the provisions of this condition will help to secure fairness and reasonableness in the way in which requests for Network Access are made and responded to, by adding clarity and robustness to the process. In addition, under section 87(5)(b) it considers that the provisions will help to secure that the obligations contained within the general condition to provide Network Access are complied with, within the reasonable periods and at the times required by this condition.
- 6.111 Ofcom has considered the matters set out in section 87(4). In particular, under section 87(4)(d) it considers that it is fair and reasonable to propose this condition in the interests of effective competition in the long term, as improvements to the process for making requests for new Network Access will ensure that communications providers are able to make effective use of BT's network in competition with BT.
- 6.112 Ofcom has also considered the test for setting conditions set out in section 47 of the Act, namely that this condition is objectively justifiable, does not unduly discriminate, and is proportionate and transparent. Ofcom considers that the condition meets these tests. In particular, it is objectively justifiable in that it ensures BT has a reasonable process for dealing with requests for new Network Access to the benefit of communications providers that require Network Access from BT. It does not discriminate unduly against BT because BT has been found to have a position of SMP in this market and is therefore able to exploit this position to the potential detriment of its competitors both in this market and in downstream markets. Ofcom does not consider that the obligation should be proposed for Kingston since there is not the same level of demand for Network Access in the Hull Area. The condition is proportionate since without it being put in place, BT's competitors would be less likely to make effective use of BT's network. Furthermore, it is transparent in its intention to ensure that BT has a reasonable process for dealing with requests for new Network Access and in setting out what this process should be.
- 6.113 Finally, Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, Ofcom considers that the provisions will help secure efficiency and sustainable competition for the maximum benefit of consumers by enabling other communications providers to make effective use of BT's network in order to offer their own downstream products in competition with BT.

Question 6.12: *Do you agree that a requirement specifying the process for dealing with requests for new products should be imposed on BT?*

Section 7

Local loop unbundling

Introduction

- 7.1 Further to the remedies proposed in Section 6, this section considers imposing on BT specific requirements in relation to the provision of LLU services.
- 7.2 LLU is a process by which the dominant provider's local loops are physically disconnected from its network and connected to another communications provider's network. This enables competing providers partly or wholly to lease a customer's access line and provide voice and/or data services directly to end users over that access line. LLU services include the following:
- metallic path facilities / fully unbundled local loop
 - the provision of access to a competing provider to the copper wires from the customer premises to a BT MDF that covers the full available frequency range, including both narrowband and broadband channels, allowing that competing provider to provide the customer with voice and/or data services over such copper wires;
 - shared metallic path facilities / shared access
 - the provision of access to a competing provider to the copper wires from the customer premises to a BT MDF that allows the competing provider to provide the customer with broadband services (including voice-over-broadband) while BT continues to provide the customer with conventional narrowband communications;
 - internal tie cables
 - the provision of links to a competing provider that connect the local loop to the equipment of a competing provider within a BT MDF site;
 - external tie cables
 - the provision of links to a competing provider that connect the local loop to the equipment of a competing provider outside a BT MDF site;
 - site access
 - the provision of access to a competing provider to BT's MDF sites in order for that competing provider to install and operate equipment within those MDF sites;
 - co-location
 - the provision of space at a BT MDF site that enables a competing provider to locate equipment within that MDF site in order to connect to BT's network and purchase LLU services from BT;
 - co-mingling
 - a type of co-location where a competing provider's equipment is fitted and operated in the same area as BT could or does house its own equipment, without a permanent barrier between them;
 - power
 - the provision of power to a competing provider at a MDF site that enables a competing provider to run its equipment at that MDF site; and
 - ancillary services the provision of which is reasonably necessary for the use of the services listed above.

- 7.3 Ofcom does not consider that sub-loop unbundling, a partial metallic path facility or local loop, should be included currently in the list of LLU services. Sub-loop unbundling may be a relevant service in the future and Ofcom considers that the requirement on BT to provide Network Access on reasonable request will be sufficient to ensure that BT provides sub-loop unbundling should a reasonable request be made.

Aims of regulation

- 7.4 The local access network remains one of the least competitive segments of communications networks overall. As noted in Section 4, BT's market share of the wholesale local access market in the UK excluding the Hull Area is around 85%. There are also significant entry barriers to providing a local access network and most competition comes from cable operators whose geographic reach extends to 50% of the population only and is therefore limited in scope. The provision of LLU services is aimed at stimulating competition in the provision of broadband services, in the absence of network build, and at enhancing competition in areas with only limited local access competition. Although there are other wholesale products that provide competing providers with access to BT's local access network in order to provide downstream broadband services, LLU services are important in that they allow competing providers to differentiate their product offerings to a greater extent and provide higher bandwidth services, a better range of applications and improved service levels.

Current impact of LLU

- 7.5 BT has been required to offer fully unbundled loops since August 2000, the charges for which were determined in December 2000 and rolled-over in March 2002. BT has also been required to offer shared access since December 2000, the charges for which were determined in October 2001. In addition, Oftel issued a number of determinations between 2001 and 2003 covering LLU charging and non-charging issues.
- 7.6 Despite regulation, take-up in the UK has been limited, with only around 11,000 unbundled lines. This is divided roughly 60:40 between fully unbundled loops and shared access. Although LLU was initially used primarily to provide services to businesses, the balance between business and residential is now more even.
- 7.7 Ofcom recognises that in relation to both take-up and the level of charges, the UK has fallen some way behind the UK's most successful EU counterparts.
- 7.8 A comparison of unbundled loop rental and connection charges compiled by the Commission in 2003 indicated that UK charges were significantly above EU-wide averages. For shared access arrangements, in particular, the UK connection charge was more than twice the EU average, while the UK rental charge was over 50% higher than the EU average. The UK charges were over three times more than those for the countries setting the lowest shared access charges.
- 7.9 The proportion of incumbent operator lines that have been unbundled in the UK is relatively low, at around 100 times less than the EU average, though this average is driven by the level of unbundling in a few countries only, notably Germany.¹⁶ In this respect, the relative success of BT's own wholesale DSL services (DataStream and IPStream products) in the UK is likely to be relevant. While broadband penetration of

¹⁶ As of January 2004, Germany accounted for approximately 50% of all unbundled lines in the EU. The majority of these lines are used for narrowband applications only.

the general population in the UK lags significantly behind the EU front-runners, at around 5.3 lines per 100 individuals, it is only somewhat lower than the EU average (6.0%). However, LLU accounts for a lower proportion of all broadband lines in the UK than in any other EU Member State.

- 7.10 Annex 5 contains a more detailed comparison of take-up and charges in Europe.
- 7.11 The French experience especially offers an indication of the potential for take-up of LLU to accelerate rapidly. At the beginning of March 2004, there were around 360,000 unbundled loops in France, an increase of around 90,000 from the beginning of the year. This contrasts with a figure of only 3,000 French unbundled lines at the beginning of 2003. This acceleration has been driven primarily by an expansion in shared access, for which charges are currently around £50 for connection and £14 per year for rental. This compares to £117 for connection and £53 for rental in the UK.
- 7.12 International comparisons should be treated with some caution. For instance, higher take-up of LLU in other countries may be explained by the absence of alternative infrastructure and alternative wholesale products, such as bitstream access, while differences in prices may be due to fundamental cross-country differences in operating environments and the costs that result. However, Ofcom intends to examine fully the case for LLU in the UK using experiences in other countries to inform its analysis. Ofcom considers that LLU has a significant part to play in establishing competitive broadband markets and is therefore committed to ensuring that appropriate regulation is put in place to provide the most positive environment for the success of LLU.

Requirement to provide LLU services

- 7.13 The proposed LLU condition requires BT to provide LLU services as soon as reasonably practicable on reasonable terms to all communications providers who reasonably request such services. The condition provides Ofcom with a specific power to issue directions and requires the dominant provider to comply with any such directions. Any contravention of a direction may therefore result in a contravention of the condition itself and thus be subject to enforcement action under sections 94 to 104 of the Act.

Kingston

- 7.14 Ofcom has not been provided with any evidence to suggest that there is currently reasonable demand for Kingston to provide LLU services. Therefore, Ofcom does not consider that it would be reasonable or proportionate to impose a specific requirement on Kingston to provide LLU services at this time.
- 7.15 However, in Section 6, Ofcom has proposed that Kingston be required to provide Network Access on reasonable request. Ofcom considers that this is sufficient to ensure that Kingston provides LLU services should a reasonable request be made in the future.

Communications Act tests

- 7.16 Ofcom considers that the condition (Condition FA9 at Annex 1) meets the tests set out in the Act.

- 7.17 Ofcom has considered its duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefit of retail consumers by enabling providers to compete in downstream narrowband and broadband markets.
- 7.18 Section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is objectively justifiable, in that it relates to the need to ensure that competition develops to the benefit of consumers. LLU services are aimed at stimulating competition in the provision of broadband services and at enhancing competition in areas of limited local access competition. Although the condition is only imposed on BT, it does not unduly discriminate, as the obligation on Kingston to provide Network Access on reasonable request is sufficient to ensure that Kingston provides LLU services should a reasonable request be made. The condition is proportionate, in that it is necessary to stimulate competition but is not unduly burdensome on BT. Finally, it is transparent in that it is clear in its intention to ensure that BT provides LLU services.
- 7.19 In addition, the Director has taken into account the factors set out in section 87(4) and, in particular, the economic viability of service providers building an alternative direct access network and the feasibility of providing LLU services.

Question 7.1: *Do you agree that BT should be required to provide LLU services?*

Determination of charges

- 7.20 Ofcom considers that it is appropriate to determine charges for specific LLU services in order to constrain BT's ability to set excessive charges that could hinder the development of competition.
- 7.21 Ofcom is considering setting charges for the following specific LLU services:
- metallic path facilities/fully unbundled local loop – rental, connection and disconnection;
 - shared metallic path facilities/shared access – rental, connection, disconnection and conversion to a fully unbundled loop;
 - migration from Datastream/IPStream to fully unbundled local loops;
 - migration from Datastream/IPStream to shared access;
 - internal tie cables – rental, connection and jointing;
 - external tie cables – rental and connection;
 - pull through for external tie cables; and
 - power.
- 7.22 Ofcom has not been provided with any evidence to suggest that it is necessary to set charges for any services other than those listed above but would welcome views on this. It should be noted that the LRIC+ requirement applies to all services within the wholesale local access market and in respect of co-location, which should ensure that the charges for these services are cost oriented.

- 7.23 At this stage, Ofcom does not have sufficient information about the costs of providing the LLU services listed above to be able to propose specific charges. However, Ofcom intends to put forward proposed charges and/or detailed charging principles for these services in its second consultation in August 2004.

Question 7.2: Do you agree that charges should be set for the following LLU services:

- metallic path facilities/fully unbundled local loop – rental, connection and disconnection;
- shared metallic path facilities/shared access – rental, connection, disconnection and conversion to a fully unbundled loop;
- migration from Datastream/IPStream to fully unbundled local loops;
- migration from Datastream/IPStream to shared access;
- internal tie cables – rental, connection and jointing;
- external tie cables – rental and connection;
- pull through for external tie cables; and
- power.

Question 7.3: Do you consider that Ofcom should set charges for services in addition to those listed above?

LLU product specification

- 7.24 Ofcom is currently intending to set charges on the basis of existing LLU product specifications. BT's current LLU service offerings were drawn up some years ago when there was little or no experience of the service, either in the UK or elsewhere in Europe. The current product specifications are as a result of extensive industry discussions from that period, although there have been a number of changes since launch to meet the changing needs of industry.
- 7.25 There are a number of differences in aspects of the product offering in the UK compared to other countries and therefore Ofcom considers that there may be opportunities for changes to product specifications to remove costs and to provide scope for price reductions
- 7.26 For shared access, possible areas to remove costs might include:
- removal of the TAM (although this will continue to be needed for fully unbundled local loops);
 - introduction where possible of automated systems for processes such as ordering and repair, which in turn may require LLU operators to implement accompanying system changes; or
 - exploring possible areas of process improvements to increase efficiencies.
- 7.27 In respect of co-mingling, possible areas to remove costs might include:
- lower-specification entry level offerings with reduced space and power for lower capacity requirements; or

- scope for sharing facilities between operators.

7.28 Ofcom welcomes views on the items above and other specific ideas with regard to changes to LLU product specifications that will meet the objective of removing costs and provide an opportunity for lower prices.

Question 7.4: *Do you consider that there is scope for change to LLU product specifications in order to meet the objective of removing costs and to provide an opportunity for lower prices?*

Application of the LRIC+ methodology

7.29 In Section 6, Ofcom has proposed that charges for the provision of Network Access in the wholesale local access market be based on LRIC +. In setting specific charges for the LLU services listed above using this methodology, it will be necessary to:

- assess the relevant long run incremental costs;
- determine the amount of common costs that should be included; and
- calculate the appropriate rate of return on capital employed that should be allowed.

Estimation of the long run incremental costs

7.30 Ofcom will assess the long run incremental costs of LLU services starting from the actual costs incurred by BT. However, Ofcom considers that the charges should include only the incremental costs that have been efficiently and necessarily incurred by BT in providing this access. Therefore, Ofcom intends to rely on information of BT's actual and forecast costs, but will also make efficiency adjustments where necessary. These adjustments will be based on a detailed analysis of BT's costs to ensure that:

- only relevant costs are included;
- no double counting takes place; and
- costs have been efficiently incurred.

7.31 Ofcom will also examine the impact of economies of scale and scope.

7.32 Ofcom will examine BT's cost information carefully, to ensure that only costs that are genuinely incremental to LLU provision are classified as such.

7.33 For example, a significant portion of the incremental costs associated with LLU are direct labour costs. An issue then is the extent to which the indirect costs associated with these labour inputs are also incremental to LLU provision. In some cases, this might mean that no mark-up over direct costs is appropriate. In other cases, it may be that some mark-up is appropriate but one that is lower than conventional accounting allocations based on average mark-up rates, especially where large increases in volumes take place.

7.34 Where it appears to be appropriate to include indirect costs, Ofcom will have to assess them. One approach to estimating the indirect costs that should be attributed to LLU is to identify a cost/volume elasticity. This elasticity measures the expected

percentage increase in indirect costs that would arise from a given percentage increase in the volume of LLU input. Ofcom expects that this would typically be significantly less than 1, as it is reasonable to expect there to be economies of scope in the provision of many indirect services where it is possible to share support functions, even where activities are not otherwise related.¹⁷

Mark-up for common costs

- 7.35 In order to ensure that BT is allowed to recover legitimately incurred common costs, a mark-up over LRIC is generally required. Ofcom considers that the charges set for LLU should not undermine the recovery of these costs. Hence, to the extent that common cost recovery has not been allowed for elsewhere, a contribution to the recovery of the relevant common cost should be included in LLU charges.¹⁸
- 7.36 At the same time, it will be important to ensure that charging arrangements do not allow common costs to be recovered twice. Any contribution to common costs included in the cost of specific activities (for example the contribution to common overheads included in labour rates) will need to be consistent with the recovery of these costs that takes place through other charges, in particular those included in the network charge controls.
- 7.37 Ofcom will also consider the appropriate overall allocation of common costs between LLU and other activities.

The common costs of the loops

- 7.38 Some of the costs associated with the provision of a local loop are invariant to the amount of bandwidth that is actually used, or to the number of services run over that loop. These costs are incremental to the whole loop, but are common to the high and low frequency portions of it.
- 7.39 This does not raise any issues when a loop is fully unbundled, since the allocation of these costs between the low and high frequency portions is irrelevant, as they are both utilised and paid for by the same communications provider. However, when a loop is shared, the split of these costs between the high and low frequency portions becomes material, since the charges set for each portion are borne by different providers.¹⁹
- 7.40 If some of the common costs of the loop were recovered from the LLU charges for shared access, BT would need to ensure that appropriate reductions were made to BT's current retail narrowband charges so that there was no over recovery of costs. Further, if charges for access to the high frequency portion of a local loop contributed to the common cost allocation, consumers not taking up broadband services would pay a higher rental charge for narrowband services than that paid by broadband users. Hence, any split of these costs between the high and low frequency portions of the loop other than 100% of common costs being recovered from the narrowband channel would be difficult to implement.

¹⁷ This approach has been used in determining the charges for fixed portability (see Determination of fixed portability costs and charges and statutory consultation on proposed modifications to BT's Licence to give effect to charge controls for portability - 31 May 2002), where the CVE for the indirect costs was found to be equal to 0.45.

¹⁸ Hence, the network costs that are common between conveyance and access are recovered from fully unbundled loops through an equal proportionate mark-up in line with the treatment given to these costs in the network charge controls.

¹⁹ An operator purchasing shared access is only purchasing the high frequency portion of the local loop.

- 7.41 The allocation of these common costs is irrelevant for the customer using the line to support both high and low bandwidth services (provided there is no double recovery), as that customer will pay the same total amount however these costs are attributed.
- 7.42 Therefore, Ofcom's initial view is that, in setting charges for shared access, the costs common to the low frequency and high frequency portions of a loop should be entirely allocated to the low frequency portion (i.e. voice telephony).²⁰
- 7.43 Ofcom is aware that this arrangement (as would any other in which the common costs of the loop are not totally allocated to the higher frequency portion) may give rise to a cost-recovery issue if customers decide to cease their voice telephony subscriptions with BT in order to receive both data and voice services on the higher frequency portion of the loop (via voice over DSL). Ofcom's view on this issue is that, when a customer with a shared loop decides not to take voice services from BT, the loop will then be considered to be fully unbundled in respect of rental charges.

Question 7.5: *Do you agree that in setting charges for shared access, the costs common to the low frequency and high frequency portions of the loop should be entirely allocated to the low frequency portion (i.e. voice telephony)?*

Rate of return on capital employed

- 7.44 Ofcom is of the view that the appropriate rate of return that should be included in the charges for LLU services is the cost of capital BT is currently allowed on its regulated network activities. This cost of capital is equal to the weighted average cost of capital ("WACC") for the activities assessed using the capital asset pricing model ("CAPM"). The relevant cost of capital is currently 13.5%. However, Ofcom is currently reassessing the cost of capital that BT should be allowed on its regulated network activities and therefore this level may change.

Geographically averaged prices

- 7.45 Regulated charges can be geographically averaged or vary across the geographic market to reflect differences in the costs of providing services in different areas.
- 7.46 Currently charges for LLU services are geographically averaged. If these charges were de-averaged so as to reflect more precisely the costs incurred to provide LLU services in each area, this would provide better signals for decision making, as an operator would face a more accurate measure of the costs associated with the decision to buy LLU services from BT.
- 7.47 However, charges varying by area might also create undue incentives for arbitrage, as BT's prices for DSL (intermediate and retail) and voice services are currently geographically averaged. Hence de-averaging the charges for LLU services only may lead to inappropriate cherry picking that artificially encourages take-up of services in low cost areas and discourages it in higher cost areas.
- 7.48 On balance, Ofcom considers that charges for LLU services should be geographically averaged.

Question 7.6: *Do you agree that charges for LLU services should be geographically averaged?*

²⁰ Current charges for shared loops include no common costs of the loop.

Charge control

- 7.49 Charges based on LRIC+ have a number of positive properties, but provide the regulated incumbent with limited incentives towards cost minimisation. To ensure that charges better mimic those that could be expected in a competitive market, it may be appropriate to introduce a charge control. In general, a charge control constrains the movement of regulated charges so that they reflect any cost savings derived from expected volume increases, expected reductions in asset and input prices and expected efficiency improvements (assessed through a benchmarking exercise). At the same time, a charge control allows the retention of all gains from unanticipated efficiency improvements for the period of the control, thus providing the dominant provider with incentives towards cost-efficiency.
- 7.50 When LLU charges were first set, a charge control was not introduced because of the inevitable uncertainty surrounding the charging of services not yet in place. However, Oftel stated its intention to review the charges and introduce an RPI-X charge cap to provide BT with incentives for cost-efficiency. However, Ofcom is of the view that take-up of LLU services is still too limited to allow an accurate enough assessment of LLU costs to set a sufficiently robust charge cap. Therefore, Ofcom proposes to review the issue of a charge control in the next review of the wholesale local access market.

Question 7.7: *Do you agree that it is not yet appropriate to introduce a charge control for LLU services?*

Cost recovery

- 7.51 The following section sets out Ofcom's proposals for the recovery of LLU costs, if a LRIC+ approach, as proposed in Section 6, is used to set charges.

Principles of cost recovery

- 7.52 In general, Ofcom's decisions on the recovery of costs are guided by six general principles.²¹ These principles are:
- cost causation – costs should be recovered from those whose actions cause the costs to be incurred at the margin;
 - distribution of benefits – costs should be recovered from the beneficiaries, especially where there are externalities;
 - effective competition – the mechanism for cost recovery should not undermine or weaken the pressures for effective competition;
 - cost minimisation – the mechanism for cost recovery should ensure that there are strong incentives to minimise costs;
 - reciprocity – where services are provided reciprocally, charges should also be reciprocal; and
 - practicability – the mechanism for cost recovery needs to be practicable and relatively easy to implement.

²¹ These principles were endorsed by the Monopolies and Mergers Commission (MMC) in their 1995 report on number portability - Telephone Number Portability: A report on a reference under s13 of the Telecommunications Act 1984 (MMC, 1995)

- 7.53 In general, cost causation is applied first and greater reliance is given to it, on the grounds that economic efficiency is enhanced by requiring parties to pay for those costs which they directly cause. The other principles are then considered, to see the extent to which these lead to an adjustment to the cost recovery scheme implied by the application of the principle of cost causation.
- 7.54 These six principles are applied to the costs incurred by BT to provide LLU services to derive conclusions on how these costs should be recovered and, thus, how the relevant charges should be structured.

Costs of providing LLU services

- 7.55 Before applying the six cost recovery principles, it is useful to categorise the costs incurred by BT in providing LLU services, according to their economic characteristics, as the application of the six principles may have different implications for different cost categories.
- 7.56 It is possible to distinguish three categories of LLU costs, namely:
- system set-up costs;
 - one-off per service costs; and
 - on-going per service costs.

LLU system set-up costs

- 7.57 These are the costs incurred by BT to develop and implement the systems and software necessary for it to have the capability to provide LLU services of a reasonable quality. These costs do not vary with the unbundling of an additional loop. The LLU system set-up costs include, among others, the costs of setting up a dedicated operational support system (“OSS”) and the costs of developing and rolling out an automatic testing system.

LLU one-off per service costs

- 7.58 These include the costs of unbundling individual local loops and of providing other LLU services. These are one-off costs and are incurred every time an additional LLU service is requested. These costs include, among others, the costs of MDF jumpering, the installation and jointing of internal tie cables and the wholesale costs associated with the provision of LLU services.

LLU on-going per service costs

- 7.59 These costs are on-going and are incurred by BT to maintain the quality of the LLU services provided. They include, among others, the costs of loop fault repair, drop wire renewal and repair, maintenance of the MDF and tie-cables, depreciation of ducts and copper pairs and wholesale costs.
- 7.60 In practice, the distinction between one-off and on-going per service costs does not appear to inform the application of the cost recovery principles. Hence, Ofcom proposes to focus only on the distinction between system set-up costs, on the one hand, and per service costs on the other.

Application of the principles of cost recovery to LLU system set-up costs

Cost causation

- 7.61 As noted above, set-up costs do not vary with the number of individual lines that are unbundled. Moreover, it is debatable whose actions caused these costs to be incurred. On the one hand, it can be argued that BT has incurred these costs due to the activities of those providers wishing to have wholesale access to its local loops and, therefore, that these providers should bear the totality of these costs. On the other hand, it can be argued that the costs arise because of EU regulatory requirements flowing from BT's SMP in the market for wholesale local access and therefore that BT should also contribute to cost recovery.
- 7.62 In these circumstances, Ofcom is of the view that the cost causation principle does not provide decisive guidance on the allocation of LLU system set-up costs. This suggests that the other principles should be carefully considered before reaching a conclusion on the recovery of LLU system set-up costs.

Distribution of benefits

- 7.63 This principle suggests that LLU system set-up costs should be recovered from all those who benefit from the development of LLU. Wholesale access to BT's local loops is expected to foster competition in the provision of broadband services, increasing the choice of services available to consumers, as well as generating pressure on the level of prices and on the quality of these services. Hence, all broadband customers can be expected to benefit from this increased competition.
- 7.64 Application of this principle therefore suggests that all customers who use broadband over the economic life-time of the LLU systems, not just those served by BT's unbundled local loops, benefit from those systems and should contribute towards the costs incurred by BT to make LLU available, i.e. the LLU system set-up costs.
- 7.65 It can also be argued that the benefits from the development of LLU systems today will flow not just to current DSL users, but also to future users as well. Thus, even where customers take up DSL services after the systems currently used to introduce LLU, have been replaced, they will benefit from the earlier development of LLU-based competition. It may then be appropriate for all these DSL customers to contribute to the recovery of the set-up costs associated with those LLU systems.
- 7.66 Hence, Ofcom believes that there is a case for recovering LLU system set-up costs across a wider base of customers than those actually utilising DSL in the short term. One possible approach to this is to extend the period over which LLU set-up costs are recovered.
- 7.67 The provision of voice over DSL services using LLU may extend the competitive impact of LLU to narrowband voice users. However, only if the provision and take-up of voice over DSL services became widespread could LLU have a significant impact on competition in the provision of narrowband voice services. Such voice over DSL services are still at an early stage of development and, although potentially important, it is not yet clear what impact they will have on competition in narrowband voice services over the period considered in this review. Therefore Ofcom considers that it would not be appropriate to assume such a significant narrowband impact will arise from full unbundling over the period considered in this review. Ofcom will nevertheless continue to monitor the development of voice over DSL.

Effective competition

- 7.68 To guarantee the development of sustainable downstream competition, the cost recovery scheme for LLU should be competitively neutral.
- 7.69 The principle of effective competition suggests that LLU system set-up costs should be recovered in a way that ensures that a level playing field is guaranteed for all providers of DSL services, independently of the means they use to provide these services.²²
- 7.70 Since BT DSL and LLU system set-up costs are likely to be different, achieving a level playing field would involve pooling LLU system set-up costs and equivalent BT DSL system set-up costs and requiring an equal contribution towards the recovery of these costs over all DSL lines. This approach (pooling of costs and equalisation) would eliminate any differential between these costs for BT DSL and the LLU operators.
- 7.71 The principle of effective competition also suggests that, to avoid the creation of barriers to the take-up of LLU services, an appropriate balance should be struck between costs recovered in the up-front connection charge and costs recovered in the recurrent rental charge.

Cost minimisation

- 7.72 This principle implies that incentives for cost efficiency should be built into the charging mechanism for LLU services. To the extent that BT chooses the particular process used to deliver the LLU service, its choice causes a particular set of costs to be incurred. Hence, BT should be provided with incentives to minimise LLU system set-up costs. One way to provide BT with such incentives would be for BT to bear all or some of these costs²³.
- 7.73 On the other hand, there should also be an incentive on LLU operators to avoid inefficiently expensive solutions, as they have some ability to influence the technical specification to be implemented (e.g. for automatic testing). Such incentive would be absent if BT were to bear all the costs. Therefore, the principle of cost minimisation points towards the recovery of these costs being shared between BT and the LLU operators.

Practicability

- 7.74 The practicability principle suggests that the mechanism for cost recovery needs to be practicable and relatively easy to implement.
- 7.75 As discussed above, on the grounds that all the beneficiaries from the introduction of LLU should contribute to its system set-up costs, these costs should be borne by all broadband users. However, it would be difficult in practice to share LLU system set-up costs with providers who do not purchase any relevant DSL service from BT e.g. cable operators. Hence, the practicability principle suggests that recovery of LLU set-up costs should be limited to DSL users.
- 7.76 In addition, the need to spread these one-off costs over the economic life of the assets implies that LLU system set-up costs have to be recovered from an uncertain volume of loops. Volumes of DSL lines may be easier to predict going forward.

²² As mentioned above, the inclusion of providers of broadband services over cable is not practical.

²³ At the same time, an approach which pooled the equivalent costs associated with BT DSL and LLU would dampen BT's incentives to minimise the costs associated with self-provision.

7.77 Hence, Ofcom considers that the principle of practicability suggests that the most appropriate base from which to recover LLU system set-up costs are all DSL lines.

Reciprocity

7.78 The reciprocity principle does not provide any useful indication in this case, because unbundled access is not provided reciprocally.

Preliminary conclusions on how LLU system set-up costs should be recovered

7.79 Cost causation is not particularly helpful in deciding how LLU system set-up costs should be recovered, as the arguments deriving from this principle do not provide a compelling basis for allocating costs. Hence, as discussed above, Ofcom is currently of the view that the key principles that should guide the recovery of LLU system set-up costs are: distribution of benefits, effective competition and cost minimisation.

7.80 Application of these principles point towards LLU system set-up costs being pooled together with equivalent system set-up costs incurred by BT to provide DSL services and then shared across all local loops used to provide DSL services. Ofcom will be considering further the appropriate period over which cost recovery should take place and would welcome views on this issue.

7.81 These principles also suggest that the up-front charges should be set so as not to create a barrier to entry. Hence, depending on the level of these costs, it may be appropriate to recover a share of the one-off system set-up costs from the rental rather than connection charges.

7.82 Hence, Ofcom’s current view is that LLU system set-up costs should be pooled together with equivalent BT DSL system set-up costs and recovered across all local loops used to provide DSL services.

Table 7.1: Charging principles for LLU system set-up costs

Principle	Suggested mechanism of recovery
Cost causation	Unclear
Distribution of benefits	Recovery from all broadband lines
Effective competition	Pooling costs with equivalent BT DSL system set-up costs and recovery over all DSL lines
Cost minimisation	Recovery shared between BT and the LLU operators
Practicability	Recovery over all DSL lines
Reciprocity	No suggestion

Application of principles of cost recovery to the LLU per service costs

Cost causation

- 7.83 The principle of cost causation provides clear guidance on the recovery of per service LLU costs since these arise directly as a result of incremental requests for, and usage of LLU services. Application of the principle then suggests that costs associated with providing an individual LLU service should be met by the operator requesting that service.
- 7.84 It could be argued that LLU is unlikely to be viable unless a minimum level of take-up is reached and that, at levels of take-up below this “critical value”, there is no meaningful distinction between system set-up and per service costs, with all costs being in some sense costs of establishing a LLU service. While Ofcom considers that there is some merit in this argument, it would be difficult to determine the appropriate critical level of take-up. Hence, it is not currently proposing to treat per service costs as if they were system set-up costs.

Distribution of benefits

- 7.85 As the main beneficiaries of per service LLU activities are the customers of the LLU operators themselves, the principle of distribution of benefits suggests that they should bear these costs. The marginal benefit derived by DSL consumers generally from the take-up of an additional LLU service is likely to be small. Therefore, this principle supports a conclusion that the operator taking up the particular LLU service should bear all the associated per service costs.

Effective competition

- 7.86 From a downstream perspective, this principle points towards a charging mechanism that guarantees a level playing field for all DSL providers. From this perspective, the recovery of LLU per service costs from LLU operators only may not deliver this objective, as BT does not always incur equivalent per service costs to enable DSL services over its local loops.²⁴ For example, BT can employ its PSTN testing system to test faults on loops that are also used to provide BT DSL services and, therefore, it does not have to incur the cost of jumpering loops to the LLU test system (TAM).
- 7.87 If LLU operators face higher charges than BT itself to obtain local access, the differences in their respective cost bases puts the former at a competitive disadvantage. This suggests that where LLU per service costs differ from those incurred by BT for equivalent DSL activities, it may be appropriate to intervene in order to guarantee competitive neutrality by pooling LLU costs and equivalent BT DSL costs and recovering them across all local loops used to provide DSL services.
- 7.88 This principle also suggests that, to avoid the creation of barriers to the take-up of LLU services, an appropriate balance should be struck between costs recovered in the up-front connection charge and costs recovered in the on-going rental charge.

Cost minimisation

- 7.89 This principle suggests that cost recovery should be structured so as to provide incentives towards cost efficiency. To the extent that BT uses different processes and incurs different costs to provide loop-based services for BT DSL and LLU, its

²⁴ Such differences sometimes arise due to the efficiencies BT enjoys because it is vertically integrated and because of the economies of scale and scope it enjoys. In other cases, they arise because BT has chosen to deploy different processes to support BT DSL and LLU services.

incentives to minimise these costs are currently limited. Therefore, this principle suggests that where LLU per service costs differ from those incurred by BT for equivalent activities, BT should contribute to their recovery.²⁵

Practicability

- 7.90 The principle of practicability requires that any cost recovery scheme adopted should be easy to implement. This principle provides little guidance with regard to LLU per service costs, apart from suggesting that the costs relevant to assets whose economic life is longer than the minimum contract period for the relevant LLU services should, where possible, be capitalised and recovered through the rental charge. This is to avoid a complicated system of disconnection charges and rebates, were the assets to revert to BT.

Reciprocity

- 7.91 This principle does not provide any useful guidance in this case, since unbundled local loops are not provided reciprocally.

Preliminary conclusions on how LLU per service costs should be recovered

- 7.92 Overall, the application of the six principles to LLU per service costs provides a less clear cut answer on the appropriate structure for the relevant cost recovery scheme.
- 7.93 The principles of cost causation and distribution of benefits suggest that these costs should be recovered from providers who request LLU services. The principle of effective competition points towards eliminating any asymmetry between LLU costs and those incurred for equivalent BT DSL-enabling activities. Cost minimisation suggests that, where the LLU per service costs differ from those incurred by BT for equivalent DSL-enabling activities, BT should contribute to their recovery. Practicability provides very limited guidance.
- 7.94 On balance, Ofcom considers that where LLU per service costs differ from those incurred by BT for equivalent DSL activities, these should be pooled together with equivalent BT DSL costs and recovered across all local loops used to provide DSL services. Ofcom would, however, welcome views on this issue.

²⁵ On the other hand, application of the equalisation principle may dampen BT's incentives to minimise the costs associated with the provision of loops for BT DSL. It may also dampen customers' incentives to make cost-minimising choices between BT DSL and LLU.

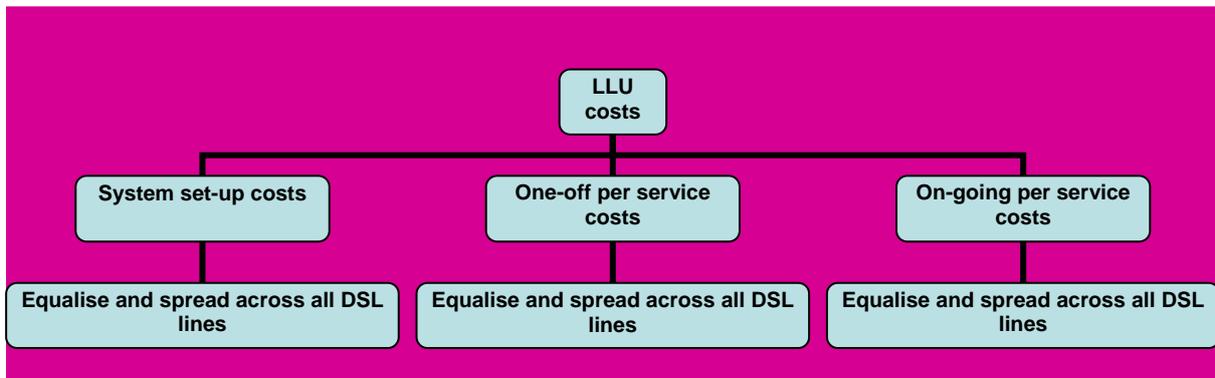
Table 7.2: Charging principles for LLU per service costs

Principle	Suggested mechanism of recovery
Cost causation	Recovery from the relevant LLU services
Distribution of benefits	Recovery from the relevant LLU services
Effective competition	Where these costs differ from those incurred by BT for equivalent activities, pool per service costs and recover over all DSL lines
Cost minimisation	Where these costs differ from those incurred by BT for equivalent activities, BT should contribute to their recovery
Practicability	No suggestion
Reciprocity	No suggestion

Preliminary conclusions on costs recovery

7.95 Figure 7.1 summarises Ofcom’s preliminary conclusions on the recovery of LLU costs.

Figure 7.1: Options for the recovery of LLU costs



Question 7.8: Do you agree that LLU system set-up costs should be pooled together with equivalent BT DSL system set-up costs and recovered across all DSL lines?

Question 7.9: Do you agree that, on balance, LLU one-off and on-going per service costs should be pooled together with equivalent BT DSL per service costs and recovered across all DSL lines?

Question 7.10: What do you think is the appropriate period over which cost recovery should take place?

Section 8

Regulatory financial reporting

Introduction

- 8.1 This section covers the proposals for the imposition on BT and Kingston of obligations for cost accounting systems and accounting separation in relation to the wholesale local access market and in respect of co-location. The imposition of regulatory financial reporting obligations on dominant providers is an important means of ensuring that obligations in relation to cost orientation and non-discrimination (as have been proposed in relation to BT and Kingston in Section 6) can be effectively monitored.
- 8.2 The appropriateness of imposing a regulatory financial reporting obligation and the level of information required is a question to be decided on the basis of the findings of the market review. The practical processes of cost accounting and accounting separation, on the other hand, such as cost attribution methodologies, accounting standards, audit, transparency, disaggregation, reconciliation and publication of information, are distinct from the broader question of principle on the appropriate level of regulation in the market and the remedies to be applied. Ofcom considers that the practical processes for regulatory financial reporting should be consistent across all markets susceptible to regulation to ensure that there is certainty and transparency for the regulator, the dominant providers and their competitors.
- 8.3 On 22 May 2003, Oftel published a consultation document on regulatory financial reporting: *Financial reporting obligations in SMP markets: A Consultation on accounting separation and cost accounting systems* ('the May 2003 consultation'). The scope of this consultation was to address how cost accounting and accounting separation should be implemented in the various markets where market reviews had proposed that regulatory financial reporting obligations would be appropriate. It also addressed the level of granularity required for such obligations to be imposed in a proportionate and appropriate manner. The document proposed conditions for wholesale cost accounting, retail cost accounting and accounting separation in a range of markets that were, at that time, the subject of market reviews being carried out by Oftel.
- 8.4 Following the May 2003 consultation, and the conclusion of many of the relevant market reviews, Ofcom published a further notification and explanatory statement – *The regulatory financial reporting obligations on BT and Kingston in markets where SMP has been demonstrated*, 8 April 2004 ('the April 2004 consultation'). This document addressed responses made to the May 2003 consultation and set out Ofcom's amended SMP conditions and directions for regulatory financial reporting for the 39 markets (26 for BT, 13 for Kingston) where Ofcom had proposed or decided that regulatory financial reporting obligations should apply. In particular, Ofcom proposed:
- SMP services conditions for regulatory financial reporting on BT (Conditions OA1 to OA34) and Kingston (Conditions OB1 to OB33) covering all forms of regulatory reporting; and
 - draft directions under those conditions setting out:
 - the network components to be reported on (draft direction 1);

- o the transparency of the systems (draft direction 2);
 - o the financial statements to be prepared and published and the appropriate audit levels (draft direction 3);
 - o the form and content of these financial statements (draft direction 4);
 - o the fairly presents in accordance with (FPIA) audit opinion (draft direction 5); and
 - o the properly prepared in accordance with (PPIA) audit opinion (draft direction 6).
- 8.5 Ofcom expects to implement these conditions and directions in the 39 markets set out in the April 2004 consultation after taking into account responses (the consultation ends on 10 May 2004).
- 8.6 Ofcom proposes that it is appropriate that most of these conditions and directions should be imposed on BT and Kingston for the market and technical area covered in this review. Some of the conditions set out in the April consultation, specifically conditions OA29 – OA31, OA34, OB28 – OB30 and OB33, are only relevant to retail markets, and therefore should not apply. However, Ofcom proposes that the remainder of the conditions (i.e. OA1 – OA28, OA32 and OA33; and OB1 – OB27, OB31 and OB32) and directions 1 to 6 set out in the April consultation should apply to BT and Kingston in the respective wholesale local access markets and in respect of co-location, subject to necessary amendments to draft direction 3 to ensure it captures the particular circumstances of the market and technical area.
- 8.7 Draft direction 3 essentially sets out the required levels of preparation, publication and audit of regulatory financial statements for each individual market. Ofcom is proposing that BT should prepare and deliver to Ofcom audited regulatory financial statements as set out in table format at Annex 6 to this document, and where identified in that table also publish these statements. Ofcom intends that this table will, in the next stage of the market review process, become an Annex to a direction under the regulatory financial obligations to apply to BT in the wholesale local access market and in respect of co-location (as for the other markets addressed by the April 2004 consultation).
- 8.8 Ofcom considers that it is appropriate for Kingston to be obliged to have systems in place to demonstrate that it is meeting its obligations (cost orientation and to not unduly discriminate). However, Ofcom considers that given Kingston's current low volumes, it should not be obliged to prepare or publish financial statements. Therefore, Ofcom is proposing that while Kingston should be subject to the relevant regulatory financial conditions (i.e. OB1 – OB27, OB31 and OB32 as set out in the April 2004 consultation), it is not necessary to give a direction to Kingston along the lines of draft direction 3. If this situation were to change and its volumes became greater, Ofcom would consider directing Kingston to prepare, publish and have audited financial statements.
- 8.9 The paragraphs below outline why the proposed regulatory financial reporting obligations are appropriate in the wholesale local access market and in respect of co-location for BT and Kingston and how regulatory financial reporting is proposed to be implemented under the regulatory financial reporting conditions and directions set out in the April consultation.

The necessity of regulatory financial reporting

- 8.10 In paragraphs 6.34 to 6.63, Ofcom is proposing that BT's and Kingston's charges should be cost-oriented on the basis of LRIC with an appropriate mark-up for the recovery of common costs and a reasonable return on capital employed (LRIC+). As explained in that section, this is to ensure that the charges of dominant providers are constrained to enable competitors purchasing such services to compete with the dominant providers in downstream markets.
- 8.11 It is essential, if the obligation for cost orientation is to be meaningful, that there is a clear and comprehensive understanding of the costs of BT and Kingston and how these are attributed to different parts of their activities. In order to accomplish this, a regulatory financial reporting system must capture all relevant financial, operational and other information necessary to prepare and present financial information. Cost accounting reporting therefore enables Ofcom to determine whether charges are cost-oriented.
- 8.12 Sections 87(9) to 87(11) of the Act allow Ofcom to impose appropriate cost accounting obligations on dominant providers in respect of the provision of Network Access, the use of the relevant network and the availability of relevant facilities. Cost accounting rules may be made in relation to charge controls, the recovery of costs and cost orientation. Ofcom therefore considers that it has the necessary legal basis to impose cost accounting obligations on BT and Kingston in the respective wholesale local access markets and in respect of co-location.
- 8.13 In paragraphs 6.26 to 6.33, Ofcom is proposing that BT and Kingston should have an obligation to not unduly discriminate. This is because where a dominant provider is vertically integrated it has an incentive to provide wholesale services on terms and conditions that discriminate in favour of its own retail activities in such a way that may have a material effect on competition.
- 8.14 It is essential, if the obligation to not unduly discriminate is to be meaningful, that BT and Kingston can be required to make transparent their wholesale prices and internal transfer prices, i.e. to demonstrate that they are not unduly discriminating against other communications providers. In practice this means that they are obliged to produce financial statements that reflect the performance of markets as though they were separate businesses. Accounting separation therefore enables Ofcom to monitor whether BT and Kingston are unduly discriminating.
- 8.15 Sections 87(7) and 87(8) of the Act allow Ofcom to impose appropriate accounting separation obligations on dominant providers in respect of the provision of Network Access, the use of the relevant network and the availability of relevant facilities. That is to say, the dominant provider may be required to maintain a separation for accounting purposes between such different matters relating to Network Access or the availability of relevant facilities. Ofcom therefore considers that it has the necessary legal basis to impose accounting separation obligations on BT and Kingston in the respective wholesale local access markets and in respect of co-location.

Communications Act tests

- 8.16 Ofcom considers that the imposition of cost accounting and accounting separation obligations on BT and Kingston in the respective wholesale local access markets and in respect of co-location are appropriate and consistent with Ofcom's obligations under the Act.

- 8.17 Ofcom has considered all of the criteria in sections 3 and 4 of the Act. In particular, the imposition of a regulatory financial reporting obligation would specifically be justifiable and proportionate to promote competition (and thereby further the interests of consumers); and to ensure efficient and sustainable competition and the maximum benefit for the persons who are customers of communications providers. This is because the imposition of a regulatory financial reporting obligation will ensure that obligations designed to curb potentially damaging market power can be effectively monitored and enforced.
- 8.18 In addition, Ofcom has considered the tests laid out in section 88 of the Act. It appears to Ofcom that there is a relevant risk of adverse effects arising from price distortion. In particular, BT or Kingston might fix and maintain some or all of its prices at an excessively high level or impose a price squeeze so as to have adverse consequences for end-users. In the light of this analysis, and taking into account the level of investment of the dominant providers, Ofcom is of the view that cost accounting is appropriate for the purposes of promoting efficiency, promoting sustainable competition, and conferring the greatest possible benefits on the end-users of public electronic communications services.
- 8.19 Section 47 of the Act further requires all conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. Ofcom considers that given the importance of cost orientation and no undue discrimination in these markets (as described in paragraphs 6.26 to 6.63) the imposition of a regulatory financial reporting obligation (with cost accounting and accounting separation reporting outputs) is objectively justifiable. That is, in order to ensure that the obligations of cost orientation and no undue discrimination are met and the benefits are realised, it is essential that Ofcom is able to monitor the obligations via a regulatory financial reporting obligation. Furthermore, the regulatory financial reporting obligation does not discriminate between providers of the same class. That is, BT and Kingston are the only Dominant Providers identified by this market review and are the only providers on whom cost orientation and no undue discrimination obligations are proposed. Ofcom also considers that the obligation is proportionate because the reporting obligations (as summarised at Annex 6) only require what is necessary to ensure that the obligations for cost orientation and no undue discriminated are being met.
- 8.20 In addition, Ofcom consulted on the regulatory financial reporting conditions in the May 2003 and April 2004 consultations. Given that the conditions and directions themselves which Ofcom is proposing to apply have already been subject to two rounds of consultation, Ofcom considers that, in conjunction with the explanation set out in this section, its proposals have been made appropriately transparent.

Implementation of regulatory financial reporting

- 8.21 As discussed above, Ofcom has already consulted on regulatory financial reporting obligations. As Ofcom is proposing that certain of these same obligations will be applied in the wholesale local access market and in respect of co-location, this market review is focussing on the appropriateness of having regulatory financial reporting in this market and technical area and the level of detail that should be reported, not on the drafting of the regulatory financial reporting obligations themselves.
- 8.22 Ofcom intends to specify the proposed specific regulatory financial reporting conditions and directions (drawn from the conclusions of this and the April 2004 consultation) in the August 2004 consultation. As a matter of law, these will be

proposals for 'new' conditions and directions, and therefore potentially subject to amendment prior to being finalised and set. However Ofcom's firm intention is to maintain a consistent and coherent approach to regulatory financial reporting (particularly the necessary underlying processes) across all markets where cost accounting and accounting separation obligations have been imposed.

Question 8.1: *Do you agree that cost accounting and accounting separation requirements should be imposed on BT in the wholesale local access market and in respect of co-location?*

Section 9

Responding to this consultation

How to respond

Ofcom invites written views and comments on the issues raised in this document, to be made by **5pm on Friday 25 June 2004**.

Ofcom strongly prefers to receive responses as e-mail attachments, in Microsoft Word format, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 9) to indicate whether or not there are confidentiality issues. The cover sheet can be downloaded from the 'Consultations' section of our website.

Please can you send your response to selina.chadha@ofcom.org.uk.

Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Selina Chadha
Competition and markets
Fourth floor
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Note that we do not need a hard copy in addition to an electronic version. Also note that Ofcom will not routinely acknowledge receipt of responses.

It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 8. It would also help if you can explain why you hold your views, and how Ofcom's proposals would impact on you.

Further information

If you have any questions about the issues raised in this consultation, or need advice on the appropriate form of response, please contact Selina Chadha on 020 7783 4147.

Confidentiality

Ofcom thinks it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, as soon as possible after the consultation period has ended.

All comments will be treated as non-confidential unless respondents specify that part or all of the response is confidential and should not be disclosed. Please place any confidential parts of a response in a separate annex, so that non-confidential parts may be published along with the respondent's identity.

Please also note that copyright in responses will be assumed to be relinquished unless specifically retained.

Next steps

Following the end of the consultation period, Ofcom will consider all responses and then publish a second consultation in August of this year that will include any changes made as a result of responses received and, to the extent that it is considered necessary to do so, Ofcom's proposed charges for specific services in the wholesale local access market and in respect of co-location.

Please note that you can register to get automatic notifications of when Ofcom documents are published, at http://www.ofcom.org.uk/static/subscribe/select_list.htm.

Ofcom's consultation processes

Ofcom is keen to make responding to consultations easy, and has published some consultation principles (see Annex 7) which it seeks to follow, including on the length of consultations.

This consultation is shorter than Ofcom's standard 10 week period because Ofcom has decided on a two consultation approach to present its proposals in relation to the wholesale local access market. This consultation does not include Ofcom's proposed charges for services within this market and therefore Ofcom considers that a 6 week period should be sufficient for consideration of the issues contained in this consultation. Given the two consultation periods, overall there will be longer than the standard 10 week period to consider Ofcom's proposals.

If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk. We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, whose views are less likely to be obtained in a formal consultation.

If you would like to discuss these issues, or Ofcom's consultation processes more generally, you can alternatively contact Philip Rutnam, Partner, Competition and Strategic Resources, who is Ofcom's consultation champion:

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Annex 1

Draft notification of proposals for the identification of services markets, the making of market power determinations and the setting of SMP services conditions

Schedule 1: BT conditions

Schedule 2: Kingston conditions

DRAFT NOTIFICATION OF PROPOSALS UNDER SECTIONS 48(2) AND 80 OF THE COMMUNICATIONS ACT 2003

Proposals for identifying markets, making market power determinations and the setting of SMP services conditions in relation to BT and Kingston

1. The Office of Communications (“Ofcom”), in accordance with sections 48(2) and 80 of the Communications Act 2003 (c.21) (the “Act”), hereby makes the following proposals for identifying markets, making market power determinations and the setting of SMP services conditions by reference to such determinations (“SMP conditions”).
2. Ofcom is proposing to identify the following markets for the purpose of making market power determinations:
 - a. wholesale local access services within the United Kingdom, but not including the Hull Area; and
 - b. wholesale local access services within the Hull Area.
3. Ofcom is proposing to make market power determinations that the following persons have significant market power:
 - a. in relation to the market set out in paragraph 2(a) above, BT; and
 - b. in relation to the market set out in paragraph 2(b) above, Kingston.
4. Ofcom is proposing to set SMP conditions on the persons referred to in paragraphs 3(a) and (b) above as set out in Schedules 1 and 2, respectively, to this Notification.
5. The effect of, and Ofcom’s reasons for making, the proposals to identify the markets set out in paragraph 2 above and to make the market power determinations set out in paragraph 3 above are contained in Section 3 and 4 of the explanatory statement accompanying this Notification.

6. The effect of, and Ofcom's reasons for making, the proposals to set the SMP conditions set out in Schedules 1 and 2 to this Notification are contained in Sections 5 to 8 of the explanatory statement accompanying this Notification.
7. In identifying and analysing the markets referred to in paragraph 2 above, and in considering whether to make the proposals set out in this Notification, Ofcom has, in accordance with section 79 of the Act, taken due account of all applicable guidelines and recommendations which have been issued or made by the European Commission in pursuance of a Community instrument, and relate to market identification and analysis or the determination of what constitutes significant market power.
8. Ofcom considers that the proposed SMP conditions referred to in paragraph 4 above comply with the requirements of sections 45 to 47, 87, 88 and 90 of the Act, as appropriate and relevant to each such SMP condition.
9. In making all of the proposals referred to in paragraphs 2, 3 and 4 of this Notification, Ofcom has considered and acted in accordance with the six Community requirements in section 4 of the Act.
10. Representations may be made to Ofcom about any of the proposals set out in this Notification and the accompanying explanatory statement by [XXX].
11. Copies of this Notification and the accompanying explanatory statement have been sent to the Secretary of State for Trade and Industry in accordance with section 50(1)(a) of the Act, the European Commission and to the regulatory authorities of every other member State in accordance with sections 50(3) and 81 of the Act.
12. Save for the purposes of paragraph 2 of this Notification and except as otherwise defined in this Notification, words or expressions used shall have the same meaning as they have been ascribed in the Act.
13. In this Notification:
 - a. "**BT**" means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;
 - b. "**Hull Area**" means the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc;
 - c. "**Kingston**" means Kingston Communications (Hull) plc, whose registered company number is 2150618, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989; and
 - d. "**United Kingdom**" has the meaning given to it in the Interpretation Act 1978 (c. 30).

[XX XXXXXXXX]

2004

SCHEDULE 1

The conditions imposed on British Telecommunications plc under sections 45, 87 and 88 of the Communications Act 2003 as a result of the analysis of the market for wholesale local access services within the United Kingdom but not including the Hull Area in which British Telecommunications plc has been found to have significant market power

Part 1: Application, definition and interpretation of the conditions in Part 2

1. The conditions in Part 2 of this Schedule shall apply to the market for wholesale local access services within the United Kingdom but not including the Hull Area and shall also apply to the provision of Co-Location.

2. In this Schedule:

“**Act**” means the Communications Act 2003;

“**Access Charge Change Notice**” has the meaning given to it in Condition FA5.2;

“**Co-Location**” means the provision of space on reasonable terms permitting a Third Party to occupy part of an MDF Site reasonably sufficient to permit the use of one or more Metallic Path Facilities, and in particular to permit the connection of the Dominant Provider’s Electronic Communications Network with the Electronic Communications Network of a Third Party at that location;

“**Co-Mingling**” means the provision of Co-Location having the following characteristics:

- a. the Third Party’s Electronic Communications Network is situated in an area of the MDF Site which:
 - i. is a single undivided space;
 - ii. after proper performance by the Dominant Provider of its obligation to provide Local Loop Unbundling Services pursuant to Condition FA9.1, would permit the normal operation of the Third Party’s Electronic Communications Network (or would permit if the Dominant Provider removed any object or substance whether toxic or not, which might reasonably prevent or hinder the occupation of the MDF Site for such use); and
 - iii. if so requested by the Third Party, is not unreasonably distant from the Dominant Provider’s Electronic Communications Network within the MDF site;
- b. no permanent physical partition is erected in the space between the Third Party’s Electronic Communications Network and the Dominant Provider’s Electronic Communications Network; and
- c. the Third Party’s Electronic Communications Network is neither owned nor run by the Dominant Provider or by any person acting on the Dominant Provider’s behalf;

“Dominant Provider” means British Telecommunications plc, whose registered company number is 1800000, and any British Telecommunications plc subsidiary or holding company, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989;

“External Tie Circuit” means a link that connects a Metallic Path Facility to the Electronic Communications Network of a Third Party at a location outside the MDF Site;

“Internal Tie Circuit” means a link, the whole of which is contained within an MDF Site, that connects a Metallic Path Facility to the Electronic Communications Network of a Third Party;

“Local Loop Unbundling Services” means any and all of the following specific services provided by the Dominant Provider:

- i. Metallic Path Facilities;
- ii. Shared Access;
- iii. Internal Tie Circuits;
- iv. Co-Location;
- v. Co-Mingling;
- vi. External Tie Circuits;
- vii. Site Access; and
- viii. ancillary services as may be reasonably necessary for the use of the services in (i) to (vii) above;

“Market” means the market for wholesale local access services within the United Kingdom but not including the Hull Area;

“MDF Site” means the site of an operational building of the Dominant Provider that houses a main distribution frame;

“Metallic Path Facilities” means a circuit comprising a pair of twisted metal wires employing electric, magnetic, electro-magnetic, electro-chemical or electro-mechanical energy to convey Signals when connected to an Electronic Communications Network;

“Network Component” means, to the extent they are used in the Market and in the provision of Co-Location, the network components specified in any direction given by Ofcom from time to time for the purpose of these Conditions;

“Ofcom” means the Office of Communications as established pursuant to section 1(1) of the Office of Communications Act 2002;

“Reference Offer” means the terms and conditions on which the Dominant Provider is willing to enter into an Access Contract;

“Shared Access” means the non-voice band frequency of Metallic Path Facilities;

“Site Access” means access to the Dominant Provider’s MDF Sites in order to install and operate an Electronic Communications Network to provide Electronic Communications Services over the Metallic Path Facilities;

“Third Party” means a person providing a public Electronic Communications Service or a person providing a public Electronic Communications Network;

“Transfer Charge” means the charge or price that is applied, or deemed to be applied, by the Dominant Provider to itself for the use or provision of an activity or group of activities. For the avoidance of doubt such activities or group of activities include, amongst other things, products and services provided from, to or within the Market and the use of Network Components in that Market; and

“Usage Factor” means the average usage by any Communications Provider (including the Dominant Provider itself) of each Network Component in using or providing a particular product or service or carrying out a particular activity.

3. For the avoidance of doubt, the definition of Electronic Communications Network for the purposes of the definitions of Co-Mingling and Site Access above shall be limited to those matters set out at section 32(1)(b)(i)-(iii) of the Act.
4. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them and otherwise any word or expression shall have the same meaning as it has in the Act.
5. The Interpretation Act 1978 shall apply as if each of the conditions were an Act of Parliament.
6. Headings and titles shall be disregarded.

Part 2: The conditions

Condition FA1

Requirement to provide Network Access on reasonable request

- FA1.1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide such Network Access as Ofcom may from time to time direct.
- FA1.2 The provision of Network Access in accordance with paragraph FA1.1 shall occur as soon as reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.
- FA1.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Condition FA2

Requirement not to unduly discriminate

FA2.1 The Dominant Provider shall not unduly discriminate against particular persons or against a particular description of persons, in relation to matters connected with Network Access.

FA2.2 In this Condition, the Dominant Provider may be deemed to have shown undue discrimination if it unfairly favours to a material extent an activity carried on by it so as to place at a competitive disadvantage persons competing with the Dominant Provider.

Condition FA3

Basis of charges

- FA3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition FA1 and/or Condition FA9 is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.
- FA3.2 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition.

Condition FA4

Requirement to publish a Reference Offer

FA4.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish a Reference Offer and act in the manner set out below.

FA4.2 Subject to paragraph FA4.10 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Network Access includes at least the following

- a. a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of Network Access);
- b. the locations of the points of Network Access;
- c. the technical standards for Network Access (including any usage restrictions and other security issues);
- d. the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing);
- e. any ordering and provisioning procedures;
- f. relevant charges, terms of payment and billing procedures;
- g. details of interoperability tests;
- h. details of traffic and network management;
- i. details of maintenance and quality as follows;
 - i. specific time scales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);
 - ii. service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;
 - iii. the amount of compensation payable by one party to another for failure to perform contractual commitments;
 - iv. a definition and limitation of liability and indemnity; and
 - v. procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices;
- j. details of any relevant intellectual property rights;

- k. a dispute resolution procedure to be used between the parties;
- l. details of duration and renegotiation of agreements;
- m. provisions regarding confidentiality of non-public parts of the agreements;
- n. rules of allocation between the parties when supply is limited (for example, for the purpose of Co-Location or location of masts);
- o. the standard terms and conditions for the provision of Network Access; and
- p. the amount applied to:
 - i. each Network Component used in providing Network Access with the relevant Usage Factors;
 - ii. the Transfer Charge for each Network Component or combination of Network Components described above;reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.

FA4.3 Subject to paragraph FA4.10 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Local Loop Unbundling Services includes the following:

- a. the location of MDF Sites;
- b. the area within which Metallic Path Facilities could be made available from each of the MDF Sites listed under (a) above;
- c. the availability of Co-Location at each of the MDF Sites listed under (a) above;
- d. equipment characteristics, including any restrictions on equipment for the purposes of Co-Location at each of the MDF Sites listed under (a) above;
- e. conditions for Site Access at each of the MDF Sites listed under (a) above, including conditions for access for staff of those Third Parties to whom the Dominant Provider provides Local Loop Unbundling Services;
- f. conditions for the inspection of MDF Sites at which Co-Location is available or at which Co-Location has been refused on grounds of lack of capacity;
- g. safety standards;
- h. the relevant charges (or charging formulae) for each feature, function and facility involved in the provision of Local Loop Unbundling Services; and
- i. anything which may reasonably be regarded as being likely to materially affect the availability of the relevant Local Loop Unbundling Services.

FA4.4 To the extent that the Dominant Provider provides to itself Network Access that:

- a. is the same, similar or equivalent to that provided to any other person; or

- b. may be used for a purpose that is the same, similar or equivalent to that provided to any other person,

in a manner that differs from that detailed in a Reference Offer in relation to Network Access provided to any other person, the Dominant Provider shall ensure that it publishes a Reference Offer in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs FA4.2(a)-(p).

FA4.5 The Dominant Provider shall, within one month of the date that this Condition enters into force, publish a Reference Offer in relation to any Network Access that it is providing as at the date that this Condition enters into force.

FA4.6 The Dominant Provider shall update and publish the Reference Offer in relation to any amendments or in relation to any further Network Access provided after the date that this Condition enters into force.

FA4.7 Publication referred to above shall be effected by:

- a. placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and
- b. sending a copy of the Reference Offer to Ofcom.

FA4.8 The Dominant Provider shall give Ofcom at least ten days prior written notice of any amendment to the Reference Offer coming into effect.

FA4.9 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

FA4.10 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

FA4.11 The Dominant Provider shall provide Network Access at the charges, terms and conditions in the relevant Reference Offer and shall not depart therefrom either directly or indirectly.

FA4.12 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Condition FA5

Requirement to notify charges and terms and conditions

- FA5.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish charges, terms and conditions and act in the manner set out below.
- FA5.2 Save where otherwise provided in Condition FA6, the Dominant Provider shall send to Ofcom and to every person with which it has entered into an Access Contract covered by Condition FA1 and/or Condition FA9 a written notice of any amendment to the charges, terms and conditions on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice") not less than 90 days before any such amendment comes into effect, or not less than 28 days before any such amendment comes into effect for new Network Access provided after the date that this Condition enters into force.
- FA5.3 The Dominant Provider shall ensure that an Access Charge Change Notice includes:
- a. a description of the Network Access in question;
 - b. a reference to the location in the Dominant Provider's current Reference Offer of the terms and conditions associated with the provision of that Network Access;
 - c. the date on which or the period for which any amendments to charges, terms and conditions will take effect (the "effective date");
 - d. the current and proposed new charge and the relevant Usage Factors applied to each Network Component comprised in that Network Access, reconciled in each case with the current or proposed new charge; and
 - e. the information specified in sub paragraph (d) above with respect to that Network Access to which that paragraph applies.
- FA5.4 The Dominant Provider shall not apply any new charge, term and condition identified in an Access Charge Change Notice before the effective date.
- FA5.5 To the extent that the Dominant Provider provides to itself Network Access that:
- i. is the same, similar or equivalent to that provided to any other person; or
 - ii. may be used for a purpose that is the same, similar or equivalent to that provided to any other person,
- in a manner that differs from that detailed in an Access Charge Change Notice in relation to Network Access provided to any other person, the Dominant Provider shall ensure that it sends to Ofcom an Access Charge Change Notice in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs FA5.3(a)-(e).

Condition FA6

Requirement to notify technical information

FA6.1 Save where Ofcom consents otherwise, where the Dominant

Provider:

- a. proposes to provide Network Access covered by Condition FA1 and/or Condition FA9, the terms and conditions for which comprise new:
 - i. technical characteristics (including information on network configuration where necessary to make effective use of the Network Access);
 - ii. locations of the points of Network Access; or
 - iii. technical standards (including any usage restrictions and other security issues), or
- b. proposes to amend an existing Access Contract covered by Condition FA1 and/or Condition FA9 by modifying the terms and conditions listed in paragraph FA7.1(a)(i) to (iii) on which the Network Access is provided,

the Dominant Provider shall publish a written notice (the "Notice") of the new or amended terms and conditions within a reasonable time period, but not less than 90 days before either the Dominant Provider enters into an Access Contract to provide the new Network Access or the amended terms and conditions of the existing Access Contract come into effect.

FA6.2 The Dominant Provider shall ensure that the Notice includes:

- a. a description of the Network Access in question;
- b. a reference to the location in the Dominant Provider's Reference Offer of the relevant terms and conditions; and
- c. the date on which or the period for which the Dominant Provider may enter into an Access Contract to provide the new Network Access or any amendments to the relevant terms and conditions will take effect (the "effective date").

FA6.3 The Dominant Provider shall not enter into an Access Contract containing the terms and conditions identified in the Notice or apply any new relevant terms and conditions identified in the Notice before the effective date.

FA6.4 Publication referred to in paragraph FA6.1 shall be effected by:

- a. placing a copy of the Notice on any relevant website operated or controlled by the Dominant Provider;
- b. sending a copy of the Notice to Ofcom; and
- c. sending a copy of the Notice to any person at that person's written request, and where the Notice identifies a modification to existing relevant terms and conditions, to every person with which the Dominant Provider has entered

into an Access Contract covered by Condition FA1 and/or Condition FA9. The provision of such a copy of Notice may be subject to a reasonable charge.

Condition FA7

Quality of service

FA7.1 The Dominant Provider shall publish all such information for the purposes of securing transparency as to the quality of service in relation to Network Access in relation to Network Access provided by the Dominant Provider in such manner and form as Ofcom may from time to time direct.

FA7.2 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Condition FA8

Requests for new Network Access

- FA8.1 The Dominant Provider shall for the purposes of transparency publish reasonable guidelines, in relation to requests for new Network Access made to it. Such guidelines shall detail:
- a. the form in which such a request should be made;
 - b. the information that the Dominant Provider requires in order to consider a request for new Network Access; and
 - c. the time scales in which such requests will be handled by the Dominant Provider in accordance with this Condition.
- FA8.2 Such guidelines shall be published within two months of the date that this Condition enters into force following a consultation with Ofcom and Third Parties. The Dominant Provider shall keep the guidelines under review and consult with relevant Third Parties and Ofcom before making any amendments to the guidelines.
- FA8.3 The Dominant Provider shall, upon a reasonable request from a Third Party considering making a request for new Network Access, provide that Third Party with information so as to enable that Third Party to make a request for new Network Access. Such information shall be provided within a reasonable period.
- FA8.4 On receipt of a written request for new Network Access the Dominant Provider shall ensure that the requirements of this Condition are met. A modification of a request for new Network Access which has previously been submitted to the Dominant Provider, and rejected by the Dominant Provider, shall be considered as a new request.
- FA8.5 Within five working days of receipt of a request under paragraph FA8.4, the Dominant Provider shall acknowledge that request in writing.
- FA8.6 Within fifteen working days of receipt of a request under paragraph FA8.4 the Dominant Provider shall respond in writing to the requesting Third Party in one of the following ways:
- a. the Dominant Provider shall confirm that the request will be met and shall confirm that the following will be prepared:
 - i. the timetable for the provision of the new Network Access;
 - ii. an initial offer of terms and conditions for the provision of the new Network Access; and
 - iii. the timetable for the agreement of technical issues.
 - b. the Dominant Provider shall confirm that a feasibility study is reasonably required in order to determine whether the request made is reasonable and the Dominant Provider shall set out its objective reasons for the need for such a study;

- c. the Dominant Provider shall confirm that the request is not sufficiently well formulated and, where it does so, the Dominant Provider shall detail all of the defects in the request which has been made; or
- d. the Dominant Provider shall confirm that the request is refused on the basis that it is not reasonable and, where it does so, the Dominant Provider shall detail its reasons for refusal.

FA8.7 Where the Dominant Provider responds to a request under paragraph FA8.4 in accordance with paragraph FA8.6(a) it shall, within thirty five working days of receipt of a request under paragraph FA8.4, respond further to the requesting Third Party in writing and:

- i. confirm the timetable for the provision of the new Network Access;
- ii. provide an initial offer of terms and conditions for the provision of the new Network Access; and
- iii. confirm the timetable for the agreement of technical issues.

FA8.8 Where the Dominant Provider responds to a request under paragraph FA8.4 in accordance with paragraph FA8.6(a) and determines, due to a genuine error of fact, that it reasonably needs to complete a feasibility study, it may, as soon as practicable and in any event, within thirty five working days of receipt of a request under paragraph FA8.4, inform the requesting Third Party that a feasibility study is reasonably required and set out its objective reasons for such a study.

FA8.9 Where FA8.8 applies the Dominant Provider shall, within forty five working days from the date that the Dominant Provider informs the requesting Third Party that a feasibility study is reasonably required, respond further to the requesting Third Party, in writing, in one of the following ways:

- a. the Dominant Provider shall confirm that the request will be met and shall:
 - i. confirm the timetable for the provision of the new Network Access;
 - ii. provide an initial offer of terms and conditions for the provision of the new Network Access; and
 - iii. confirm the timetable for the agreement of technical issues; or
- b. the Dominant Provider shall confirm that the request is refused on the basis that it is not reasonable and, where it does so, the Dominant Provider shall detail its reasons for refusal. The Dominant Provider shall provide to Ofcom a copy of the feasibility study and shall provide to the requesting Third Party a non-confidential copy of the feasibility study.

FA8.10 The time limit set out in paragraph FA8.9 above shall be extended up to seventy working days from the date that the Dominant Provider informs the requesting Third Party that a feasibility study is reasonably required pursuant to paragraph FA8.8, if:

- a. circumstances have arisen which, despite the Dominant Provider using its best endeavours, prevent it from completing the feasibility study within forty five working days of the date that the requesting Third Party was informed of the need for a feasibility study pursuant to paragraph FA8.8; or

- b. the Third Party and the Dominant Provider agree to extend the time limit up to seventy working days.

FA8.11 The time limit set out in paragraph FA8.9 above shall be extended beyond seventy working days from the date that the Dominant Provider informs the requesting Third Party that a feasibility study is reasonably required pursuant to paragraph FA8.8, if:

- a. Ofcom agrees; or
- b. the Third Party and the Dominant Provider agree to extend the time limit beyond seventy working days.

FA8.12 Where the Dominant Provider responds to a request under paragraph FA8.4 in accordance with paragraph FA8.6(b) the Dominant Provider shall, within sixty working days of receipt of a request under paragraph FA8.4, respond further to the requesting Third Party, in writing, in one of the following ways:

- a. the Dominant Provider shall confirm that the request will be met and shall:
 - i. confirm the timetable for the provision of the new Network Access;
 - ii. provide an initial offer of terms and conditions for the provision of the new Network Access; and
 - iii. confirm the timetable for the agreement of technical issues; or
- b. the Dominant Provider shall confirm that the request is refused on the basis that it is not reasonable and, where it does so, the Dominant Provider shall detail its reasons for refusal. The Dominant Provider shall provide to Ofcom a copy of the feasibility study and shall provide to the requesting Third Party a non-confidential copy of the feasibility study.

FA8.13 The time limit set out in paragraph FA8.12 above shall be extended up to eighty five working days of receipt of a request under paragraph FA8.4, if:

- a. circumstances have arisen which, despite the Dominant Provider using its best endeavours, prevent it from completing the feasibility study within sixty working days of receipt of a request under paragraph FA8.4; or
- b. the Third Party and the Dominant Provider agree to extend the time limit up to eighty five working days.

FA8.14 The time limit set out in paragraph FA8.12 above shall be extended beyond eighty five working days of receipt of a request under paragraph FA8.4, if:

- a. Ofcom agrees; or
- b. the Third Party and the Dominant Provider agree to extend the time limit beyond eighty five working days.

FA8.15 Within two months of the date that this Condition enters into force the Dominant Provider shall provide Ofcom with a description of the processes it has put in place to ensure compliance with this Condition. It shall keep those processes under review to ensure that they remain adequate for that purpose.

FA8.16 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Condition FA9

Requirement to provide Local Loop Unbundling Services

- FA9.1 The Dominant Provider shall provide Local Loop Unbundling Services as soon as it is reasonably practicable to every Third Party who reasonably requests such Local Loop Unbundling Services.
- FA9.2 The Dominant Provider shall provide Local Loop Unbundling Services on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may direct from time to time.
- FA9.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

SCHEDULE 2

The conditions imposed on Kingston Communications plc under sections 45, 87 and 88 of the Communications Act 2003 as a result of the analysis of the market for wholesale local access services within the Hull Area in which Kingston Communications plc has been found to have significant market power

Part 1: Application, definition and interpretation of the conditions in Part 2

1. The conditions in Part 2 of this Schedule shall apply to the market for wholesale local access services within the Hull Area and shall also apply to the provision of Co-Location.

2. In this Schedule:

“**Act**” means the Communications Act 2003;

“**Access Charge Change Notice**” has the meaning given to it in Condition FB5.2;

“**Co-Location**” means the provision of space on reasonable terms permitting a Third Party to occupy part of an MDF Site reasonably sufficient to permit the use of one or more Metallic Path Facilities, and in particular to permit the connection of the Dominant Provider’s Electronic Communications Network with the Electronic Communications Network of a Third Party at that location;

“**Dominant Provider**” means Kingston Communications plc, whose registered company number is 2150618, and any Kingston Communications plc subsidiary or holding company, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989;

“**Market**” means the market for wholesale local access services within the Hull Area;

“**MDF Site**” means the site of an operational building of the Dominant Provider that houses a main distribution frame;

“**Metallic Path Facilities**” means a circuit comprising a pair of twisted metal wires employing electric, magnetic, electro-magnetic, electro-chemical or electro-mechanical energy to convey Signals when connected to Apparatus or an Electronic Communications Network;

“**Network Component**” means, to the extent they are used in the Market and in the provision of Co-Location, the network components specified in any direction given by Ofcom from time to time for the purpose of these Conditions;

“**Ofcom**” means the Office of Communications as established pursuant to section 1(1) of the Office of Communications Act 2002;

“**Reference Offer**” means the terms and conditions on which the Dominant Provider is willing to enter into an Access Contract;

“**Third Party**” means a person providing a public Electronic Communications Service or a person providing a public Electronic Communications Network;

“**Transfer Charge**” means the charge or price that is applied, or deemed to be applied, by the Dominant Provider to itself for the use or provision of an activity or

group of activities. For the avoidance of doubt such activities or group of activities include, amongst other things, products and services provided from, to or within the Market and the use of Network Components in that Market; and

“Usage Factor” means the average usage by any Communications Provider (including the Dominant Provider itself) of each Network Component in using or providing a particular product or service or carrying out a particular activity.

3. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them and otherwise any word or expression shall have the same meaning as it has in the Act.
4. The Interpretation Act 1978 shall apply as if each of the conditions were an Act of Parliament.
5. Headings and titles shall be disregarded.

Part 2: The conditions

Condition FB1

Requirement to provide Network Access on reasonable request

- FB1.1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide such Network Access as Ofcom may from time to time direct.
- FB1.2 The provision of Network Access in accordance with paragraph FB1.1 shall occur as soon as reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.
- FB1.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Condition FB2

Requirement not to unduly discriminate

FB2.1 The Dominant Provider shall not unduly discriminate against particular persons or against a particular description of persons, in relation to matters connected with Network Access.

FB2.2 In this Condition, the Dominant Provider may be deemed to have shown undue discrimination if it unfairly favours to a material extent an activity carried on by it so as to place at a competitive disadvantage persons competing with the Dominant Provider.

Condition FB3

Basis of charges

- FB3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition FB1 is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.
- FB3.2 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition.

Condition FB4

Requirement to publish a Reference Offer

FB4.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish a Reference Offer and act in the manner set out below.

FB4.2 Subject to paragraph FB4.9 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Network Access includes at least the following:

- a. a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of Network Access);
- b. the locations of the points of Network Access;
- c. the technical standards for Network Access (including any usage restrictions and other security issues);
- d. the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing);
- e. any ordering and provisioning procedures;
- f. relevant charges, terms of payment and billing procedures;
- g. details of interoperability tests;
- h. details of traffic and network management;
- i. details of maintenance and quality as follows:
 - i. specific time scales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);
 - ii. service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;
 - iii. the amount of compensation payable by one party to another for failure to perform contractual commitments;
 - iv. a definition and limitation of liability and indemnity; and
 - v. procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices;
- j. details of any relevant intellectual property rights;
- k. a dispute resolution procedure to be used between the parties;

- l. details of duration and renegotiation of agreements;
- m. provisions regarding confidentiality of non-public parts of the agreements;
- n. rules of allocation between the parties when supply is limited (for example, for the purpose of Co-Location or location of masts);
- o. the standard terms and conditions for the provision of Network Access; and
- p. the amount applied to:
 - i. each Network Component used in providing Network Access with the relevant Usage Factors;
 - ii. the Transfer Charge for each Network Component or combination of Network Components described above;reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.

FB4.3 To the extent that the Dominant Provider provides to itself Network Access that:

- a. is the same, similar or equivalent to that provided to any other person; or
- b. may be used for a purpose that is the same, similar or equivalent to that provided to any other person,

in a manner that differs from that detailed in a Reference Offer in relation to Network Access provided to any other person, the Dominant Provider shall ensure that it publishes a Reference Offer in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs FB4.2(a)-(p).

FB4.4 The Dominant Provider shall, within one month of the date that this Condition enters into force, publish a Reference Offer in relation to any Network Access that it is providing as at the date that this Condition enters into force.

FB4.5 The Dominant Provider shall update and publish the Reference Offer in relation to any amendments or in relation to any further Network Access provided after the date that this Condition enters into force.

FB4.6 Publication referred to above shall be effected by:

- a. placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and
- b. sending a copy of the Reference Offer to Ofcom.

FB4.7 The Dominant Provider shall give Ofcom at least ten days prior written notice of any amendment to the Reference Offer coming into effect.

FB4.8 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

FB4.9 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

FB4.10 The Dominant Provider shall provide Network Access at the charges, terms and conditions in the relevant Reference Offer and shall not depart therefrom either directly or indirectly.

FB4.11 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Condition FB5

Requirement to notify charges and terms and conditions

FB5.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish charges, terms and conditions and act in the manner set out below.

FB5.2 Save where otherwise provided in Condition FB6, the Dominant Provider shall send to Ofcom and to every person with which it has entered into an Access Contract covered by Condition FB1 a written notice of any amendment to the charges, terms and conditions on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice") not less than 90 days before any such amendment comes into effect for Network Access being provided on the date that this Condition enters into force, or not less than 28 days before any such amendment comes into effect for new Network Access provided after the date that this Condition enters into force.

FB5.3 The Dominant Provider shall ensure that an Access Charge Change Notice includes:

- a. a description of the Network Access in question;
- b. a reference to the location in the Dominant Provider's current Reference Offer of the terms and conditions associated with the provision of that Network Access;
- c. the date on which or the period for which any amendments to charges, terms and conditions will take effect (the "effective date");
- d. the current and proposed new charge and the relevant Usage Factors applied to each Network Component comprised in that Network Access, reconciled in each case with the current or proposed new charge; and
- e. the information specified in sub paragraph (d) above with respect to that Network Access to which that paragraph applies.

FB5.4 The Dominant Provider shall not apply any new charge, term and condition identified in an Access Charge Change Notice before the effective date.

FB5.5 To the extent that the Dominant Provider provides to itself Network Access that:

- a. is the same, similar or equivalent to that provided to any other person; or
- b. may be used for a purpose that is the same, similar or equivalent to that provided to any other person,

in a manner that differs from that detailed in an Access Charge Change Notice in relation to Network Access provided to any other person, the Dominant Provider shall ensure that it sends to Ofcom an Access Charge Change Notice in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs FB5.3(a)-(e).

Condition FB6

Requirement to notify technical information

FB6.1 Save where Ofcom consents otherwise, where the Dominant

Provider:

- a. proposes to provide Network Access covered by Condition FB1, the terms and conditions for which comprise new:
 - i. technical characteristics (including information on network configuration where necessary to make effective use of the Network Access);
 - ii. locations of the points of Network Access; or
 - iii. technical standards (including any usage restrictions and other security issues), or
- b. proposes to amend an existing Access Contract covered by Condition FB1 by modifying the terms and conditions listed in paragraph FB6.1(a)(i) to (iii) on which the Network Access is provided,

the Dominant Provider shall publish a written notice (the "Notice") of the new or amended terms and conditions within a reasonable time period, but not less than 90 days before either the Dominant Provider enters into an Access Contract to provide the new Network Access or the amended terms and conditions of the existing Access Contract come into effect.

FB6.2 The Dominant Provider shall ensure that the Notice includes:

- a. a description of the Network Access in question;
- b. a reference to the location in the Dominant Provider's Reference Offer of the relevant terms and conditions; and
- c. the date on which or the period for which the Dominant Provider may enter into an Access Contract to provide the new Network Access or any amendments to the relevant terms and conditions will take effect (the "effective date").

FB6.3 The Dominant Provider shall not enter into an Access Contract containing the terms and conditions identified in the Notice or apply any new relevant terms and conditions identified in the Notice before the effective date.

FB6.4 Publication referred to in paragraph FB6.1 shall be effected by:

- a. placing a copy of the Notice on any relevant website operated or controlled by the Dominant Provider;
- b. sending a copy of the Notice to Ofcom; and
- c. sending a copy of the Notice to any person at that person's written request, and where the Notice identifies a modification to existing relevant terms and conditions, to every person with which the Dominant Provider has entered

into an Access Contract covered by Condition FB1. The provision of such a copy of Notice may be subject to a reasonable charge.

Annex 2

Narrowband and broadband price comparisons

Narrowband price comparisons

A2.1 Table A2.1 below sets out information for a range of narrowband products offered by BT, ntl and Telewest.

Table A2.1 Sample of loop-based and cable-based narrowband service prices

	Install £	Rental £	Local Calls £			National Calls £		
			Day	Eve	W'end	Day	Eve	W'end
<i>Standard</i>								
BT	74.99	9.5	0.04	0.01	0.01	0.08	0.04	0.015
ntl	75	9.5	0.03	0.02	0.01	0.03	0.02	0.01
Telewest	25	10	0.03	0.02	0.01	0.03	0.02	0.01
<i>Free evenings and weekends</i>								
BT	74.99	16.5	0.03	0.00	0.00	0.03	0.00	0.00
ntl	75	18.5	0.03	0.00	0.00	0.03	0.00	0.00
Telewest	25	17.5	0.04	0.00	0.00	0.04	0.00	0.00
<i>Free calls anytime</i>								
BT	74.99	25.5	0.00	0.00	0.00	0.00	0.00	0.00
ntl	75	25.0	0.00	0.00	0.00	0.00	0.00	0.00
Telewest	25	26	0.00	0.00	0.00	0.00	0.00	0.00
<i>Internet pay-as-you-go (excluding basic line rental)</i>								
BT			0.04	0.01	0.01			
ntl			0.01	0.01	0.01			
<i>Unlimited dial-up internet (excluding basic line rental)</i>								
BT		15.99	0.00	0.00	0.00			
ntl		10.00	0.00	0.00	0.00			
Telewest		14.00	0.00	0.00	0.00			
AOL		15.99	0.00	0.00	0.00			
Freeserve		15.99	0.00	0.00	0.00			
Tiscali		14.99	0.00	0.00	0.00			

Source: Company websites

A2.2 Comparison of the data for loop-based and cable-based services set out above indicates broad equivalence for similar service provision.

Broadband price comparisons

A2.3 Table A2.2 below sets out information on a sample of residential broadband internet access products, offered over both local loops (DSL) and over cable, providing (i) 512kbit/s and (ii) 1 Mbit/s download speeds.

Table A2.2 Sample of loop-based and cable-based broadband internet access prices

Product	Delivery	Install £	Modem £	Rental £/month
500k				
AOL Broadband	DSL/Cable	0.00	0.00	27.99
BT Broadband Basic	DSL	30.00	50.00	19.99
BT Broadband	DSL	0.00	0.00	27.00
Freeserve	DSL	0.00	0.00	27.99
Pipex Extreme Solo2Go 500	DSL	17.57	0.00	23.44
Tiscali Broadbandx10 - Unlimited	DSL	0.00	0.00	24.99
Telewest Blueyonder	Cable	0.00	0.00	25.00
ntl	Cable	0.00	0.00	24.99
1Mb				
AOL 1Mb Broadband	DSL	0.00	0.00	34.99
BT Broadband 1Mb	DSL	0.00	0.00	38.00
Pipex Extreme Solo2Go 500	DSL	52.88	0.00	33.99
Telewest Blueyonder	Cable	0.00	0.00	35.00
ntl	Cable	0.00	0.00	34.99

Source: Company websites

A2.4 The information set out in the table suggests that loop-based and cable-based products are very similarly priced.

Annex 3

KPI background and current issues

Background

A3.1 On 15 November 2001, Oftel published a Direction on service level commitments and compensation related to initial service provision and ongoing service levels (<http://www.ofcom.org.uk/static/archive/oftel/publications/broadband/llu/sla1101.htm>).

A basic principle underlying that Direction was that, where BT provides equivalent or comparable products both to itself and another provider, the level of service provided should be equivalent or comparable.

A3.2 To encourage BT to improve its performance, it was required to provide regular reports to Ofcom against Key Performance Indicators (KPIs) and service level commitments for access network facilities (ANF) covering:

- Initial provision of service
 - delivery and completion timescales;
 - testing and handover of facilities;
- Ongoing service levels;
 - fault handling and repair;
 - service availability; and
 - support service levels.

A3.3 The full set of KPIs is listed in the Schedule to Section B of the Annex to the November 2001 Direction.

A3.4 Oftel published a consultation, *Proposed requirement on dominant providers to publish Key Performance Indicators*, on 11 July 2003 (see http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/kpis0703.htm). This followed proposals for SMP obligations on BT to publish KPIs for wholesale services in the fixed narrowband, broadband and leased lines market reviews. The consultation set out high level proposals for specific KPIs, intended to be representative of key business processes, but not considered disproportionate for BT to collect and publish data on. LLU was not included in the initial proposals.

A3.5 Responses to that consultation can be found on Ofcom's website, under "Legacy Regulators", at <http://www.ofcom.org.uk/static/archive/oftel/publications/responses/2003/kpis0703/index.htm>. In its response, Bulldog expressed its concerns regarding discrimination in the provision of LLU and the efficacy of the LLU KPI reporting process. Ofcom considers that it would only be appropriate to consider KPIs for LLU within the context of a review of the relevant market.

A3.6 In September 2003, the LLU Industry Group reviewed the list of KPIs included in the ANF Agreement and made a number of proposals to BT for additions and

modifications to the co-location and MPF metrics. The review of the KPIs is an iterative process. BT currently provides monthly reports to the Group on the KPIs listed in Table A2.1 below. The indicators are aggregate totals of BT's performance to other LLU operators and BT does not provide comparative data on the quality of service it provides to itself.

Table A3.1 List of KPIs on which BT currently reports to the LLU Industry

Plan and Build			
Percentage of PC3s/DLR3s delivered within the permitted time of start	Co-mingling product only	Co-mingling product + enabling	DLR
Percentage of orders completed by target date (ECD date)	Co-mingling product only	Co-mingling product + enabling	DLR
Total lapse time from start date to (actual) RFI/RFS	Co-mingling product only	Co-mingling product + enabling	DLR
Volume of co-location fault reports	Received	Cleared	
MPF and Shared MPF Provision			
% of line characteristics provided within two days	MPF	SMPF	
% of pre-order enquiries fatally/non-fatally rejected	MPF	SMPF	
% of firm orders rejected (inc cancellations/hand backs)	MPF	SMPF	
Average lapse time from order receipt (POE) to CAD		SMPF	
% of orders provisioned by CAD (job effective)	MPF	SMPF	
MPF & Shared MPF Repair			
Percentage of early life failures (within five days of handover)	MPF	SMPF	
Percentage of repeat faults (occurring within 30 days of the previous fault clear)	MPF	SMPF	
Percentage of faults escalated to Stage II	MPF	SMPF	
Percentage of standard care faults repaired in 17 working hours	MPF	SMPF	
Percentage of line characteristics provided within two days	MPF	SMPF	
Percentage of pre-order enquiries fatally/non-fatally rejected	MPF	SMPF	
Percentage of firm orders rejected (including cancellations/hand backs)	MPF	SMPF	
Percentage of orders provisioned by CAD (job effective)	MPF	SMPF	
Percentage of standard care faults repaired in 28 working hours	MPF	SMPF	
Percentage of total care faults repaired in 24 clock hours	MPF	SMPF	

Issues with current KPI process

A3.7 The review of the KPIs has raised a number of issues, both in relation to the actual indicators themselves and problems identified in the reporting process.

A3.8 **Pre-ordering provisioning:** BT's pre-ordering process involves an exchange of information between BT and LLU operators to validate the order. The KPIs have revealed a high rejection rate for both MPF and SMPF orders at the Pre-Ordering

Enquiry (“POE”) stage. For MPF Orders, LLU providers are required to supply full details of the end user’s premises including postcode in a format that exactly matches the format stored by BT’s internal systems. As BT itself has access to the database, it may potentially experience a much lower level of order rejections than its competitors.

- A3.9 **Ordering:** In his Direction of 15 November 2001, the Director stated that once the volume of loops started to increase he would expect to direct BT to provide computerised ordering and included a reserve requirement on BT to provide an automated support system with the capability needed by providers in the ANF agreement. Although BT does have an automated ordering process for MPF, this is linked to BT’s electronic ordering system, and is not recorded as a separate event. BT does not currently provide a KPI but is in the process of developing an independent ordering gateway for SMPF orders, so would be able to publish a KPI in future if required.
- A3.10 **Provisioning:** BT has a target for total end to end timescales for LLU operators (80/120 working days) for the provision of co-mingling facilities but does not disclose its own timescales even though these are stated to be equivalent. BT does not currently provide a KPI showing the average lapse time between the POE to Customer Acknowledged Date (“CAD”) MPF. This is because the order process specifies the customer preferred date for delivery which may or may not be aligned with BT’s target date for delivery. If operators do not require the delivery within the standard lead times this may skew the average and the KPI would be misleading. This is a particular issue for enabling builds where a third party contractor is involved. BT is considering introducing a new process which will indicate whether enabling works are likely to be minor or major which will enable BT to state at an earlier stage of the process whether it is able to meet the target date for delivery.
- A3.11 **Point of measurement.** BT currently provides a KPI for the percentage of MPF/SMPF orders provisioned by the CAD, but not to the customer required date (“CRD”). LLU operators consider that the CRD would provide a more accurate indicator of the number of orders that BT could have provisioned on time as this is the date on which the LLU provider actually requires delivery. If there is a pre-provisioning fault then the CAD will be amended automatically to reflect the fault and therefore there is a lack of transparency regarding actual performance. A possible alternative may be to measure the KPI in relation to the contractual delivery date (“CDD”) which is calculated by adding the standard lead time for LLU to the order entry date.
- A3.12 **Fault repairs:** The time taken to fix a fault is a fundamental discrimination issue. Whereas Ofcom accepts that fault clearance may sometimes be outside of BT’s control, excessive fault clearance times may indicate a different level of service offering for BT’s competitors. BT’s current fault repair targets for LLU are based on BT’s retail PSTN service, which some LLU providers consider are not appropriate for business end users. Information about service availability is also important so that providers are able to forecast the level of down time per year and incorporate this into their business plans.

Annex 4

Condition FA8 – Process for dealing with requests for new products

A4.1 In Section 6, Ofcom proposes imposing on BT a regulated process for requests for new Network Access. This annex sets out the detail of Condition FA8, Process for dealing with requests for new products.

A. Publication of reasonable guidelines on requesting a new product

A4.2 Conditions FA8.1 and FA8.2 oblige BT to publish the required content and form of a request for new Network Access. Ofcom considers that it is appropriate to require BT to produce reasonable guidelines on requesting new Network Access. Ofcom believes that such guidelines will contribute to ensuring that the process of providing new Network Access is efficient by ensuring that BT receives accurate product descriptions in sufficient detail and gives requesting communications providers confidence that requests are handled in a fair and consistent manner. Ofcom considers that BT should consult with Ofcom and relevant third parties before finalising the initial version of these guidelines to ensure that the guidelines meet the reasonable needs of stakeholders. Ofcom would expect BT to make the proposed guidelines publicly available and to engage with stakeholders as appropriate to enable them to contribute to the development of the final version of the guidelines. Ofcom also considers that BT should finalise the initial guidelines within two months of the date the condition enters into force. In addition, BT shall keep these guidelines under review and consult with relevant third parties and Ofcom before making any amendments.

B. Provision of information for the purpose of making a request for a new Network Access

A4.3 Ofcom considers it appropriate to require BT, on receipt of a reasonable request, to supply sufficient technical and network information to enable third parties to construct proposed product specifications that are efficient and meet their reasonable requirements (Condition FA8.3). Ofcom requires that the information should be supplied within a “reasonable timescale”. If a dispute arises about timescales, the parties could refer the matter to Ofcom. If it considered it appropriate to accept such a dispute, Ofcom would consider what is reasonable on a case-by-case basis, taking into account the complexity of the information requested.

A4.4 Ofcom considers that BT should not refuse access to any such information on the basis of confidentiality, although BT may require a non-disclosure agreement. Ofcom considers that in signing confidentiality agreements BT must take into account its obligations to meet all reasonable requests for access and to provide information to requesting operators. If necessary, BT should review confidentiality agreements with its suppliers accordingly in order to ensure compliance with its obligations.

1. Section 87(4)(e) of the Act requires Ofcom to take account of, inter alia, any relevant intellectual property (“IP”) rights in considering whether it is proportionate to mandate or attach conditions to an access obligation.

Ofcom recognises that IP rights will protect some types of information, but where that information is essential to allow BT’s competitors to request and make use of

reasonable access products, Ofcom expects BT to explore whether such information could be made available and protected with non-disclosure agreements.

A4.5 As set out in the Access Guidelines, in the event of a dispute about the provision of information based on the existence of relevant IP rights, Ofcom will consider the identification of IP rights on a case-by-case basis.

C. Process for dealing with requests for new Network Access

2. The following is a summary of the process for dealing with requests for new Network Access:

- BT must acknowledge receipt of the request within five working days (Condition FA8.5);
- BT must give a first written response to the request at the latest within 15 working days of its receipt (Condition FA8.6). It is envisaged that the response will not be an initial offer of terms and conditions, although nothing would preclude such a response at this stage. If the request is not adequately formulated, Ofcom would expect BT and communications providers to be able to discuss constructively how the request could be more appropriately formulated. How a request should be appropriately formulated should be covered in BT's guidelines. If the request is refused on the basis of specified objective criteria or the need to maintain network integrity, BT shall detail its reasons for refusal. If the request is sufficiently well formulated, BT shall state either that the initial offer of terms and conditions will be prepared, or that a feasibility study will be required (and objective reasons why a feasibility study is required). BT should also at this stage confirm preparation of a timetable for the agreement of technical issues (Condition FA8.6);
- BT may reject a request on the grounds that it is not reasonable, is not technically feasible, requires BT to provide something which is not within its power to provide, or would compromise the integrity of BT's network. Oftel has set out in the Access Guidelines (at paragraph 2.28) the procedure to be followed to resolve disputes about a 'reasonable request' for Network Access. Ofcom considers that a request is unreasonable if it imposes an undue burden on BT, i.e. BT would be unable to recover its costs of providing the requested access;
- Where there is no feasibility study, 35 working days after receipt of the request (at the latest), BT must provide an initial offer of terms and conditions and a timetable for the new Network Access and the resolution of technical issues (Condition FA8.7);
- Where BT has said that no feasibility study is required but, due to a genuine error of fact, BT decides after 15 days that a feasibility study is reasonably required, it may inform the requesting party within 35 working days that a feasibility study is required (Condition FA8.8) and give objective reasons why the study is required. Ofcom expects that this condition will apply in limited circumstances only, and generally BT will decide whether a feasibility study is required within 15 working days; and
- Where a feasibility study is undertaken, at the end of 60 working days, BT must be able to respond fully to the majority of requests for new Network Access (Condition FA8.9). The condition allows provision for this time to be extended to 85 working days, where, despite using its best endeavours, BT is unable to complete the feasibility study within 60 working days or when BT and the requesting operator agree that more time is needed. Ofcom does however acknowledge that in certain circumstances, BT might reasonably require even more time to respond fully to a request. Such circumstances might include multiple or conflicting requests from

different providers, extremely complex requests covering a number of different technology areas or requests requiring wider industry consultation. The condition therefore includes provision for the overall deadline to be extended to over 85 working days, with the agreement of the requesting party or Ofcom (Condition FA8.11). Where BT wishes to extend the 60 day deadline to 85 working days (Condition FA8.10), it is for BT to show that circumstances exist which prevents it from responding to the request within 60 working days.

Annex 5

International comparisons

Introduction

- A5.1 This Annex sets out comparisons of the charges for and take-up of LLU across different EU Member States. It also places the extent of LLU in the context of the overall take-up of broadband in these Member States. It does not cover the 10 new Member States which acceded to the EU on 1 May 2004.
- A5.2 International comparisons provide a useful benchmark against which to judge the development of LLU in the UK. The relationship between LLU prices and take-up observed in other countries could also provide insight into the possible impact of price changes on LLU take-up in the UK. Furthermore, analysis of charges in other countries may yield cost information which could inform the identification of efficient cost levels in the UK.
- A5.3 However, it is also important to recognise that LLU provides just one way of delivering services which can compete with the incumbent's own offerings. Hence, any cross-country comparison of LLU prices and take-up must also take appropriate account of the role of cable modem and wholesale DSL alternatives in delivering broadband service competition.
- A5.4 Finally, to the extent that operating environments differ across countries, this will limit the inferences for the UK that can be drawn from any simple international price or take-up comparisons.

Comparison of LLU charges across EU Member States

- A5.5 Table A5.1 sets out rental and connection charges for both fully unbundled and shared loops in Member States, as published in the November 2003 Report on the Implementation of the EU Electronic Communications Regulatory Package (the 9th Implementation Report). This report is available on the European Commission's website at:
http://europa.eu.int/information_society/topics/ecom/implementation_enforcement/annualreports/9threport/index_en.htm

Table A5.1 Charges for full and shared loops in Member States (July 2003)

Country	Full loops		Shared loops	
	Connection €	Rental €/ month	Connection €	Rental €/ month
Austria	54,5	10,9	109,0	5,5
Belgium	54,9	11,9	54,9	2,3
Denmark	44,8	8,3	104,4	4,1
France	78,7	10,5	78,7	2,9
Finland	218,0	14,1	105,0	6,7
Germany	70,56	11,8	74,9	4,8
Greece	36,1	10,6	47,0	5,3
Ireland	121,5	16,8	123,4	9,0
Italy	32,0	8,3	44,5	2,8
Luxembourg	185,6	15,8	196,2	5,0
Netherlands	33,9	9,9	44,1	2,3
Portugal	84,1	12,0	88,2	3,0
Spain	20,0	12,3	27,0	3,5
Sweden	167,6	11,4	119,7	5,4
UK	128,3	14,8	170,5	6,4

3. Overall, as is clear from this table, the UK currently has some of the highest LLU charges in the EU. In particular, only:
- Finland, Luxembourg, and Sweden have higher full unbundling connection charges;
 - Ireland and Luxembourg have higher full unbundling rental charges;
 - Luxembourg has a higher shared access connection charge; and
 - Finland and Ireland have higher shared access rental charges.

A5.6 The report also reported on the average charges²⁶ across Member States for both full and shared access to loops. These were €68.20 and €11.50 for connection and rental to full loops respectively. For shared loops, the charges were €80.60 and €4.20 respectively. The UK charges for the rental of, and connection to, full and shared loops were therefore significantly higher than the average charges across Member States. Comparisons for shared access are particularly striking, with rental and connection charges for a number of Member States at levels substantially below half the UK figures.

Take-up of local loop unbundling

A5.7 Table A5.2 provides a comparison of the total number of loops that have been unbundled in individual Member States (full, shared and total). These data were set out in the Commission's Communication Committee (Cocom) *Working Document on Broadband access in the EU*, which was published on the Commission's website

²⁶ For full details of the weightings, refer to the 9th Implementation Report.

(<http://forum.europa.eu.int/Public/irc/infso/cocom1/home>) and set out the position across Member States as of 1 January 2004.

Table A5.2 Numbers of unbundled and shared loops in Member States (January 2004)

Country	Full loops	Shared loops	Aggregate	Penetration % of all lines
Austria	26,700	0	26,700	0.9
Belgium	3,915	2,682	6,597	0.1
Denmark	50,791	15,888	66,679	3.1
Finland	78,600	22,000	100,600	3.7
France	3,800	272,900	276,700	0.9
Germany	1,349,848	86	1,349,936	3.6
Greece	650	5	655	0.0
Ireland	280	1,100	1,380	0.1
Italy	538,800	19	538,819	2.0
Luxembourg	1,167	0	1,167	0.5
Netherlands	33,945	174,210	208,155	2.7
Portugal	1,756	0	1,756	0.0
Spain	16,011	5	16,016	0.1
Sweden	6,214	45,699	51,913	0.9
UK	5,418	2,812	8,230	0.0

A5.8 It is immediately apparent that, even in absolute terms, more than half of all Member States have unbundled more lines than the UK. When adjusted for size, the comparisons are even starker. The UK has one of the lowest LLU penetration rates (measured as the percentage of all lines that have been unbundled) in the EU. Indeed, each of the other large Member States (France, Germany, and Italy) has unbundled at least 35 times the number of LLU lines in the UK.

A5.9 second notable feature to emerge from the unbundling data is the variation in the relative uptake of full and shared access options across the EU. In Germany and Italy, most strikingly, the significant levels of unbundling observed to date have been almost exclusively of the full access variety. On the other hand, the development of unbundling in France, the Netherlands and Sweden has been driven primarily through shared access arrangements.

A5.10 A feature that is not apparent from this data 'snap-shot' is the dynamic of LLU take-up. In France, for example, levels of unbundling were comparable with those in the UK at the beginning of 2003. However, they are now running at around 40,000 to 50,000 lines per month.

A5.11 No single pattern emerges from comparison of the LLU pricing data set out in Table A5.1 with the LLU take-up data presented in Table A5.2. For example, while take-up of shared access is highest in France and the Netherlands, which have some of the lowest charges in the EU, it is also high in Sweden, where charges are relatively high. Similarly, while the high take-up of full unbundling in Italy is consistent with it having the lowest charges in the EU, take-up in Germany is significantly higher than in a

range of other countries where charges are very similar. This suggests that it is not appropriate to focus on price alone in explaining comparative take-up of LLU in the UK.

Take-up of broadband overall

4. The data presented in Tables A5.1 and A5.2 show that the charges for LLU are relatively high in the UK and take-up is relatively low. However, it is appropriate to consider these figures in the wider broadband context. In particular, low take-up of LLU may be explained by a number of other factors including:

- entrants, notably the cable operators, choosing to offer broadband services using their own networks;
- entrants preferring to utilise wholesale DSL services offered by the incumbent; and
- vigorous competition from the incumbent's own DSL services.

A5.12 Table A5.3, which sets out data that were included in the Cocom report, shows the alternative delivery mechanisms that can be used to provide broadband services and shows the volumes for each of these in Member States.

Table A5.3 Provision of broadband services across Member States (January 2004)

	LLU '000	All DSL '000	Non DSL '000	All B'band '000	B'band Take-up Per capita	LLU/ B'band %
Austria	26.7	279.5	400.0	618.5	8.4%	3.9%
Belgium	6.6	765.2	479.6	1244.7	12.1%	0.5%
Denmark	66.7	473.2	205.5	678.7	12.7%	9.8%
Finland	100.6	345.6	88.7	494.3	8.4%	23.2%
France	276.7	3262.8	393.9	3656.7	6.2%	7.6%
Germany	1350.0	4498.1	144.2	4667.5	5.6%	29.1%
Greece	0.7	8.6	1.4	10	0.1%	7.0%
Ireland	1.4	25.2	9.7	34.9	0.9%	4.0%
Italy	538.8	2158.5	580.9	2739.3	4.7%	19.7%
Luxembourg	1.2	10.9	1.6	12.4	2.8%	9.7%
Netherlands	208.1	920.2	930.0	1908.2	11.6%	11.2%
Portugal	1.8	185.2	316.0	500.4	4.9%	0.4%
Spain	16.0	1676.5	551.7	2228.2	5.5%	0.7%
Sweden	50.9	555.1	364.4	919.5	10.4%	5.5%
UK	8.2	1804.6	1838.5	3172.1	5.3%	0.3%

A5.13 Although take-up of unbundled local loops is extremely low in the UK, the data in Table A5.3 shows that the penetration of retail broadband services generally is comparable to that seen in a number of other Member States. Thus, while broadband penetration in the UK lags some way behind that in Denmark, Belgium, the Netherlands, and Sweden, it is similar to the levels observed for the other large EU Member States.

A5.14 The information in Table A5.3 highlights the variety of methods used to deliver broadband across the EU. Thus, while LLU accounts for a very substantial percentage of broadband provision in Germany and Finland, for example, its role in the UK is currently negligible, and smaller than in any other Member State. Non-DSL broadband provision, principally cable, accounts for as many lines as DSL in the UK and the Netherlands, but is a relatively small option in Germany.

A5.15 In several countries, such as the UK, DSL competitors have to date chosen to supply broadband principally using the incumbent's wholesale DSL offerings, rather than LLU. However, in Germany there is no such wholesale DSL provision, which provides one explanation for why LLU take-up is relatively high there. (It is also the case that most unbundled lines in Germany are used for voice rather than broadband applications.)

Annex 6

Regulatory financial reporting

Proposals for BT's Wholesale Cost Accounting Financial Statements

A6.1 For the purposes of this annex the following abbreviations are used, the scope of these statements is set out in the matrix of obligations that follows; references to annexes are to the form and content direction attached at Schedule 4 to the Notification dated 8 April 2004. In the table below, X means that the financial statement set out at the head of the column is required for the market or service on that row.

A6.2 Please note that the separation of the tables into Parts A to F is purely for presentational purposes.

- CCPS = 'current cost primary statements', current cost profit and loss statement (CC P&L) and statement of current cost mean capital employed (CC MCE), as set out in Annexes 13 & 14 in relation to wholesale services, Annexes 11 & 12 in relation to wholesale segments (when designated), Annexes 9 & 10 in relation to individual wholesale markets;
- RTW = 'reconciliation to wholesale', reconciliation of CC P&L and CC MCE to wholesale level - consolidation across group of markets covered by review (as set out in Annexes 7 & 8 for wholesale markets), followed by consolidation of these consolidations, to give consolidated CC P&L and CC MCE for wholesale markets subject to cost accounting (as set out in Annexes 5 & 6);
- RTSA = 'reconciliation to statutory accounts', reconciliation of consolidated CC P&L and CC MCE for wholesale markets subject to cost accounting to the profit and loss account and balance sheet of the operator shown in their statutory financial statements (as set out in annexes 27 & 28, supported by annexes 29, 30, 31 & 32)
- SoCC Ext = statement of costs and charges for wholesale service supplied in the market, other than those which are only Internal Wholesale Services (as set out in annex 34);
- SoCC Int = statement of costs and charges for wholesale service supplied in the market, which are only Internal Wholesale Services (as set out in annex 35);
- SoAC FA = statement of activity costs on a current fully allocated cost basis for the market (as set out in Annexes 38), supported by consolidated statement of activity costs on a current fully allocated cost basis (as set out in Annexes 37),
- NCR FA = attribution of activity costs on a current fully allocated cost basis for the market (as set out in annex 40), supported by consolidated attribution of activity costs on a current fully allocated cost basis (as set out in annex 39),
- SoAC IC = consolidated statement of activity costs on a incremental and standalone cost basis (as set out in Annex 41)
- RFR – regulatory financial review, as set out in annex 2;
- SDR – statement of responsibility, as set out in annex 3
- FPIA – Audit Opinion required for statements, for inclusion in audit report as set out in annex 4

- PPIA – Audit opinion required for statements, for inclusion in audit report as set out in annex 4
- Notes – notes to the financial statements, as set out in annex 23
- RMP – retail markets purchase statement, as set out in annex 26
- SPS – summary, for reconciliation purposes, of profitability by wholesale service (as set out in annex 36);
- AFI (a) – cost category analysis AI-1 and summarised activity analysis AI-3 (as set out in annex 42)
- AFI (b) – cost category analysis AI-4 and summarised activity analysis AI-2 (as set out in annex 42)
- AFI (c) – analysis of depreciation charge and CCA adjustments AI-5 and CCA fixed asset movement statement AI – 6 (as set out in annex 42)
- AFI (d) – operator assistance combinatorial tests AI-7 (as set out in annex 42)
- AFI (e) – mean capital employed and summarised activity analysis for all network components AI – 8 and network activity analysis of mean capital employed for all network components AI –10 (as set out in annex 42)
- AFI (f) – analysis of outpayments AI – 9 (as set out in annex 42)
- AFI (g) – revenue analysis by tariff option AI-11 and revenue analysis by customer option AI-12 (as set out in annex 42)
- AFI (h) – indices applied for CCA revaluation AI-13 (as set out in annex 42)
- AFI (i) – assets valuation and useful economic life analysis AI-14 (as set out in annex 42)
- AFI (j) – marketing expenditure analysis AI-15 (as set out in annex 42)
- AFI (k) – operating cost and mean capital employed by plant group AI-16 (as set out in annex 42)
- AFI (l) – fixed fee revenues by tariff AFI 17 (as set out in annex 42)
- AFI (m) – analysis of asset transfers AI-18 (as set out in annex 42))
- AFI (n) – CPS set up costs AI-19 (as set out in annex 42)

Part A

Review of the wholesale local access markets, consultation

Wholesale market and illustrative services	Financial statements					Audit		Published
	CCPS	RTW	RTSA	SoCC Ext	SoCC Int	FPIA	PPIA	
Wholesale local access market	X	X	X			X		X
- wholesale service A	X			X			X	
- wholesale service B etc	X				X		X	

Part B

Review of the wholesale local access markets, consultation

Wholesale market and illustrative services	Financial statements					Audit		Published
	SoAC FA	NCR FA	SOAC IC	RFR	SDR	FPIA	PPIA	
Wholesale local access market	X	X	X	X	X	X		X
- wholesale service A					X		X	
- wholesale service B ...					X		X	

Part C**Review of the wholesale local access markets, consultation**

	Financial statements					Audit		Published
	Notes	RMP	SPS			FPIA	PPIA	
Wholesale market and illustrative services								
Wholesale local access market	X		X			X		X
- wholesale service A	X						X	
- wholesale service B ...	X						X	

Part D**Review of the wholesale local access markets, consultation**

	Financial statements					Audit		Published
	AFI (a)	AFI (b)	AFI (c)	AFI (d)	AFI (e)	FPIA	PPIA	
Wholesale market and illustrative services								
Wholesale local access market								
- wholesale service A	X	X	X	X	X		X	
- wholesale service B ...	X	X	X	X	X		X	

Part E**Review of the wholesale local access markets, consultation**

	Financial statements					Audit		Published
	AFI (f)	AFI (g)	AFI (h)	AFI (i)	AFI (j)	FPIA	PPIA	
Wholesale market and illustrative services								
Wholesale local access market			X	X			X	
- wholesale service A								
- wholesale service B ...								

Part F

Review of the wholesale local access markets, consultation

	Financial statements					Audit		Published
	AFI (k)	AFI (l)	AFI (m)	AFI (n)		FPIA	PPIA	
Wholesale market and illustrative services								
Wholesale local access market	X	X	X				X	
- wholesale service A	X						X	
- wholesale service B ...	X						X	

Proposals for BT's Accounting Separation Financial Statements

A6.3 For the purposes of this annex the following abbreviations are used, the scope of these statements is set out in the matrix of obligations that follows; references to annexes are to the form and content direction attached at Schedule 4 to the Notification dated 8 April 2004. In the table below, X means that the financial statement set out at the head of the column is required for the market or service on that row.

Please note that the separation of the tables into Parts A to B is purely for presentational purposes.

- TS - turnover statements: sales of External Wholesale Services (as set out in annex 24) and sales of Internal Wholesale Services (as set out in annex 25)
- SOS – notes to the financial statements (as set out in annex 23) in relation to sufficiency of separation, in particular assurance that activities to which accounting separation applies have been sufficiently separated from each other and from activities to which separation does not apply;
- IMT – Inter-market turnover, reconciliation of the source and destination of inter market turnover, to verify that transfer charges are self cancelling overall (as set out in annex 33)
- RFR – regulatory financial review, as set out in annex 2;
- SDR – statement of responsibility, as set out in annex 3
- FPIA – Audit Opinion required for required statements, for inclusion in audit report as set out in annex 4
- PPIA – Audit opinion required for required statements, for inclusion in audit report as set out in annex 4
- CCPS = ‘current cost primary statements’, to demonstrate sufficiency of separation where CCPS not required for cost accounting purposes – current cost profit and loss statement and statement of current cost mean capital employed, as set out in Annexes 13 & 14 in relation to wholesale services, Annexes 11 & 12 in relation to wholesale segments (when designated), Annexes 9 & 10 in relation to individual wholesale markets;
- RTW = ‘reconciliation to wholesale’, reconciliation of CC P&L and CC MCE to wholesale level, to demonstrate sufficiency of separation where for cost accounting purposes RTW not required – consolidation across group of markets covered by review (as set out in Annexes 7 & 8 for wholesale markets), followed by consolidation of these consolidations, to give consolidated CC P&L and CC MCE for wholesale markets subject to accounting separation (as set out in annex 5 & 6)
- RTSA = ‘reconciliation to statutory accounts’, reconciliation of consolidated CC P&L and CC MCE for wholesale markets subject to accounting separation to the profit and loss account and balance sheet of the operator shown in their statutory financial statements (as

Review of the wholesale local access market

set out in annexes 27 & 28, supported by annexes 29, 30, 31 & 32), to demonstrate sufficiency of separation where RTSA not already required for cost accounting purposes

Part A**Review of the wholesale local access markets, consultation**

	Financial statements			Audit		Published
	TS	SOS	IMT	FPIA	PPIA	
Wholesale market and illustrative services						
Wholesale local access market	X	X	X	X		X
- wholesale service A		X			X	
- wholesale service B ...		X			X	

Part B**Review of the wholesale local access markets, consultation**

	Financial statements			Audit		Published
	RFR	SDR	CCPS, RTW & RTSA	FPIA	PPIA	
Wholesale market and illustrative services						
Wholesale local access market	X	X	X	X		X
- wholesale service A		X			X	
- wholesale service B ...		X			X	

Proposals for Kingston's Wholesale Cost Accounting Financial Statements

A6.4 For the purposes of this annex the following abbreviations are used, the scope of these statements is set out in the matrix of obligations that follows; references to annexes are to the form and content direction attached at Schedule 4 to the Notification dated 8 April 2004. In the table below, X means that the financial statement set out at the head of the column is required for the market or service on that row.

A6.5 Please note that the separation of the tables into Parts A to C is purely for presentational purposes.

- CCPS = 'current cost primary statements', current cost profit and loss statement (CC P&L) and statement of current cost mean capital employed (CC MCE), as set out in Annexes 13 & 14 in relation to wholesale services, Annexes 11 & 12 in relation to wholesale segments (when designated) and Annexes 9 & 10 in relation to individual wholesale markets;
- RTW = 'reconciliation to wholesale', reconciliation of CC P&L and CC MCE to wholesale level - consolidation across group of markets covered by review (as set out in Annexes 7 & 8 for wholesale markets), followed by consolidation of these consolidations, to give consolidated CC P&L and CC MCE for wholesale markets subject to cost accounting (as set out in annex 5 & 6);
- RTSA = 'reconciliation to statutory accounts', reconciliation of consolidated CC P&L and CC MCE for wholesale markets subject to cost accounting to the profit and loss account and balance sheet of the operator shown in their statutory financial statements (as set out in annexes 23 & 24, supported by annexes 25, 26, 27 & 28)
- SoCC Ext = statement of costs and charges for wholesale service supplied in the market, other than those which are only Internal Wholesale Services (as set out in annex 30);
- SoCC Int = statement of costs and charges for wholesale service supplied in the market, which are only Internal Wholesale Services (as set out in annex 31);
- SoAC FA = statement of activity costs on a current fully allocated cost basis for the market (as set out in Annexes 34), supported by consolidated statement of activity costs on a current fully allocated cost basis (as set out in Annexes 33),
- NCR FA = attribution of activity costs on a current fully allocated cost basis for the market (as set out in annex 36), supported by consolidated attribution of activity costs on a current fully allocated cost basis (as set out in annex 35),
- RFR – regulatory financial review, as set out in annex 2;
- SDR – statement of responsibility, as set out in annex 3
- FPIA – Audit Opinion required for required statements, for inclusion in audit report as set out in annex 4
- PPIA – Audit opinion required for required statements, for inclusion in audit report as set out in annex 4

- Notes – notes to the financial statements, as set out in annex 19
- RMP – retail markets purchase statement, as set out in annex 22
- SPS – summary, for reconciliation purposes, of profitability by wholesale service (as set out in annex 32);

Part A

Review of the wholesale local access market, consultation

	Financial statements					Audit		Published
	CCPS	RTW	RTSA	SoCC Ext	SoCC Int	FPIA	PPIA	
Wholesale market and illustrative services								
Wholesale local access market	X	X	X					
- wholesale service A	X			X				
- wholesale service B ...	X				X			

Part B**Review of the wholesale local access market, consultation**

	Financial statements					Audit		Published
	SoAC FA	NCR FA	SOAC IC	RFR	SDR	FPIA	PPIA	
Wholesale market and illustrative services								
Wholesale local access market	X	X	X	X	X			
- wholesale service A					X			
- wholesale service B ...					X			

Part C

Review of the wholesale local access market, consultation

	Financial statements				Audit		Published
	Notes	RMP	SPS		FPIA	PPIA	
Wholesale market and illustrative services							
Wholesale local access market	X		X				
- wholesale service A	X	-					
- wholesale service B ...	X	-					

Proposals for Kingston's Accounting Separation Financial Statements

A6.6 For the purposes of this annex the following abbreviations are used, the scope of these statements is set out in the matrix of obligations that follows; references to annexes are to the form and content direction attached at Schedule 4 to the Notification dated 8 April 2004. In the table below, X means that the financial statement set out at the head of the column is required for the market or service on that row.

Please note that the separation of the tables into Parts A to B is purely for presentational purposes.

- TS - turnover statements: sales of External Wholesale Services (as set out in annex 20) and sales of Internal Wholesale Services (as set out in annex 21)
- SOS – notes to the financial statements (as set out in annex 19) in relation to sufficiency of separation, in particular assurance that activities to which accounting separation applies have been sufficiently separated from each other and from activities to which separation does not apply;
- IMT - Inter-market turnover, reconciliation of the source and destination of inter market turnover, to verify that transfer charges are self cancelling overall (as set out in annex 29)
- RFR – regulatory financial review, as set out in annex 2;
- SDR – statement of responsibility, as set out in annex 3
- FPIA – Audit Opinion required for required statements, for inclusion in audit report as set out in annex 4
- PPIA – Audit opinion required for required statements, for inclusion in audit report as set out in annex 4
- CCPS = 'current cost primary statements', to demonstrate sufficiency of separation where CCPS not required for cost accounting purposes - current cost profit and loss statement and statement of current cost mean capital employed, as set out in Annexes 13 & 14 in relation to wholesale services, Annexes 11 & 12 in relation to wholesale segments (when designated) and Annexes 9 & 10 in relation to individual wholesale markets;
- RTW = 'reconciliation to wholesale', reconciliation of CC P&L and CC MCE to wholesale level, to demonstrate sufficiency of separation where RTW not required for cost accounting purposes - consolidation across group of markets covered by review (as set out in Annexes 7 & 8 for wholesale markets), followed by consolidation of these consolidations, to give consolidated CC P&L and CC MCE for wholesale markets subject to cost accounting (as set out in annex 5 & 6)
- RTSA = 'reconciliation to statutory accounts', reconciliation of consolidated CC P&L and CC MCE for wholesale markets subject to accounting separation to the profit and loss account and balance sheet of the operator shown in their statutory financial statements (as

Review of the wholesale local access market

set out in annexes 23 & 24 supported by annexes 25, 26, 27 & 28), to demonstrate sufficiency of separation where RTSA not required for cost accounting purposes

Part A**Review of the wholesale local access market, consultation**

	Financial statements			Audit		Published
	TS	SOS	IMT	FPIA	PPIA	
Wholesale market and illustrative services						
Wholesale local access market	X	X	X			
- wholesale service A		X				
- wholesale service B ...		X				

Part B

Review of the wholesale local access market, consultation

	Financial statements			Audit		Published
	RFR	SDR	CCPS, RTW & RTSA	FPIA	PPIA	
Wholesale market and illustrative services						
Wholesale local access market	X	X	X			
- wholesale service A		X				
- wholesale service B ...		X				

Annex 7

Ofcom's consultation principles

A7.1 Ofcom has published the following seven principles that it will follow for each written consultation:

Before the consultation

A7.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

A7.3 We will be clear about who we are consulting, why, on what questions and for how long.

A7.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A7.5 We will normally allow ten weeks for responses, other than on dispute resolution.

A7.6 There will be a person within Ofcom who will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. This individual (who we call the consultation champion) will also be the main person to contact with views on the way we run our consultations.

A7.7 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a 'red flag consultation' which needs their urgent attention.

After the consultation

A7.8 We will look at each response carefully and with an open mind. We will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 8

Consultation questions

Section 2 Introduction

Question 2.1 *Do you agree that non-charge related issues are dealt with more appropriately outside of this market review?*

Section 3 Market definition

Question 3.1 *Do you agree with the proposed market definitions?*

Question 3.2 *Do you agree that it is appropriate to define a single market for residential and business use?*

Question 3.3 *Is there evidence that might support alternative market definitions?*

Section 4 Market power assessment

Question 4.1 *Do you agree with the SMP criteria used?*

Question 4.2 *Do you agree on the assessments of SMP?*

Question 4.3 *Do you have any comments on future developments that might affect these assessments?*

Question 4.4 *Do you agree that it is necessary and appropriate to regulate co-location as part of a package of remedies to address BT's and Kingston's market power in the wholesale local access market?*

Section 5 Approach to regulatory remedies

Question 5.1 *What do you consider is the impact of each of the proposed options for remedies?*

9.1

Section 6 General remedies

Question 6.1 *Do you agree that, in general terms, ex-ante regulation is justified in the wholesale local access market and in respect of co-location?*

Question 6.2 *Do you agree that a requirement on BT and Kingston to provide Network Access on reasonable request should be imposed?*

Question 6.3 *Do you agree that a requirement not to unduly discriminate should be imposed on BT and Kingston?*

Question 6.4 *Do you agree that LRIC+ is the most appropriate approach for setting charges given the characteristics of the wholesale local access market?*

Question 6.5 Do you agree that a requirement to publish a reference offer should be imposed on BT and Kingston?

Question 6.6 Do you consider that Ofcom should specify the contents of the SLA or SLG for LLU services? Please provide evidence in support of your response.

Question 6.7 Do you agree that BT and Kingston should be required to notify changes to charges and terms and conditions?

Question 6.8 Do you agree that changes to existing Network Access should be notified 90 days in advance and that charges, terms and conditions for new Network Access should be notified 28 days in advance?

Question 6.9 Do you agree that a requirement to notify technical information should be imposed on BT and Kingston?

Question 6.10 Do you agree that a transparency as to quality of service requirement should be imposed on BT?

Question 6.11 Do you consider that Ofcom should specify KPIs in respect of LLU services? If so, what KPIs should Ofcom include and what would be suitable comparators for those KPIs to demonstrate that BT is providing an equivalent level of service? Please provide justification for your response.

Question 6.12 Do you agree that a requirement specifying the process for dealing with requests for new products should be imposed on BT?

Section 7 Local loop unbundling

Question 7.1 Do you agree that BT should be required to provide LLU services?

Question 7.2 Do you agree that charges should be set for the following LLU services:

- metallic path facilities/fully unbundled local loop – rental, connection and disconnection;
- shared metallic path facilities/shared access – rental, connection, disconnection and conversion to a fully unbundled loop;
- migration from Datastream/IPStream to fully unbundled local loops;
- migration from Datastream/IPStream to shared access;
- internal tie cables – rental, connection and jointing;
- external tie cables – rental and connection;
- pull through for external tie cables; and
- power.
-

Question 7.3 Do you consider that Ofcom should set charges for services in addition to those listed above?

Question 7.4 Do you consider that there is scope for change to LLU product specifications in order to meet the objective of removing costs and providing an opportunity for lower prices?

Question 7.5 *Do you agree that in setting charges for shared access, the costs common to the low frequency and high frequency portions of the loop should be entirely allocated to the low frequency portion (i.e. voice telephony)?*

Question 7.6 *Do you agree that charges for LLU services should be geographically averaged?*

Question 7.7 *Do you agree that it is not yet appropriate to introduce a charge control for LLU services?*

Question 7.8 *Do you agree that LLU system set-up costs should be pooled together with equivalent BT DSL system set-up costs and recovered across all DSL lines?*

Question 7.9 *Do you agree that, on balance, LLU one-off and on-going per service costs should be pooled together with equivalent BT DSL per service costs and recovered across all DSL lines?*

Question 7.10 *What do you think is the appropriate period over which cost recovery should take place?*

Section 8 Regulatory financial reporting

Question 8.1 *Do you agree that cost accounting and accounting separation requirements should be imposed on BT in the wholesale local access market and in respect of co-location?*

Annex 1

Annex 9

Consultation response cover sheet

- A9.1 In the interests of transparency, we will publish all consultation responses in full on our website, www.ofcom.org.uk, unless a respondent specifies that all or part of their response is confidential. We will also refer to the contents of a response when explaining our decision, without disclosing the specific information that you wish to remain confidential.
- A9.2 We have produced a cover sheet for responses (see below) and would be very grateful if you could send one with your response. This will speed up our processing of responses, and help to maintain confidentiality by allowing you to state very clearly what you don't want to be published. We will keep your completed cover sheets confidential.
- A9.3 We strongly prefer to receive responses in the form of a Microsoft Word attachment to an email. Our website therefore includes an electronic copy of this cover sheet, which you can download from the 'Consultations' section of our website.
- A9.4 Please put any confidential parts of your response in a separate annex to your response, so that they are clearly identified. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title: Review of the wholesale local access market

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

What do you want Ofcom to keep confidential?

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

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

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response. It can be published in full on Ofcom's website, unless otherwise specified on this cover sheet, and I authorise Ofcom to make use of the information in this response to meet its legal requirements. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

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

Name

Signed (if hard copy)

Annex 10

Glossary

This glossary is without prejudice to the definitions used in the draft notification of proposals set out in Annex 1.

ADSL (Asymmetric Digital Subscriber Line): a digital technology that allows the local loop to send a large quantity of data in one direction and a lesser quantity in the other.

Broadband: a service or connection which capable of supporting always-on services which provide the end-user with high data transfer speeds.

BT: British Telecommunications plc.

Cable modem: a cable modem is a device that enables a consumer to access the Internet via a cable access line

CAD (Customer Agreed Date): is usually set to the same value as the CRD but will change to the appointment date or will be forced back as a consequence of the cooling off period.

Co-location: the provision of space at a BT MDF site that enables a competing provider to locate equipment within that MDF site in order to connect to the dominant provider and purchase LLU services. For the avoidance of doubt, co-location includes co-mingling.

Co-mingling: a type of co-location where a competing provider's equipment is located in the same area as the dominant provider could or does house its own equipment, without a permanent barrier between them.

Communications provider: a person who provides an Electronic Communications Network or provides an Electronic Communications Service.

CRD (Customer Required by Date): is the date requested for MPF provision. This date will not change.

Digital: the binary coded representation of a waveform, as opposed to analogue, which is the direct representation of a waveform.

Distant location: the provision of an external tie circuit (or facilities for one to be installed) either to a street cabinet or other distant location.

DLR3: The result of the joint survey incorporating an offer issued by BT conditional upon the grant of any planning or other consent necessary for the provision by BT of Distant Location

DSL (Digital Subscriber Line): a family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary local loops into high-speed digital lines, capable of supporting advanced services such as fast Internet access and video-on-demand. ADSL (Asymmetric Digital Subscriber Line), HDSL (High bit rate Digital Subscriber Line) and VDSL (Very high data rate Digital Subscriber Line) are all variants of xDSL.

DSLAM (Digital Subscriber Loop Access Multiplexer): apparatus used to terminate DSL enabled local loops, which comprises a bank of DSL modems and a multiplexer which combines many local loops into one data path.

External tie cable: the provision of links that connect the local loop to the equipment of a competing provider outside a MDF site.

Hull Area: the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc.

Internal tie cable: the provision of links that connect the local loop to the equipment of a competing provider within an MDF site.

IP (Internet Protocol): the packet data protocol used for routing and carriage of messages across the Internet and similar networks.

IP network: a network that uses IP; for example the Internet is a public IP network.

Kingston: Kingston Communications (Hull) PLC, communications provider which operates in the Hull Area.

KPIs: key performance indicators

Local loop: the access network connection between the customer's premises and the local serving exchange, usually comprised of two copper wires twisted together.

Local loop unbundling (LLU): a process by which a dominant provider's local loops are physically disconnected from its network and connected to competing provider's networks. This enables operators other than the incumbent to use the local loop to provide services directly to customers.

Main distribution frame (MDF)/unbundled local loop: the equipment where local loops terminate and cross connection to competing providers' equipment can be made by flexible jumpers.

Metallic Path Facilities: the provision of access to the copper wires from the customer premises to a BT MDF that covers the full available frequency range, including both narrowband and broadband channels, allowing a competing provider to provide the customer with both voice and/or data services over such copper wires.

Modem: abbreviation of modulate-demodulate, a device that converts a digital signal into analogue for transmission purposes. It also receives analogue transmissions and converts them back to digital.

Narrowband: a service or connection allowing only low data transfer speeds.

PCR3: The result of the full survey incorporating an offer or information document issued by BT conditional upon the grant of any planning, building regulation or other consent necessary.

POE: Pre Order Enquiry

PSTN: Public Switched Telephone Network

RFI Date: The date on which the Representative certifies in writing that the Works have been completed (and the expressions "Ready for Installation" or "RFI" shall be construed accordingly)

RFS: The date on which testing is satisfactorily completed

Shared metallic path facility (SMPF)/shared access: the provision of access to the copper wires from the customer's premises to a BT MDF that allows a competing provider to provide the customer with broadband services, while the dominant provider continues to provide the customer with conventional narrowband communications.

Site access: the provision of access to BT's MDF sites in order for a competing provider to install and operate equipment within those MDF sites;

SMP: The Significant Market Power test is set out in European Directives. It is used by National Regulatory Authorities (NRAs) such as Ofcom to identify those communications providers who must meet additional obligations under the relevant Directive.

Standard care: Service maintenance by BT. Operates during working hours (0800 - 1700 hrs Monday to Friday, excluding Bank and Public Holidays). BT aims to respond to a fault report received before 1700 hrs on one working day by the end of the next working day. Work will be carried out only during working hours.

Total care: Operates 24 Hours per day, 7 days a week including Bank and Public Holidays. BT will respond within 4 hours of receipt of a fault report but this does not apply to faults which do not immediately affect the use of equipment by the customer.