CURRENT COST ACCOUNTING

DETAILED VALUATION METHODOLOGY 2007/08

16 September 2008

CONTENTS

1. INTRODUCTION

1.1 General

The UK regulatory environment changed in 2003 when, on 25 July, the Communications Act came into force, introducing a new regulator – the Office of Communications (Ofcom) – and a new regulatory framework. The new regulation and the background to it are explained in Annex A of the Primary Accounting Documents (PADs) and in detail in Section 1 of the Detailed Attribution Methods (DAM)

Under the new framework regulation is applied through separate sets of conditions made by Ofcom, of which some apply to all relevant communications providers and others are imposed individually on particular providers which, following a review of the relevant markets, are found to have SMP, or which are designated as ‘‘universal service providers’’.

A requirement for regulatory financial reporting has been imposed on British Telecommunications plc (“the Company”)[see Note 1 overleaf] for those SMP Markets, Technical Areas and Disaggregated Activities where it is deemed a necessary remedy.

This DVM document has been revised in light of changes to the regulatory reporting requirements (i.e. the introduction of SMP & Non SMP reporting), arising from and amended by the publication of Ofcom’s Final and Explanatory Statements and Notifications listed below, although these changes in reporting requirements do not affect the current underlying CCA valuation principles or methodology.

- The regulatory financial reporting obligations on BT and Kingston Communications - dated 22 July 2004
- Changes to BT’s regulatory financial reporting framework - dated 31 August 2005
- Changes to BT’s regulatory financial reporting & audit requirements - dated 16 August 2006
- Changes to BT’s regulatory financial reporting obligations - dated 5 June 2007
- Changes to BT’s regulatory financial statements - dated 26 June 2008

The “Introduction” section of the Primary Accounting Documents provides more detail on these changes in reporting requirements.

The Primary Accounting Documents, which are no longer required to be agreed between the Company and Ofcom, set out the framework of the regulatory accounting principles, attribution methods and accounting policies under which the Financial Statements are to be prepared. They are made up of the following and, if there is any inconsistency between them, have the following order of priority:-

- Regulatory Accounting Principles
- Attribution Methods
- Transfer Charging System
- Accounting Policies
- Long Run Incremental Cost (“LRIC”) methodology

The Detailed Attribution Methods (DAM) is a reference manual prepared by the Company that supplements the Primary Accounting Documents. It provides further details of the Attribution Methods described in the Primary Accounting Documents.

The Primary Accounting Documents include the Current Cost (CC) Accounting Policies employed in preparing the CC Financial Statements, and in turn, these Policies include the general principles of valuation of fixed assets.

This document has been prepared by the Company to facilitate understanding of the CC Financial Statements by providing further details of the valuation methodologies applied to BT Group's tangible assets in the CC Financial Statements.

The finance systems used by BT Group plc and its subsidiaries ("BT") permit the identification of pay, non-pay and capital costs within each asset category. This includes a system for booking time and items such as stores and capital expenditure to a range of sub-accounts known as "classes of work". The codes of these classes of work describe the type of asset in detail and they are categorised into a number of asset categories as follows. Details of the class of work codes included under each asset category are provided in Annex 4.

(i) Assets comprising BT's Telecommunications Network infrastructure related equipment:

- Duct
- Local cable (including drop-wires installed from April 2000)
- Access Radio Systems
- Asymmetric Digital Subscribers Loop (ADSL) Equipment
- UK Transmission – excluding Duct
- Local Exchanges
- Main Exchanges
- Intelligent Network
- 21st Century Network
- Network Power plant (Inland)
- Network Administration Computers
- Private Circuit equipment and Non-Voice network (Inland)
- Apparatus (Customer Premises & Support Equipment)
- Payphones
- International

These assets can be allocated directly to plant groups and activities for cost attribution purposes on the basis of the class of work records in the general ledger.

Note 1 - BT Group plc is the listed holding company for an integrated group of businesses that provides voice and data services in the UK and overseas, particularly in Europe, but also in the Americas and the Asia Pacific region. British Telecommunications plc is a wholly owned subsidiary of BT Group plc and holds virtually all businesses and assets of the BT group.

(ii) Other Assets including those assets supporting the telecommunications operations:

- Motor Vehicles
- Computers
- Office Machines
- Property

These assets are apportioned across plant groups and activities using bases that replicate the total apportionment to services of the costs of the activities supported by the assets concerned.

(iii) Capital Miscellaneous & Non-Core

This category covers all other assets not included above. Examples are:

- Local Line & Exchange Test & Measuring Equipment
- Fixed assets mainly comprising personal computers and servers used for research and development work
- Training Plant
- Tools and testers used in the construction and maintenance of the Core and Access networks

1.2 Basis of Preparation of the Current Cost Financial Statements

The current cost statements for the Markets, Technical areas, components, and Wholesale services are prepared under the financial capital maintenance convention in accordance with the principles set out in the Report to H. M. Treasury (1986) "Accounting for Economic Costs and Changing Prices" and the handbook "Accounting for the effects of changing prices", published in 1986 by the Accounting Standards Committee. Under this convention, current cost profit is normally arrived at by adjusting the historical cost profit to take account of changes in asset values and of the erosion in the purchasing power of shareholders' equity during the year due to general inflation. However, the inflation adjustment in respect of shareholders' equity is not relevant to the Markets, Technical areas, components, and Wholesale services. Asset values are adjusted to their value to the business, usually equivalent to their net current replacement cost. Changes in asset values are referred to as unrealised holding gains, or losses. These include other movements, which are taken directly to reserves in historic cost accounting.

1.3 Principles of Valuation of Tangible Fixed Assets

Assets are stated in the balance sheet at their value to the business, usually equivalent to their Net Current Replacement Cost (NRC). This is generally derived from the asset's Gross Replacement Cost (GRC) and is the current purchase price of an identical new asset or the cost of a modern equivalent asset (MEA) with the same service potential.

The effect of the asset revaluation on the profit and loss account is to increase the historical cost profit by any unrealised holding gains (UHG) arising in the year and to decrease it by unrealised losses. In the Financial Statements, UHGs for the various categories of fixed assets are treated in the same way as depreciation, so that losses increase costs and gains reduce them. CCA adjustments to the Profit & Loss and balance sheet values are allocated to Businesses using the same principles and processes as the historical cost depreciation charges for the assets to which they relate.

The methods employed and examples of assets valued using each method are given in the following table:

Valuation assumption	**Valuation method**	**Example**
Existing technology	Absolute valuation or Indexation	Access fibre cable Synchronous Digital Hierarchy (SDH)
Modern Equivalent Asset (MEA) – see section 1.4(ii)	Absolute valuation	Plesiochronous Digital Hierarchy (PDH = CRF Class of Work)
Low value, short residual life and/or minimal impact on regulated areas of BT	Historical cost	Motor Transport

1.4 Choice of Valuation Method

The valuation methods used for the various asset categories are reviewed each time valuations are prepared to ensure that they are still appropriate and produce robust valuations in the light of changes in technology and levels of investment. For example, when new technology is being introduced the purchase price will represent its current cost but in later periods indexation or an absolute valuation will be introduced as prices change and/or the technology of the asset purchased is no longer the modern technology (see (ii) below).

If the technology of the asset in place is still the current technology (subject to section (ii) below), the asset is valued on a like-for-like basis but at current prices rather than the prices when purchased.

(i) Existing technology

Where an asset is being re-valued on a direct replacement basis, its replacement cost is usually assessed either by indexation or by absolute valuation. The choice of method involves a judgement as to which method, given the data available, is likely to give a more accurate and robust valuation. Factors considered include the following:

Indexation: This is an appropriate method when there has been little technological change in the asset category and all the direct costs associated with bringing the asset into service would be incurred if it were to be replaced today. A major advantage of indexation is that the valuation is directly linked to the historical cost values of fixed assets, so any assets recorded in the historical cost accounts are included in the CCA valuation. Net replacement cost is derived using indexation of the historical net book values – see section 1.8.

The table below shows those assets presently valued on an indexed historic basis as detailed in section 2.

Asset Description	Cow	Section ref. for detailed methodology
Asynchronous Transfer Mode Equipment	ATM	2.7 (iii)
Asynchronous Transfer Mode Equipment (Wholesale)	ATMW	2.7 (iii)
Provide & Install Exchanges Lines (Business)	NWB	2.3 (iii)
Provide & Install Exchanges Lines (Residential)	NWR	2.3 (iii)
Synchronous Digital Hierarchy Equipment	SDH	2.7 (ii)

Absolute valuation: In using the indexation method there may be difficulties in establishing appropriate indices and hence it may be more accurate and reliable to use physical volumes and unit prices to derive an absolute valuation. This method in turn may present difficulties, for example in establishing meaningful current unit prices, so the choice of method for a particular asset depends on individual circumstances.

The table below shows those assets presently valued on absolute valuation basis as detailed in section 2. The method for deriving CCA depreciation for each CoW is given, and a detailed explanation of these methods is provided in section 2.2 of Annex 3.

Assets valued using absolute methodology			
Asset Description	**Cow**	**2007/08 CCA Depreciation Method**	**Section ref. for detailed methodology**
Digital Subscriber-line	ADSL	NBV/GBV	2.6
Advance Service Units Switching	ASU	Roll Forward	2.9
Junction Cable – Optical Fibre	CJF	Roll Forward	2.7 (iv)
Junction Repeaters, Digital non-op	CRD	Roll Forward	2.7 (i)
Junction Repeaters, OF	CRF		
Repeaters	CRHQ		
Local Distribution Cable	LDC	Roll Forward	2.3 (ii) & 2.4
Local Distribution Duct	LDD	NBV/GBV	2.2 & 2.4

continued

Assets valued using absolute methodology (continued)			
Asset Description	**Cow**	**2007/08 CCA Depreciation Method**	**Section ref. for detailed methodology**
Local System X Exchange	LDX	Roll Forward	2.8 (i)
Local Line OF Spine Cable	LFSC	NBV/GBV	2.3 (i)
Main Distribution Frame for Exchanges	LMDF	Roll Forward	2.8 (ii)
Local System Y Exchange	LYX	Roll Forward	2.8 (i)
Main Underground Cable	MUC	Roll Forward	2.7 (iv)
Signalling Network and Interconnect	SIGNI	NBV/GBV	2.10

(ii) Modern Equivalent Asset

In situations where there is technological change, existing assets may not be replaced in an identical form. In such cases the replacement cost is based on the cost of a modern equivalent asset, which is the cost of a modern asset with similar service potential. In some cases the rate at which modern assets can be introduced is limited by practical constraints such as manufacturing and installation capacity, and lead times. In these instances and where BT has definitive plans to replace these existing assets, the mix of technologies used as the modern equivalent for valuation in BT is generally taken as that forecast to be in place in three years time. The problems of assessing capacity and unit costs are the same as for any absolute valuation, as described above.

No MEA changes have taken place for 2007/08 or are expected in the immediate future as a result of introduction of 21st Century Network (21CN). The bulk of the assets proposed to be replaced by this new technology are highly depreciated and will continue to be treated as separate assets in their own right for CCA purposes until they are fully depreciated and/or replaced by these new assets and removed from service. 21CN assets are valued separately.

(iii) Low value, short residual life or minimal impact on regulated parts of BT

Where assets have a relatively low value, the asset is accounted for at its historical cost and is not re-valued. Similarly where the life of an asset is relatively short, such that there is unlikely to be a significant difference between the cost of the asset at the date of acquisition and its gross replacement cost, the asset is not re-valued but retained at its historical cost value. Also where the assets are virtually fully depreciated, the historic cost may be used if any adjustment, in net terms, is immaterial.

Additionally the impact upon the cost attributions to the regulated areas of BT is considered. If any cost adjustment arising from the CCA adjustments falling within a regulated area of BT is considered immaterial then generally it is considered unnecessary to perform a revaluation.

1.5 Cost Adjustments

(i) Operating Cost Adjustments

If there are material differences in operating costs between the modern equivalent asset (MEA) and the existing asset, the MEA valuation of the existing asset is adjusted to reflect these. The differences may arise, for example, due to differing maintenance costs over the whole lives of the assets.

At present for assets valued using an MEA approach there are no cases where the differences have been identified as significant and hence no adjustments are required.

(ii) Functionality Abatements

Where existing assets are valued using a modern equivalent asset the unit price of the modern asset may reflect a higher level of functionality than that of the existing asset. In such cases the MEA valuations of the existing assets are adjusted downwards to reflect the estimated cost of upgrading these assets to the functionality of the version used in the valuation.

(iii) Surplus Capacity

An asset is considered to have surplus capacity only if there is capacity within the asset that is not in use and not expected to be put into use over BT's planning horizon. Thus assets that have capacity planned to be brought into use, or which are needed to meet known planning margins or network resilience requirements are considered to be part of the operating capacity.

Where there is modularity in the provisioning of capacity, provided that a part of the modular asset is utilised or will be utilised over the planning horizon, these assets are included within the operating capacity in their entirety.

BT has not identified any material groups of assets that fall within the above definition of surplus capacity that require revaluation. In prior years surplus capacity for specialised buildings was valued at NIL net realisable value. However, following the "transfer" of the bulk of BT's property assets to Telereal in December 2001, the value of the remaining buildings and consequently the amount of surplus is immaterial and therefore these are now valued at historic cost – see section 2.10.

1.6 New Technology and its Use as MEA

Emerging replacement technologies are treated as separate asset categories until it is clear that their costs are lower than those of an older technology and that they have become the modern equivalent. For example, fibre cable is being deployed in parts of the access network but its cost is not yet low enough for it to be considered as the MEA for copper cable.

In considering the use of new technology as the MEA it is assumed that there are no changes to BT's network topology, i.e. the number of nodes and links between them are valued in their existing configuration, not as a theoretical optimised network. No MEA changes have taken place for 2007/08 as a result of 21CN due to the reasons mentioned in section 1.4 (ii) above.

1.7 Unit Costs

Unit costs applied to capacity for absolute valuations are based on outturn prices where these are considered representative of the costs that would be relevant if the assets were being replaced at a normal rate in the normal course of business. It is possible that the prices currently being paid are unrepresentative, for example when ordering levels are particularly high or low, or at the end of a technology's life. In such cases an estimate is made of an appropriate current cost with reference to internal and external data.

1.8 Choice and application of indices for Indexation Method

For assets valued using the indexation method, BT Regulatory Finance (RF) have prepared price indices for each class of asset in conjunction with BT Procurement. Cost trends based on the purchase price of the class of assets being valued have been used by RF to generate indices. Where there is divergence between known historical achievements against predicted trends this data is taken into account to better reflect the expected movements. 31 March 1989 is generally, used as the reference base, with updates made twice a year (March and September). Newer technologies have the base year set in the first year of expenditure (e.g. for SDH assets, the base is 30 September 1994 and for ATM assets the base is 30 September 1996). The indices are derived from various sources of information including the following:

- the cost base of the elements of BT expenditure carried out by RF from data for stores items and contract expenditure
- external indices and cost trends studies including Office for National Statistics information (e.g. Retail Price Index and UK average earnings figures)

These indices are used to produce index trends for each asset based upon the appropriate mix of the four cost categories (i.e. BT pay, stores, contract and other).

Table 1 in Annex 2 lists the indices (including their sources) prepared by BT Regulatory Finance in conjunction with BT Procurement, and Table 2 lists the trends including the make-up of these trends for those assets valued using indexed historic method in CCA.

The year-end valuation for each asset is built up from vintaged asset data, sourced from the Group's Oracle Fixed Asset Registers. Indices at 31 March (current year) are used in the year-end valuations in conjunction with the indices at 30 September in the year of registration for the asset being valued, as illustrated below. Use of the mid-year indices reflects the fact that the assets are purchased throughout the year; thus the current year HCA additions have a six month's indexation applied to them to derive their CCA value.

Example for asset being valued at 31 March 2008:

Year of Registration:	*GBV additions in the year*	*GRC additions in the year*
1990/91	A	A x Index @ 31/3/08 / Index @ 30/9/90
1991/92	B	B x Index @ 31/3/08 / Index @ 30/9/91
etc.	.	.
	.	.
2007/08	Z	Z x Index @ 31/3/08 /Index @ 30/9/06
TOTAL @ 3/2008	***GBV = Sum of above***	***GRC = Sum of above***

1.9 Capitalised Planning costs

This category, sometimes referred to as "Indirects", comprises the pay costs of BT's people covering a number of activities; predominately planning, controls, survey and assessment.

The overall Gross Replacement Cost for those asset categories where capitalised planning costs are relevant includes the current cost values of these costs. The current cost being derived by applying the UK Average Earnings index, abated by an annual factor for productivity improvements, to the vintaged capitalised planning costs in the historic accounts (as described in section 1.8). It should be noted that for those physical assets not revalued for CCA purposes the Indirects are similarly excluded from revaluation for reasons of materiality, in line with those associated to the physical assets.

1.10 Depreciation

Depreciation is provided on tangible fixed assets on a straight-line basis from the time they are available for use so as to write off their costs over the estimated useful lives, taking into account any expected residual values. No depreciation is provided on freehold land.

The lives assigned are the same under both the current cost and historical cost conventions. CCA depreciation for each asset category is derived using one of two methods adopted by BT. These methods are explained in more detail in Annex 3.

CCA depreciation for those assets valued on historic and indexed historic basis is based on the NBV/GBV methodology – see Annex 3, section 2.2 for description.

For those assets valued on absolute valuation basis, the CCA depreciation is derived using the method previously highlighted against each asset category in section 1.4.

1.11 Assets not in service

A fundamental principle generally adopted by BT is that any asset not in service on the valuation date and that is not anticipated will be used in future is excluded from the CCA valuation. (see also section 1.5 (iii) regarding Surplus Capacity)

1.12 Disposals, write-outs & write-offs

These figures are derived from HCA figures using the most appropriate method for the asset being valued. The detailed methodology is determined by the valuers who have the expert knowledge about the most appropriate approach to be adopted for the class of work / asset generally, but within the overall approach described in Annex 3, section 2.1.1 of this document.

2. DETAILED VALUATION METHODOLOGY

2.1 Introduction

This section provides an outline of the methodologies adopted for deriving the gross valuation and CCA depreciation.

The studies and data sources utilised in the preparation of the CCA Valuations referred to in this section are described in Annex 1.

A description of the Asset Movement Statement process for derivation of Net Replacement Cost (NRC) including the underlying CCA movements is provided in Annex 3.

2.2 Duct

Duct is valued at replacement cost using absolute valuation methodology. In the years prior to 2007/08 the valuation was based on data taken from two studies; the Local Line Costing Study (LLCS) which covers duct that contains at least one local cable, and the Trunk and Junction Duct study (T&J) which covers duct that contains only trunk and/or junction cables (i.e. no local cables).

From 2007/08 physical data for local duct is becoming available from a system called PIPeR (Physical Inventory for Planning and eRecords) which is applying digital mapping processes to BT's local network. At present only a small proportion of the total network is covered by this system, therefore as with the previous LLCS approach the sample information has been grossed up to provide national volumes.

Duct and Local Metallic Cable are valued in a combined process, the combined valuation methodology including an explanation of the surveys used, the basis of unit costs and physicals information, are explained in more detail in Section 2.4.

The indexed CCA values of the capitalised planning costs are included in the overall valuations – see section 1.9.

2.3 Local Cable

There are two technologies of Local Access cable - fibre and copper which are valued independently for current cost purposes. Copper cable is further divided between the Distribution Network and Other Local Metallic Cable. The Distribution Network being taken as from the point when the cable leaves the exchanges Main Distribution Frame (MDF) to the customer Distribution Point near their premises. Other Local Metallic Cable includes the final delivery dropwire from the DP to the customers Network Terminating Equipment (NTE), together with a number of other ancillary cables and supporting electronics.

(i) Fibre Cable

From 2005/06 onwards the valuation of Fibre Cable has been prepared from the 2004/05 valuation, produced by the method detailed below. The 2004/05 valuation being extrapolated forward by the addition of historic cost movements plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment.

Fibre Cable in 2004/05 was valued at replacement cost using absolute valuation methodology with the exception of some low value categories of assets (see below). The total fibre capacity was previously valued by applying materials costs and installation prices. The installation price was calculated as the BT average labour cost per hour multiplied by the time to undertake cable construction activities and the fibre capacity data is obtained from the Integrated Network System (INS).

The indexed CCA value of the capitalised planning costs was included in the overall valuation – see section 1.9.

Table 1 – CoW LFSC

Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (NBV/GBV)	Number of cables and lengths (Fibre km) sorted by cable size (i.e. no. of fibres)	INS (Integrated Network System)	Unit Price per fibre km	Latest contract prices from CSS, standard task times as used by Fibre Planners and BT Retail standard manhour rates (see Note 1 below)

Note 1: BT Retail standard manhour rates were prepared by BT Retail Major Business Commercial Finance based on methodology used by GATIS, and these were agreed between the MoD and BT. The 2007/08 rates for use in CCA have been derived by indexing the 2004/05 GATIS rates by the Average Earnings Indices.

Table 2 - Process steps (in preparing valuation)

Details of process used (CoW – LFSC) – including key assumptions and any models used
Step 1: Volumes of cable length by fibre size is extracted from INS. .**Step 2**: Fibre cables and joints are costed using volumes and: - Latest stores costs, from prices supplied by BT Strategic Procurement from the BT Retail CSS system. - Average standard task times (based on the time to undertake cable construction activities), known as "synthetics", used by BT's local planners, and BT Retail standard manhour rates.

The relatively low (remaining) value assets comprising Local Network Service Module equipment (LFME CoW), Local Line Optical Fibre Exchange Service Module (LFXE CoW), Local Access Service Access Control Centres (LFCC CoW) and Microconnect Provision (CoW MICRO) are valued at historic cost.

(ii) Copper Distribution Cable

Local Copper Cable, excluding Dropwires (see (iii) below), is valued at replacement cost using absolute valuation methodology. In the years prior to 2007/08 the valuation was based on data taken from the Local Line Costing Study (LLCS).

From 2007/08 physical data for local duct is becoming available from a system called PIPeR (Physical Inventory for Planning and eRecords) which is applying digital mapping processes to BT's local network. At present only a small proportion of the total network is covered by this system, therefore as with the previous LLCS approach the sample information has been grossed up to provide national volumes.

Duct and Local Metallic Cable are valued in a combined process, the combined valuation methodology including an explanation of the surveys used, the basis of unit costs and physicals information, are explained in more detail in Section 2.4.

(iii) Other Local Metallic Cable

Network Terminating Equipment, associated with ISDN2 delivery (NTIS CoW), Business Highway Provision NTE (HHB CoW), Residential Highway Provision NTE (HHR CoW) assets and Local Line Electronic Systems for Copper (LSC CoW) are all valued at historic cost

Expenditure incurred on drop wires (capitalised in HCA from April 2000) on NWB and NWR CoWs, is valued at indexed historic cost.

2.4 Duct and Local Metallic Copper Distribution Cable

Duct: This valuation includes all duct in the Access and Core network and is reported under LDD class of work in CCA. It also includes all jointing chambers, frames, covers, Primary Cross-connection Point (PCP) shells and Secondary Cross-connection Point (SCP) shells.

Copper Distribution Cable: This category comprises copper cable and associated cable furniture (e.g. joint enclosures, poles etc) in the Access network. The copper cable assets are valued in LDC class of work. Fibre cable (LFSC class of work) and Dropwires are excluded from this valuation and valued separately under their own CoWs.

(i) Local Lines costing (prior to 2007/08)

Valuation of Local Lines duct was based on the Local Lines Costing Study (LLCS) which takes into account the length of duct, type of duct, number of duct bores and other duct-related information such as manholes, joint boxes and other constructions at the end of duct sections e.g. Primary Cross Connection Points and Distribution Points.

The total replacement cost of the duct was calculated from the materials cost of the duct itself (or its nearest modern equivalent), based on current contract prices, and the cost of installation. In

addition to area zone, type of duct and number of ways, the construction prices also vary according to whether the duct is to be built under carriageway, footway or soft surface and so an average surface mix taken from BT's Duct Surface survey (see section 3.1.1) is used. An allowance is included to cover the costs of BT contract supervision. The LLCS sample map surveys are normally updated annually. However, for the 2006/07 valuation (as in 2005/06), the results of the map surveys conducted in 2002/03 were used. Access Management Information System (AMIS) physicals data was used to adjust the valuation to the current known actual number of Primary Cross-Connection Points and Distribution Points thus reducing the potential error from the lack of this update(.

The costs for each duct section and all associated street furniture, such as manholes, are totalled to produce a total duct value. Weightings are applied as for Local Cable - Metallic, see below.

Diagrams 1(i) and 1(ii) illustrate the valuation process for Copper and Duct.

Table 1 – CoWs LDC & LDD (prior to 2007/08)

Class Of Work	**Valuation basis (Dep'n Method)**	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
LDC (Copper Cable)	Absolute (Roll Forward)	Copper cable km by pair type (i.e. number of pairs), Unit of associated cable furniture	LLCS (Local Line Costing Study), CSS (Customer Service System) for stores costs. AMIS for "actual" volumes	Unit Price per km of Copper cable and per unit of associated cable furniture	Latest contract rates as supplied by BT Retail standard. Manhour Rates – see Note 1 below
LDD (Duct)	Absolute (NBV/GBV)	Duct km, Unit of associated furniture	LLCS (Local Line Costing Study) for Access Duct, Absolute Duct Study (ADS) for Core Duct. AMIS for "actual" volumes	Unit Price per km of Duct and per unit of associated furniture	Latest contract rates as supplied by BT Retail standard Manhour Rates – see Note 1 below

Note 1: BT Retail standard manhour rates are prepared by BT Retail Major Business Commercial Finance based on methodology used by GATIS, and these are agreed between the MoD and BT. The 2006/07 rates for use in CCA were derived by indexing the 2004/05 GATIS rates by the Average Earnings Index.

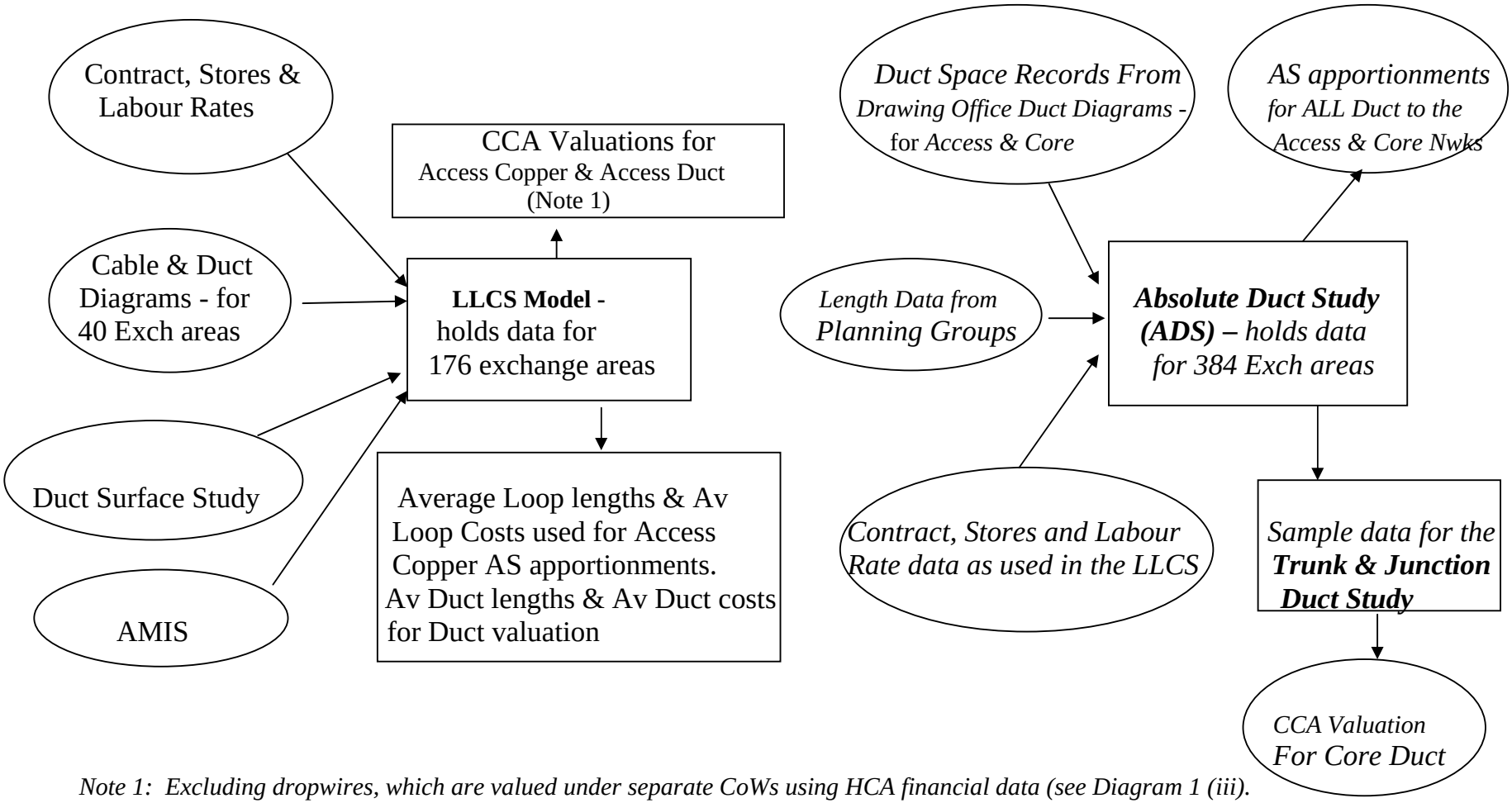
Table 2 - Process steps (in preparing valuation)

Class Of Work	**Details of process used (CoWs – LDC & LDD -**prior to 2007/08**) – including key assumptions and any models used**
LDC, LDD	For Access Copper & Duct assets The following steps describe the annual process normally followed to derive these valuations. However, due to a very limited number of drawing office updates conducted over recent years, the results of the 2002/03 map survey were used for the 2006/07 valuations. The rest of the process, including use of current year's actual physicals information from the Access Management Information System (AMIS), remains unchanged from previous years. **Step 1:** The LLCS (Local Line Costing Study) model holds records for 176 exchange areas (from approximately 5,600 nationally), which form a representative sample of exchange areas both across the UK and across geotypes. These reflect a number of different Geotypes (e.g. Urban, Rural, Densely or Sparsely populated) in order to account for all possible examples of Local network. Network plans for these 176 exchange areas are made available to act as a sample for the LLCS study. *[Note: As mentioned above, due to a very limited number of drawing office updates conducted since 2002/03, the following steps 2 and 3 were not followed in 2006/07, instead the results of the 2002/03 maps survey were updated with current data from AMIS (see Step 4 below) for this year's valuations.]* **Step 2:** In 2002/03, 40 exchange areas from the sample of 176 were selected by the Wholesale Finance Network Cost Analysis team for review based on guidelines provided by BT's statisticians. The exchange areas are selected on a rotational basis. Any areas already selected over the previous two years were not included again in 2002/03 LLCS study. **Step 3:** Data was extracted relating to all copper and duct length and network furniture in the Local network. (100% of E-side and 25% of D-side) This was then input into the LLCS system. **Step 4:** The sample data was first weighted up to exchange level to allow for the fact that only 25% of the 'D' side data is collected. Comparing the number of DP's and PCP's against the actual amount out in the network derives the exchange weighting. The actual number of DPs/PCPs, in addition to other volume data, are recorded on the Access Management Information System (AMIS). The number of DPs & PCPs extracted from AMIS is the current volume present in the exchange, this therefore not only aggregated up the sample to represent the total exchange but also factored in any change in volume since the sample date. **Step 5:** BT Retail standard manhour rates were used in order to obtain costs for copper/duct provision in the year. **Step 6:** Stores costs were supplied from data stored on CSS (Customer Service System).

	Step 7: Contract costs were supplied by BT Strategic Procurement. These are used in conjunction with 1994/95 rates indexed forward to derive the unit installation costs. **Step 8:** Based on information from the above a total GRC was produced covering all (approximately 5600) exchanges. For Core Duct assets **Step 1:** Use is made of the results of the Absolute Duct Study (ADS) to value core duct assets. A sample of 384 exchange areas was selected from a population of all exchange areas nationally (approximately 5,600). 10% of Duct Space Records (DSRs) were sampled for each of the 384 exchange areas. Cables are designated as Access, Trunk or Junction types using information on the DSRs. **Step 2:** All duct containing Access cables was eliminated for the purposes of the CCA valuation. **Step 3:** Records of the surfaces for the individual duct sections were obtained from the drawing offices and then current costs obtained using the same sources of data as for the Access Copper and Duct assets explained above (steps 5 to 8). **Step 4:** The value derived in Step 3 is then added to the local duct valuation to provide a total CCA GRC valuation for duct. **Step 5:** As duct is automatically written out of the HCA books at the end of its working life but remains in use and therefore continues to be valued in Step 4 above, in order to ensure consistency with the HCA accounting policies, the GRC obtained is abated by the cumulative CCA value of "auto-write-out" assets. This value is obtained by re-valuing, the cumulative HCA write-out value of duct using the latest pricing data used to derive the GRC value. For copper cable, this value is calculated as the net of capital spend less the value of the capacity additions derived from the LLCS/AMIS data used in current year's valuation.

DIAGRAM 1(i)

Use of Local Line Costing Study (LLCS) and Absolute Duct Study (ADS) for CCA Valuations
and AS apportionments of Copper and Duct



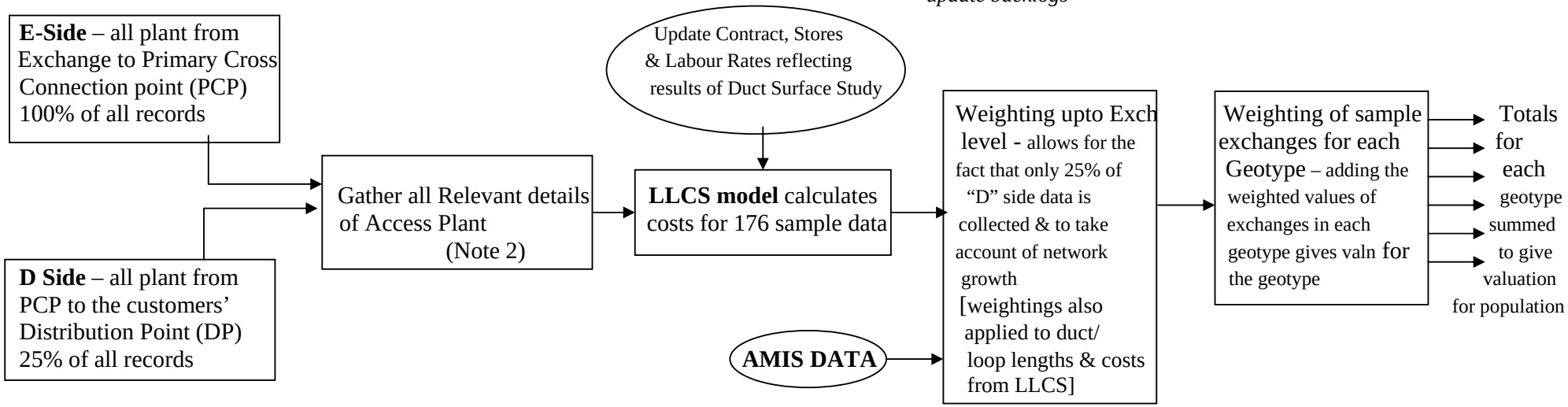
Note 1: Excluding dropwires, which are valued under separate CoWs using HCA financial data (see Diagram 1 (iii).

DIAGRAM 1 (ii)

OUTLINE OF LLCS PROCESS

Duct Diagrams of ALL plant
in the Access Network for 40 Exchanges from a representative LLCS sample of 176 exchange areas both across the UK and geotypes [Note 1]

Compares no. of surveyed DP's & PCP's against AMIS current value compensating for any diagram update backlogs

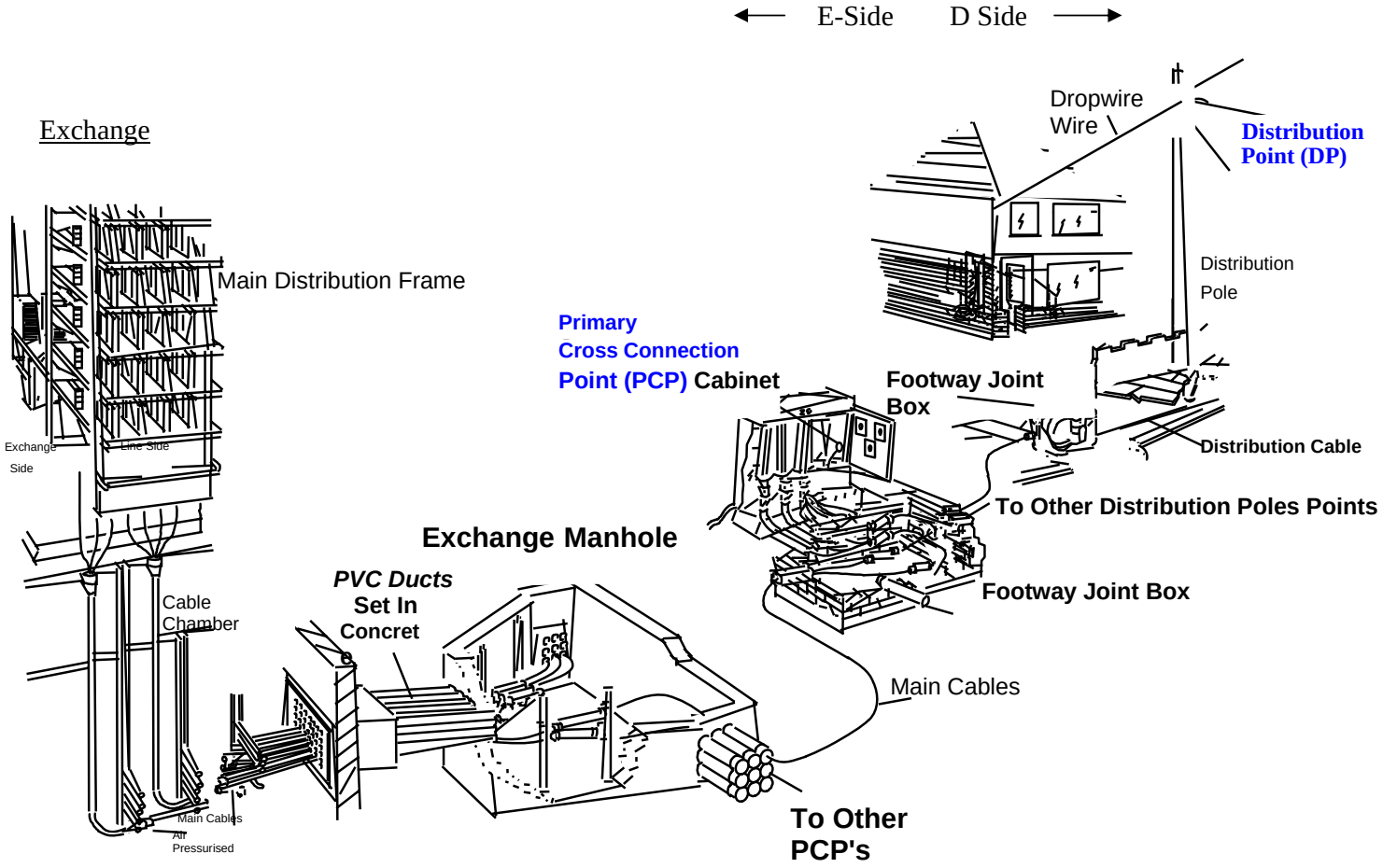


Note 1: Duct Diagrams from Drawing offices which show all duct, manholes and joint boxes, and Cable diagrams which give details of the cables. Dropwires are excluded from the LLCS – these are valued separately under their own CoWs based on HCA financial data

Note 2: This process captures information to derive an average profile for PCPs and DPs by geotype of the E-side and D-side respectively.

DIAGRAM 1 (iii)

A DIAGRAM ILLUSTRATING THE DUCT & COPPER ASSETS IN THE LLCS SURVEYS
(Note: Dropwires are not included in LLCS)



(ii) Local Lines costing (2007/08)

For 2007/08 the valuation of Local Lines assets is based on volumetric data obtained from the PIPeR (Physical Inventory for Planning and eRecords) system. As this system is in the early stages of introduction the volume of exchanges for which data is available is at present limited. At the year end data from 192 completely converted exchanges was available. Though a greater volume of data than that previously used, under LLCS, as this is not a random sample it was considered expedient to add the data relating to a further 36 smaller exchanges improving the geographical coverage of the sample, this data was extracted by manual means giving a total sample volume of 228 exchanges. The PIPeR system provides accurate data including the length and type of duct, number of bores and other duct-related information such as manholes, joint boxes and other constructions at the end of duct sections e.g. Primary Cross Connection Points and Distribution Points (DPs). The PIPeR data includes Duct for trunk purposes not captured in the previous LLCS survey method, which therefore required separate valuation. Therefore for practical purposes the duct network is valued as a single platform and a proportion of it is then apportioned to trunk. Similarly for Cable details of the cable type, length, joints, poles and DP equipment are provided. This data is up to date and more complete than that available from the previous sources.

The sample data for the available exchanges contains a significant volume of asset records which due to their age do not adequately record the specific asset type. In such cases either a logical conversion of the available type information has been made or the remaining total unknown assets have been treated as being of a similar mix to those assets which are adequately recorded.

The assets volumes are aggregated by exchange within geotype, national volumes are then extrapolated for each geotype using factors based upon the number of DPs by geotype in the sample and by the number of DPs by geotype nationally.

The total replacement cost of the duct is calculated from the materials cost of the duct itself (or its nearest modern equivalent), based on current contract prices, and the cost of installation. In addition to area zone, type of duct and number of ways, the construction prices also vary according to whether the duct is to be built under carriageway, footway or soft surface and so an average surface mix taken from BT's Duct Surface survey (see section 3.1.1) is used. Contract costs were discounted to represent the impact of the benefits that might be gained from a total platform replacement over a short period of time, including economies of scale, revisions in working practices and the effects of competitive tendering. The degree of discount applied at 45% is necessarily a matter of judgement which was supported by the views of a number of senior managers within BT.

The cost of cable is similarly constructed from BT standard labour rates and task times together with the latest materials stores prices.

Table 1

Class Of Work	Valuation basis (Dep'n Method)	Capacity Measure	Source of Capacity	Unit Price or Index used	Source and basis of Unit price/Index
LDC (Copper Cable)	Absolute (Roll Forward)	Copper cable km by pair type (i.e. number of pairs), Unit of associated cable furniture	PIPeR (Physical Inventory for Planning and eRecords). For Poles a national volume is obtained from the Artisan system	Unit Price per km of Copper cable and per unit of associated cable furniture	Latest contract rates as supplied by BT Retail standard. Manhour Rates – see Note 1 below CSS (Customer Service System) for stores costs.
LDD (Duct)	Absolute (NBV/GBV)	Duct km, Unit of associated furniture	PIPeR (Physical Inventory for Planning and eRecords)	Unit Price per km of Duct and per unit of associated furniture	Latest contract rates as supplied by BT Retail standard Manhour Rates – see Note 1 below CSS (Customer Service System) for stores costs.

Table 2 - Process steps (in preparing valuation)

Class Of Work	Details of LDC & LDD valuation process used – including key assumptions and any models used
LDC, LDD	For Access Copper & Duct assets The following steps describe the process followed to derive these valuations. **Step 1:** The PIPeR (Physical Inventory for Planning and eRecords) system holds records for 192 exchange areas (from approximately 5,600 nationally), which combined with 36 exchanges for which data has been produced manually form a representative sample of exchange areas both across the UK and across geotypes. These reflect a number of different Geotypes (e.g. Urban, Rural, Densely or Sparsely populated) in order to account for all possible examples of Local network. The volumes data for these 228 exchange areas represent 100% of the assets for each exchange. **Step 2:** The Artisan system which holds records of poles for Health & Safety inspection purposes is interrogated to give the national volume of poles by exchange area split between construction materials. This volume data is then costed using average costs for installation labour and materials.

	Step 3: Data was extracted from PIPeR relating to all copper and duct length and network furniture in the Local network. This was then input into a series of costing models covering the various asset types (Duct, Manholes, Jointboxes, PCPs & SCPs, Cable, joints and DPs). **Step 4:** BT standard manhour and stores item rates are obtained and contract costs are supplied by BT Strategic Procurement. **Step 5:** Due to the contracts and stores processes involved the stores prices extracted for valuation purposes at the end of March are approximately three months in arrears of market rates. Generally the difference is immaterial, but this year the raw commodity market price of copper rose by approximately 25%. This would have meant a material understatement of the actual replacement cost of copper cable at the balance sheet date and therefore the stores prices were uplifted to correct the situation. **Step 6:** The current contract rates reflect existing volumes of work which are of a relatively small volume and of a reactive nature due to BT's mature network structure. Consequently these rates are higher than would be expected if a large scale installation programme were in hand, as CCA theory requires, therefore the contract rates have been discounted to compensate for this. **Step 7:** Based on information from the above the volumes are costed to produce a total GRC covering all BT's exchanges. **Step 8:** Duct is automatically written out of the HCA books at the end of its financial life. However the financial life used is less than the actual average physical life observed, so assets remain in use and therefore continue to be valued in Steps 1 to 7 above forming part of the initial gross valuation. Therefore, in order to ensure consistency with the HCA accounting policies, the GRC obtained above is abated by the cumulative CCA value of "auto-write-out" assets (since this policy came into force in 1998/99). This value is obtained by re-valuing, the cumulative HCA write-out value of duct using the latest pricing data used to derive a GRC value.

2.5 Access Radio Systems

These assets (TPWA CoW) are valued at historical cost.

2.6 Asymmetric Digital Subscriber Line (ADSL) Equipment

The ADSL class of work covers contract, stores and labour for the construction, installation, commissioning, replacement, re-arrangements and recovery of ADSL (Asymmetric) and XDSL equipment at local exchanges, stores at local exchanges and at customer's premises, to carry broadband services to customers.

From 2005/06 onwards these assets are valued by extrapolating forward the 2004/05 valuation by the addition of historic cost movements plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment. The 2004/05 methodology is explained overleaf.

Digital Subscriber Line Access Multiplexers (DSLAMs) and customer end ADSL equipment (CPE) assets were valued using absolute valuation methodology as illustrated in Tables 1 & 2 below. Capitalised software development spend was valued at Indexed Historic cost using asset specific indices (System X software) prepared by BT Regulatory Finance in conjunction with BT Procurement – see section 1.8. This index was considered to be the most appropriate for use in the case of bespoke software. All other assets (including test equipment, spares and Symmetric Digital Subscriber Line equipment) included in the ADSL category were valued at historic cost.

The indexed CCA value of capitalised planning costs is included in the overall valuation – see section 1.9.

CCA depreciation is derived using the NBV/GBV methodology - (See Annex 3, section 2.2).

Table 1 – CoW ADSL

Elements (Asset Policy Code)	**Valuation basis (Dep'n Method)**	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Exchange End ADSL equipment – DSLAMS (ADSA)	Absolute (NBV/GBV)	No. of racks, hubs, cards for Fujitsu and Alcatel 1st and 2nd Generation equipment	NISM – (Network Inventory and Spares Management)	Unit Price for individual elements	Latest contract cost information from BT Strategic Procurement.
ADSL Residential NTE (ANTE) and ADSL Business NTE (BNTE)	Absolute (NBV/GBV)	No of modems/ routers	ASC (Automated Supply Chain)	Unit price for individual elements	ASC (Automated Supply Chain)

Table 2 - Process steps (in preparing valuation)

Asset Policy Code/ Element	**Details of process used (CoW – ADSL) – including key assumptions and any models used**
ADSA	**Step 1**: Total number of elements extracted from NISM (Network Inventory and Spares Management). Broken down into Alcatel and Fujitsu, first and second-generation equipment. **Step 2**: Both First and Second generation equipment valued at second generation unit prices (on MEA basis) as provided by procurement.
ANTE and BNTE	**Step1:** Cumulative volume purchased and price movement information since contract inception obtained from ASC. **Step 2**: Assume cumulative demand, adjusted for 26% churn from Powerhouse = 'volume' of modems. **Step 3**: Calculate CCA value using the volume of modems from Step 2 and latest contract unit prices.

2.7 UK Transmission – excluding Duct

Transmission capacity is provided on digital circuits on fibre, on digital circuits on transverse screen and on analogue circuits on copper. The trunk transmission network is fully modernised and capacity is provided on digital systems using fibre cable and radio systems.

The indexed CCA values of the capitalised planning costs are included in the overall valuations of those CoWs presently revalued – see section 1.9. Non-capacity related expenditure is included in the valuation if appropriate.

Valuations are calculated using the replacement costs for the following asset groups:

(i) Plesiochronous Digital Hierarchy (PDH) equipment

This category mainly relates to provision, re-arrangement of Junction Repeater Non-Optical fibre, Junction Repeaters Optical Fibre and plesiochronous digital or optical equipment in the Trunk Network.

As PDH technology is now commercially obsolete and prices for these assets are no longer available they are valued on the basis that they are replaced with an equivalent SDH network giving the same capacity in terms of 2Mbit ports per exchange. This results in a combined valuation for the three PDH classes of work (CRD, CRHQ & CRF) and is included in CRF for CCA purposes.

From 2005/06 onwards these assets are valued by extrapolating forward the 2004/05 valuation, taking into account HCA movements and price changes. Price changes in 2005/06 reflected the material impacts on pricing for the modern equivalent Add-drop SDH Multiplexers. The 2004/05 methodology is explained below.

The 2004/05 PDH capacity was valued using the absolute valuation methodology. "Normal course of business" prices are no longer available as PDH technology is now commercially obsolescent. The valuation was based on the price of SDH equipment required to meet the equivalent level of PDH capacity in terms of 2Mbit ports per exchange. Redeployment of spare PDH kit, originally identified for "lift and shift", to cater for anticipated growth in capacity is unlikely to occur due to migration plans following implementation of 21CN. Hence, these assets were excluded from the CCA valuation for the financial year 2004/05 onwards.

CCA depreciation is derived using the Roll Forward methodology - (See Annex 3, section 2.2).

The equivalent replacement network consists of:

i) access SDH equipment in the form of Consolidation Units at core nodes which do not have a core SDH presence,
ii) access SDH equipment in the form of Hub Muxes at core SDH nodes,
iii) core SDH equipment at core SDH nodes including ADMs, 4/1 cross connects, 4/4 cross connects, LTE1/16 and ISEs.

Redeployment of spare PDH kit, originally identified for "lift and shift", to cater for anticipated growth in capacity is unlikely to occur due to migration plans following implementation of 21CN. Hence, these assets are not included in the CCA valuation this year.

Table 1 – CoW CRF

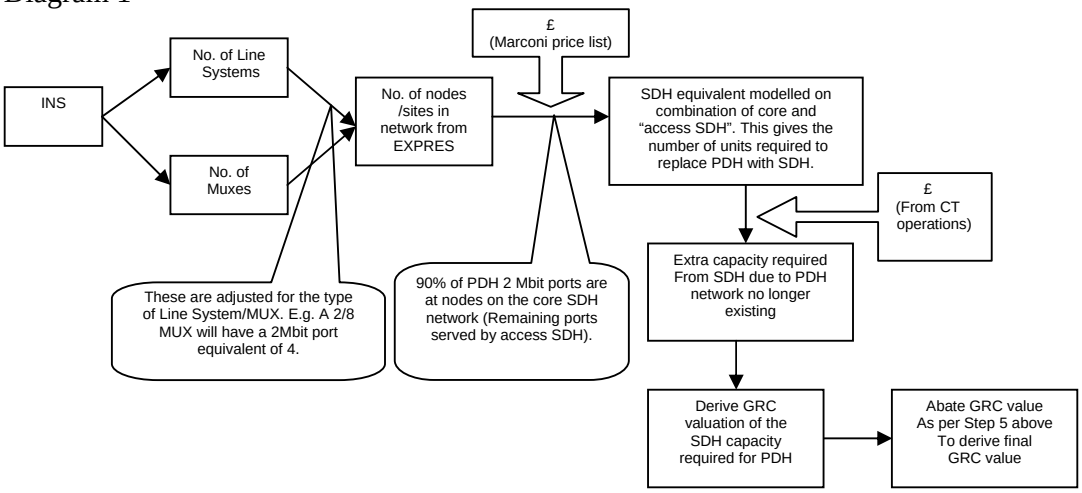
Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (Roll Forward)	Number of Muxes, line systems and other SDH equipment required to provide the equivalent PDH capacity in terms of 2Mbit ports required per exchange.	INS (Integrated Network System). No. of nodes from EXPRES	Unit Price per Access or Core SDH equipment.	Latest supplier price list for Access and Core SDH equipment. Provided by BT Strategic Procurement (Marconi Contract).

Table 2 - Process steps (in preparing valuation)

Diagram 1 below illustrates the valuation process for the PDH assets.

Details of process used (CoW – CRF) – including key assumptions and any models used
Step 1: INS data is used to provide volumes of PDH equipment comprising Line Systems and Muxes. Spare PDH assets, originally identified for "lift and shift" to cater for anticipated growth in capacity, are not included in the CCA valuation this year (see above). **Step 2**: Number of nodes/sites in network are extracted from EXPRES**.** **Step 3**: Model is used to calculate Access and Core SDH kit that would be required to replace existing number of 2Mbit PDH ports at each exchange. **Step 4**: Latest contract costs used to calculate GRC based upon number of Consolidation Units, Hub Muxes and ADMs that are required. **Step 5**: The GRC is then abated to reflect the fact that some of the additional functionality for the PDH network (e.g. network transmission monitoring equipment i.e. LTME class of work) is inherently available on SDH. The value of abatement is equal to the gross valuation of LTME CoW which includes assets to support the PDH network but which are not required for the SDH network.

Diagram 1



(ii) Synchronous Digital Hierarchy (SDH) equipment

These assets are valued on an indexed historical cost basis using asset specific cost trends based on index data prepared by BT Regulatory Finance in conjunction with BT Procurement – see section 1.8 and Annex 2.

CCA depreciation is based on the NBV/GBV methodology - (See Annex 3, section 2.2).

(iii) Asynchronous Transfer Mode (ATM & ATMW)

These assets are valued on an indexed historical cost basis using asset specific cost trends based on index data prepared by BT Regulatory Finance in conjunction with BT Procurement – see section 1.8 and Annex 2.

CCA depreciation is based on the NBV/GBV methodology - (See Annex 3, section 2.2).

(iv) Cable (UK Transmission)

Within this category are grouped four types of assets Underground Cable (MUC CoW), Junction Cable – Optical Fibre (CJF CoW), Junction Metallic Pair Cable (CJC CoW) and Submarine cable assets (BHQ CoW). The latter two (CJC & BHQ) with declining, low investment and immaterial CCA adjustments are valued at historic cost.

For 2007/08 the valuations of MUC & CJF are derived as follows:

Underground Cable (MUC CoW)

This category includes provision, replacement or recovery of Trunk Cables. This Class Of Work is now closed apart from costs associated with re-arrangements of existing MUC assets. All new fibre spend is booked to CJF Class of Work.

These assets are now highly depreciated and have virtually nil investment. For 2007/08 the valuation has been prepared from the 2003/04 valuation, produced by the method detailed below. The 2003/04 valuation being extrapolated forward by the addition of historic cost movements plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment.

The cable sheath length in the network for each cable size is multiplied by the pro-rata cost from the closest commercially available cable size to give a replacement cost. The total replacement cost for all fibre is then divided by the actual fibre length to give an average cost per fibre km.

Table 1 – CoW MUC

Valuation basis	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (Roll Forward)	Fibre Km	INS (Integrated Network System).	Pro-rated Unit Price per Fibre Km	Latest Fibre costs as provided by BT Strategic Procurement.

Table 2 - Process steps (in preparing valuation)

Details of process used (CoW – MUC)
Same steps as for CJF CoW (see section below).

Table 3 – Basis of cable costing

As standard cable sizes now installed are limited to only 12, 24, 48, 96, 126,144 and 168 fibres, historic cables that do not fall into these categories are costed on the following basis:

Historic Cable Size (Fibres per Cable)	**Basis of costing 2007/08 valuation (Fibres per Cable)**
2, 4 , 6, 8, 12	12
16, 18, 24	24
32, 38, 48	48
72, 88, 96	96
126	126
168	168

Junction Cable – Optical Fibre (CJF CoW)

This category includes provision, replacement, renewal, re-arrangement or recovery of Junction Repeaters Optical Fibre.

For 2007/08 the valuation has been prepared from the 2004/05 valuation, produced by the method detailed below. The 2004/05 valuation being extrapolated forward by the addition of historic cost movements plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment.

The cable sheath length in the network for each cable size is multiplied by the pro-rata cost from the closest commercially available cable size to give a replacement cost. The total replacement cost for all fibre is then divided by the actual fibre length to give an average cost per fibre km.

Table 1 – CoW CJF

Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (Roll Forward)	Fibre Km	INS (Integrated Network System)	Pro-rated Unit Price per Fibre Km	Latest Fibre Contract Costs supplied by BT Strategic Procurement

Table 2 - Process steps (in preparing valuation)

Details of process used (CoW CJF) – including key assumptions and any models used
Pro-rated costs per fibre km are calculated for the cable types (see Table 3 below) and used to derive the final CJF valuation. The pro-rating is necessary to reflect the fact that, for example, 2,4,6,8 fibre cables (hence their prices) are no longer commercially available. Therefore, the prices for these sizes have to be derived based on the price of the nearest commercially available cable (i.e. 12-fibre cable) for valuation purposes. **Step 1**: Sheath and Fibre km volumes of CJF assets and the number of nodes for each size of fibre cable are extracted from INS. **Step 2:** The cost of the closest commercially available cable for each size of cable is obtained e.g. the closest available cable for 1 to 12 fibre size cables is the 12 fibre cable. **Step 3**: Cost per sheath Km of each size of cable is derived by pro-rating the cost in step 1 as follows: Cost per sheath Km of cable to be valued = Cost from step 2 / Sheath size commercially available cable X sheath size of cable to be valued **Step 4**: Cost of each size of cable is derived by multiplying the cost per sheath Km of the cable by the sheath length of the cable **Step 5:** The total cable cost is derived from figures in Step 4 and the total cost is divided by the actual fibre length to derive the average cost per unit length of fibre. This information is used to derive the price variances and the overall cable valuation. Capacity additions during the year need to be added into the valuation. HCA Additions = CCA Additions.

Table 3 – Basis of cable costing

As standard cable sizes now installed are limited to only 12, 24, 48, 96, 126,144 and 168 fibres, historic cables that do not fall into these categories are costed on the following basis:

Historic Cable Sizes (Fibres per Cable)	**Basis of costing for 2007/08 valuation (Fibres per Cable)**
2 , 4, 6, 8, 12	12
16, 18, 24	24
32, 38, 48	48
72, 88, 96	96
126	126
168	168

CCA depreciation for cable excluding optical fibre is derived using the NBV/GBV methodology. Optical fibre employs the Roll Forward methodology - (See Annex 3, Section 2.2.1 (ii)).

v) Other Transmission Equipment

Trunk & Junction Radio Systems (comprising radio systems, aerials and towers), Telex Exchange, Telegraph Transmission and Defence Telegraph equipment assets, plus Network Transmission monitoring equipment are valued at historic cost.

Valuation of duct in relation to these assets is included within the overall Duct valuation in section 2.2.

2.8 Local Exchanges

This category includes:

- Local Digital Exchanges
- Local Main Distribution Frames
- Operator Services System
- Carrier Pre-Select Assets
- Telephony Server Assets

The local switching capacity CoWs LDX & LYX and local distribution frames (CoW LMDF) are valued at replacement cost using absolute valuation methodology. The other element of local switching capacity UXD5 a declining, low investment with an immaterial CCA adjustment is valued at historic cost.

Telephony server assets, operator services system and carrier pre-select assets which also have declining, low investments and immaterial CCA adjustments are also valued at historic cost.

The indexed CCA value of the capitalised planning costs is included in the overall valuation for those CoWs revalued (LDX, LMDF & LYX) – see section 1.9.

CCA depreciation for those assets valued using absolute methodology is derived using the Roll Forward method.

(i) Local Digital Exchanges

The valuation for local exchanges (excluding UXD5 assets – LUX CoW) is based on the mix of installed capacity for each exchange technology using Modern Equivalent Asset principles. From 2005/06 onwards the CCA value has been derived by extrapolating forward the 2004/05 valuation (detailed below), taking into account price changes and HCA movements.

LDX CoW accounts for equipment and associated costs supplied by Marconi, LYX CoW to that supplied by Ericsson.

The 2004/05 GRC was derived by applying "normal course of business" contractors' unit prices to the exchange physicals and taking into account the associated BT labour, supervision and spares costs. Adjustments are made to the final Gross Replacement Cost for non capacity spend and functionality where appropriate using both actual business spend and future forecast spend against registered programmes as follows:

(a) Actual spend which is not reflected in the unit cost is added e.g. Software upgrades

(b) Functionality abatement is applied to the valuation where the cost of an enhanced asset is used in the valuation. The net present value of functionality spend required to bring the assets to the functionality of the enhanced asset (e.g. software upgrades) is deducted from the valuation. This adjustment is based on BT's investment plans if appropriate;

(c) If unit costs do not reflect an enhanced asset, then functionality spend to date is added to the valuation indexed to the current date where appropriate.

(d) Only the software spend providing the additional functionality that adds to the revenue earning capacity of an exchange (and therefore adding value in CCA terms) is included in the valuation – this spend is included at indexed historic cost using "System X software" index for LDX CoW and "System Y" software index for LYX CoW.. Software costs to provide architectural changes (i.e. increasing the performance of the processor) are not included.

The methodology as explained overleaf was used for the LDX & LYX assets in 2004/05.

Table 1 – CoWs LDX & LYX

Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (Roll Forward)	Unit of Local Switching network element	EXPRES, PULSE (System X only) and NRS (AXE10 only) systems	Unit price per Local Switching network element.	Local Exchange Modernisation Programme (LEMP2) contract prices as supplied by BT Strategic Procurement. Unit prices based on indexed LEMP2 figures using indices from suppliers.

Table 2 - Process steps (in preparing valuation)

Details of process used CoWs LDX & LYX) – including key assumptions and any models used
Step 1: Network physicals sourced from EXPRES for Concentrators and PULSE for System X Processors. For AXE10s EXPRES is used for Concentrator data and NRS is used for processor data. For Mobile units information is sourced from the Restoration Mobile Manager in BT Operate. **Step 2**: The basic approach is to firstly calculate the valuation of the year's opening physicals based on the latest contract prices. The movements in the year (e.g. additions, disposals, write-outs etc) added to this valuation to derive the year-end valuation. Hence, all network equipment at the start of the year is broken down into quantity and location (i.e. by exchange). This data is then run through the LEMP2 (Local Exchange Modernisation Programme) contract models which hold the dimensioning and pricing data; Analogue and ISDN are valued at fitted capacity and Per Line Auxiliary Equipment is valued at working capacity plus 5% to reflect planning margin requirements. These models dimension and cost each exchange in the network. The output of these models is fed into the Switch CCA Model (VALP) operated by BT Operate Network Cost Analysis team. The VALP model is used to index forward this valuation to bring the LEMP based valuation to the current date and also to include BT's provisioning costs - as explained in steps 3 and 4 below. **Step 3:** BT Regulatory Finance produce an index to be applied to LEMP2 prices. The total contract cost can then be indexed forward. LEMP2 contract is now expired, but is deemed as the best indicative measure of normal course of business purchasing conditions. This is because, for the majority of non-ISDN assets, the NP2K contract does not represent "normal course of business" as these contract prices are appropriate for low volumes for repair and maintenance only. Additionally, certain items are not available as new supply under the NP2K contract and the only prices available for these are under the LEMP2 contract. **Step 4**: BT Provisioning costs are added i.e. spares cost, databuild and contract supervision. These are updated each year to account for labour rate increases. **Step 5**: Additions in the period are added at Historic Cost. These are sourced from the spend data in CID, and appropriate adjustments are made for non-value adding costs e.g. software and lift & shift. **Step 6**: Adjustments are made for particular one-off projects not otherwise captured such as Modular Controller and Surftime Concentrator links which have been booked against the COW. This data is obtained from BT's Fixed Asset Register and project based financial information on CID. Software is also added from the previous period that would have otherwise not been captured in the valuation - this is necessary as the software spend does not increase capacity and will therefore not be included in the CCA valuation which is based on the opening physicals (as per Step 2 above). Only the software spend providing the additional functionality that adds to the revenue earning capacity of an exchange (and therefore adding value in CCA terms) is included in the valuation – this spend is included at indexed historic cost using the "System X software" and "System Y

software" indices as appropriate for LDX and LYX CoWs respectively. Software costs to provide architectural changes (i.e. increasing the performance of the processor) are not included.

Step 7: An abatement is made to adjust Ericsson processor spares costs. This is due to the fact that the valuation for all Processors are based on the more expensive 21220 unit (an assumption made in the valuation model), but several older (and cheaper) 21212 units are still active.

(ii) Local Main Distribution Frames

This category relates to the provision, extension, upgrade, replacement, re-arrangement and recovery of Main Distribution Frames connected with Inland (BTUK) telephone exchanges. MDF's are those distribution frames providing direct interface with external circuits terminations (customer or other exchanges).

Until 2004/05 the majority of the distribution frames were valued at replacement cost using absolute valuation methodology based on costs of a modern equivalent asset. From 2005/06 onwards the CCA value has been extrapolated forward to 2007/08 by the addition of historic cost movements plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment.

Mobile distribution frames are valued on an indexed historic cost basis using asset specific cost trend ("Other") derived by BT Regulatory Finance from index data prepared in conjunction with BT Procurement – see section 1.8 and Annex 2. Indexation is used due to relatively low value of these assets and difficulties in obtaining robust pricing data.

Table 1 – CoW LMDF

Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (Roll Forward)	No. of distribution side (d-side) connections to Main Distribution Frame eqpt.	AMIS (Access Management Information System)	Unit Price per d-side connection, hourly labour rate	Latest contract cost for relevant (T1103 type) MDF eqpt. CID (see Data sources below) for hourly labour rate

Table 2 - Process steps (in preparing valuation)

Details of process used (CoW LMDF) – including key assumptions and any models used
Step 1: Number of d-side connections to MDF equipment are sourced from AMIS (Access Management Information System – see Data sources below). **Step 2**: Latest contract costs for elements of T1103 equipment are used to provide unit

price per d-side connection.

Step 3: The manhour rate specific to the Class of Work is taken from CID and this is used as the hourly labour rate.

Step 4: The unit costs and hourly labour rates derived above are applied to the number of d-side connections to derive the gross valuation.

2.9 Main Exchanges

This category includes:

- Main Network Switching Digital (MDX CoW)
- Next Generation Switches (NGSC CoW)
- Cashless Services platform (CSNC CoW)
- Advance Service Units Switching (ASU CoW)

Where appropriate, costs for BT direct labour, spares, contract supervision and databuild are added.

The CCA values of the capitalised planning costs for the CoW ASU, which is revalued, are included in the overall valuations – see section 1.9.

CCA depreciation for those assets valued using absolute methodology is derived using the Roll Forward method.

Given the minimal price changes in NGS equipment and the low residual value of MDX assets the valuation of the combined platforms is at Historic Cost.

The assets comprising the Cashless Services Platform have a declining and low investment for which the CCA adjustment is not material they are therefore valued at historic cost.

Advance Service Units Switching

This category contains assets that support Featurenet Products. The Featurenet network consists of twenty-six Nortel DMS100 switches located at 26 major BT buildings around the UK.

The normal process for deriving this valuation is explained in the following tables. However, for 2007/08 as this CoW is highly depreciated with low NRC and low investment, this years value is being derived by extrapolating forward the 2003/04 valuation taking into account price changes and HCA movements.

The 2003/04 valuation was based upon current capacity valued using the unit capacity cost priced on the latest contract prices.

CCA depreciation is derived using the Roll Forward methodology - (See Annex 3, section 2.2).

Table 1 – CoW ASU

Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (Roll Forward)	DMS100 volumes (Capacity related) plus Data Build and Software costs (Non Capacity related).	Actual DMS 100 volumes sourced from BT IN & Featurenet Capacity team *.	Unit Price per DMS 100 supplied	Latest contract costs supplied by BT Strategic Procurement**.**

* This group is part of BT Wholesale Network Engineering & Services and they are responsible for Intelligent Networks and FeatureNet Capacity Management. The capacity records are maintained by the group using their local data base (Capacity Report) which is kept up to date taking into account information from the 'Supplier Document' showing the original purchases and upgrades relating to ASU switches.

Table 2 - Process steps (in preparing valuation)

Details of process used (CoW ASU) – including key assumptions and any models used
Step 1: Actual volumes of DMS 100 equipment supplied by BT IN & Featurenet Capacity team. **Step 2:** ASU switches – 2003/04 unit price was derived using prior year prices indexed forward using "ASU" trend using asset specific cost trend ("ASU") derived by BT Regulatory Finance from index data – see section 1.8.

2.10 Intelligent Network

The Intelligent Network is grouped into three classes of work

- INC Intelligent Network including platforms such as the Cambridge platform switch assets (used to support various Number Translation Services and internet type calls e.g. Freefone, Speaking Clock, Televoting, Surf Time, BT Click).
- SIL Co-operative Intelligent Service Layer
- SIGNI Signalling Network and Interconnect platform

INC CoW assets are valued on a historic cost basis. This is largely due to declining investment on these assets, which are now highly depreciated, and the impact of CCA adjustments on product costs being immaterial.

SIL assets are valued on a historical cost basis as the net value is small and consequently the resulting CCA adjustment would be immaterial.

SIGNI Class of Work captures the costs of the signalling network, signalling network management system and interconnect elements of the Intelligent Network platform.

The valuation of SIGNI (Signalling Network and Interconnect platform) from 2005/06 onwards has been extrapolated forward from the 2004/05 valuation by the addition of historic cost movements plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment. The 2004/05 valuation was derived using replacement costs based on the latest contract prices.

Table 1 – CoW SIGNI

Valuation basis (Dep'n Method)	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used**	**Source and basis of Unit price/Index**
Absolute (NBV/GBV)	Volumes of specific assets as described in the table below.	BT Operate Signalling Policy and Design Unit *	Unit Price per SPR, STP or Link Monitor	Contract prices provided by BT Procurement for SPRs, STPs and Link Monitors.

* This group is part of BT Operate Network Engineering & Services and they are responsible for Signalling Policy and Design. The capacity information (number of Signalling Point Relays -SPRs & Signalling Transfer Points – STPs) is held on their local database that is updated on regular basis.

Table 3 - Process steps (in preparing valuation)

Details of process used (CoW – SIGNI) – including key assumptions and any models used
Step 1: Volumes of equipment sourced from BT Operate Signalling Policy and Design Unit and from the Signalling Assurance Programme Manager. **Step 2:** Costs for equipment noted above sourced from BT Operate Signalling Policy and Design Unit and from the Signalling Assurance Programme Manager and applied to volumes in step 1 to derive the CCA valuation. **Step 3:** Additional costs incurred in the year (e.g. for software, licences and development that provide additional functionality) are added at historic cost to the gross valuation derived in step 2. These costs are obtained from the general ledger.

2.11 Property

The majority of property assets (general-purpose buildings, specialised buildings, general purpose land, specialised land and the majority of accommodation plant) are valued at historic cost, as the number of buildings remaining in BT ownership is small following a sale and leaseback transaction in 2001, and the CCA adjustment spreads across a large number of components, resulting in adjustments to the individual components that are not material.

Specialised accommodation plant associated with and specific to Network equipment is grouped into the "ACPN" CoW. This category covers the cost of construction, provision, installation and recovery of network equipment-related accommodation plant. This includes Electric Light and Power (EL&P) in transmission areas only, all vent and chill equipment and Fire Flood and Gas Detection (FFGD), also included are Kitchen equipment, Intruder detection.

For 2007/08 the CCA adjustments were not material and the CCA net value of assets was not materially different from their HCA equivalent. Therefore as this difference is not expected to increase in the next few years and is spread across a large number of components, these assets were switched to being valued at Historic Cost.

For 2006/07 the valuation was prepared from the 2004/05 valuation, produced by the method detailed below. The 2004/05 valuation being extrapolated forward by the addition of historic cost movements, plus CCA adjustments in relation to price changes, disposals and any other material HCA activity giving rise to a CCA adjustment.

Assets valued on Absolute basis within ACPN are:

- Electric Light and Power (EL&P)
- Vent and Chill (TANV)
- Lights for Main Distribution Frames (LMDF)

The 2004/05 methodology is explained in detail below.

To derive the overall valuation for ACPN, the value of other network related plant such as fire, flood and gas detection equipment, kitchen equipment, intruder detection equipment and some low value items which are valued at indexed historical cost are added to the absolute valuation derived below.

The normal agreed process for deriving these absolute valuations is explained in the following tables. For this year this methodology has not been strictly followed in the following two respects:

i. Electric Light and Power (EL&P) - Use of this approach requires the power requirement of each network building to be calculated based on the network equipment contained in the building. The building power consumption is then used to derive the EL&P volumes necessary to supply this requirement.

   However due to practical and timing difficulties in deriving the power requirements for each of BT's operational buildings, the valuation is based on the 2004/05 actual number of equipment racks, the population of which is then used

to calculate the volumes of equipment used (e.g. no. of rack footings and lighting suites). These are then multiplied by their latest unit prices to derive the total valuation for this asset category. The number of racks has been sourced from the BT Operate database called Advitium.

ii. Vent & Chill – In 2004/05 a thorough re-assessment of the equivalent replacement costs of the assets was undertaken with the support of various parties in BT's Procurement & Supply Chain, Network Planning & Implementation, and Network Cooling Policy & Planning units. These unit costs were combined with the volume of Air Handling Unit elements, sourced from PIRM, to calculate asset replacement costs for the year.

iii. Lights for Main Distribution Frames - The accommodation footprint for main distribution frames, obtained from the BT Operate database Advitium was converted into the number of lights by the application of current planning and dimensioning rules. The volumes of lights was then valued using the latest unit prices from BT's Procurement & Supply Chain.

Table 1 – CoW ACPN (prior to 2007/08)

Elements (Asset Policy Code)	**Valuation basis (Dep'n Method)**	**Capacity Measure**	**Source of Capacity**	**Unit Price or Index used?**	**Source/ Basis of Unit Price/ Index**
Electric Light and Power (EL&P) (TANE)	Absolute (Roll Forward)	Number of lights/power sockets based on power consumption in kilowatts. Numbers of FeatureNet isolators based on number of Small Remote Unit (SRU) sites (from Skyline).	Based on power requirements for actual existing volumes of exchange equipment sourced from CTCS. Numbers of SRU sites supplied by BT Wholesale Featurenet capacity management from information held on a local database.	Unit Price per Light/ Power socket and latest installation manhour rate	Latest contract costs from BT Procurement & Supply Chain Unit.
Lights for MDF (LMDF)	Absolute (Roll Forward)	Number of lights for main distribution frames	Accommodation footprint for main distribution frames from Advitium	Unit price per light	Latest unit prices from BT Procurement & Supply Chain unit

Vent and Chill (TANV)	Absolute (Roll Forward)	Volumes of AHU (Air Handling Unit) elements	PIRM (Power Inventory Routine Manager)	Unit Price per AHU element	Latest contract costs from BT Procurement & Supply Chain, Network Planning & Implement-ation units.

Table 2 - Process steps (in preparing valuation)

Elements (Asset Policy Code)	**Details of process used (CoW – ACPN prior to 2007/08) – including key assumptions and any models used**
Electric Light and Power (EL&P) (TANE)	Electric Light and Power refers to the lights that run down the Transmission equipment racks and associated power plant. **Step 1**: Transmission consists of six categories (SDH – Synchronous Digital Hierarchy, PDH – Plesiochronous Digital Hierarchy, DPCN – Digital Private Circuit Network, ACE – Automatic Cross-Connection Equipment, EACE – Enhanced Cross-Connection Equipment, ECEF – Enclosed Capacity Expansion Frame). Power consumption is calculated by multiplying volumes by the power consumption (from the manufacturer's specifications) of each type of kit. **Step 2**: Total consumption is converted in to a volume of light and power sockets required for each exchange. **Step 3**: Gross Replacement Costs calculated by multiplying volume of light and power sockets and FeatureNet isolators by latest costs per unit for light and power sockets supplied by the BT Procurement & Supply Chain as mentioned above.
Lights for MDF	**Step 1**: Accommodation footprint from Skyline for main distribution frames in the network is converted into the numbers of lights required by the main distribution frames using the BT Commercial & Regulatory Finance Network Cost Analysis local model which holds dimensioning data for lighting requirements. **Step 2**: Gross replacement cost is calculated by multiplying volume of lights by latest cost per unit of light supplied by BT Procurement & Supply Chain as mentioned above.
Vent & Chill (TANV)	**Step 1**: Source data for total volumes of Vent & Chill is PIRM (Power Inventory Routine Manager). **Step 2**: Latest costs are provided by BT Procurement & Supply Chain and Network Planning & Implementation Units, which when multiplied by volumes provides a Gross Replacement Cost for these assets.

The indexed CCA value of the capitalised planning costs for the Network related Accommodation Plant (ACPN) is included in the overall CoW valuation – see section 1.9.

CCA depreciation for all property assets employs the NBV/GBV method - (See Annex 3, section 2.2).

2.12 Other Fixed Assets

The assets in the sectors listed below are valued at historic cost for one or more of the following reasons:

- They are short life assets where only modest price movements have been observed and are expected over the assets remaining life.
- The assets have a low gross value and are not material to BT's overall asset base.
- The assets are highly depreciated and the remaining net value is not material to BT's overall asset base.
- The CCA adjustment, if calculated, would be spread across a large number of components thus resulting in immaterial adjustments to individual components or markets.
- The assets are in an unregulated area of the Group, and the CCA adjustment does not spread across any regulated components.

Assets valued at Historic Cost

- **21st Century Network**
- **Motor Vehicles**
- **Computers**
- **Office Machines**
- **Private Circuit Equipment and Non-Voice Network (Inland)**
- **Network Power Plant (Inland)**
- **Network Administration Computers**
- **Apparatus (Customer Premises & Support Equipment)**
- **Payphones**
- **International (including CNS assets)**
- **Capital Miscellaneous and Non-Core**
- **Engineering Stores**

2.13 Intangible Assets

Intangible assets traditionally comprised two elements, Goodwill which is the bulk of the value and Licence fees. Additionally in line with IAS 38 (Intangible Assets) computing software is also now classified as an intangible asset.

(i) Computing Software - Operating Systems & Application Software

Operating system software is that which is required to provide batch and on-line services to end users, including databases, monitors and additional software to ease operational use of the system. Applications software is that which meets a specific business need and cannot be used for any other purpose.

These assets are valued at historic cost as the assets are not material to BT's overall asset base and the CCA adjustment spreads across a large number of components thus resulting in non-material adjustments to individual components.

(ii) On transition to IFRS, the group elected not to apply IFRS3, 'Business Combinations' retrospectively to acquisitions that occurred before 1st April 2004. From the date of transition, goodwill is not amortised but is tested for impairment annually or more frequently if events and circumstances indicate that the goodwill might be impaired. The Current Cost Regulatory Financial Statements follow this treatment and exclude goodwill from the regulatory financial results, showing it simply as a reconciling item between the Current Cost Regulatory Financial Statements and BT's Annual Report.

In the HCA (and CCA) accounts goodwill arising on the acquisition of businesses which occurred between 1 January 1998 and 1 April 2004 continues to be included in the balance sheet at original cost, less accumulated amortisation to the date of transition. Goodwill arising on the acquisition of businesses prior to 1 January 1998 was written off directly to retained earnings in the HCA accounts, but in CCA accounts this was amortised and charged to the profit and loss account on an annual basis over the useful economic life.

(iii) Licence fees paid to governments, which permit telecommunications activities to be operated for defined periods, are amortised from the later of the start of the licence period or launch of service to the end of the licence period on a straight-line basis. These are not re-valued in the current cost accounts, though again an adjustment for currency movements is made.

2.14 Assets In The Course Of Construction (AICC)

Current cost valuations are adjusted to reflect the value of these assets except where they are taken into account in the underlying CCA valuation. As the year-end balance of historical expenditure broadly reflects current price levels no further current cost adjustment is made.

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Report of the Inflation Accounting Committee – presented to Parliament by the Chancellor of the Exchequer and the Secretary of State for Trade by Command of Her Majesty - September 1975

Inflation Accounting – An introduction to the debate, 1983, Professor Geoffrey Whittington

ANNEX 1

STUDIES AND DATA SOURCES USED IN CCA VALUATIONS

The following studies and data sources are utilised in the preparation of the CCA Valuations as described in section 2.

- **ADS - Absolute Duct Study**

Used for valuing Copper Cable (LDC) and Duct (LDD)
This study is used to provide sample data for the Trunk & Junction Duct (T&JD) Study which is used to derive the valuation of duct in BT's core network. Additionally, the data from ADS is used to calculate the apportionments of duct to the Access and Core networks. The study is based on a nationally representative sample of Duct Space Records (DSRs) – 10% of the DSRs in 384 areas. These records allow identification of duct used exclusively by Core (Trunk and Junction) cable. This duct is then valued and added to the LLCS duct valuation to provide a total valuation for all duct. This study was last updated in 1996.

- **Advitium**

Used for valuing Accommodation Plant Network (ACPN)
A database maintained by BT Operate which holds records (CAD diagrams) of the floorspace in BT's operational buildings (i.e. the Specialised estate only) and the equipment and infrastructure deployed within these buildings. It holds more granular information compared to that held on Skyline.

- **AMIS - Access Management Information System database**

Used for valuing Copper Cable (LDC), Duct (LDD) and Local Main Distribution Frame (LMDF)
This database was a sub-system of the Customer Service System (CSS). AMIS held current network volume data like number of DPs and PCPs by exchange. AMIS was maintained by BT Computing Partners and was updated monthly. Following the creation of Openreach AMIS has been replaced by the ORBIT system.

- **ARTISAN - Automated Reporting & Target Investment System for the Access Network**

Used for valuing poles within Copper Cable (LDC)
Openreach's Artisan system holds records of poles for Health & Safety inspection purposes. It provides the national volume of poles by exchange area split between construction materials.

- **ASC - Automated Supply Chain**

Used for valuing Asymmetric Digital Subscriber Line equipment (ADSL)
This computerised system, owned by Supply Chain Partners Business Unit within BT's Procurement & Supply Chain, is a stores ordering system. This system is used to monitor stock levels, forecasts and demands for products within BT, and to maintain purchasing contracts placed with external suppliers. It also includes pricing information.

- **CID - Central Information database**

Used for valuing Copper Cable (LDC), Duct (LDD) and Local Main Distribution Frame (LMDF)

The Management Information System that the Accounting Separation system is run on. This database is updated from various BT systems including Payroll and Accounts Payable and records both BT's financials and non-financials data.

- **CSS - Customer Service System**

Used for valuing Copper Cable (LDC), Duct (LDD) and Fibre Cable (LFSC)

The system that manages various aspects of customer service from order capture through issues and fault handling, to work management (including engineering time through national job recording) and billing.

- **Duct Surface Study**

Used for valuing Copper Cable (LDC) and Duct (LDD)

This study provides the average mix of surfaces (between carriageway, footway and unsurfaced) under which duct is built. The survey is based on the recorded construction details for a nationally representative sample of 2000 Duct Surface Records (DSRs). This study was last updated in 1997.

- **EXPRES - Exchange Planning & Review System**

Used for valuing Plesiochronous Digital Hierarchy (PDH) equipment (CRF), Local Exchange Switches (LDX & LYX)

This is a database holding information on Local Exchange & Main Exchange with details of units in service with current capacities and ordering information (both historic and future). It is used to provide connections data for models used in AS, CCA and LRIC.

- **GATIS** - **G**overnment **A**ccountancy and **T**echnical Cost **I**nvestigation **S**ervice

Used for valuing Copper Cable (LDC), Duct (LDD) and Fibre Cable (LFSC)

A specialised BT unit within Financial Analysis dealing with all matters relating to cost investigation. This unit has now been disbanded but the methodology adopted by GATIS for derivation of standard pay rates was used by BT Retail Major Business Commercial Finance in preparing the BT Retail standard manhour rates until 2004/05. As there is no longer any other requirement for this service in BT the GATIS rates have not been updated and the 2007/08 rates for use in CCA have been derived by indexing the 2004/05 GATIS rates by the Average Earnings Index.

- **INS - Integrated Network System**

*Used for valuing Junction Cable Optical Fibre (CJF***),** *Plesiochronous Digital Hierarchy (PDH) equipment (CRF), Fibre Cable (LFSC) and Main Underground Cable (MUC)*

Inventory database for BT's PDH circuits and cabling for PDH and SDH.

- **LLCS - Local Lines Costing Study**

Used for valuing Copper Cable (LDC) and Duct (LDD)

This model was used prior to 2007/08 to value Copper and duct in the Access network (i.e. from local exchange main cable chamber to the local distribution point) based on a survey of 40 exchange areas selected from a nationally representative sample of 176. It does not hold any data on dropwires that are valued under separate CoWs using HCA financial data. Additionally, the average loop lengths and average loop costs are used in the copper apportionment model to apportion copper costs to components. The LLCS surveys are normally updated annually. However, due to a very limited number of drawing office updates conducted over the last year, the LLCS surveys have not been updated this year. Instead the results of the 2002/03 maps survey have been used for this year's valuations. The use of AMIS (see Step 4 under For Access Copper & Duct assets in Table 2) information as a reference inherently leads to a final valuation whose accuracy or robustness is not materially affected by the lack of this update as mentioned in Table 2 above.

- **NISM - Network Inventory and Spares System**

Used for valuing Asymmetric Digital Subscriber Line equipment (ADSL)

This is the primary computer system designed to manage maintenance spare equipment for BT's core network (switch and transmission). NISM holds location information for the maintenance spares, tracks the faulty items through the repair cycle and ensures that the maintenance spare stock level is managed.

- **NRS - Network Recording System**

Used for valuing Local Exchange Switches (LDX & LYX)

This is a system that holds details of all BT PSTN network 2Mb port terminations. It allows any system between two switches to be queried and displayed, showing the switch termination details at each end. NRS allows switch port terminations to be allocated/de-allocated for the introduction/cessation of routes or systems on a route. NRS obtains a download of switch data for each switch. This switch data is downloaded on a regular basis (monthly) and any route/system changes entered on the system are validated against the switch data.

- **ORBIT – OpenReach Business Intelligence Tool**

Used for valuing Copper Cable (LDC), Duct (LDD) and Local Main Distribution Frame (LMDF)

This database is a sub-system of the Customer Service System (CSS). ORBIT holds current network volume data like number of DPs and PCPs by exchange. ORBIT is maintained by BT Computing Partners and is updated monthly. ORBIT has replaced the AMIS system used in the pre-Openreach environment.

- **PIPeR - Physical Inventory for Planning and eRecords**

Used for valuing Copper Cable (LDC), Duct (LDD)
The PIPeR system presently holds records for 192 exchange areas, from approximately 5,600 nationally. It has completed the final stages of a pilot following which large scale roll-out is now commencing.
The system provides accurate data including the length of duct, type of duct, number of duct bores and other duct-related information such as manholes, joint boxes and other constructions at the end of duct sections e.g. Primary Cross Connection Points and Distribution Points. Similarly for Cable details of the cable type, length, joints, poles and DP equipment are available.

- **PIRM - Power Inventory Routine Manager**

Used for valuing Accommodation Plant Network (ACPN)
This is an inventory of all power systems. PIRM also automatically generates maintenance routine assignments. PIRM is owned by the Network Power and Cooling Unit within BT Operate which has responsibilities for planning, maintenance and setting of national policy for all aspects of BT's power and cooling infrastructure.

- **Powerhouse**

Used for valuing Asymmetric Digital Subscriber Line equipment (ADSL)
This is a web based Management Information System, run by BT Retail Finance, which aims to provide a single consistent source of revenue and volume information in a quality controlled environment.

- **PULSE - Processor Utilisation Loading of Switch Equipment**

Used for valuing Local Exchange Switches (LDX & LYX)
Is used to capture processor performance (equipment, traffic & calls, processor occupancy) and hold it historically. This information is thresholded/ trended to give an indication to planning duties of exhaustion to trigger either a re-arrangement or extension to a particular switch. The information stored is also used to analyse configuration to resolve performance issues & monitor critical processor resources (e.g. Traffic Handling Magazines). Network capacity is key to the performance of our network. Critical resources need to be monitored and reported on so that BT provides the optimal network configuration, at least cost. BT also has a responsibility to show in its quarterly report the amount of network capacity that is in the network, PULSE is used to provide this information.

- **Skyline**

Used for valuing Accommodation Plant Network (ACPN)
This database holds detailed records (e.g. tenure, ownership and floor areas) for BT's properties [both Specialised and General Purpose].

- **Trunk & Junction Duct Study**

Used for valuing Copper Cable (LDC) and Duct (LDD)
This study uses the same sample of DSRs as the ADS (see above). In this case, the DSRs with shared cables (core and local) are identified allowing this subset of duct to be apportioned between Access and Core according to duct space utilised. It has no impact on the duct valuation as shared duct is valued based on the LLCS results.

ANNEX 2

INDICES AND TRENDS USED IN CCA

The following tables show the indices and trends that are used to derive valuations for those assets using the indexed historic methodology.

Section 1.8 of this document explains how these indices and trends are used to derive the indexed valuations.

TABLE 1: List of indices produced by BT Regulatory Finance including their sources as used in 2007/08 CCA Valuations (Index and Trend references are a unique identifier used in GRF process documentation)

No	Index	Index Ref.	Description of Indices (Index references from first column of this table)
1	ATM	ATM	The index used reflects price changes being achieved by BT procurement.
2	Dropwire	DW1	Indices based on 35% Copper, 25% Output Prices Electrical Engineering and 40% Average Earnings (used to 2006/07)
3	SDH	SDH	SDH: Based on a model reflecting market situation in the Telecommunications/IT area. In the absence of a stable mix of published indices that could be used, the pricing method used was constructed based on market research, understanding of the vendors cost drivers, responses from competitive tenders in related areas and input from the BT Buying community. The resulting trend is constructed using weighted inputs from Average Earnings, RPI and an internally prepared SDH contract index. The weightings used being determined by reference to average spends over past years.
4	Average Earnings	AVE1	The source for this index is the Office for National Statistics – average earnings index: all employees: main industrial sectors. Column LNMS - Production Industries (Seasonally adjusted) from NOS site http://www.statistics.gov.uk/statbase/TSDTimezone.asp.
5	Average Earnings + Productivity	AVE2	The index is based on the Average Earnings Index (see index no. 23) but assumes continued productivity improvements of c2% pa.
6	RPI	RPI1	From the Office for National Statistics Retail Price Index for all items (RPI) from NOS site http://www.statistics.gov.uk/statbase/TSDTimezone.asp. [item CHAW]
7	Output prices Electrical Engineering	ELE1	Based on Output EE information from Office for National Statistics, Monthly Digest of Statistics. This information is used in conjunction with "output of selected sub-sections of industry"; Electrical and Optical equipment POKS (Index numbers of producers' prices) - from NOS site http://www.statistics.gov.uk/statbase/TSDTimezone.asp.
8	Copper Cable	COP1	Referenced as an index from 2004/05, derived from Copper trading prices.
9	Metallic Cable	MET1	Based on 35% varying with Copper Prices and 65% with Earnings and Productivity.
10	Poles	POL1	Based on trended index of pole prices, which is tied to RPI.
11	Cabinets	CAB1	Based on 75% varying with RPI and 25% with Earnings and Productivity.
12	External installation	INS1	The index is based on Earnings + Productivity indices (No 5) but from a lower base.

TABLE 2: List of Asset Trends and The Basis of Their Derivation From Index Data

Description of Trend	Trend Ref.	Makeup of Trend
ATM assets	ATM1	(Pay weighting x Index No 4) + (Materials weighting x Index No 1) + (Contract weighting x Index No 1) + (Other weighting x Index No 6)
SDH Transmission	SDH1	(Pay weighting x Index No 4) + (Materials weighting x Index No 3) + (Contract weighting x Index No 3) + (Other weighting x Index No 6)
Access Copper	ACC1	(Pay weighting x Index No 4) + (Materials weighting x 0.92 * Index No 9 + Materials weighting x 0.07 * Index No 10 + Materials weighting x 0.01 * Index No 11) + (Contract weighting x Index No 12) + (Other weighting x Index No 6) (used for Dropwires 2007/08)

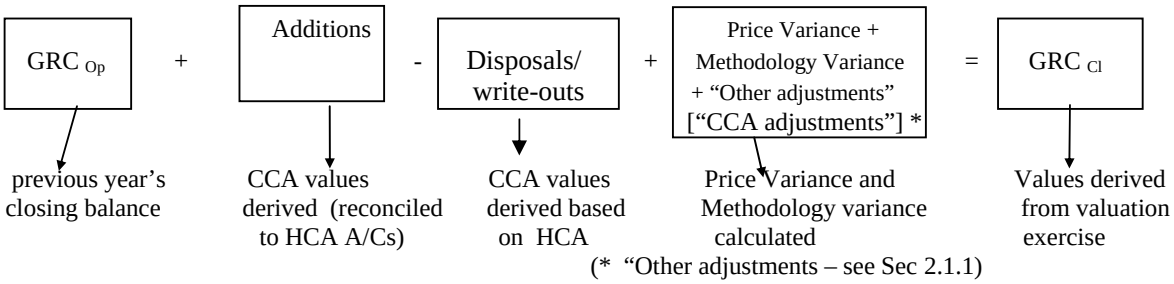
Note:
A number of additional indices & trends are maintained for use in the production of Absolute valuations or for comparative purposes. These are excluded from the above list, but referred to where appropriate in section 2 where the Absolute valuation methods are detailed.

ANNEX 3

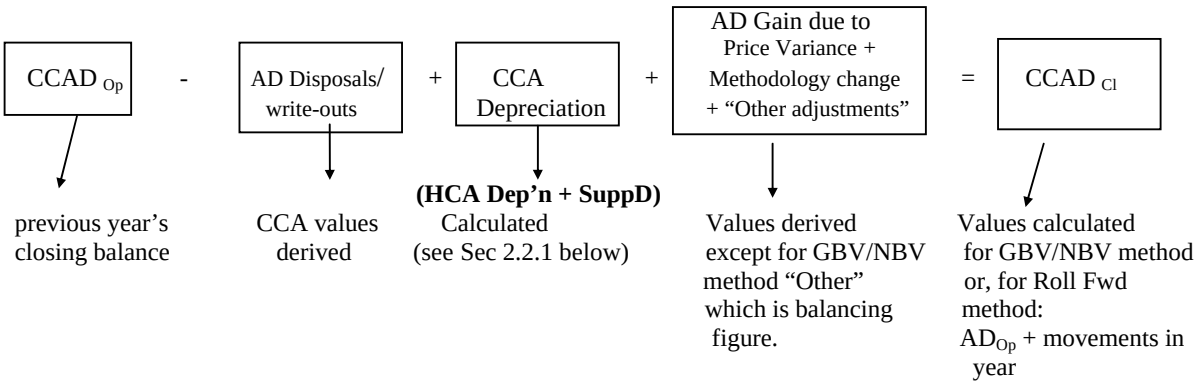
Description of the AMS process for derivation of Net Replacement Cost (NRC) including the underlying CCA movements

ILLUSTRATION OF PROFORMA ASSET MOVEMENT STATEMENT (AMS) FOR CCA VALUATION MOVEMENTS BY CLASS OF WORK (COW)

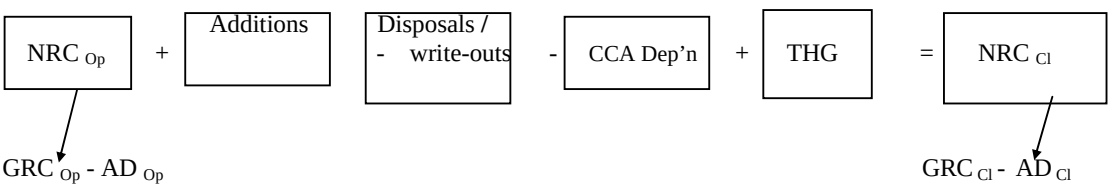
STEP 1 - Gross Holding Gain (GHG) Calculation



STEP 2 - Depreciation Calculations (AD = Accumulated Depreciation)



STEP 3 - Calculation of NRCs, Supplementary Depreciation (SuppD) etc (from Steps 1 and 2)



SuppD = CCA Depreciation (from Step 2) - HCA Depreciation

Description of the AMS process for derivation of Net Replacement Cost (NRC) including the underlying CCA movements

1. GENERAL

The overall process including the AMS spreadsheet models is reviewed each year for continuous improvement. Consequently, the actual detailed mechanics of the operation of the AMSs can vary from one year to the next to reflect any changes from our reviews.

The volume of asset Cows using the AMS has been dramatically curtailed, owing to the number of CoWs that have changed to use historic values or are being extrapolated from prior year revaluations.

The above diagram contains an outline of the AMS process and, to aid understanding, the following description should be read in conjunction with this diagram.

Each AMS spreadsheet pro-forma incorporates the HCA and CCA AMS schedules. The former is populated from the historic numbers and fully reconciled to the published HCA accounts. The opening balances (i.e. GRC, CCAD and NRC) are as per previous year's financial statements. These figures form the basis of the current year's CCA AMS that is then completed as explained below.

Before completing the Asset Movement Statement, the year-end gross replacement costs (GRC) are required. Explanations of the gross valuations are not included here and are covered under the appropriate sections in this document.

2. DESCRIPTION OF AMS PROCESS

Once the year-end GRC for a class of work has been calculated, the following steps are followed to derive the CCA adjustments and Net Replacement Cost (NRC).

2.1 STEP 1 – Calculation of Gross Holding Gain

2.1.1 For assets valued using absolute valuation methodology

- Additions – This figure comprises two elements – the assets in service plus the movement in the work in progress (WIP) over the year. The valuation for assets in service is derived using the volumes of additions in the year and the latest prices. The unit price applied to the additions is the same as that used to derive the closing gross valuation. The WIP movement figure is the difference between the current year-end and opening (i.e. previous year's closing) WIP figures reported in HCA accounts.

  The value of the CCA additions derived as explained here may not equal the value of HCA additions (e.g. "normal course of business" prices in CCA may differ from the actual prices

paid due to volume discounts or last production line orders). This difference is included in the CCA adjustment category identified as "Other adjustments".

- Disposals/write-outs - These figures are derived from HCA figures using the most appropriate method for the asset being valued. Although overall guidance on the methods and options for specific assets is available from Group Regulatory Finance, who have overall responsibility for CCA policy, generally the detailed methodology is left to the discretion of the valuers. These valuers have the expert knowledge about the most appropriate approach to be adopted for the class of work / asset that they are responsible for.

  Typical methods for deriving **CCA values of disposals/write-outs** are as follows:

  i CCA value of disposals/write-outs = HCA value of disposals/write-outs x the ratio (opening GRC/opening GBV)

  (e.g. used for Access Fibre assets. PDH Electronics in the Outer Core captured on COW CRF also employs this method, although it uses the closing GRC:GBV ratio.)

  The HCA values of disposals/write-outs are obtained from the Fixed Asset Registers.

  This is the most commonly used approach.

  ii CCA value of disposals/write-outs = (Indexed GBV of write-outs / Indexed GBV of the asset) x Absolute valued GRC

  This approach is confined to duct assets only.

  iii CCA value of disposals/write-outs = Volume of disposals/write-outs x unit cost

  (e.g. used for Cashless, Advanced Services units, Local Exchange, Main Exchange, Core Radio, Transverse Screen Cable and PDH assets associated with COW CRD.)

  iv CCA value of disposals/write-outs = HCA value as per the Fixed Asset Register.

  (e.g. used for Network Power, Accommodation Plant and PDH assets associated with CRHQ COW.)

  v CCA value of disposals/write-outs = Capital spend in the year less the value of capacity additions as per the CCA physicals data source

  (e.g. used for Access Copper – LDC CoW)

The value of the CCA disposals/write-outs derived as explained above may not equal the values in HCA. As with additions, the difference between the HCA and CCA values is included in the CCA adjustment category identified as "Other adjustments". The above list is not exhaustive and individual valuers are free to use an alternative method where available information sources dictate or support this, though generally the method used should be used consistently over the years.

- Price Variance - the price variance is calculated by using the standard approach for variance analysis i.e. by applying the change in unit price during the year to the opening volumes (i.e. last year's closing) figures. Additionally a half years change is applied to the net movement in the current year, to reflect that on average these occurred at the mid point but have now moved to year end prices.

- Methodology Variance - Following a change of methodology in the year, a revised valuation is derived using the same data and underlying calculations as for the previous year-end. The difference between the revised and existing gross figures gives the methodology variance.

Under an ideal scenario, the sum of the Opening GRC and the above mentioned movements should equal the pre-calculated Closing GRC. However, in reality this may not be the case. This, therefore, acts as a self-checking mechanism for the valuer who will need to investigate the reason for the "mis-balance". This difference is reported under the "Other adjustments" category which also includes any differences between the HCA and CCA additions as mentioned above, and any adjustments arising from the transfer of assets from one CoW to another.

2.1.2 For assets valued using extrapolated absolute valuation methodology

For those assets where the extrapolated approach based on a previous year's closing CCA valuation is used, known price changes are applied to this valuation together with the current year's HCA movements to derive the closing valuation for the current year. This approach is used for those assets where there had been no significant developments in technology or underlying asset base, which justified a full absolute valuation exercise.

This process of an extrapolated valuation is an annual decision. For 2006/07 BT reviewed whether any changes occurred that required a full absolute valuation to be prepared and it was considered that extrapolation would provide a robust valuation for the current year.

2.1.3 For assets valued using indexed historic methodology

AMSs for those assets valued on Indexed Historic basis are completed using data obtained from the fixed asset registers.

- Additions - This figure comprises two elements and it equals the value of the HCA additions registered on the Fixed Asset Register to the year-end plus the movement in the work in progress (WIP) at historic cost. The WIP movement figure is the difference between the current year-end and opening (i.e. previous year's closing) HCA WIP figures.

Unlike the additions for assets valued on absolute basis, where a difference between the CCA and HCA additions may arise, for assets valued using indexation the CCA and HCA additions are the same figure.

- Disposals/write-outs - For those assets, which are registered on the "core" FAR, where the facility for indexation exists, the indexed values of disposals/write-outs are obtained directly from the FAR data. The indices used are the same ones as those used for deriving the indexed gross valuations.

As in the case of CCA disposals/writeouts for assets valued on absolute basis, the value of the CCA disposals/write-outs derived as explained above may, in certain cases, not reflect the true CCA value of the disposals due to limited asset registration details (e.g. for bulk registered assets, complex assets). The difference between the derived and true CCA values is included in the CCA adjustment category identified as "Other adjustments".

- Methodology Variance - Following a change of methodology in the year, a revised valuation is derived using the same data and underlying calculations as for the previous year-end. The difference between the revised and existing gross figures gives the methodology variance.

- Price Variance - Once the additions, disposals/write-outs and methodology variance figures, (derived as described above) and the opening/closing GRCs have been used to complete the AMS, the balancing figure is the price variance.

2.2 **STEP 2 – Depreciation Calculations**

2.2.1 For assets valued using absolute valuation methodology

BT uses two main methods as follows to calculate CCA depreciation. With both methods CCA depreciation is based on the same principles and lives used in historical accounts (as recommended by the ASC Handbook).

i. NBV/GBV Method

Under this method, the CCA asset is assumed to be depreciated in the same ratio as its historical cost equivalent. This means that the CCA depreciation stays in line with HCA. The following relationship, therefore, holds:

$$\frac{NBV}{GBV} = \frac{NRC}{GRC}$$ or alternatively,

$$CCAD = HCAD \times (GRC/GBV)$$

(where CCAD = Current Cost Accumulated Depreciation and HCAD = Historic cost Accumulated Depreciation)

This relationship is used to calculate the year-end CCAD. The difference between this derived figure and the opening CCAD then represents the current year's movements including the year's depreciation charge which is the balancing figure.

[Note: Depreciation for duct is derived using the Indexed NBV/Indexed GBV ratio]

ii. **Roll Forward Method**

Under this method the CCA depreciation for an asset is assumed to be related to the historic cost depreciation in the same ratio as the average GRC to the average GBV.

Using this approach,

- The opening CCAD is uplifted by price change in the year.
    - Depreciation relating to disposals, write-outs and transfers is taken out
    - Current year's CC depreciation charge is derived using the relationship
      HC depreciation charge x (GRC/GBV)
    - The closing CCAD is the sum of the above items

To aid the understanding of these two approaches, the methods in context of the AMS are illustrated below. The GRC and GBV values used in depreciation calculations exclude work in progress (WIP) which is not depreciated.

[Note: In the case of land and general purpose property, the first step is to derive the open market valuation. This is the equivalent of the net replacement cost (NRC). The gross replacement value is then derived using the relationship (GBV/NBV) = (GRC/NRC). This information is used to derive the depreciation figure].

i. **NBV/GBV Method**

Opening Cumulative balance of CC Depreciation ($CCAD_{Op}$) A
(= previous year's closing balance)

CC depreciation of disposals, calculated using the default formula:-
(GRC of disposals / GBV of disposals) x HC depreciation of disposals B

CC depreciation of write-outs, calculated using the default formula:-
(GRC of write-outs / GBV of write-outs) x HC depreciation of write-outs C

CC depreciation of transfers, calculated using the default formula:-
(GRC of transfers / GBV of transfers) x HC depreciation of transfers D

CC depreciation of methodology variance, calculated using the default formula:-
GRC of method change x (opening total HC depreciation / opening total GBV) E

CC depreciation of "other" adjustments, calculated as the difference between:
the Opening Cumulative balance of CC depreciation plus all movements
and the Closing Cumulative balance of CC depreciation F

(balancing figure)

AD due to price variance, calculated using the formula:-

[Opening Cumulative balance of CC depreciation	A	
+ CC depreciation associated with Methodology Changes	E	
+ CC depreciation associated with Other adjustments	F]	
x percentage price movement for the year	=	H

plus

[CC depreciation associated with Disposals	B	
+ CC depreciation associated with Write-outs	C	
+ CC depreciation associated with Transfers	D	
+ CC depreciation charge for the year	G]	
x square root of the price movement in the year	=	J
		K = (H + J)

Closing Cumulative Balance of CC Depreciation calculated using the default formula:-
(Closing GRC / Closing GBV) x Closing Cumulative HC depreciation **L**

[Closing GBV is adjusted to allow for fully depreciated assets not in service which are not valued in CCA. This brings the GBV on a consistent basis with the GRC]

CC depreciation charge for the year, calculated as:-

CC depreciation charge for the year, calculated using the default formula:-
HCA depreciation charge x (mean GRC / mean GBV)The difference between:
the Opening Cumulative balance of CC depreciation plus all movements
and the Closing Cumulative balance of CC depreciation G

NOTE: With the exception of price variance and depreciation charge the above formulae are the default calculation automatically performed by the pro-forma. However, there is a facility within the AMS pro-formas to input the figures manually, for example, in instances where adequate data is available at sub-CoW level to achieve an improved figure.

ii. Roll Forward Method

Opening Cumulative balance of CC Depreciation ($CCAD_{Op}$) A
(= previous year's closing balance)

CC depreciation of disposals, calculated using the default formula:-
(GRC of disposals / GBV of disposals) x HC depreciation of disposals B

CC depreciation of write-outs, calculated using the default formula:-
(GRC of write-outs / GBV of write-outs) x HC depreciation of write-outs C

CC depreciation of transfers, calculated using the default formula:-
(GRC of transfers / GBV of transfers) x HC depreciation of transfers D

CC depreciation of methodology variance, calculated using the default formula:-

GRC of method change x (opening total HC depreciation / opening total GBV) E

CC depreciation of "other" adjustments, calculated using the default formula:-
GRC of "other" change x (opening total HC depreciation / opening total GBV) F

CC depreciation charge for the year, calculated using the default formula:-
HCA depreciation charge x (mean GRC / mean GBV) G

(GBV is adjusted to allow for fully depreciated assets not in service which are not valued in CCA. This brings the GBV on a consistent basis with the GRC)

AD due to price variance, calculated using the formula:-

[Opening Cumulative balance of CC depreciation A
+ CC depreciation associated with Methodology Changes E
+ CC depreciation associated with Other adjustments F]

x percentage price movement for the year = H

plus

[CC depreciation associated with Disposals B
+ CC depreciation associated with Write-outs C
+ CC depreciation associated with Transfers D
+ CC depreciation charge for the year G]

x square root of the price movement in the year = J

K = (H + J)

Closing Cumulative Balance of CC Depreciation calculated as:-

L = A - B - C +/- D +/- E +/- F + G +/- K **L**

NOTE: With the exception of price variance and depreciation charge the above formulae are the default calculation automatically performed by the pro-forma. However, there is a facility within the AMS pro-formas to input the figures manually, for example, in instances where adequate data is available at sub-CoW level to achieve an improved figure.

2.2.2 For assets valued using indexed historic valuation methodology

BT uses a single method for all assets valued using the indexed historic valuation methodology to calculate CCA depreciation.

The detailed records from the asset register are summarised by year of registration then indexed forward to the current year, the aggregate figure being the closing Gross Replacement Cost and Current Cost Accumulated Depreciation for the year to which is added any Late Registrations. Supplementary Depreciation is calculated using the mean GRC/GBV method. The values of other movements in the year are then calculated using equivalent HCA ratios or opening CCA/HCA ratios as appropriate.