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**RADIO BASE STATION BACKHAUL PRODUCT HANDBOOK**

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# ABOUT THIS PRODUCT HANDBOOK

This product handbook is intended to give guidance on the Radio Base Station Backhaul product from BT Wholesale, including:

* An overview of the service
* Network diagram
* Commercial aspects
* How to place an order
* How to report a fault
* Billing
* Pricing
* Key contacts
* Performance levels and reporting
* Technical specifications

Please note that this document is for guidance only and should differences be found between it and the contractual documents, the contractual documents take precedence.

# ABOUT RADIO BASE STATION BACKHAUL

Radio Base Station Backhaul is a set of network components that a Mobile Network Operator (MNO) is able to buy to provide transparent transmission capacity between an MNO’s radio base station premises and their mobile switching centre (MSC).

The Radio Base Station Backhaul Circuit routes from a Point of Connection (PoC) at the MNO’s MSC, or network, across the BT network to the Cell Site, to supply a transmission path at the appropriate bandwidth. “Radio Base Station Backhaul” is therefore a name for the service that describes the network elements that are used to provide the connectivity between the POC and the Cell site.

There are three main network elements in Radio Base Station Backhaul:

## **2.1 The Point of Connection (A-end)**

This is the infrastructure that provides the connection between the MNO’s switching centre or network and the serving SDH node in the BT network. The high-capacity PoC infrastructure is supplied as a Customer Sited Connection (CSC).

Radio Base Station Backhaul CSC is the means by which the Circuit will be handed over at the MNO’s premises and will be terminated on an Add-Drop Multiplex (ADM) positioned at the MNO site. Radio Base Station Backhaul CSC can be provided at STM-1 (SMA1), STM-4 (SMA4) and STM-16 (SMA-16 or MSH51) capacities only and will be delivered via Dual Feed, Single Parent architecture. Multiple Radio Base Station Backhaul circuits can be handed over at a single PoC.

Radio Base Station CSC ADM’s capacity can also be used for the provision of PPC circuits; this applies to Grandfathered ADM’s / Existing ADM’s and any new future ADM requirement for RBS.

#### Interface Requirements

Radio Base Station Backhaul CSC will present circuits to the MNO on STM-1, STM-4 or STM-16 interfaces; the MNO will select the interface card and JKLM (timeslot) on which the circuit is presented.

Radio Base Station Backhaul CSC product build will need to incorporate the following:

* Basic ADM builds
* Interface card for Multiplex Section Protection (MSP) protection
* Interface card for 1+1 protection
* Interface card with no protection

## **2.2 The Cell Site (B-end)**

This is the infrastructure that provides the connection between the remote Cell Site (Radio Base Station) and the nearest BT Exchange. This infrastructure can support either singleton, or multiple circuits, including multiple connections at 4 x 2Mbit/s or 16 x 2Mbits. Presentation at the Cell Site will be via standard G703 or X21 interfaces.

Cell Site infrastructure will be the means by which circuits are delivered to Cell sites and can be delivered either over fibre or copper.

Cell Site infrastructure must be ordered simultaneously with the circuit order.

# Interface Requirements

The engineering design of the ‘B’ end of a Radio Base Station Backhaul is the same as a Retail Private Circuit, selection of the delivery option and interface required will be the responsibility of the MNO when ordering the circuit.

## **2.3** Radio Base Station Backhaul Circuit

This is the connection across the BT network between the PoC and the Cell Site. Radio Base Station Backhaul Circuits are available at the following bandwidths: 128 - 960Kbit/s and 2Mbit/s.

It is only available to Mobile Network Operators [[1]](#footnote-1)∅ for the purpose of collecting Cell Site traffic for backhauling to their Switching Centres.

The product will be available nationally, except in the Hull Area, for new supply, at 2Mbit/s and all bandwidths between 128Kbit/s and 960Kbit/s.

## **2.4 Radio Base Station Backhaul Generic Diagram**

Connection to the MSC can be either direct (single tier) or indirect (two tier). If Radio Base Station Backhaul is used with a two tier network then an additional service (non Radio Base Station Backhaul) is required to link to the Switch Site.

MNO Nominated

BT Nominated

CELL SITE

LINK

CSC

MNO POC

CELL SITE

Cell to Cell circuits are not eligible for Radio Base Station Backhaul. In brief the following conditions generally apply to all Radio Base Station Backhaul products:

**2.5 Point of Connection Options**

**Cell Sites**

**Cell Sites**

**Switch Site**

**Switch Site**

**Point of Connection**

**BT Equipment**

**MNO Equipment**

**Key**

**RBS Backhaul Circuit**

**RBS Backhaul Circuit**

**Single Tier Network**

**Two Tier Network**

**Non-RBS Private Circuit**

**Customer Site**

## **RBS Backhaul Customer Sited Connection**

RBS CSC is the means by which the Circuit will be handed over at the MNO’s Point of Connection and will be terminated on an Add-Drop Multiplex (ADM) positioned at the PoC. The RBS CSC product is ONLY available to Point of Connection Sites where the BT Serving Exchange is a nominated BT SDH Node or MSH Node if that is the type of transport required.

### 2.6.1 Interface Requirements

RBS CSC will present circuits to the MNO on STM-1 or STM-4 interfaces; the MNO will have the option to select the interface card and JKLM (timeslot) on which the circuit is presented.

RBS CSC product build will need to incorporate the following:

* Basic ADM builds
* Interface card for Multiplex Section Protection (MSP) protection
* Interface card for 1+1 protection
* Interface card with no protection

## **RBS Backhaul In Span Handover**

RBS ISH will be the means by which circuits are handed over at a BT nominated Footway Box (within 100 metres of the Serving Exchange), with an ADM provided by the MNO at its premises, and a BT provided ADM at the BT site. The RBS ISH product is ONLY available to Point of Connection sites where the BT Serving Exchange is a nominated BT SDH Node or MSH Node if that is the type of transport required.

### 2.7.1 Interface Requirements

The agreed RBS ISH solution is to use an SMA1, SMA4 or SMA16 ADMs with a Line card facing the MNO presenting a MSP interface. MNOs have the option to select the JKLM (timeslot) on which the circuit is presented, however BT will select the position if the MNO has no preference.

**2.7.2 RBS ISH Forecasting Spreadsheet**

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## **RBS In Span Handover Extension**

RBS ISH Extn will be the means by which circuits are handed over at the MNOs nominated Footway Box, with an ADM provided by the MNO at its premises, and a BT provided ADM at the BT site. BT access fibre and duct will be provided from the BT Serving Exchange to the nominated Footway Box within the same Serving Exchange area.

The RBS ISH Extn product is ONLY available to PECN sites where the BT Serving Exchange is a nominated BT SDH Node or MSH Node if that is the type of transport required.

RBS ISH Extn will be delivered via Dual Feed, Single Parent architecture.

RBS ISH Extn can be provided at STM-1, STM-4 & STM-16 capacities, all RBS ISH Extn connections will use MSP.

The PoC will be within a contractually agreed distance from the BT Building housing the SDH/MSH Transmission Node with which the MNO wishes to interconnect.

NB: for further details on ISH delivery please refer to the DSL & PPC provisioning manual:

https://www.btwholesale.com/pages/static/Library/Technical\_Documents\_and\_Procedures/DSL\_In\_Span\_Handover\_\_\_PPC\_Provisioning\_Manual\_/index.htm

**2.9 Migration and Grandfathering**

BT Wholesale offers MNOs a number of options regarding the Migration & Grandfathering of existing BT Retail Private Circuits, Equipment and Infrastructure.

## **2.9.1 Migration**

MNOs will be able to Migrate qualifying BT Retail Private Circuits to Radio Base Station Backhaul provided there is an equivalent Radio Base Station Backhaul product to migrate to.

Circuits submitted for migration will be subject to various validation checks as detailed in the Migration Manual:

There will be a reclassification charge for each migrated circuit (including bearers) and a charge will also be raised if the circuit fails the validation process.

Migrated circuits will retain their current Private Services Identification (PSI).

Qualifying existing circuits between Cell Sites and MSCs, used for Radio Base Station Backhaul purposes only, at bandwidths of 2Mbit/s and between 128Kbit/s and 1024Kbit/s, may also be migrated to Radio Base Station Backhaul terms and conditions.

All elements of the Radio Base Station Backhaul service are subject to a minimum 12 month term. Migrated circuits carry the balance of their existing Retail term.

Full details are available in the Radio Base Station Backhaul Migration Manual.

## **Conversion**

As per Schedule 3 of the Radio Base Station Backhaul Contract MNO’s are entitled to the conversion of BT Retail Private Circuits to RBS Backhaul for eligible BT Retail Private Circuits.

This briefing is intended to outline the rules for Conversion and the eligibility criteria.

Conversions must be requested using the Migration and Conversion requirement form which will be available from the Reference Offer website by the Effective Date.

Any circuit presented for Conversion, but still within its Minimum Period, will be liable for any remaining rentals owed.

* Note that the Minimum Period applies to the first 12 months of the service and also applies in respect of changes made (ie, shifts and upgrades).
* Retail terms and conditions are applicable to existing contracts. For example it is not possible to decrease Pool Contract Commitment levels.

Conversions will be charged at the same rate as Migrations, as per the Carrier Price List.

Eligibility Criteria:

When MNO’s submit conversion requests to their appointed CMC it will first be validated to ensure they meet the criteria. The validation checks made will include the following:

* The MNO is a 2G or 3G licensed Operator
* The circuit is under current ownership of the MNO
* One end of the Retail Private Circuit\* is located at a Point of Connection.
* One end of the Retail Private Circuit\* is located at a Radio Base Station Cell Site.
* The circuit has no open orders against it.
* Bandwidth is 2Mbit/s or in the range of 128Kbit/s – 1024Kbit/s.
* There is an equivalent Radio Base Station Backhaul product to migrate to.

\*provided under BT’s Terms and Conditions for Private Service

Unlike Migrations there is no end date; Circuits can be Converted at any time.

Effective billing date for the Conversion from Retail pricing to RBS pricing will be the same as it is for Migrations:- Conversion request + 5 Days.

## **Grandfathering**

Existing infrastructure can be used for both Retail services (including Siteconnect); once exhausted new Radio Base Station Backhaul Customer Sited Connection (CSC) infrastructure must be purchased.

Customers wishing to benefit from this arrangement must agree the infrastructure to be Grandfathered with BT, and pay a Grandfathering fee. If customers do not wish to Grandfather existing infrastructure they must purchase new Radio Base Station Backhaul Infrastructure before circuits can be delivered.

The following Infrastructure can be Grandfathered: 4x2, 16x2, SMA1, SMA4, SMA16, and MSH51.

New sub-2Mbit/s circuits cannot be delivered over Grandfathered MSH 51 Infrastructure.

Requests for Grandfathering of Infrastructure must be received at least 10 working days before circuits can be ordered over Grandfathered Infrastructure.

Requests for Grandfathering must be made on appropriate CRF available on the Reference Offer.

### Rules for grandfathering of an ADM or Mux

1. Must be a Point of Connection (A-End). This can be a switch site or a non switch site but not a cell site.
2. Cannot be grandfathered where there is a dependent 12 month interconnect forecast delivery or advanced CSI product. (applies to switch site)
3. Cannot be grandfathered if it has existing interconnect circuits only. (applies to switch site)
4. Empty ADM or Muxes can be grandfathered but may be subject to applicable reconfiguration charges.
5. Cannot be grandfathered if it was installed after 10th Jan 2005.
6. Cannot be grandfathered if it’s not for the sole use of the MNO

### Post Grandfathering of an ADM or Mux

1. Once grandfathered, ADMS or Muxes cannot be used for interconnect circuit orders.
2. All MSH51 ADMs will be capacity managed by the CMCS. All other circuit others onto 4X2s, 16X2s, SMA1s, SMA4s and SMA16s must have the trib and ports shown on the CRF.

## **2.10 Radio Base Station Backhaul Products and Services**

The following Radio Base Station Backhaul Products and Services are available:

## **2.10.1 Radio Base Station Backhaul N x 64Kbit/s**

Radio Base Station Backhaul Circuits at NX64kbit/s are available from 128kbit/s - 960kbit/s with interface options of X21 or G703. Nx64kbit/s circuits at 1024kbit/s are only available for rental, no orders for new supply or moves of circuits can be placed.

Delivery options at the cell site are as follows;

* For 128kbit/s-640kbit/s Single pair copper delivery at an existing copper site or new copper site.
* For 128kbit/s-960kbit/s 2Mbit HDSL on either, existing or new copper
* For 128kbit/s-960kbit/s Fibre Delivery on a new 4x2 or 16x2 at an existing or new fibre site
* For 128kbit/s-960kbit/s Spare capacity on BT Retail fibre infrastructure installed before 10/01/05.
* For 128kbit/s-960kbit/s Spare capacity on existing Radio Base Station Backhaul infrastructure already provided for that MNO
* For 128kbit/s-960kbit/s Radio delivery on a 4x2 or 16x2 (please note that Radio delivery will only be used as an expedient where standard delivery options cannot be used, it is not a customer driven option).

Where timeslot mapping is required service must be delivered in a 2mbit/s path.

# 2.10.1.1 320kbit/s-640kbit/s Cell Site Copper Delivery

This will enable MNO’s to order 320-640kbit/s circuits at a lower price than the previous 2Mbit fibre delivery infrastructure using new Line Cards & Network Terminating Units and is based upon the existing 128kbit/s-256kbit/s copper delivery equipment, inter-working via a single metallic pair.

These circuits are only available where fibre infrastructure is not required and the copper is able to support the requested bandwidth. It is therefore subject to distance limitations.

If a circuit is not suitable for copper delivery the MNO will be notified at the quotation stage. Any Radio Base Station Backhaul orders falling outside the transmission limits will be provided by the existing 2Mbit/s methods, attracting appropriate fibre charges.

## **2.10.1.2 Distance/ Reach**

The copper delivery of 320kbit-640kbit is subject to distance limitations, with the greater the bandwidth service the shorter the reach, i.e. 640kbps will have a shorter reach than 320kbps.

|  |  |  |  |
| --- | --- | --- | --- |
| Service Type | Distance/ Reach | Service Type | Distance/ Reach |
| 128kbit/s-256kbit/s | 5.7km | 384kbit/s | 4.32km |
| 320kbit/s | 4.68km | 448kbit/s-640kbit/s | 3.0km |

Note – Distances shown are for indicative purposes only and will not be legally binding. Cable characteristics, such as conductor diameter and cable route will affect distance/reach.

The new Cell Site Copper Delivery option will only be suitable for Data services (N or N+1) via the X21 customer interfaces. Voice services are not supported.

## **2.10.2 Radio Base Station Backhaul 2 Mbit/s**

Radio Base Station Backhaul Circuits at 2Mbit/s will be available with interface presentation options of X21, G703 (75 or 120) at the Cell Site.

Delivery options at the cell site are as follows;

* HDSL on existing copper or new copper
* Fibre Delivery on a new 4x2 or 16x2 at an existing fibre site or new fibre site
* Spare capacity on BT Retail fibre infrastructure installed before 28/09/05 (as recorded on BT planning systems) where the Retail Private Circuit driving the infrastructure was ordered prior to 11/2/05
* Spare capacity on existing Radio Base Station infrastructure already provided for that MNO
* Radio delivery on a 4x2 or 16x2 (please note that Radio delivery will only be used as an expedient where standard delivery options cannot be used, it is not a customer driven option).

## **2.10.3 Radio Base Station Backhaul Assured Resilience**

BT employs a complex set of routing rules within its network to ensure Quality of Service levels are maintained and assets are utilised efficiently. Customers have a choice of Radio Base Station Backhaul circuit protection levels to help them meet their end user’s requirements.

### 2.10.3.1 Full Diversity End to End

A single circuit or pair of circuits will be designed such that no single cable, equipment, or nodal failure, in the BT Network and between the Customer premises, will cause total failure of the circuit or pair of circuits. This level of resilience does not include assurance against any failure of duct infrastructure including local access to the customer premises.

### 2.10.3.2 Full Diversity Main Link

A pair of circuits will be designed such that no single cable, equipment, or nodal failure, in the BT Network between the Serving Nodes, will cause total failure of the pair of circuits. This level of resilience does not include assurance against any failure of duct infrastructure.

### 2.10.3.3 Basic Diversity

A pair of circuits will be designed such that no single cable failure in the BT Network between the Customer premises, will cause total failure of the pair of circuits. This level of resilience does not include assurance against any failure of equipment, node or duct infrastructure.

## **2.10.3.4 Multiple Resilience**

This is where Assured Resilience is applied to more than 2 circuits. It is supplied subject to network availability and may include any mix of the following Assured Resilience options: Full Diversity End to End; Full Diversity Main Link; Basic Diversity

## **2.10.4 Radio Base Station Backhaul Bandwidth Regrade**

The regrade facility will be offered on Radio Base Station Backhaul bandwidths. From 128 – 960Kbit/s

Regrade orders can be applied to the existing circuit although strictly speaking it should be a cease and re-provide. Where the circuit is also being moved, i.e. onto a new bearer, charges for both the regrade and move will be raised.

In the case where existing infrastructure is not compatible with the new service then new infrastructure will be provided and standard charges and standard lead times for new provision will apply. An example of where this may happen is as follows:

* 256Kbit/s circuit exists on copper delivery and is upgrading to a 512Kbit/s service on a fibre 4x2 multiplexer with a 320-960kbit/s NTU
* Any infrastructure orders and charges are identified and notified prior to the circuit order. Where new infrastructure is required there will be no rebate on old infrastructure.

## **Radio Base Station Backhaul Change of Interface**

This service gives MNOs the option to change the interface presentation of their Radio Base Station Backhaul circuits with bandwidths of 128Kbit/s to 2Mbit/s.

There are two options available:

* Changing from a BNC (75ohm) interface to an RJ45 (120ohm) interface and vice versa.
* Changing from a G703 interface to an X21 interface or vice versa.

## **External Move of a Circuit to a Different Cell Site**

Where an external move is required to a different Cell Site the MNO will identify the 3 choices of RBS Infrastructure that they wish the service to be provided by and appropriate cell site infrastructure charges will apply in addition to the charge for a move

## **2.10.7 Radio Base Station Backhaul Radio Access**

The Radio Base Station Backhaul Radio Access product will be utilised as an expedient by BT planners to provide service in circumstances (e.g. engineering constraints), which preclude the provision of the Radio Base Station Backhaul service, via standard copper or fibre infrastructure.

The Radio Base Station Backhaul Radio Access technology can be employed at the Cell Site or the Point of Connection site.

The Radio Base Station Backhaul Radio Access is not offered as a customer option. MNOs will have the option to indicate on the Customer Requirement Form (CRF) that they will accept a quote for service provision via radio technology, should standard methods of provision not be possible.

Radio Base Station Backhaul Radio Access will not be provided as a temporary service.

**2.10.7.1 Service via an Intermediate Site**



Provision by radio may be made using an intermediate cell Site where there is no radio line of sight (LOS) between the new cell Site and any BT serving exchange, where both cell sites are in the same MNOs name.

Note: If LOS to any alternative Serving Exchange is available then this should be used before applying this new method of delivery.

This service applies to 2 Mbit/s Circuits only.

The intermediate site must have a direct connection to a BT serving Exchange.

The MNO ensure that the Indoor Unit can be accommodated within 1m from the existing NTE.

Any additional cost incurred to provide service in this manner will be passed on to the Customer, including (but is not limited to): planning permissions, supervisory charges, tower strengthening.

The MNO is responsible for obtaining site share agreements.

The MNO agrees to bear the cost of upgrading any equipment at the intermediate Site should it be required to supply the capacity needed.

The MNO accepts that any change at the intermediate Cell Site may have an impact on the end Cell Site. Any cost incurred to keep the end Cell Site working would be borne by the MNO.

When BT provides the Service in this way then it will be provided on a reasonable endeavours basis and the SLA provisions within Schedule 4 of this contract will not apply. This also applies to migrated circuits.

## **2.10.8 Radio Base Station Backhaul 2Mbit/s Subsequent Circuits**

Provision of a subsequent circuit, where the Customer already has a Digital Wideband service and where there is spare capacity on dedicated infrastructure at both the PoC and Cell Site, should be completed in 10 workings days.

The MNO must specifically request a 2Mbit/s subsequent circuit for it to be delivered as such. If this request is not made, the circuit will be treated as a standard 2Mbit/s circuit.

To qualify as a subsequent circuit, the MNO must identify the existing Infrastructure, by inserting the circuit number of the co-located circuit at the Cell Site on the RBS Backhaul CRF.

The only delivery medium is "Existing" No other choices are open to the MNO. Where the choice is anything other than “Existing”, this would mean the circuit is not a Subsequent circuit and will not be provided as such.

Spare capacity would generally only be applicable to fibre infrastructure

Cell Site Infrastructure that was delivered for circuits migrated onto RBS is eligible to be used for subsequent circuits.

Where the Customer does not have RBS Infrastructure at the Cell Site the decision on whether a circuit is classified subsequent must be made by BT. Where the circuit is not classified as subsequent normal lead times will apply.

If there is no spare capacity on the existing Infrastructure, it will be reported back to the MNO that the service cannot be delivered. The CMC will cancel the order and the MNO will need to place an order for a standard 2Mbit/s RBS Backhaul with their choice of delivery mediums and new CRD

Dedicated infrastructure means specific to the Customer

The price for a Subsequent Radio Base Station Backhaul is the same as a New Radio Base Station Backhaul, but the lead-time for provision of service is significantly reduced.

# COMMERCIAL

The Radio Base Station Backhaul portfolio comprises a set of Standard Services, which are available to MNOs only. Radio Base Station Backhaul products are subject to the conditions of the Contract.

MNOs should address any queries with regards to the Radio Base Station Backhaul Contract, in the first case, to their nominated BT Commercial Manager.

## **Radio Base Station Backhaul Pricing**

There are two main types of charge for Radio Base Station Backhaul:

* An installation (connection) charge, which is a one off charge
* An ongoing Site and Circuit rental charge

EnhancedCare maintenance is provided within tariff.

Section B11 of the BT Carrier Price List is the authoritative source of pricing information for Radio Base Station Backhaul.

Customers may chose to spread PoC infrastructure connection charges, at capacities of SMA1, 4 and 16, over a 2 or 4 year term.

Migration from qualifying BT Retail Private Circuits will be at BT’s Regulated rates, failed migrations are also chargeable.

Radio Base Station Backhaul is not eligible for any BT Retail discount schemes

All excess construction charges will apply, where incurred, with zero waivers

Each of the three elements of the Radio Base Station Backhaul service is priced separately, the total connection charge being the sum of the parts. These three elements are:

## **3.1.1 Point Of Connection Infrastructure Charge**

The Point of Connection infrastructure charge is based on the infrastructure build costs for the Customer Sited Connection and includes an annual rental charge.

## **3.1.2 Cell Site Infrastructure Charge**

The Cell Site infrastructure charge is based on the costs incurred in the Radio Base Station Backhaul Local End Infrastructure build – e.g. copper or fibre, and the Cell End sited equipment installed.

## **3.1.3 Circuit Connection Charge**

The Circuit connection charge includes the costs incurred in providing the Radio Base Station Backhaul Circuit across the BT network from the Cell Site to the PoC.

There will be a Circuit Connection charge for each new circuit supplied

#### Rental Charges

The annual rental charge covers the ongoing costs of maintaining the overall service across the BT network from the Cell Site to the PoC. Radio Base Station Backhaul Circuit rental is calculated on a radial distance basis using a series of distance related bands, including a Metro zone band. The Metro Zone will be restricted to CLZ at launch.

Price bands will be: Metro, 0-15 Km, 16-35 Km, 36-75 Km 76-150 Km, 151-300 Km and over 301 Km. RADIO BASE STATION Backhaul rental is also bandwidth dependant as follows:

## **3.1.4.1 128Kbit/s-960Kbit/s Bandwidth**

For 128Kbit/s-960Kbit/s circuits the radial distance is measured from the BT Exchange nearest to the Cell Site and the SDH Node serving the MNO PoC.

## **3.1.4.2 2Mbit/s Bandwidth**

For 2Mbit/s circuits, the radial distance is measured from the BT Exchange nearest to the Cell Site and the SDH Node serving the MNO PoC.

## **3.1.5 RBS Co-Routed**

To date the maintenance of the kit has been included in the circuit rentals. The NTE rental has been removed from the circuit pricing and the result is a lower circuit rental.

There are 2 levels of NTE tariff. You will be able to choose which tariff to go onto and it can either be done as an independent reclassification request or as part of a circuit order

There is a Reclassification charge when changing from Singleton to Multiple which is for the validation of circuit routing, therefore applies per circuit. The charge will appear against the Singleton NTE’s which are being replaced by a Multiple NTE

On 1st Feb 06 any circuits which were not previously identified by MNO’s as being co-routed will automatically be moved onto the Singleton tariff. This means a reduction in the circuit rental and the introduction of a Singleton NTE rental.

The NTE rentals will appear on the RBS Infrastructure bill and can be cross referenced by the cell site reference.

Where you have identified co-routed circuits the NTE’s will be reclassified to the multiple tariff and the Reclassification fee will be raised.

The identifier for Singleton NTE’s is SRBSxxxxxx and for Multiple MRBSxxxxxx.

For new RBS orders from 1st February 2006, you must select the NTE type on the CRF. This can be existing Multiple, new Multiple or Singleton and should align with the first choice delivery medium, ie, if you select “existing” infrastructure on the circuit order then the NTE type would normally be “existing multiple”. The CMC will confirm at the end of the planning period whether there is indeed existing infrastructure, they will confirm the NTE type and the standard provision process will follow. At the completion stage the NTE reference will be made known to you for your records.

If you have an existing Singleton NTE and you order a new 2mbit/s circuit to the same site you may choose to reclassify to the Multiple tariff. In order to do this you would select New Multiple on the CRF. As you will have existing Singleton NTE being charged to the site you will want to cease these as well. In order to do this you will need to add the SRBS reference in the notes field.

On the CRF you will be prompted to do this but on eCO you will need to remember to enter these details. If you do not enter the reference the Singleton NTE will not be ceased. The same also applies to cease of a circuit.

It is important to note that this charge is relevant to the NTE and not to the circuit.

RBS Co-Routed ceased to exist from 1st June2007 due to launch of RBS8Mbit/s Product as detailed below.

## **3.1.6 RBS 8Mbit/s Product**

**Overview**

RBS 8Mbit/s is a commercial package for multiples of 2Mbit/s circuits aimed at offering a competitive alternative to DSL & self provide radio.

On the 1stJune 2007 the prices of standard 2Mbit/s circuits changed:

* Singleton and Multiple NTE rental has been subsumed within the circuit rentals for simplicity.
* 2Mbit/s pricing has been rebalanced due to a review of costs carried out as part of this development but on the whole there will be a benefit to customers as a result of this action.
* Connection Charges changed to reflect a reduced subsequent circuit connection.
* New 2Mbit/s rentals were effective on all circuits from 1st June 2007. No action was required by the customer to implement the new rental

In addition BTW Introduced the 8Mbit/s package which customers can purchase at any time to package circuits. This is a cost effective option from the 3rd circuit onwards.

* New RBS 8Mbit/s rentals applicable from 1st June 2007 for migrations
* Prices are applicable from 1st July 2007 for new orders.
* Circuits in an 8Mbit/s Package must have a common cell site and be in the same distance band. Although not NTE specific, NTE’s must be in the same comms.room/cabinet. For example the customer could have 2x2G circuits and 2x3G circuits, potentially on different NTE’s, within a cabin where the 2G circuits are linked to a Point of Connection (PoC) in Manchester and the 3G circuits linked to a PoC in Birmingham.
* The 8Mbit/s package has a 12 month Minimum Period. Any 2Mbit/s circuits moving out of an 8Mbit/s package restarts a new 12 month Minimum Period

**Eligibility**

* The RBS 8Mbit/s packages apply to radio & fibre delivered sites only.
* The RBS 8 M/bit/s package is not applicable to Copper delivered circuits as individual NTUs are supplied for each circuit; therefore there is no economy of scale.

**Migration**

In order to migrate circuits into 8Mbit/s packages customers must submit an Excel (or similar) spreadsheet listing cell site references and listing the applicable circuits at that cell site. This spreadsheet must be submitted in the recommended format (see “Migration Format”).

The CMC will run the spreadsheet through a macro to validate the request and will make the appropriate changes to implement the packages.

Any circuits/sites that fail validation will be returned to the customer with reasons for failure and may be charged at the current validation charge of £10. If these failures are down to billing backup inaccuracies then BT will waive the charge.

The new rental will apply from the migration order received date + 5 days, for processing.

Migration orders received between 1st June 2007 & 1st September 2007 are migrated free of charge.

Migration orders received after 1st September 2007 will be charged at £15 per regrade.

Changes to packages will be charged at Reclassification rates as detailed in the CPL.

**Order Process**

New orders for the 8Mbit/s packages can be placed from 1st July 2007.

Orders must be placed on eCO or the CRF, which will be amended to cater for the changes, i.e. Remove reference to SRBS/MRBS, add facility to identify circuits associated with request for 8MB package etc.

## **Scenario A Create New 8Mbit/s Package – Regrade circuits**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**Regrade**

**Provide**

## **Scenario B Create New 8Mbit/s Package – Regrade + Provide circuits**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**Regrade**

**Provide**

**Provide**

## **Scenario C Update Package – Provide circuit**

**Regrade**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**Provide**

#### Scenario D Update Package – Regrade circuit

**Regrade**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**Regrade**

## **Scenario E Update Package – Cease Circuit**

**Cease**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**Regrade**

## **Scenario F Cease Package – Regrade circuit**

**8MB psid ‘BRBSnnnnnn’**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**2MB psid ‘MXRBnnnnnn’**

**Cease**

**Cease**

**Cease**

**Regrade**

**Regrade**

**2MB psid ‘MXGBnnnnnn’**

**2MB psid ‘MXUKnnnnnn’**

**Billing**

* SRBS/MRBS references will be removed from the bill.
* There is no change to the invoice format.
* There are additional columns in the Bill Backup which capture the cross referencing between the 8Mbit/s package and the circuits within it. (See format attached)
* The first bill to incorporate these changes will be the Q3 Billing run in October 2007, although the price change following the removal of the SRBS & MRBS and rebalancing exercise will be captured in the Q2 billing run due in June 2007.

**Additional Information**

**Cease within Minimum Period**

Where an 8Mbit/s package is ceased within the minimum 12 month period, the billing system will pick it up and raise the rental for the remaining period. However, the Customer should be advised that if they have any circuits remaining on the site that they are intending to regrade to standard 2Mbit/s, then it may be beneficial for them to remain on the 8M/bits package for the remainder of the minimum term, otherwise they would be charged for the remainder of the year and also for the individual 2Mbit/s circuits

When circuits are regraded the contract term will be nullified on the billing systems so if the circuits are subsequently ceased within the Minimum Period, it will be the responsibility of the CMC to advise Billing of the Rental Liability date which is flagged on COSMOSS. The process for doing this is manual.

**Migration Format**

All Migration requests should be submitted in the format specified in the enclosed spreadsheet.



**3.1.7 RBS Subsequent 8Mbit/s Product**

**Overview:**

RBS Subsequent 8Mbit/s is a commercial offering aimed at Mobile Network Operators growth over the next few years. MNO’s have indicated a growth of between 15 to 25% to support higher speed 3G access in high density areas.

The reduced cost is based on savings made in delivering a number of circuits all at the same time.

From the 1st September, customers will be able to purchase Subsequent 8Mbit/s Packages

* New Subsequent RBS 8Mbit/s rentals applicable from 1st September 2008 for migrations
* Prices are applicable from 1st September 2008 for new orders.
* In order to purchase a Subsequent 8Mbit/s Package, customers must always have one active standard 8Mbit/s Package in place. All successive packages at the same site which meet the qualification rules may then be Subsequent 8Mbit/s Packages
* Circuits in a Subsequent 8Mbit/s Package must have a common cell site and be in the same distance band. Although not NTE specific, NTE’s must be in the same comms.room/cabinet. For example, the customer could have 2x2G circuits and 2x3G circuits (potentially on different NTE’s) within a cabin where the 2G circuits are linked to a Point of Connection (PoC) in Manchester and the 3G circuits linked to a PoC in Birmingham.
* The Subsequent 8Mbit/s package has a 12 month Minimum Period.
* Each Subsequent 8 Mbit/s Package will always contain four circuits
* On request of a Subsequent 8Mbit/s Package, all 4 circuits will be delivered at the same time.
* Individual ceases of 2Mbit circuits from within a package are not permitted as it is a package price not an individual circuit price. Therefore we see no reason for operators to require this.
* Should the customer choose to cease a standard 8Mbit/s Package where they also have a Subsequent Package – then the Subsequent Package will be Re-graded to a standard Package to ensure correct charges are maintained.

Note – We would advise customers to cease Subsequent Packages before they cease any Initial Package where they have two or more 8Mbit/s Packages at the same location.

**Eligibility**

* The Subsequent RBS 8Mbit/s packages apply to radio & fibre delivered sites only.
* The Subsequent RBS 8 M/bit/s package is not applicable to Copper delivered circuits as individual NTUs are supplied for each circuit; therefore there is no economy of scale.

**Migration**

In order to migrate into Subsequent 8Mbit/s packages customers must submit an Excel (or similar) spreadsheet listing both cell site references and the applicable circuits at that cell site.

The CMC will validate the request and will make the appropriate changes to implement the packages.

Any circuits/sites or existing standard packages that fail validation will be returned to the customer with reasons for failure and may be charged at the current failed validation charge of £10. If these failures are caused by billing backup inaccuracies then BT will waive the charge.

There will be a 1 month migration window upon launch of the subsequent 8Mbit/s package running from 1st September to the 1st October 2008.

During this period customers can choose to re-grade existing standard 8 Mbit/s Packages to Subsequent 8Mbit/s packages.

Note that the customer must always have at least one active standard 8 Mbit/s package in place. All other qualifying packages/circuits at the same site may then be migrated to 8 Mbit/s Subsequent Packages.

Also during this period we will accommodate customers request for new Subsequent packages where they have a number of individual circuits as well as a standard 8Mbit/s Package at site. In doing this we will subsume their existing individual circuits into the new Subsequent Package and discount the connection charge of the package by the cost of connection charges previously paid on those individual RBS 2Mbit circuits. Where these circuits were migrated from other private circuit products to RBS, the reduction will be the equivalent current connection charge equal to an RBS 2Mbit/s subsequent circuit, i.e. £1050.00 per circuit.

Note – The discount against the connection charge will only be up to the full cost of connection for the Subsequent 8 Mbit/s Package - no refunds will be given.

**Example**:

Customer has an existing 8Mbit/s package and two individual circuits at a cell site – they now wish to initiate a subsequent 8Mbit/s Package.

An Order must be placed for a Subsequent 8Mbit/s Package and instruction given to subsume the existing individual circuits into the new package. There must always be four circuits within the package, so in this example the customer will also need two new Provides. The customer must inform the relevant service team of the A ends for the new Provides . Any change of A-end (Switch) location for the existing 2Mbit/s being moved into the subsequent package will be subject to the standard charge for Circuit Re-arrangement. Note that the distance bands of all the circuits within a package must be the same..

On receipt of request the Service team will initiate the processes for delivering the customers’ order and in doing so will discount the connection charge of the Subsequent 8Mbit/s Package by the cost of connection charges already paid for on the two individual circuits.

**Note:**  This discounting will only apply on orders received up to the 1st October 2008. All orders after this date will be charged in full disregarding any previous connection charges which may have been paid on individual 2Mbit circuits.

Migration requests should be managed through the customers Account teams and be presented to the Service team in Excel format for processing and validation.

Any circuits / sites or existing packages failing validation will be returned to the customer with reasons for failure and may be charged the current failed validation charge of £10.00. If these failures are due to billing back up inaccuracies then BT will waive the charge.

The new rental will apply from the migration order received date + 5 days, for processing.

Migration orders received between 1st September and 1st October 2008 are migrated free of charge.

Changes to packages will be charged at Reclassification rates as detailed in the CPL.

**Order Process**

New orders for the Subsequent 8Mbit/s packages can be placed from 1st September 2008.

Orders must be placed on eCo or via the CRF, which will be amended to cater for the changes.

**Billing:**

Billing will continue via BTW and the first bill to incorporate these new changes will be in October 2008 (Q3).

Migration orders received between 1st September & 1st October 2008 are migrated free of charge. BTW will ensure all migration requests received during this period are processed, and will use best endeavours to ensure that they are reflected in the Q3 2008/09 invoice. Any requests not captured in the Q3 invoice will be reconciled and adjusted accordingly in the Q4 invoice.

**Additional Information**

**Cease within Minimum Period**

Where an 8Mbit/s package is ceased within the minimum 12 month period, the billing system will pick it up and raise the rental for the remaining period. However, the Customer should be advised that if they have any circuits remaining on the site that they are intending to re-grade to standard 2Mbit/s, then it may be beneficial for them to remain on the 8Mbit/s package for the remainder of the minimum term, otherwise they would be charged for the remainder of the year and also for the individual 2Mbit/s circuits

**Migration Format**

All Migration requests should be submitted in the format specified in the enclosed spreadsheet.



# PROVISION

Customers instigate Radio Base Station Backhaul service by ordering PoC Infrastructure, Cell Site Infrastructure and Circuits to be delivered across this infrastructure. Radio Base Station Backhaul PoC and Cell Site infrastructure must be in place to deliver Radio Base Station Circuits, however Cell Site Infrastructure and Circuits must be ordered together, whereby the longer of the two lead times will apply.

## **Placing an Order**

Radio Base Station Backhaul orders should be placed via eCo Order, where customers currently have this capability deployed. In relation to customers who do not have eCo Order capability, there will be a deployment roll out of eCo Order, over a 6 month period to these customers; beginning in January 05.

With effect from 10/07/05 all customers will be required to place Radio Base Station Backhaul orders via eCo Order. Should there be a technical issue which prevents deployment of eCo Order; BT will make reasonable endeavour to support these individual order placement needs.

In the interim period, until deployment of eCo Order capability is completed; the standard Radio Base Station Backhaul CRF format should be used for order placement.

eCo and the CRF are be available at <http://www.btwholesale.com>

MNOs must specify and agree the infrastructures required at the Cell site and POC

MNOs must ensure that all sites have suitable accommodation for any BT equipment required for the provision of the service

There is no aggregate interface option at the Cell Site end of the circuit

Spare Cell Site capacity on existing BT Retail provided equipment, installed before 28/9/05, may be used for Radio Base Station Backhaul, on a first come first served basis

Order types

The following order functions are permissible:

* Provide
* Cease
* Change of bandwidth
* Change of interface
* Move within the existing site
* Move to a new site

BT endeavours to minimise unavoidable downtime during moves and changes, however all changes are likely to include an element of down time.

## **Provision Lead Times**

The following lead times apply for Radio Base Station Backhaul infrastructure and circuits, date escalations are not permitted.

|  |  |
| --- | --- |
| **Network Infrastructure** | **Lead Time (from Order Request Date)** |
| New Point of Connection  | 85 Working Days\*\* |
| Additional ADM on existing Point of Connection | 60 Working Days |
| Provision of additional card on existing Point of Connection mux | 25 Working Days |
| **Radio Base Station Backhaul Circuits** | **Lead Time (from Order Request Date)** |
| 128-256Kbit/s over copper | 10 Working Days |
| 128-256Kbit/s over fibre | 30 Working Days\*\* |
| 320-960Kbit/s | 30 Working Days\*\* |
| 2Mbit/s | 30 Working Days\*\* |
| Subsequent 2Mbit/s \* | 10 Working Days |

\*Subsequent circuits are charged at the standard price but attract a shorter lead time where spare capacity is available.

\*\*These lead times apply where the MNO is having a circuit for the first time and spare duct is available at either or both ends, or radio can be utilised. Where excess construction or major build is required Lead Times will be subject to survey

#### Provision Service Level Guarantee

Full details of the Provision Service Level Guarantee can be found in Schedule 4 of the Contract, which remains the authoritative document in all service level matters.

#### Expedite

MNOs will each be allowed to submit a number of RBS Backhaul orders that they wish to Expedite, BT will use reasonable endeavours to deliver these orders in less than the Standard Lead Time.

The number of Expedite orders shall not exceed 15% of the MNOs previous months order volume.

An Expedite order cannot be submitted with a Customer Required by Date (CRD) of less than 50% of the SLT for the Product/Service and it must be requested on order placement. The order cannot be Expedited during the delivery process.

This does not affect BT’s contractual obligations of achieving the Contractual Delivery Date (CDD), which remains unchanged at the SLT for the relevant Product.

#### Constraints

Although reasonable endeavours will be made to meet the CRD, this process does not guarantee that all authorised Expedite orders can be delivered to meet the CRD. Circumstances out with BT’s control or physical limitations may prevent achievement of Expedited CRD’s.

The Expedite process supports Provision Orders only

This process does not apply to projects

## **4.3 2Mbit/s Central London Zone**

For 2Mbit/s Radio Base Station Backhaul circuits that are wholly within the Central London Zone MNOs may request delivery in as little as 10 working days.

Following are the criteria for ordering 2Mbit/s CLZ Radio Base Station Backhaul

Both the Cell site and the MNO Point of Connection must be within the Central London Zone (0207 – 0207 based on BT exchange areas and BT number ranges).

* No change to existing Radio Base Station Backhaul prices
* Only applies to 2Mbit/s Bandwidth Radio Base Station Backhaul i.e. this does not extend to circuits delivered over 2Mbit/s infrastructure.
* The process only applies to orders for provision of new circuits.
* Circuits that qualify as ‘Subsequent’ Radio Base Station Backhaul circuits should still be ordered as such.
* Circuits with Diversity are not included in the new process.
* Assumes capacity exists at MNO Point of Connection
* It is very important to note that significantly lower delivery timescales are only likely to be achieved for orders delivered over HDSL copper or where spare capacity exists on Cell Site infrastructure. If new fibre or radio delivery is required it is currently unlikely that BT would be able to provision service in a considerably foreshortened timescale.

## **Order Progress**

Order progress updates are only available via the eCo web portal.

Cell Site Infrastructure and Circuit order delivery are dependent on the completion of customer site build activities. There are advantages with overall circuit delivery lead-times for customers to provide BT with forecast dates for their Cell Site build milestones; and to advise BT when they are completed. The mechanism to achieve this for Radio Base Station Backhaul will be via the eCo web portal.

#### Site Surveys

Radio Base Station Backhaul Site Surveys are only available on an infrastructure order; Site Survey charges are in addition to the infrastructure order charges. Multiple surveys for a single site will be chargeable at timescale rates in addition to the standard Site Survey rate, if completed during the same visit. If additional visits are required, then additional full Site Survey charges will be raised.

Where a Site Survey is required, the customer must either advise a Joint Site Visit date, not less than 5 days from order request, or submit the site plans to the CMC, in the format specified in the Customer Service Plan; otherwise the order will be rejected.

Please refer to the BT Survey Services Manual for further information

## **Quotation**

BT provides a quotation for Radio Base Station Backhaul orders that includes confirmation of Delivery medium, Excess Construction Charges and Committed Delivery Date.

Once the Costs are accepted by a MNO the order is contractually binding on BT and the MNO and variances to the order cannot be accepted.

## **4.5.1 Changes Before / After Quotation**

The only acceptable change to an order will be as listed below:

* Change of Interface – A charge for the change will be applicable as detailed in the Carrier Price List.
* Change of Name or Contact

All other ‘in-flight’ changes to an order will result in the order being cancelled and re-issued where applicable cancellation charges will apply.

## **4.5.2** Quotation acceptance Timescales

BT will aim to provide quotations for Infrastructure and Circuits by day 10 from Order Request, the MNO must respond with acceptance or cancellation within 5 working days. Under exceptional circumstances the MNO may suspend the order for a period of 20 working days but this must be done within the 5 day window.

## **Cancellation**

Circuits in course of provision may be cancelled at any time by a customer; BT will recover its costs, including any survey costs, via its cancellation charges. Details can be found in the Carrier Price List.

**Penalty Free Cancellation**

MNOs have the option to cancel an order without penalty under certain conditions if BT fails to provide service, for infrastructure or circuits, by contracted dates. The threshold dates after which cancellation can take place are detailed below but the Contract for Radio Base Station Backhaul above should be consulted for fuller details.

**4.6.2 Cancellation Threshold for Circuits**

|  |  |
| --- | --- |
| **Lead Time** | **Cancellation Threshold (beyond lead time)** |
| 10 Working Days or less | 10 Working Days |
| 11-30 Working Days | 20 Working Days |

4.6.3 Cancellation Threshold for Network Infrastructure

|  |  |
| --- | --- |
| **Lead Time** | **Cancellation Threshold (beyond lead time)** |
| 21-40 Working Days | 20 Working Days |
| 41-60 Working Days | 25 Working Days |
| 61-90 Working Days | 30 Working Days |

4.6.4 Cancellation Charges

Details of Cancellation Charges and how they are calculated are detailed in the Carrier Price List Section B11.05

It is important to note: All cancellation charges are based on the Lead Time for the product being cancelled.

## **Stop The Clock**

Stop the Clock is designed to cope with instances when circumstances beyond BT’s, or a MNO’s, reasonable control occur during the provision process.

**4.7.1 BT Stop the Clock**

BT may, on notification to the MNO, invoke the Stop the Clock process when a circumstance beyond BT's reasonable control occurs during the provision process.

Some of the reasons for STC are listed below, however, it should be noted that these reasons should not be taken as definitive or exhaustive; they are detailed here for guidance purposes only:

* MNO building not ready
* MNO contact not available to grant access to site
* Unable to gain access to site due to room in use
* Third Party wayleave delayed
* Duct collapsed requires street opening notice.
* Man hole or footway box contaminated with toxic material e.g. Petrol and requires specialist contractors
* Duct Blocked by foreign body e.g. cement and requires a street opening notice.
* Original Wayleave, planned and requested at quotation acceptance, is rejected and new Planning and Wayleave required

Also, reasons where BT may not invoke Stop the Clock:-

* No resource to do the work.
* BT failed to turn up on appointment date
* BT turned away from site as no appointment was made in advance.
* Lack of transmission equipment in BT exchange.
* Duct Blocked by BT Cables.
* BT failed to identify a Wayleave requirement at quotation.
* BT’s supplier failed to deliver on agreed date.

The clock is re-started on expiration of the notified circumstances and MNO informed

BT is not liable for compensation payments for delays due to circumstances beyond its reasonable control

Delays due to "Stop the Clock" will not be taken into account in calculating BT's timescale targets.

**4.7.2 MNO Stop the Clock**

MNOs may, on notification to BT, request Stop the Clock when circumstances beyond their reasonable control occur during the quotation acceptance period only

* The clock is re-started on expiration of the notified circumstances
* MNO's are not eligible for compensation payments for delays due to circumstances beyond their reasonable control during the quotation acceptance period

## **Standby Battery Options**

The only Standby Battery options available for order with Radio Base Station Backhaul are:

* Option 1a – 4x2 Integral Batteries
* Option 1b – 16x2 Battery pack and SDH access

There is no rental attached to the standby battery ordered for use with Radio Base Station Backhaul products.

There is no restriction on Radio Base Station Backhaul MNOs being able to order this product.

## **Ceased In Error**

If a Radio Base Station Backhaul circuit has been ceased and a MNO subsequently decides that service is still required then a new provide order will be necessary. The relevant Lead Time for the bandwidth required will apply, however BT will work with the MNO to help minimise disruption for the end customers.

## **Support**

Any unresolved technical queries and other reports of provisioning difficulties should be directed in the first instance to the Customer Management Centre Manager.

# Maintenance

Please refer to the Radio Base Station Backhaul Operations and Maintenance Manual (O&M) and the Contract for maintenance matters including for more detail of:

* Service Levels
* Compensation
* Fault Reporting

## Repair Service Level Guarantee

## Fault Handling Timescales

## Escalation Times

## Fault Re-Test and Closure Timescales

## Planned Engineering Works (PEW)

## **5.1 Availability Compensation Scheme**

To be eligible for ACS the fault must be :

* Reported by the customer.
* "Faulty" when reported.
* Suffering total loss of service for greater than a minute (not erroring)
* Available for immediate intrusive testing
* A provable fault by BT
* Not subject to RCS compensation
* Not caused by MNO/Customer equipment
* Not caused by matters beyond BT's reasonable control

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J |
| X = Count of faults | 3 | 4 | 1 | 0 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R = Count of RCS eligible faults | 1 | 2 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F = Count of ACS eligible faults = (X – R) | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ACS applied |  | Y | Y |  |  | Y |  |  |  | Y |  |  |  |  |  |  | Y | Y |  |  |  |  |  |  |  |  |  |  |  |  | N |  |  | N |  |  | Y |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | \* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | \*\* | \* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | \*\* |

\* ACS Starts when total loss of service (i.e. total loss of service for one minute or longer) occurs three or more times, within a twelve month period

\*\* ACS ends until such time as twelve months have passed and the Radio Base Station Backhaul Circuit has not suffered total loss of service.

# Billing

Billing information for Radio Base Station Backhaul products and services can be found in the Radio Base Station Backhaul Billing Manual on the Reference Offer website.

# Quality of Service (QoS) reporting

Quality of Service reports will be provided as normal by the Service community.

Reviewed as established customer Service Review Meetings

# Contact Information

Enquires about Radio Base Station Backhaul should be addressed in the first case to the MNO’s BT Account Team or the nominated Customer Management Centre (CMC).

## **8.1 How to Access the BT Wholesale Website**

The Our Networks site is a secure site that contains information on Radio Base Station Backhaul.

To obtain access to this site, registration must be completed. This registration is then validated to ensure there is NO unauthorised access to this site.

**8.1.1** New Registration

Click on Login and Registration so that you can see the Username and Password fields. Underneath the ‘ready’ button you will see the link ‘Register now’. Once you have clicked on this link, complete the necessary steps of registration.

Now follow the instructions given below for Registered Users.

8.1.2 Existing Registered Users

1) Click on Login and Registration and enter your username and password to login.

2) Underneath ‘Login and Registration’ you will now see a section called ‘Tools and Applications’, the bottom link will be called ‘Find out More’. Click on this to display ‘Enhanced Services’ – click again.

3) You should now be shown a list of secure applications that you do not have access to. Select ‘Our Networks’ and click on the ‘Ready’ button.

The form will be directed to the eContact Team who will validate your request for access to this area. You will receive a confirmation email within 24hrs to notify you once your request has been actioned.

# 9 Glossary

|  |  |
| --- | --- |
| Abbreviation or term | Explanation  |
| ADM | Add Drop Multiplexor (SDH equipment) |
| CSC | Customer Sited Connection |
| DPCN | Digital Private Circuit Network |
| e.Co | Electronic Customer Ordering |
| FRP | Fault Reporting Point |
| MIS | Management Information System |
| MSH | Marconi Synchronous Hierarchy |
| MSP | Multiplex Section Protection |
| PDH | Plesiochronous Digital Hierarchy |
| MNO | Mobile Network Operator |
| POC | Point of Connection |
| RCS | Reduced Charges Scheme |
| SDH | Synchronous Digital Hierarchy |
| SMA | Synchronous Multiplex Access |
| SNEID | SDH Network Element Identifier |
| STM-n | Synchronous Transport Module (level n) |

Further details of explicit meanings contained in this document can be found in the Contract

# Appendix A: Radial Distance Calculation

Two terms are used in Radio Base Station Backhaul pricing, ‘Serving’ and ‘Nearest’, they are not interchangeable and do not mean the same thing.

‘Serving’ – as in Serving Exchange or Serving SDH Node refers to the BT site that is normally used to deliver services to premises.

‘Nearest’ – as in Nearest SDH Node refers to the geographically closest BT premises whether or not it would normally be used to serve that premises.

EXAMPLE

In the example shown above although the nearest SDH node A is 2km away from the MNO premises because there is a river between the buildings, the premises is in fact served by Node B that is 7km away.

CIRCUIT RADIAL DISTANCE

When the radial distance of a circuit is calculated it is based on the following rules

* The radial distance of 128kbit – 960kbit Radio Base Station Backhaul circuits is calculated based on the Serving Exchange of the Cell Site and the Nearest DPCN Node of the MNO PoC Serving SDH Node.
* The radial distance of 2Mbit/s Radio Base Station Backhaul circuits is calculated based on the Serving Exchange of the Cell Site and the Serving SDH Node of the MNO PoC
* The radial distance of 2Mbit DPCN Bearers is calculated based on the distance between Nearest DPCN Node to the MNO Point of Connection (PoC) Serving SDH Node and the MNO PoC Serving SDH Node

 It is important to note the following

 - Point of Connection Serving Nodes can be any SDH node

- For Customer Sited Connection (CSC) the Serving SDH Node or Nearest DPCN Node can be identified via the published BT data these will be the ‘billing’ nodes irrespective of any changes BT may operationally have to make to it’s routing to support the service.

- To note that if the Serving Exchange of a MNOs proposed CSC site is not an SDH node then they cannot have CSC at that location.

|  |  |  |
| --- | --- | --- |
| **Version No** | **Date** | **Reason for Change** |
| Issue 1 | 13 December 2004 | First Issue |
| Issue 2 | 01 June 2005 | Inclusion of RCS / ACS Information |
| Issue 3 | 19 Feb 2006 | Document Review |
| Issue 4 | 24 March 2007 | Document Review |
| Issue 5  | 01 April 2007 | Singleton / Multiple |
| Issue 6 | 30 April 2007 | Price review |
| Issue 7 | 01 Jan 2008 | 8Mbit/s Bundles |
| Issue 8 | 08 May 2009 | Document Review |

**END OF DOCUMENT**

1. ∅. The Radio Base Station Backhaul Product will only be available to Mobile Network Operators within the UK, who either hold a Global System for Mobile Communications (GSM or 2G) license issued under the Wireless Telegraphy Act for Second Generation Cellular services, or a Universal Mobile Telecommunications Service (UMTS or 3G) license issued under the British third-generation mobile-phone license auction that concluded on 27 April 2000. [↑](#footnote-ref-1)