TRAFFIC MANAGEMENT KEY FACTS INDICATOR*

(not including during busy times and places to manage network congestion see Section 2)								
Name of broadh	and product:	All Mobile Broad	Ihand and Handset 1	Tariffs				
Name of broadband product: All Mobile Broadband and Handset Tariffs Use and availability of services, content, application and protocols on this product								
Are any services, content, applications or protocols always blocked on this No product?**								
Are any services, content, applications of protocols always blocked on this No product?								
If so what? N/A								
Are any services, content, applications or protocols always slowed down? No								
If so what? N/A								
Are any services, content, applications or protocols always prioritised? No								
If so what? N/A								
Are any managed services delivered on this product?								
If so what? What impact?	N/A							
Data caps and d								
What are the dow	/nload/upload li	mits or data usag	ge caps on this	Many plans	s have			
product? specific of allowand								
Is traffic management used to manage compliance with data caps and download limits?								
Under what circumstances? N/A								
Level of speed reduction?		N/A						
Duration of speed reduction?		N/A						
Is traffic management used in relation to heavy users?								
Under what circumstances?		N/A			•			
Level of speed reduction?		N/A						
Duration of speed		N/A						
Section 2: Traffic management to optimise network utilisation (what happens during busy times and places in addition to traffic management as described in section 1)								
Is traffic management used during peak hours? No								
When are typical peak hours?								
What type of traffic is managed during these periods?*** Traffic type Blocked Slowed down Prioritised								
Traffic type Peer to Peer (P2I		2 0	Slowed down	Prioritised				
Newsgroups	7)							
Browsing/email								
VOIP (Voice over IP)								
Gaming								
Audio streaming								
Video streaming								
Music downloads								
Video downloads								
Instant messaging								
Software updates								

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Is traffic management use	Yes		
If so how?	During seasonable traffic peaks (typically July to September and other holiday periods) we may need to manage the bit rate of some data services in our Go Roam destinations to make sure that everyone has a good experience.		
	In our Go Roam Around the World destinations, we support streaming at standard definition. File sharing (such as peer-to peer and torrenting) and Virtual Private Networks (VPN) services may also see reduced bit rates.		

^{*} This KFI gives an overview of typical traffic management practices undertaken on this product; it does not cover circumstances where exceptional external events may impact on network congestion levels.

Glossary

Traffic management:

Traffic management is the term used to describe a range of technical practices undertaken to manage traffic across networks.

The different outcomes achieved by the use of technical practices can include:

- the prioritisation of certain types of traffic in busy times or busy areas to ensure that it is of an adequate quality
- the slowing down of certain traffic types that are not time-critical at busy times or busy places
- ensuring compliance with a consumer's contract, for example slowing down of traffic for the heaviest users
- supporting the delivery of managed services, for example to ensure a guaranteed quality of service for a specific piece of content

Managed services: The majority of internet traffic is delivered on a "best efforts" basis. A managed service, on the other hand is one whereby an ISP offers "quality of service" that can guarantee a certain level of performance, so that the content, service or application can be delivered without risk of degradation from network congestion. Such a quality of service arrangement can be made between an ISP and a content or service provider or directly between an ISP and the consumer.

Best Efforts: This phrase relates to the delivery of internet traffic where traffic management is applied without distinctions based on the source of that traffic.

Slowed down: This outcome is achieved by the deployment of technologies that can decrease the priority of traffic types deemed to be non-time critical on the network e.g. slowing down traffic such as downloads during busy times and busy periods.

^{**}This excludes any service, content, application or protocol that an ISP is required to block by UK law and child abuse images as informed by the list provided by the Internet Watch Foundation.

***If no entry is shown against a particular traffic type, no traffic management is typically applied to it.

TRAFFIC MANAGEMENT KEY FACTS INDICATOR*

Prioritised: This outcome is achieved by the deployment of technologies that increase the priority given to certain traffic types, e.g. time-critical traffic such as video. This outcome can also be achieved as a consequence of slowing down other selected traffic which reduces the overall data flow on the network.

Heavy users: Heavy users can cause peak traffic volumes to exceed the engineered maximum load. In practice this refers to a very small proportion of users of a network whose use is excessive to the extent that it impacts on other users.

File sharing: We consider file sharing to be either of the following:

- using peer-to-peer download services like BitTorrent or Limewire
- downloading and sharing large files using certain sites specifically set up to share files.

TrafficSense™: TrafficSense™ is a system we use to intelligently manage data on our network to give the best experience possible for the majority of our customers, who should benefit from higher speeds and a smoother internet experience.

If you want to find out more about traffic management, Ofcom have published a <u>Consumer Guide to Traffic Management.</u>