THE BENEFITS OF MOBILE CONNECTIVITY

THE BENEFITS OF MOBILE COMMUNICATIONS

A.1 Telecommunications is a public utility that was provided by the Post Office until the decision was taken in the early 1980's to privatise this service. This was achieved through the Telecommunications Act 1984 (the 1984 Act) and it was under Section 7 that the original mobile network operators (MNO's) were granted licenses. The Communications Act 2003 (the 2003 Act) ended the licensing regime established by the 1984 Act, but the operators retained their special status as Electronic Communications Code Network Operators (Code Operators, previously Telecommunications Code Systems Operators). The 2003 Act widened the opportunity for operators to become Code Operators, a key criteria being the public benefit of the network provided.

A.2 Although the MNOs are private companies, they all therefore provide a public service and one which is recognised as being essential to a modern economy. Setting aside the large contribution made by the electronic communications industry to the economy through direct employment and the sale of products and services, the local benefits will be varied and considerable. In addition as the technology continues to improve and the range of services become more varied and innovative, the benefits will also expand at a fast pace. A connected and modern smart phone is now able to access thousands of applications, which means that it is almost impossible to now quantify or specify all the potential benefits.

A.3 Ofcom's Communications Market Report August 2016 identifies the growing demand for mobile connectivity:

- 91.5 million active mobile subscriptions at the end of 2015
- 39.5m of those are 4G subscriptions - an increase of 15.9 million (67.3%) compared to the year previously.

- 4G take-up significantly increased across all ages, genders and socio-economic groups in 2016

- Compares to 25.6m fixed landlines to residential properties across UK

- 93% of adults who personally own/use a mobile phone (71% smart phone up from 61% in 2014))

- The proportion of respondents with access to the internet on their mobile increased from 61% to 66% in 2016

- Two-thirds of adults used mobile data services in 2016 - a five percentage point increase on the previous year.

- In March 2016, more internet users visited online retailers on mobile devices than on laptops and desktops; Three in ten mobile internet users accessed their bank account via their mobile phone in March 2016– a growing trend

- The mobile phone is the most popular device for social media use in 2016: 50% of all adults' time using social media is spent on a mobile phone.

- Businesses accounted for 13% of all mobile connections at the end of 2015

- UK having 97.8% outdoor premises coverage by at least one operator in May 2016. 67% of mobile phones (53.1 million) were used to access the internet in 2015, up from 61% in 2014 (47.9 million).

A.4 The UK Government places emphasis on the significance of the UK Digital Economy in all its forms, including fixed and wireless communication networks like the mobile communications networks. In its Information Economy Strategy (June 2013), the UK Government estimated that the digital sector alone

contributed around £105 billion in gross value added (GVA) to the UK in 2011 and The Department for Culture, Media & Sport (DCMS) indicate in its Sectors Economic Estimates August 2016, that this is now 12% higher at over £118 billion. The telecoms sector represents 1.8% of the total UK GVA in 2015, so a significant contributor to the UK Economy.

A.5 Mobile connectivity is vitally important to support this Digital Economy and has become akin to the "fourth utility", with commensurately high public reliance and expectation of ubiquitous service. To help achieve this high level of service, the Government has or is in the process of implementing a number of changes. These changes, which are summarized below in themselves signify a major policy shift that is relevant to the weight to be attached to the support given to the provision of infrastructure in the development management process:

- The Digital Economy Bill, which amongst other things:
    - will place on operators a Universal Broadband Obligation
    - will introduce a new Electronic Communications Code, with the intention of facilitating economic access to sites
- Extended rights of permitted development, in England, with the other administrations all looking to do likewise

A.6 Most communities and local authorities now understand the principal benefits , which can be categorised under sub – headings, with examples (which overlap to some extent) as follows:

Economic Benefits

- Central and local government are harnessing applications and on line services to help businesses as well as communities – for example, DEFRA now requires a variety of forms to be completed on line, rather than in written form.

- Mobile communications, especially high speeds can help extend business opportunities into peripheral areas, both directly and indirectly.

- An example of a direct benefit would be a business reliant on mobile communications being able to establish within an area, so creating local employment opportunities.

- Indirect benefits, might include visitors to the local area being able to search and make reservations or bookings at local restaurants or hotels, or people selecting an area to visit over another because of the availability of services

- Local tradesmen and others who provide services such as doctors and vets can provide a more responsive and flexible service, which can save costs.

Improving Social Well - Being

- Mobile communications can help social well – being by simply ending or reducing a sense of isolation.

- Mobile communications can bring about far greater personal convenience and security, for example, teenagers can keep in parental contact when out in the evening.

- Mobile communications can provide much greater freedom to carers, who can remain in contact in case of emergency.

- Mobile communications are required to enable people to remain connected and to access social networking sites. For young people in particular this is important so that they can feel included amongst their peer group.

- Mobile communications can access a range of applications to benefit peoples lifestyle and interests.

- Mobile communications can help parents interact with children far away, for example, a divorced father can play a game on line with a son many miles away.

- Reliable mobile connectivity gives people the choice to elect not to have a fixed line. At a time when nearly everyone has a mobile, a low income household with no or little mobile connectivity may still have to pay for both. Better mobile connectivity and availability can mean that a household can save on the fixed line costs, which to them would be an appreciable saving.

Encouraging Sustainable Lifestyles

- Mobile phones can help minimise unnecessary journeys, so increasing productivity and reducing travel demands.

- Mobile phones can help facilitate modern forms of working, including greater homeworking, particularly beneficial to more rural communities. This can bring about an improved balance between home and working life. At the same time, it can help minimise private car movements and so help reduce peak period congestion and pollution. This is a particularly important benefit when transport policy to reduce travel and CO^2 emissions seems to be failing.

Improving Health and Safety

- Most 999 calls in the UK, including requests for Coastguard assistance and Mountain Rescue are now made using mobile phones.

- On an average day in the UK 11 people are killed on our roads. A far greater number are saved from fatal or permanent injury through prompt paramedical assistance in the critical early period following an accident. This is made possible by 999 calls placed almost immediately following an accident.

- Ambulances responding to heart attack victims will often have mobile connected ECG machines that can send real time data back to specialist hospital units, so they can advise paramedics on the scene, direct the victim to the most appropriate unit and enable pre-operation preparations to commence on the victim and at the hospital.

- There are an increasing range of health and well-being applications, from fitness bands to heart and other monitoring for alerts to take medication or seek help. These are increasing with 4G services and with 5G are anticipated to be more linked with primary health care records and services.

- Mobile phones can be used to summons assistance from the breakdown services in the secure environment of a locked car. This is particularly important to the vulnerable.

FUTURE DEMAND, EXPECTATIONS AND REQUIREMENTS

A.7 The ability to be or remain connected wherever we are is an increasingly important part of our daily lives, whether for business or for contacting friends and family or for accessing online information and entertainment services on the move. Improvements and resilience to existing mobile networks is therefore expected and required in order to support a prosperous and competitive economy.

A.8 These factors coupled with the continued evolution of technology and the services that can be supported by it drive demand for network coverage and capacity. As a global economy, geopolitical factors increase the imperative to meet this demand – Brexit and a potentially more protective USA, for examples, mean that we shall have to become more competitive to maintain and grow our economy. This continued and future demand for mobile services brings with it a number of considerations mainly relating to:

- Areas without coverage or partial coverage
- Capacity and data demands and associated network pressures

A.9 In its Strategic Review of Digital Communications in 2015, Ofcom highlighted some key considerations:

- Not everyone in the UK enjoys the same high level of availability.
- There are a number of different concerns in terms of wide scale availability of decent services.
- Availability of fixed and mobile services is lower in rural areas. This has a particular impact in Scotland, Wales and Northern Ireland.
- Mobile coverage remains uneven in key places where people look to make calls and use data, including indoors and on the move.

- In urban areas less than 1% of premises have no mobile coverage, compared to 13% for rural areas. But 91% of urban premises have indoor coverage from all voice networks, whereas only 31% of rural premises have this coverage.

- Evidence indicates widespread concern about service quality.

- Poor mobile coverage is not only an issue for premises; it is also an issue for transport networks.

A.10 The Ofcom Market Report 2016 further indicates that coverage varies significantly between urban and rural communities in the UK, with 99.2 % of premises in urban UK areas having outdoor 4G coverage, and 79.3% covered by all four operators compared to 88.9% of rural premises having outdoor 4G coverage from at least one operator, and just 21.0% having coverage from all four operators. However the figures do not explain the full picture and there remain significant variances across the UK, with the levels of rural coverage as example much lower in some of the most peripheral locations of Scotland and Wales.

A.11 Even where mobile coverage may exist, not all users benefit in the same way –in October 2016 uSwitch stated that one third of mobile phone users have reported poor or no reception at home. There remain clear disparities in mobile coverage across the UK, from roads to rural areas, voice coverage to 4G internet, so there is much left to be done to improve mobile infrastructure and increase the extent of coverage in the UK.

A.12 To tackle this there are various Government and Regulator initiatives to improve mobile connectivity across the UK, such as the £5 billion investment agreement with the four main Mobile Network Operators (MNOs) in 2014 to improve mobile coverage in the UK. The Devolved Governments may be looking also to bring forward their own strategies and plans to improve mobile connectivity which might include public intervention like the Mobile Infrastructure Project which helped deliver a number of shared mobile communication sites across the UK.

A.13 The National Infrastructure Plan, Digital Economy Bill (and eventual Act) and reforms to the Electronic Communications Code should all bring changes to remove barriers to investment in communications infrastructure and to secure better mobile connectivity across the UK, along with the parallel changes already referred to being formulated and introduced to the UK Town Planning systems.

A.14 At national level the 700 MHz radio spectrum is currently being cleared from broadcast purposes to release radio spectrum to be reused for other services, such as to help meet the growing demand for data usage across the mobile networks. Indeed, capacity of the UK networks is a growing consideration in network deployment and maturity – it is predicted that by 2020 demand for mobile data will be between 30 and 45 times that in 2015 (Nokia Bell Labs53). So the mobile networks not only have to have coverage improvements and better user accessibility, but the ability to cope with demand, future trends and future technologies which place significant pressures on the networks and how they operate.

.A.15 What is very evident is that the UK town planning systems have a major responsibility in helping to deliver these network changes and improvements. This will be achieved through supportive national and local policy and guidance. It must also entail meaningful engagement with the industry and effective decision making by local planning authorities - by properly balancing operational and environmental considerations, particularly in the most sensitive of locations (like protected areas) where rural communities exist and aspire to have similar levels of mobile connectivity comparable to other urban areas of the UK.