General Background Information for Telecommunications Development

This document is designed to provide general background information on the development of the Cornerstone network providing mobile telecommunications coverage for Vodafone and Telefónica. Formed in 2012 following agreement between Telefónica UK Limited and Vodafone Limited, Cornerstone enables the two companies to jointly operate and manage a single network grid across the UK. This document has been prepared for inclusion with planning applications and supports network development proposals with generic information.

1.0 INTRODUCTION

Over 30 years ago under the Telecommunications Act 1984, a licence was granted to Vodafone and Telefónica to provide wireless (or mobile) phone services utilising unused radio frequencies adjacent to those transmitted for over 50 years by the television industry. Initially, because this wireless technology was new and the number of potential customers unknown, a number of tall masts were used to provide basic radio coverage to the main populated areas. As the way we use our phones, and other technology, has changed over the past 30 years, so has the requirement for where base stations must be located. Due to the increased data transfer necessary for the latest telecommunication services, base stations must be located where the local demand exists.

2.0 DIGITAL NETWORKS

The Vodafone and Telefónica 2G digital networks were developed in the early 1990s. This digital technology is often referred to as GSM (Global System for Mobile Communications) which is the common European operating standard enabling phones to inter-connect to other networks throughout Europe and Internationally.

In 2000, Vodafone and Telefónica launched their 'Third Generation' mobile telecommunications service known as 3G or UMTS. In addition to voice services, this allowed broadband access to the Internet for mobile phones and laptop computer data card users.

2013 saw the launch of 4G services on the Cornerstone network. This technology allows for ultra-fast speeds when browsing the internet, streaming videos or sending emails. It also enables faster downloads.

2019 will see the introduction of 5G services, with the ambition of the Government for the UK to become a world leader in this technology. This will ensure early advantage is taken of its potential and the UK creates a world-leading digital economy that works for everyone.

2.1 WHAT IS 5G?

5G is the new generation of wireless technology and will deliver the reliable and faster networks of the future. 5G will change how we understand wireless connectivity, moving from something we experience through personal devices to an integrated infrastructure of buildings, transport and utilities, providing enormous benefits for citizens, businesses and urban regions alike.

5G will provide a new level of underlying connectivity to transform services and create new digital ecosystems that will deliver cost and time savings and new amenities to the

regions inhabitants. With the ability to connect one million devices per square kilometre[1], 5G is to offer higher speeds and capacity than anything that has come before.

Whether it be in the healthcare, transport, energy or retail sectors, 5G will reshape how we use these services and will bring substantial savings to households, businesses and Councils.

2.2 WHAT INFRASTRUCTURE DOES 5G REQUIRE?

For these benefits to be delivered and to ensure the UKs regions do not fall behind their national and international counterparts, there must be further investment in digital infrastructure. 5G uses higher frequency radio signals that have a shorter range and will require more base station sites than the existing networks.

As 5G is to deliver new technology, so too the infrastructure required is different than that necessary to provide the previous generations of connectivity. Wherever possible, existing installations will be utilised to accommodate the necessary infrastructure. In certain cases the upgrade of service will require a dual pole solution for sites which currently have a single pole design. Due to the beamforming technology required for 5G service, the antenna height in many cases must be greater than that for previous generation technology.

It is very important to note that mobiles can only work with a network of base stations in place where people want to use their phones (or other wireless devices). Without base stations, the technology we rely on simply won't work.

3.0 PLANNING POLICY GUIDANCE ON TELECOMMUNICATIONS

The revised National Planning Policy Framework (NPPF) was published on 19th February 2019. The NPPF supports high quality communications infrastructure and recognises it as a strategic priority. At para. 112 it states that: "Advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections."

The NPPF goes on to state at Para. 116 that: "Local planning authorities must determine applications on planning grounds only. They should not seek to prevent competition between different operators, question the need for an electronic communications system, or set health safeguards different from the International Commission guidelines for public exposure."

4.0 SITE / MAST SHARING

Cornerstone actively encourage and support site sharing for both commercial and environmental reasons. All operators are required to explore site-sharing opportunities under the terms of their licences. Cornerstone have implemented a number of measures to identify and maximise site-sharing opportunities.

[1] Ofcom Report: Supporting the Expanding Role of Wireless Innovation in UK Industry

5.0 PRE-APPLICATION CONSULTATION

Cornerstone are committed to carrying out appropriate consultation with Local Planning Authorities, stakeholders and the public. The Code of Best Practice on Mobile Network Development gives guidance on the factors network operators should consider when determining what consultation is required, as each development is different. These factors are equally applicable for Local Planning Authorities who carry out their own consultation once the application has been submitted.

6.0 LEGAL CASES

The following legal cases may be helpful;-

6.1 Harrogate case November 2004

The Court of Appeal gave a judgment that Government Planning Guidance in PPG8 (now replaced by the NPPF) is perfectly clear in relation to compliance with the health and safety standards for mobile phone base stations. The Court of Appeal and the High Court both upheld Government policy in response to a planning inspector's decision that departed from that policy and failed to give adequate reasons for doing so.

6.2 Bardsey case January 2005

This was a case in which a local planning authority failed to comply with its obligations to act within the 56 day period provided under the permitted development regulations. The Court of Appeal confirmed that the permitted development regime for mobile phone base stations is compliant with the Human Rights Act.

7.0 FURTHER INFORMATION

We trust the above answers your main queries regarding our planned installation.

The enclosed site-specific details will identify any alternative discounted options and reasons why they were rejected and how the proposed site complies with national and local planning policies.

The Digital Connectivity Portal provides guidance for local authorities and network providers on improving connectivity across the UK. Produced by DCMS, it promotes closer cooperation between network providers and local authorities, and offers guidance on effective policies and processes to facilitate deployment of digital networks.

The Future Telecoms Infrastructure Review, produced by DCMS, sets out the future for telecoms in the UK and the opportunities that these advancements in digital connectivity will create.

The National Planning Policy Framework sets out government's planning policies for England and how these are expected to be applied.