



## Mobile UK Information Sheet

### Radio Signals and Health – 5G

#### What is 5G?

5G is short for 'fifth generation mobile networks'. It has been designed to be far faster than previous generations and to allow new uses for mobile data.

In the UK, rollout is expected to commence during 2019. The main benefits of 5G are that it will be much faster and have higher capacity than 4G, with download speeds in excess of 1Gbps. To place this in context, customers will be able to download - not merely stream - a full HD movie in less than 10 seconds on a 5G network. The same task would take closer to 10 minutes on 4G.

#### 5G radio signals

5G, as with previous generations, will use radio signals over a range of frequency bands.

Some of the potential bands for 5G are at similar frequencies to mobile technologies already in use.

In addition, some higher frequency bands, such as 30GHz and 60GHz and known as millimetre waves, will be used to deliver high capacity in conjunction with small cell deployments (see separate **Information sheet** on small cells).

Where 5G is added to an existing site or where coverage is provided in a new area, there may be a small localised exposure increase. All mobile technologies, including 5G, are designed to minimise power to reduce system interference resulting in levels that will remain very low relative to the international exposure limits set by the **International Commission on Non- Ionizing Radiation Protection (ICNIRP)**.

The exposure limits developed by ICNIRP cover all radio frequencies up to 300GHz. This range includes all the frequencies that will be used for mobile telecommunications in the UK, including the spectrum allocated for 5G services.