



Department for Digital, Culture, Media & Sport

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J. Mwanzia
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Our Ref: TO2018/13303

Dear J. Mwanzia,

Thank you for your correspondence of 27 September to the Freedom of Information team at the Department for Digital, Culture, Media and Sport (DCMS), regarding 5G safety and testing. We have treated your request as correspondence as it is not a request for recorded information, and to respond to the questions raised requires an explanation. Please find answers to your questions below:

With regard to questions 1-5, 10, 13, 14, 16 and 17, the department does not hold information with regard to these questions. This department is not responsible for studies related to 5G microwave frequencies, or microwave frequencies more generally, and their effect on human health.

Public Health England's (PHE's) Centre for Radiation, Chemical and Environmental Hazards (CRCE) takes the lead on public health matters associated with electromagnetic fields, including exposure to microwave frequencies (noting that microwave frequencies are used in a wide range of applications as well as telecommunications). PHE advice recommends exposures for microwave frequencies are kept within guidelines from the International Commission on Non-Ionizing Radiation Protection (ICNIRP). PHE are committed to monitoring the evidence applicable for electromagnetic field exposure and to revise its advice, should that be necessary.

I would recommend contacting Public Health England with regard to your concerns, you can make a request by emailing: foi@phe.gov.uk.

Furthermore, 5G is a term used to describe the fifth generation of mobile communications technologies. There is not yet a common definition of 5G as development is still in progress. Definitive standards are due to be agreed in 2019 and incremental deployment is expected over the following decade.

5G is likely to be deployed as part of an intricate patchwork of technologies, including advanced LTE (4G), Wi-Fi and 5G New Radio (a 'network of networks'). Deployment will be in phases rather than all at once, and will likely vary by geography due to different demand levels and costs. Some of the technologies being tested in the DCMS 5G Testbeds and Trials (5GTT) Programme Phase 1 projects involve 4G or are built on previous telecoms technology, so don't only involve 5G technology and frequencies due to the heterogeneous nature of new networks.

6. When are the proposed trials to take place?



The DCMS 5G Testbeds and Trials Programme was set up in 2017 to coordinate the development of 5G services and applications through a series of trials, which contribute to the development of the 5G ecosystem across the UK.

In 2017-18 a collaboration between three leading UK Universities: the 5G Innovation Centre at the University of Surrey, the University of Bristol and King's College London built and demonstrated a 5G Test Network. The capabilities of this network were demonstrated at Mobile World Congress (MWC) in February 2018. Further demonstrations of the individual test network capabilities took place in Bristol and the City of London in March 2018.

In March 2018, six 5G testbeds were selected to trial 5G technology in a number of sectors across the UK. These DCMS-sponsored projects will run from April 2018 until the end of March 2019.

We are now in the process of taking forward 5G projects in both urban and rural areas (Urban Connected Communities and Rural Connected Communities), which will begin to run trials in 2019 and will run until 2021.

Details of these and other parts of DCMS's 5G programme can be found at: <https://www.gov.uk/government/collections/5g-testbeds-and-trials-programme>.

7. Are local people going to be informed that these trials are happening?

In addition to the above website and other publicity, each project has a local focus and have highlighted their work via local publicity and press.

8. Has there been any consultation with people in these trial areas to elicit their views?

The Government has published Calls for Evidence: (<https://www.gov.uk/government/consultations/5g-call-for-evidence/5g-call-for-evidence>) and (<https://www.gov.uk/government/consultations/5g-network-deployment-pilots-call-for-views>) ahead of the six Phase 1 projects and the large-scale UCC project.

9. What monitoring of health and environmental effects are in place at the test sites?

5G equipment being deployed must comply with the Radio Equipment Directive (2014/53/EU) and EU harmonised standards listed in: https://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/red_en.

Employers must also carry out sufficient risk assessments for both their own employees and to those affected by work activities such as the general public. For EMF exposure the UK Health and Safety Executive refers to compliance of ICNIRP guidelines.

11. What is the proposed timetable for this?

The government's 5G Testbeds and Trials Programme was launched in late 2017 and will run until 2020/21. The purpose of this programme is to help industry understand how future 5G products, services and applications will be developed and the challenges of wider deployment.

As stated above, 5G is likely to be deployed as part of an intricate patchwork of technologies, including advanced LTE (4G), Wi-Fi and 5G New Radio (a 'network of networks'). Deployment will be in phases rather than all at once, and will likely vary by geography due to different demand levels and costs.

Wider national rollout of 5G will depend on many things, including the results of these trials and agreement of international 5G standards. Although one aim of the 5G programme is to grow the UK 5G ecosystem, the timetable for 5G rollout will mainly be defined by industry, based on the commercial opportunities.

12. Will local residents be informed when this is happening?

Wider rollout of 5G is not anticipated to be any different to rollout of previous wireless technologies e.g. 4G. So, for example, individual planning authorities administer the planning laws locally and issue permission to build masts through the normal planning process.

15. What is being done to investigate safer technologies such as fibre optics?

On 23 July 2018, the UK Government published the Future Telecoms Infrastructure Review (FTIR), a key part of our modern Industrial Strategy. The FTIR sets out a national, long-term strategy for digital connectivity to meet the government's targets of nationwide full fibre coverage by 2033. Full fibre to the premise (FTTP) will provide potential for gigabit speeds over a reliable connection.

The review can be found here: <https://www.gov.uk/government/publications/future-telecoms-infrastructure-review>.

I hope this information is helpful.

Yours sincerely,

Ministerial Support Team