



Ministry
of Defence

Ministry of Defence
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United Kingdom

Ref: FOI2018/13859

E-mail: ISS-SecretariatGpMbx@mod.gov.uk

19 November 2018

Dear [REDACTED],

Thank you for your email of 5 November 2018 requesting the following information:

"The first auction of 5G spectrum concluded in April 2018 when Ofcom sold 150MHz of 3.4GHz spectrum previously used by the Ministry of Defence. All four operators secured spectrum, although the fifth bidder, Airspan Spectrum Holdings, failed in its bid. The 3.4GHz spectrum will be used for – and central to – rolling out 5G networks. Ofcom also auctioned off 40MHz of 2.3GHz spectrum (also recovered from the MoD) for immediate use to provide additional capacity for existing networks, which can also be used for 5G in the future. O2 won all the available 2.3GHz spectrum."

I'd like to know the following:

- 1. What did the MOD use the '5G' bandwidths for within the UK and Worldwide?*
- 2. What software and hardware inventions, apparatus, tools, weapons, units and anything of note use the '5G' bandwidth?*
- 3. What were all the frequencies the MOD used?*
- 4. Why do the MOD use '5G' bandwidth?*
- 5. Have the MOD and its partners, agencies and suppliers tested and used 5G in the field and have now developed that technology for the consumer markets? If yes, what products have been developed for commercial use?*
- 6. I'd like to see all data on the safety concerns of Humans operating within a '5G' environment and how the MOD have set out guidelines for safe and unsafe exposure.*
- 7. Why is the MOD selling unused '5G' bandwidth?*
- 8. What is the MOD using in replacement of the '5G' bandwidth?*
- 9. What experiments did the MOD conduct using 5G and what are the dates and conclusions?"*

I am treating your correspondence as a request for information under the Freedom of Information Act 2000 (FOIA).

A search for the information has now been completed within the Ministry of Defence (MOD), and I can confirm that some information in scope of your request is held, and some of this is available in the public domain. Our answers are as follows:

Background information

The MOD released spectrum in 2015 at the request of Ofcom, in order to allow its wider use by the commercial sector. The spectrum was auctioned as technology neutral, and not specifically as "5G bandwidth". However, this spectrum was considered to be optimum for 5G technologies.

1. *What did the MOD use the '5G' bandwidths for within the UK and Worldwide?*

"5G bandwidth" does not exist, and therefore the MOD does not use it. However, some areas of spectrum are considered to be more suitable for 5G than others (see background information above).

2. *What software and hardware inventions, apparatus, tools, weapons, units and anything of note use the '5G' bandwidth?*

See answer provided for question 1 above.

3. *What were all the frequencies the MOD used?*

The MOD used spectrum in accordance with the UK Frequency Allocation Table 2015:

[UK Frequency Allocation Table 2015](#)

4. *Why do the MOD use '5G' bandwidth?*

See answer provided for question 1 above.

5. *Have the MOD and its partners, agencies and suppliers tested and used 5G in the field and have now developed that technology for the consumer markets? If yes, what products have been developed for commercial use?*

The MOD has not developed or tested 5G technologies.

6. *I'd like to see all data on the safety concerns of Humans operating within a '5G' environment and how the MOD have set out guidelines for safe and unsafe exposure.*

The MOD has no data on safety for 5G operation, as it has not developed any 5G capabilities.

7. *Why is the MOD selling unused '5G' bandwidth?*

In the Budget Statement of 2016 Government revised its original target, to make available 500MHz of public sector managed spectrum below 5GHz by 2020, to 750MHz of public sector managed spectrum in bands below 10GHz by 2022, of which 500MHz will be made available by 2020.

As a holder of public sector spectrum, Defence will contribute toward this target.

8. *What is the MOD using in replacement of the '5G' bandwidth?*

See answer provided for question 1 above.

9. *What experiments did the MOD conduct using 5G and what are the dates and conclusions?*

See answer provided for question 5 above.

Under Section 16 of the Freedom of Information Act (Advice and Assistance) please note that any further questions relating to the use of 5G in the UK should be directed to Ofcom:

www.ofcom.org.uk

If you have any queries regarding the content of this letter, please contact this office in the first instance.

If you wish to complain about the handling of your request, or the content of this response, you can request an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail CIO-FOI-IR@mod.gov.uk). Please note that any request for an internal review should be made within 40 working days of the date of this response.

If you remain dissatisfied following an internal review, you may raise your complaint directly to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal review process has been completed. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website at <https://ico.org.uk/>.

Yours sincerely,

ISS Secretariat