

Statement to Full Council – Impact of 5G on Wildlife & the Environment (Sarah Greensides)

The telecoms industry has produced safety guidelines for human beings exposed to wireless radiation. However, there are no equivalent safety guidelines for wildlife.

The higher frequencies used in 5G technology are known to be particularly damaging to insect and bird populations.

A 2018 study showed how the shorter wavelengths in higher frequencies are absorbed more easily by insects' bodies, creating a heating effect. There were increases in absorbed power up to 370% when the insects, including honeybees, were exposed to these frequencies, with detrimental effects on their behaviour and health.

As part of the Bristol is Open smart city 5G programme, we are told that "within the City of Bath... 60 GHz mmWave fronthaul network capacity exists between the Guildhall and Roman Baths sites". 60 Gigahertz is a high frequency.

There is already convincing evidence that 3G and 4G cause harm to wildlife, in particular our birds and pollinating insects such as bees who use electromagnetic fields for navigation and migration, and may be an important factor in colony collapse disorder. 4G will continue to be used alongside 5G.

In a 2010 study, researchers "compared the performance of honeybees in cell phone radiation exposed and unexposed colonies. A significant decline in colony strength and in the egg laying rate of the queen was observed. The behaviour of exposed foragers was negatively influenced by the exposure, there was neither honey nor pollen in the colony at the end of the experiment."

A 2013 review of 113 peer reviewed studies showed that in 70% of the studies, wireless radiation had a significant effect on birds, insects, other vertebrates, other organisms and plants. The greatest impact was on development and reproduction of birds and insects.

We are told that smart cities and interconnected gadgets will mean we are more energy efficient and can monitor air pollution and traffic flows. Yet 'smart' technology is carbon intensive, requiring mining of raw materials, manufacture and transportation, as well as waste from disposal of old gadgets and appliances. In 2018-19, data centres for the Internet and the servers that power them, produced more carbon emissions than aviation.

And what about trees? There has already been felling of thousands of healthy mature trees in areas earmarked for 5G, including along railway lines as Network Rail has plans for 5G across the entire rail network. Research by the University of Surrey refers to trees as an obstruction as their wet foliage can block the shorter wavelengths used in 5G. Felling of mature trees is at odds with climate change mitigation which requires the planting of more trees and the preservation of existing ones.

In a time of climate emergency, and when scientists have declared an insect apocalypse and when forests are under threat, is it not reckless in the extreme to roll out street level Wi-Fi,

4G and 5G on our lamp posts and other street furniture, to install towers in our fields and antennas along our railway lines? Biodiversity is a key goal in the Local Plan. Can we allow our desire for ever greater connectivity to triumph over sustainability?

At the very least, we are requesting that Bath and North East Somerset Council carry out an Environmental Impact Assessment on the effects of this technology.

Thank you.

Environmental Health Trust – links to numerous peer-reviewed scientific studies

<https://ehtrust.org/science/bees-butterflies-wildlife-research-electromagnetic-fields-environment/>