Mobile UK Information Sheet

Radio Signals and Health – Small cells

Small cells

'Small cells' (also known as micro-cells or pico-cells) are smaller antenna systems designed to work over a very short range, perhaps only a hundred metres. They can be deployed in high usage urban areas to ease congestion that could lead to problems for mobile phone users, such as dropped calls or a 'busy signal'.

Because they only need to cover a short range the power output is typically much lower than a larger macro base station. Small cells are generally either wall mounted or pole mounted.

- **Wall-mounted microcells**

  A wall-mounted antenna is normally located externally. The antenna is enclosed within a plastic case, similar in appearance to a security alarm box. The restricted access zone is normally located within this plastic casing. In all instances any restricted access zone is inaccessible to members of the public.

- **Pole-mounted microcells**

  Microcells can also be mounted on existing street furniture - typically a CCTV camera pole or lighting column. For these installations, the restricted access zone is typically a few centimeters from the antenna and is not accessible by the public..

Guidelines on radio frequency exposures

All UK mobile phone operators design build and operate their installations, both macro cells and small cells, comply with the guidelines set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). Independent surveys by the UK regulator have shown that radiofrequency exposure from UK mobile phone installations is hundreds of times below these guideline levels.

As with the larger radio base stations, there is a zone within a microcell in which it is possible that exposures might exceed guidelines. Public access is restricted to this zone which is a short distance only, typically a few centimetres.