

**Question 1: Have all the possible victims of interference been correctly identified and quantified as far as possible?:** Daconi believe that all users of the spectrum have been identified fairly and represented in the consultation document.

**Question 2: Have the costs and benefits been correctly captured? In particular, are the costs of interference to WLANs appropriately assessed?:** The estimated cost effect of interference to WLANs is difficult to quantify. However, Daconi believe the interference costs are over-estimated in the consultation document.

Interference is only of concern to a subset of users who need to achieve high performance from an 802.11 network, i.e. a high number of simultaneous users, wish to use emerging services which required QoS guarantees. Typically these will be large business users or schools, both of whom have their own (large) premises and grounds. Interference would only be an issue at the boundary of the premises/ground.

Businesses have other concerns, such as security, which may mandate fitting of Pilkington K Glass to heavily attenuate the transmitted signal (to prevent eaves-dropping). This would also have the effect of reducing interference as received signals would also be attenuated.

Note that both businesses and schools would benefit from reduced deployment costs due to increased coverage area of higher power equipment.

**Question 3: Are there any other mechanisms that could be used to restrict device operation to appropriate areas? Of the schemes set out which should be preferred?:** The use of location aware equipment in the UK is not a favourable option. This would considerably increase cost should GPS/Galileo chipsets become mandatory in high power equipment. Further complications involve equipment that is located indoors and without 'line of sky', rendering satellite tracking technologies useless.

Daconi believe Option one 'maximise benefits' is the correct option.

**Question 4: Should we move from specifying radiated power to specifying conducted power?:** Daconi believe the use of directional antenna, especially in the deployment of backhaul links (vital to BFWA/BWA deployments) will reduce the interference effects of any power increase. It makes sense to move towards conducted power outputs as this encourages the use of directional antenna, providing better performance in terms of selective coverage and interference to others.

**Question 5: For 2.4GHz which of these options do you favour? Are there other viable options that should be considered? Or should regulations be left unchanged?:** Daconi believe Option one 'maximise benefits' is the correct option. Increased power output to 10W EIRP will allow reduced deployment costs for the following users:

1. schools: which are located primarily in urban areas but in older buildings which have thick walls and higher power will reduce the total cost of deployment. Note that schools would not cause interference to others as they typically have their own grounds.

2. industrial: which are located primarily in urban areas but in older buildings which have thick or metal walls and higher power will reduce the total cost of deployment. Note that industrial units would not cause interference to others as they typically have their own grounds and tend to have metal screened buildings.

3. offices: which are located primarily in urban areas where higher power will reduce the total cost of deployment. Note that modern office buildings have Pilkington K Glass which heavily attenuates the signal i.e. reduces interference.

4. Rural CANs[2], and MESH networks: rural areas often contain houses with 'difficult' materials, such as stone, dense brick and lead, resulting in considerable attenuation to both 2.4Ghz/5Ghz signals. An increase in power would allow for greater coverage in MESH CANs and domestic WLANs.

Any power limits beyond 10W EIRP are not practical causing more problems with interference than economical benefit.

**Question 6: For 5GHz should Ofcom increase the power to 4W EIRP at 5.8GHz in accordance with ECC Recommendation and as set out in the draft IR2007? Should Ofcom open the database for public access to facilitate coordination?:** Daconi backhaul link solutions use C-Band 5.8Ghz spectrum. An increase of power to 4W EIRP would be beneficial to links that are borderline coverage with current limits.

Daconi believe Option one 'maximise benefits' is the correct option, i.e. no registration requirements should be placed on users.

Opening the database to the public has some major commercial factors that have to be taken into account. By requiring registration adds costs to any deployment. By making this data public, rival BFWA/BWA companies will be able to estimate each other's coverage areas. This may lead to segmentation/isolation of the BFWA/BWA market in rural areas with larger providers effectively 'buying out' smaller suppliers by registering multiple high power devices in areas of possible deployment.

**Additional comments:**