Protecting

OPERATING RESPONSIBLY

Exposure to radio frequency (RF) waves | Independent research | Handsets | Masts and network build | Mast sharing | Industry co-operation | Informed debate | Driver distraction | Health monitoring through mobile communications

GRI REFERENCES

2.9, 2.22, 3.10, 3.12, 3.13, 3.14, 3.15, 3.19, IO3, IO4, IO5, IO6, IO7, IO8, PA8, PA9, PR1, PR2, PR5, PR6, PR8, SO1 and TA4

There is much public debate about whether mobile phones, base stations and antennas cause adverse health effects – and we aim to provide the best information available today.

Our information leaflets are available in our stores and online and include information on:

- radio frequency (RF) from mobile phone masts;
- mobile handset Specific Absorption Rates (SARs);
- repetitive strain injury (RSI);
- safe use of mobile services, such as when driving.

www.o2.com/cr/report2005/downloads

Scientists have been studying the health effects of radio waves – used by many familiar technologies, such as TV and radio transmitters and cordless phones – for over 50 years.

So far, researchers have established that the only adverse effect from radio waves emitted by mobile communications is heating. Exposure guidelines, based on analysis of all relevant science, protect against this and incorporate precautionary margins.

The scientific consensus remains that mobile communication masts and mobile phones do not pose a threat to human health. For instance, the Stewart report of 2000 states that 'the balance of evidence does not suggest mobile phone technologies put the health of the general population of the UK at risk'. The National Radiological Protection Board (NRPB – now part of the Health Protection Agency) confirms in its report of January 2005 that 'the main conclusions of Stewart still apply today'. Both studies call for further independent research into any areas of uncertainty. We support this precautionary approach.

We take the concerns of our customers, employees and other stakeholders seriously, so we include the perception of an alleged health risk from mobile communications in our consolidated Group risk register.

The issue centres on whether exposure to radio frequency waves emitted from mobile phones and antennas causes adverse health effects. Our approach is to ensure we operate within the exposure guidelines. We also comply with best practice guidelines on responsible mast siting, openly consult with the communities where our networks are built and provide information materials.

In 2004/05, there were no complaints from regulatory or other official bodies that oversee our compliance with precautionary emission guidelines.

Exposure to radio frequency (RF) waves

We take care to ensure that the effect of our products, services and networks does not exceed international RF exposure limits.

All our products comply with international exposure guidelines and our network equipment is operated to ensure people are not inadvertently exposed above these guidelines. This includes the terrestrial trunked radio (TETRA) technology used by Airwave.

We adhere to the exposure guidelines issued by the UK's National Radiological Protection Board (NRPB), Germany's Strahlenschutzkommission (SSK), the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and the European Commission.

Independent research

We do not conduct or commission our own research on exposure to radio frequency. Instead, we monitor national and international studies and help to fund the main independent research programmes.

We agree with our industry peers and experts that clear scientific evidence can only come from a wide-ranging body of study. We will continue to support major independent studies with clearly stated and relevant objectives.

Our financial commitment last year exceeded £700,000 and in total it is well in excess of £1 million. We communicate with the Department of Health and the Department of Trade and Industry in the UK, Bundesamt für Strahlenschutz (Federal Radiation Protection Agency) in Germany, and a range of world trade bodies, health authorities and the World Health Organisation to ensure that the research addresses appropriate health concerns.

We expect significant research findings to be presented in the next two years. Current research includes studies within:

- the UK Mobile Telecommunications Health Research (MTHR) programme of 29 studies, a £7.36 million joint Government/Industry funded independent programme over six years;
- a UK Home Office study into TETRA, the technology used by Airwave, our secure network for the emergency services, including assessment of the Specific Absorption Rates (SAR) to the head;
- the joint funded German Government/ industry research programme – Deutches Mobilfunk Forschungsgemeinschaft;
- findings from the 'Interphone' research into the long-term use of mobile phones and whether there is any link to head and neck tumours. In 2006, we anticipate the results of the analysis by the International Agency for Research on Cancer (IARC);
- the World Health Organisation is expected to publish a health risk assessment on RF in 2007.

O2 has agreed to help fund a second five-year phase of the UK MTHR research programme.

Handsets

As the MTHR programme publishes research results, we expect a growing interest in handset SAR – a measure of the amount of radio wave energy absorbed by the body during mobile phone use.

We currently abide by a number of Government and voluntary commitments. They include publicising SAR values for phones and an agreement that we do not market our products to the under 16s.

All handsets we sell, including TETRA handsets, conform to the relevant SAR limit of 2 watts per kilogramme. Details for specific models of mobile phones are available in our UK stores and online.

www.mmfai.org | www.izmf.de | www.o2online.de | www.de.o2.com

It is often suggested that selecting a handset with a lower SAR is the best way to reduce exposure. For those who have concerns about exposure to radio frequency waves we suggest that moving the phone away from the body can be more effective, for example by using a hands-free kit, loudspeaker or texting function.

SAR information appears in the user guides of all of our products. A press critique and a BBC television report suggested that we were not offering customers enough information about SARs. We responded to this by aiming to include SAR values for each handset in our UK sales booklet and by providing new customer advice material to our store employees.

We have also helped the industry to formulate a policy on ways to minimise the risk of Repetitive Strain Injury from the hand movements in text messaging.

Masts and network build

O2 is guided by and fully supports best practice in the development of its mobile networks and we aim to be transparent in our network building plans. In total, our networks include 25,548 base stations. Wherever possible we aim to share sites with other operators.

Our approach – particularly in the current development of 3G services in the UK, Germany and Ireland, and Airwave – is to encourage dialogue and consultation with stakeholders.

We support the GSM Europe (GSME) recommendations on best practice, the UK industry's Ten Commitments to best siting practice, the code of best practice on mobile network development, and the joint operator voluntary agreement in Germany. These require improved communication and consultation, compliance with exposure guidelines and increased site sharing where feasible.

COMMENT FROM COUNCILLOR SUSIE KEMP, CHAIR OF LGA PLANNING COMMITTEE:

"I think it is great that O2 are taking the sustainability agenda seriously and look forward to seeing more tangible evidence over the next 12 months of how they have achieved real sustainability."

O2'S RESPONSE:

When considering where to locate new radio base stations, O2 always seeks to minimise the impact on the environment whilst at the same time keeping the local authority and community fully informed of its intentions.

See what you can do.

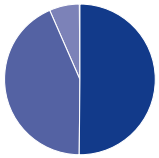
AVOIDING REPETITIVE STRAIN INJURY

When using a mobile phone for texting or playing games:

- Do not grip the phone tightly.
- Press the buttons lightly.
- Make use of the special features in the handset which minimise the number of buttons that have to be pressed, such as message templates and predictive text.
- Take lots of breaks to stretch and relax.

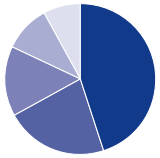
However, if symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensation, stiffness are experienced, do not ignore these warning signs and promptly see a qualified health professional.

CHART 1: Number of O2 Base stations in service (estimate)



UK (including Airwave)	12,811
Germany	11,061
Ireland	1,644
Isle of Man	32
Total	**25,548**

CHART 2: Number of queries to O2 UK on the sitings of communications masts 2004/05



Site Objection (pre-build)	532	45%
Site Objection (post-build)	261	22%
Land Offer	179	15%
Query (non complaint)	112	10%
Site Objection (health and safety and environmental)	90	8%

Our performance in meeting the Ten Commitments has been independently reviewed by Deloitte & Touche, on behalf of the Mobile Operators' Association, which published its second review during the year. The report concluded that the industry as a whole is improving its performance but that it could do better still. In response we have introduced improvements to our record keeping in the UK and are currently examining where we can consult local communities better.

Our performance in meeting the joint operator voluntary agreement in Germany was reviewed for the third time by Deutsche Institut für Urbanistik (German Institute of Urban Affairs).

In the UK, we experienced an increase in objections to new builds. This stemmed partly from our increased activities with 3G network building and partly, we believe, from the readily available information we produce for the public.

We have a dedicated team of community relations managers in each of our businesses and their job is to engage with local communities on our network building, especially if there is local opposition to a mast structure. We attend public meetings, consult through drop-in sessions, distribute information leaflets and, in the UK, operate a dedicated helpline for enquiries – telephone 0113 388 6780.

We provide local planning authorities with a list of all the UK sites we plan to develop in any coming year. This helps them to work with our community teams and to address potential concerns.

Mast sharing

In line with UK Government policy, it is our standard practice when searching for a site for a new base station, to see whether we can use an existing mast or structure. We also allow other operators to install their equipment on our ground based masts, where possible.

Some of O2 UK's ground based masts are capable of hosting equipment from other operators, but not all of these masts will meet the coverage requirements of other operators' networks. Sharing a mast means increasing the height and size of the mast and this is not always acceptable to local communities or local planning authorities, who sometimes prefer several smaller masts rather than one larger mast.
UK: **www.mobilemastinfo.com**
Ireland: **www.comreg.ie/sector**.

Industry co-operation

We participate in and co-fund a number of industry groups, including the Mobile Operators Association in the UK, the Informationszentrum Mobilfunk e.V. (IZMF) in Germany and the GSM Europe (GSME).

O2 chairs the GSME Health and Environment Working Group, the UK Mobile Operators Association Compliance Working Group, and is a member of the board of Informationszentrum Mobilfunk e.V. (IZMF) in Germany.

We have a formal agreement to share 3G networks with T-Mobile in Germany and a general policy to share masts with all other operators and to use existing infrastructure where possible.

Informed debate

Our leaflets now include information on health, child protection, customer safety and safe driving. We are committed to encouraging further debate on these issues.

We do not always get this right. During the year we were made aware of some criticism regarding the availability of Department of Health leaflets in our UK stores. So we improved our stocks of leaflets and included this measure in our regular internal store audits. At the same time, we produced new O2 health and safety leaflets, which can be viewed at:
www.o2.com/cr/report2005/downloads.

In 2004, we took a lead role in two health seminars, jointly organised by GSME, the European Commission and the Mobile Manufacturers' Forum. Consumers, regulators, industry bodies, activists and European MPs attended the events. A third seminar is being organised to take place in September 2005. The theme will be risk communication and stakeholder dialogue.

Driver distraction

We have reported on and contributed to the issue of distraction driving in the last two years and were involved in consulting with the UK Government on the legislation which now bans the use of hand-held mobile devices whilst driving. We believe this issue will soon become public again. Some experts now believe that it is the actual content of a conversation that is most likely to distract a driver and put safety at risk.

Health monitoring through mobile communications

We are funding the development of medical devices using mobile communications to monitor asthma and cystic fibrosis patients remotely.

Trials with asthma patients have already proved that many more patients monitored their breathing regularly this way compared with conventional methods. The cystic fibrosis trial is under way and results will be available at the end of 2005. We are also working with the British Lung Foundation which has commissioned a study to explore the attitudes of medical professionals and patients to the benefits of mobile communications to remote asthma monitoring. These results are due in 2006.