A POPULAR REVOLT

Costing £2.9 billion, the UK's new police communication system Tetra has been described by one independent scientist as likely to cause 'more civilian deaths than all the world's terrorist organisations put together'

Jay Griffiths reports

Before the Tetra mast was erected in Llanidloes, the nearest thing to a health scare there was the fact that the local Kwik Save was no longer selling prunes in apple juice.

Llanidloes is a small, open-hearted market town in a damp and lovely valley in mid Wales. It is a town with a strong identity and a long memory; some people still live in the street where they were born. Solidly Welsh, and surrounded by farmland, Llanidloes also has a smattering of English blow-ins; people who are into organic veg and eco-design and jazz, and who chirpily co-exist with no more than the odd grumble from locals about the 'hippy contingent'.

And then, stealthily, on a bank holiday weekend in May, the mobile phone company O_2 (through its subsidiary MMO_2) erected a Tetra mast in the heart of the town. O_2's idea of 'consultation' was legal but risible: it did little more than inform the mayor and town council that it was putting the mast up, whether Llanidloes liked it or not.

And Llanidloes did not.

There was an outcry. Posters were put up in windows, a march held, banners made. (One banner flew from the top of the mast itself.) Llanidloes joined what *The Times* has described as a 'popular revolt' against Tetra.

The local people felt bullied by a giant of a company. For many of them, it's an issue of local democracy: they should have the right to refuse. 'In Llanidloes,' says the stalwart and thoughtful local councillor Morgan, 'we have a history of David beating Goliath.' Someone else tells me that the town was the site of a Chartist riot in the 19th century.

And then the people of Llanidloes began educating themselves. What they discovered, just like hundreds of communities around the country, is the full staggering story of Tetra. A story that involves science being 'perverted for political ends', chronic illness and agonising death, one of the country's leading scientists performing an extraordinary U-turn, a company that openly confesses to taking no responsibility for the safety of what it produces, a financial scandal, a political scandal and, above all else, a health scandal.

If you live near a Tetra mast, then this story affects you directly. And considering that there will eventually be at least 3,200 such masts erected in the UK, there *will* be one near you.

Tetra stands for 'Terrestrial Trunked Radio'. It is the new police communication system using microwave radiation and low-frequency electromagnetic pulsing, and is operated by O_2 under the brand name Airwave. 'Airwave,' says a police source, 'is better than the old system for voice traffic: at least we don't get interference from Dutch cabbies anymore.' It also prevents criminals from listening in, as it has it's own private, digitally encrypted frequency. At present, police forces run their own analogue radio system, and it can be difficult for neighbouring forces to communicate with each other. By the end of 2005 this will no longer be a problem, as by then all the country's constabularies will have switched over to Tetra.

Not everyone, however, is so enthusiastic about Tetra. Dr Gerard Hyland, an expert in low-level radiation, member of the International Institute of Biophysics and prominent Tetra critic, states: 'With the Tetra roll-out we could be seeing a pandemic of brain tumours in 10 years.' Low-frequency radiation, says Hyland, affects brain function and the blood-brain barrier and degrades the immune system. Children are known to absorb far more radiation than adults. Writing in the medical journal *The Lancet* in November 2000, Hyland stated: 'Radiation is known to affect the brain rhythms, and children are particularly vulnerable... The main effects are neurological, causing headaches, memory loss and sleeping disorders.'

When a Tetra mast was switched on in Dursley in Gloucestershire people there complained of migraines, sleeplessness, nosebleeds and being 'shocked awake' up to 15 times a night. At a school in Littlehampton, Sussex, 11 children had to be sent home on the day that a nearby Tetra mast went live. The children suffered dizziness and, like the residents of Dursley, severe headaches and nosebleeds. (Interestingly, the local community did not know the mast had been switched on, so the children's reactions could not have been psychosomatic.) At Drumcarrow Hill in Fife a Tetra transmitter has been in operation since the late 1990s. Only about 200 people live around the mast, but there have been at least seven recent cases of cancer and five cases of motor neurone disease (MND) diagnosed in the area over the past five years. (Normally, no more than two people to every 100,000 is diagnosed with MND per year.)

WHEN A TETRA MAST WAS SWITCHED ON IN DURSLEY IN GLOUCESTERSHIRE PEOPLE THERE COMPLAINED OF MIGRAINES, SLEEPLESSNESS, NOSEBLEEDS AND BEING 'SHOCKED AWAKE' UP TO 15 TIMES A NIGHT

MND is a particularly nasty and fatal degenerative disease. Last year Dr Neil Cherry, former associate professor of environmental health at Lincoln University, died from it, convinced he had contracted MND as a consequence of his long exposure to low-frequency radiation, the potential health hazards of which he researched. Cherry's work suggests that low-level radiation, and Tetra, could also cause heart and blood problems, interference with bone marrow and tumours.

Not surprisingly, Llanidloes does not want Tetra. Nor did professor Sir David Lane, the director of the Cancer Research UK Cell Transformation Research Group at the University of Dundee, who submitted a formal objection to the siting of a Tetra mast and base station near his home on the grounds that it might 'constitute a health hazard to the occupants of the neighbouring houses'.

Even insurance companies, including firms like Lloyd's of »

London and Swiss Re, have advised each other that exclusion clauses should be written against paying compensation for illnesses caused by exposure to continuous long-term low-level radiation. John Fenn, of Sterling Underwriters, has said: 'I've been concerned about this for some time and a few years ago I began writing exclusion clauses. I'm convinced there is a problem.'

In the 1960s low-frequency electromagnetic and microwave radiation were identified as having potential for use in anti-personnel weapons. And the Pentagon has confirmed it has developed microwave crowd-control weapons. Documents from the US Department of Defense report: 'Animal experiments have demonstrated the use of low-level microwave signals to produce death by heart seizure or by neurological pathologies resulting from breaching the blood-brain barrier.' Ought a system developed as weaponry to be considered safe for the police and public?

Gerard Hyland is explicit. '[If you ask] whether there is an established risk to human health from exposure to Tetra radiation, the answer is undoubtedly "yes".' He adds: 'If there were the same degree of uncertainty over a food or medicine, the government would never have licensed it.' The problem is that while food and drugs are subject to a stringent and lengthy (but by no means infallible) testing regime, technologies like genetic engineering, nanotechnology and Tetra undergo much laxer scrutiny.

Blakemore, chief executive of the state funding body the Medical Research Council. Mysteriously, Blakemore, who is also a member of the National Radiological Protection Board's (NRPB) Advisory Group on Non-Ionising Radiation (Agnir), now says: 'On reflection [16Hz radio waves provide] absolutely no cause for alarm at all.' His explanation for this volte face is as follows: 'My mind hasn't changed. I still hold to both of my previous statements. In principle, it would have been better if 16Hz pulsing could have been avoided. But that was said in the context of the quite strict precautionary approach adopted by the Stewart Report.'

Because of that caution, Agnir was commissioned in 2001 to write a report on Tetra's possible health effects. Although Agnir's conclusion appeared to be 'all's well', there were worrying details in the body of its report, including the observation that studies 'do not exclude the possibility of a risk of cancer that appears only after many years of exposure, nor of a hazard from radiation modulated at around 16Hz'.

Yet if you telephone the NRPB as a member of the press you will be told: 'Agnir concluded that it was unlikely that special features of the Tetra system posed a risk to health.' And the website of the Tetra Industry Group (whose members include O_2, Motorola and Nokia) cheerfully says the group 'noted Agnir's conclusion that research published since the Stewart Report does not give cause for concern.'

I BELIEVE THAT THE GOVERNMENT, GOVERNMENT SCIENTISTS AND THIS INDUSTRY WILL BE RESPONSIBLE FOR MORE CIVILIAN DEATHS IN PEACETIME THAN ALL THE TERRORIST ORGANISATIONS PUT TOGETHER

The Green MEP for London Jean Lambert has said: 'Reports of Tetra being responsible for tumours, leukaemia, MND and other cancers must be taken seriously... With risks like these the precautionary principle must apply.' What Lambert refers to as the precautionary principle, the people of Llanidloes call common sense: if something may have risks, and has not been proved safe, it must be assumed that it may be dangerous. Clearly, there is a real need for tougher regulation and testing of new technologies, but the government doesn't see it that way at all, and the person it has put in charge of its Better Regulation Task Force is David Arculus, who is also chair of MMO_2. The fox is in charge of guarding the chicken coop.

The thing about Tetra that makes it potentially risky is that its signal has a frequency of 17.6 hertz (Hz; the hertz unit measures the number of times a signal's wave oscillates in a second). That's very close to the 16Hz frequency at which the brain 'loses' calcium – an effect known as calcium efflux and which has been linked to MND. [Tetra's frequency is also within the frequencies used by the brain's beta waves.]

The first warning over this came in the report of the influential Independent Expert Group on Mobile Phones (the Stewart Report). Published in 2000, the report stated that [radio] frequencies around 16Hz 'should be avoided, if possible'. The Stuart Report was authored by professor Colin

Why? The government agency the Police Information Technology Organisation (Pito) candidly says of the Agnir report that 'the research was commissioned to *reassure* users of systems like Airwave that they do not pose a risk'. The report itself echoes this observation: one study, it said, 'could be of crucial importance in helping to *reassure* users of the safety of amplitude-modulated and pulse-modulated communication systems'. (The italics are mine.) Call me old-fashioned, but I rather thought that the job of an organisation called the National Radiological Protection Board might be to protect the nation from hazardous radiation; instead it seems to be protecting industry from hazards to its profits.

Unconvinced by the Stewart Report, the Police Federation (the union-style representative body for police officers in England and Wales) commissioned independent research scientist Barrie Trower to complete a study on the possible risks of Tetra. He completed his report in September 2001, and the findings were shocking. The Police Federation sat on it for a few months, but it was leaked onto the internet. Trower, with a background in government microwave research, was a careful collator of the evidence and wrote his report in a style that would be comprehensible to a non-scientific reader; he was thus a profoundly important whistleblower – for the police and public alike. 'When I wrote the Tetra report,' »

Trower later commented, 'I said [the system] must never be used, and I haven't changed my mind. I believe that the government, government scientists and [this industry] will be responsible for more civilian deaths in peacetime than all the terrorist organisations put together.'

Astonishingly, however, the Home Office is rolling Tetra out nationwide without proper studies being done first: an act that Hyland describes as 'totally irresponsible'. The NRPB admits: 'No epidemiological study as yet has explored the risks associated with telecommunications systems such as Tetra which use [RF] radiation modulated at frequencies around 16Hz... Human volunteer studies should be carried out.'

I asked professor Lawrence Challis, who, like Colin Blakemore, is a member of Agnir, if proper studies had been done. 'No,' he said, 'because you'll never be able to say that something is safe unless you have an infinity of studies, but there is no evidence of any harm and the police are happy with the system.'

Last year the Home Office *did* commission a £5m study from Imperial College London to study Tetra's effects on police officers (not volunteers) over a 10-year period. But that study is only looking at the effect of handsets, and is being done while the system is already in use.

Since many of Tetra's potential effects could take years to surface, scientists agree that any studies of the system should run for several years. But the experiments that the government did instigate, at the Ministry of Defence's laboratories at Porton Down on Salisbury Plain, were completed in just three and a half months and involved exposure to Tetra signals lasting only 20 minutes.

Tetra was piloted in Lancashire in March 2001. Soon 177 police officers in the county reported symptoms that included migraine, nausea, sleeplessness and lack of concentration. Elsewhere, the Norfolk Constabulary has confirmed that six people have become ill with dizziness and headaches since a mast on top of North Walsham police station went live early this year. Twenty-five people living near the mast have reported similar illness.

While researching this article, I heard of police officers 'terrified' (their word) of using Tetra, but who were pressured not to speak openly about their fears. One officer from Lancashire wrote to *Police*, the Police Federation magazine, in March 2002, saying: 'I personally know of new cases of skin problems, sleeplessness, migraines, depression, difficulty in concentrating and headaches.' He has since been moved to another section. Another told me the system was a 'done deal the first day we heard of it'. Officers felt they had no choice in the matter. 'It was something we couldn't stop.'

Speaking only on condition of anonymity, a senior police source told me: 'I've got to be guarded. There's an awful lot of political pressure regarding this issue.' He was not allowed to speak to other officers about the risks of Tetra, and felt that his career was on the line if he objected publicly. He spoke of his feelings of being kept ignorant and isolated. He asked me for information and help – any help: legal help or campaign help. I was moved: it isn't often that someone so powerful sounds so helpless.

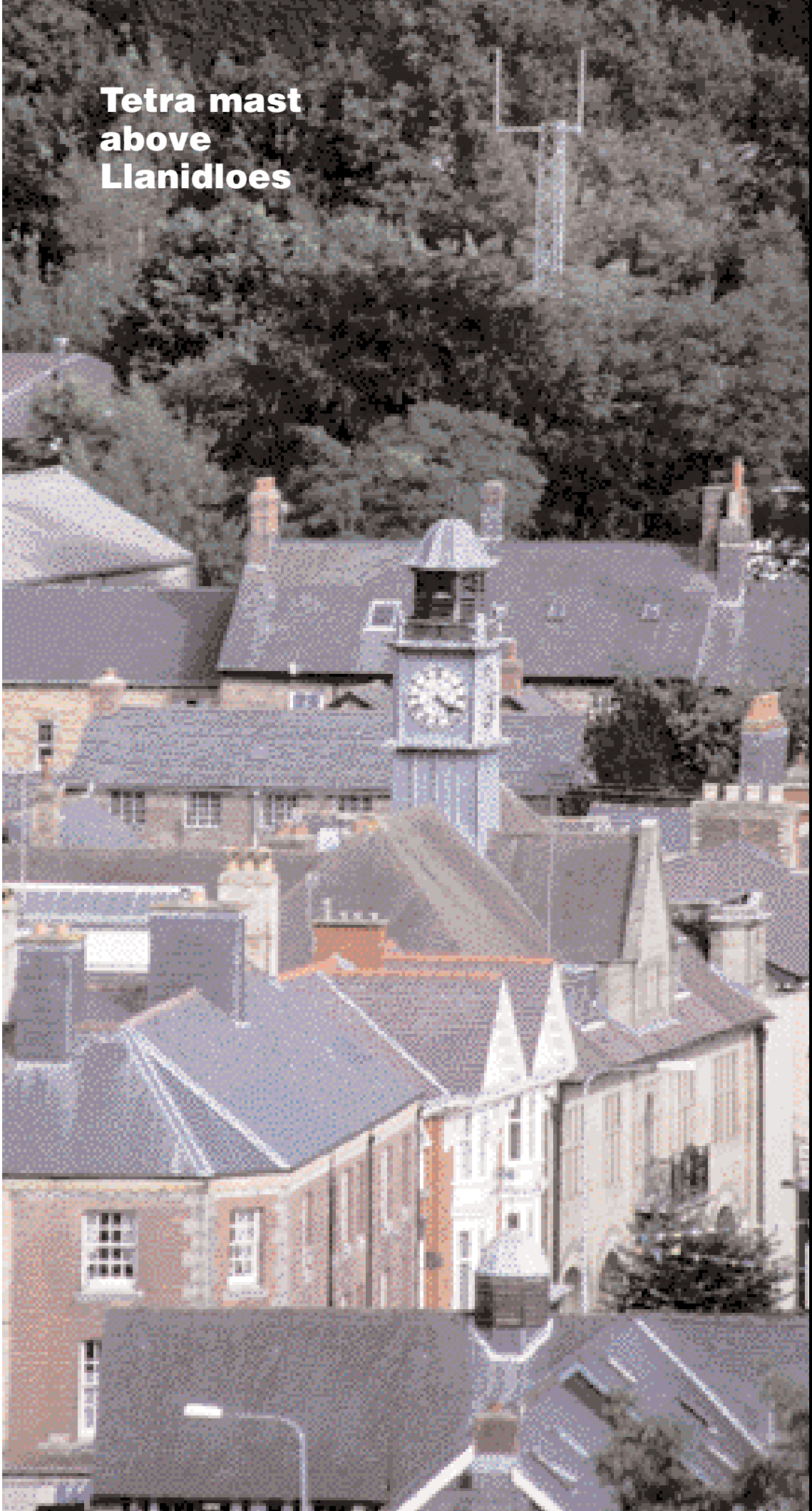
I spoke to Steve Pierce, chair of the Devon and Cornwall district of the Police Federation. 'We need 21st-century technology,' he said. 'And in that sense we welcome Tetra. But if you ask if I'm easy about Tetra, the answer is no. How can I be?' At a Police Federation meeting on Tetra in October 2002, Pierce spoke to Dr Mireille Levy, the Home Office health and safety officer for the system. Levy said: 'Nothing will stop Tetra and if the officers don't like it, they can resign.' Heads swivelled, conversations stopped, Pierce told me. An officer asked Levy who would be responsible if he contracted leukaemia. 'No one,' she replied.

Tell that to Dr Ian Dring. His brother Neil used to be a police officer in Leicester, and died in agony of oesophageal cancer this summer. Ian Dring said his brother was convinced that it was Tetra that caused his death. He said/says: 'If people want to know how it feels to have your brother die in your arms, fighting for 48 hours for every breath, then I'll tell them. It was a death you wouldn't wish on your worst enemy.'

> **"IF PEOPLE WANT TO KNOW HOW IT FEELS TO HAVE YOUR BROTHER DIE IN YOUR ARMS, FIGHTING FOR 48 HOURS FOR EVERY BREATH, THEN I'LL TELL THEM. IT WAS A DEATH YOU WOULDN'T WISH ON YOUR WORST ENEMY."** DR IAN DRING

Having spent much of his working life in health and safety, Ian Dring, himself a scientist, monitored his brother's condition. 'As soon as he started using Tetra he got severe headaches. And the site of the tumour was where he mounted the handset.' Neil Dring had none of the usual preconditions for oesophageal cancer: he was only 38, younger than the age group typically associated with it; he was a non-smoking, light-drinking triathlete with no stomach problems and whose diet was good. 'To us,' said Ian Dring, 'that's suspicious. And then another officer of similar age and equally healthy has been diagnosed with oesophageal cancer in the Leicester force and in the same place.' Ian Dring quotes the American Cancer Society as saying that for a man under 40 without preconditions the incidence rate of this type of cancer would be one in 100,000, and that the chances of two people of the same profile in the same environment getting it simultaneously would be millions to one.

Stan Sexton, health and safety adviser for the Leicestershire Constabulary, has said that the second officer rarely used Tetra for radio calls. But Dr Grahame Blackwell, who formerly led a team researching and developing third-generation mobile communications, says that irrelevant: radiation from handsets could trigger problems that could then be exacerbated by »



Tetra mast above Llanidloes

THE (NOT SO) SECRET POLICEMAN'S REPORT

So concerned was the Police Federation about the possible health risks of Tetra that in 2001 it commissioned independent research scientist Barrie Trower to write a report about the system. These are just some of the fears he voiced:

'...The good work of the hormone melatonin at night will be restricted leading to suppression of the immune system.'

'...[It] could enhance breast cancer in lady police officers.'

'...There could be long-term damage to the eyes of officers using Tetra.'

'...I am particularly concerned for the acutely sensitive brains and organs of police dogs.'

'...Tetra may be used in areas where children are running around, and there are very well-known and documented cases of pulse radiation affecting epileptic children.'

'...Because Tetra affects the beta rhythm of the brain it will affect what the beta rhythm is responsible for; namely, sound judgement in emergency situations.'

'I fail to see how Tetra can possibly be safe for the officers [who] use it.'

'...In an exclusive report in the *Manchester Evening News* [on] 11 May 2001 Dianne Bourne [wrote]: 'The head of brain surgery at Nasa has even said he would not consider holding [a Tetra handset] to his head. He said the net result is that the police are guinea pigs.'"

Although intended to be confidential, Trower's report was leaked onto the internet. Read it in its entirety at www.planningsanity.co.uk/reports/trower.htm

constant exposure to radiation from masts. I spoke to Lawrence Challis about the two Leicester officers. 'Sadly people die of cancer every day,' he said, and dismissed as chance the fact that two police officers working in the same force died of exactly the same extremely rare cancer.

Meanwhile, Llanidloes is realising the diversity of its talents. The mayor and his town councillors lobby energetically against the mast. An ex-physics teacher reads up on the science. In the buildings around the mast, people inform their landlords they will move out of rented business space if it is switched on. People who have never campaigned over anything in their lives get active. ('Never,' says councillor Morgan, 'never, ever underestimate Llanidloes.') The guys at the local printers stay working till 10 at night to help produce information leaflets. The council organises a leaflet drop to every house in the borough. Someone begins a 'NO_2 Tetra' subvertising campaign.

A public meeting is called. O_2 is invited. And the NRPB. And the supportive local MP Lembit Opik. Local people come in their hundreds. Virtually everyone attends. Except, that is, O_2: it sends an insulting letter saying, 'The nature of public opposition and local activism have raised serious concerns with regard to the safety of O_2 employees at such a meeting.' (*They* are worried about *their* safety?) Further, O_2 says the Llanidloes site 'perfectly fits the needs of the Airwave service'. 'But it does not,' comments Opik, 'fit the needs of Llanidloes.'

But the man from the NRPB, Dr Michael Clark, does attend. He speaks of sunshine, X-rays and ordinary radio signals. He says very little about Tetra. And he lies to the town, claiming that the Trower report was not commissioned by the Police Federation.

As stated above, the NRPB exists to regulate radiation. It is government-funded. Like many regulatory bodies, however, it has unhealthily close ties to the industry it claims to oversee, and there are clear conflicts of interest. The NRPB sub-contracts research on microwave radiation to a firm called Microwave Consultants Limited, whose director is Dr Camelia Gabriel, who also happens to be a senior consultant for the mobile phone company Orange.

Dr Keith Baverstock used to be the World Health Organisation's senior radiation adviser in Europe. In July 2004 he addressed a conference on low-level radiation and accused the NRPB of 'misusing' science (in studies of nuclear-test veterans). He said science had been 'perverted for political ends' by government agencies that should have been protecting public health. Baverstock alleged a 'serious flaw' in the NRPB's methodology in these studies.

The NRPB's reputation was further sullied by an article in *The Observer*, which said the board had misled the panel responsible for the Stewart Report about the availability of 'vital evidence of harmful effects on children from transmitter masts'. The panel had asked the NRPB for copies of a particular study on children; the NRPB informed it that the research was unpublished and unobtainable. Not so. *The Observer* reported: 'The research, published in an international scientific journal in 1996, has been easily obtained by ordinary members of the public.'

What's more, there is a yawning discrepancy between what the NRPB and other agencies consider are safe levels radiation. To illustrate this point, Alasdair Philips, the founder of the campaign group Powerwatch, draws an analogy between radiation levels and speed limits: it's as if Britain had a speed limit of 2,847mph, while the limit in the rest of the EU was 9mph. (See panel.)

Why the difference? Crucially, the NRPB sets its standards only after taking into account the *thermal* effects of radiation. But scientists like Gerard Hyland believe that it is the non-thermal effects of radiation that are 'far more serious'. With thermal effects there is enough energy to heat tissue; with non-thermal effects heating does not take place, but there are other adverse impacts on biological structure and the body's communication systems. Roger Coghill runs the independent Coghill Research Laboratories, which specialises in bioelectromagnetics. He says: 'The worldwide scientific community is shocked that the regulatory authorities of the West are ignoring plentiful and robust evidence that non-thermal radio-frequency exposure can cause serious adverse health effects.'

'WE ARE A GROUP OF PEOPLE WHO LOVE OUR JOB AND WE ARE NOT "TROUBLE MAKERS", BUT WE ARE GENUINE IN OUR BELIEF THAT THESE [TETRA] RADIOS ARE KILLING US.' ANONYMOUS POLICE OFFICER

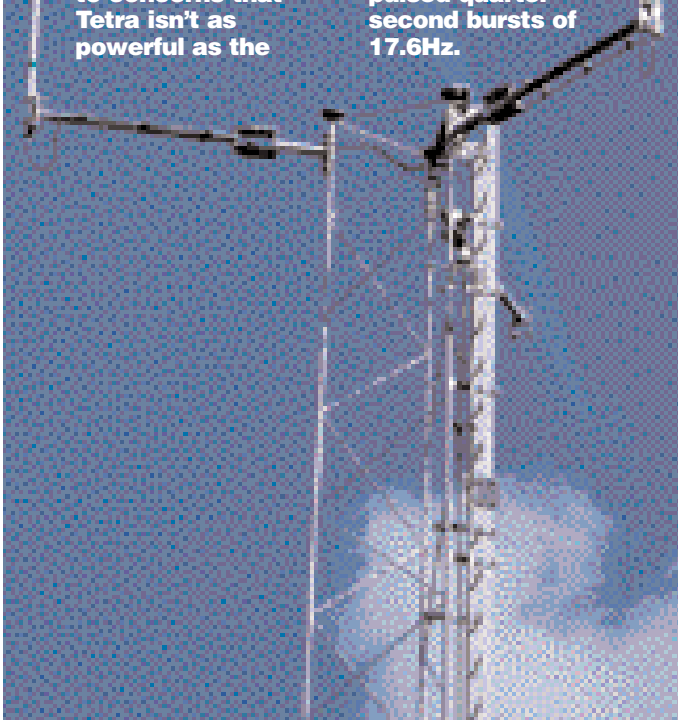
Meanwhile, the Home Office and O_2 insist the system is safe, and refer to the Agnir report for proof. But the Agnir study was not peer-reviewed. The NRPB has been furiously attacked by the Coghill Research Laboratories, which says the board fails 'to mention or discuss the hundreds of studies being reported in the literature of adverse effects at levels well below so-called thermal levels'; standards set in the West [for radio-frequency exposure] are 'influenced by commercial not biological considerations'; the work of the NRPB completely ignores the exposure levels set in China and the former Eastern bloc, and this 'raises the question whether such deliberate wilful omissions by experts purporting to carry out a protective function on behalf of the public constitute criminal neglect'.

O_2's response to public disquiet has been cavalier. It has been accused in court of 'corporate bullying' and, in reference to protesting residents, has said: 'We had to bring certain places into line.' A company spokesperson has even declared: »

What is TETRA?

There are two components to Tetra: the handsets and the masts. In order to give the system full national coverage, 3,350 Tetra masts are currently in the process of being built around the country, at distances of roughly eight miles apart. The masts emit a constant carrier signal, which the handsets tune into to transmit messages between each other. This will enable police officers to communicate with each other much as the general public now does with mobile phones. Due to concerns that Tetra isn't as powerful as the mobile phone company O_2 first promised, however, there is talk of doubling the number of masts.

When a policeman makes a call from his handset to that of another officer, the message is transmitted in electromagnetic waves, just as with a mobile phone. Tetra handsets emit both the constant carrier signal and a pulsed signal that carries the information of the message. The Tetra carrier signal is emitted at a constant 400MHz. The modulated signal is sent in pulsed quarter-second bursts of 17.6Hz.



'The safety of what we supply is nothing to do with us.'

At a meeting in the House of Commons between Llanidloes residents and the company, O_2 PR executive Josh Berle referred to the use of Tetra by the 'police, fire and ambulance services'. Not so fast. According to the House of Commons Library Research Papers, the fire and ambulance services have rejected it, apparently for reasons of cost. Tetra, said Berle, is in use in many countries. Careful. In fact, the system used by many national police forces, including those of France, Switzerland and Germany, is the French-standard Tetrapol, which, crucially, does not pulse at 17.6Hz. Alasdair Philips says Tetrapol is 'intrinsically more bio-friendly as it does not pulse in the same way or at similar endogenous brain-wave frequencies'.

Tetrapol is also far cheaper than Tetra, whose initial cost is £2.9 billion. Here we get to the financial scandal. Besides being very expensive, the Tetra system doesn't Do What It Says On the Tin. Its data-transmission speeds are about a quarter of what was promised. Further, it *does* do things it shouldn't: the former regulator the Medical Devices Agency (now subsumed under the Department of Health's Medicines and Healthcare Products Regulatory Agency) has complained that it interferes with defibrillators and incubators, can upset heart pacemakers and could have 'direct impact on patient care'.

The Home Office agreed the Tetra contract in a public-private partnership with BT (which then hived it off to O_2) and the US telecommunications company Motorola. Later, the House of Commons Public Accounts Committee scrutinised the deal and was unimpressed by Airwave as a system, and by the behaviour of the Home Office. The committee observed: 'Airwave might be more sophisticated and expensive than it really needs to be... In negotiating [the] deal the Home Office failed to secure any claw-back for the taxpayer of additional profits if the system is sold by O_2 to overseas governments... Failure to negotiate a claw-back agreement was a product not just of O_2 being in a powerful position as the only bidder, but also the inability of the Home Office to bring the fire service and other safety organisations on board... It was by no means clear to us who will bear the risk if concerns about the effects on health of using the Airwave system prove to be real.' This is the political scandal: that the Home Office should apparently put the interests of a huge private company before the safety of the police and the public.

The Tetra Industry Group admits on its website that it has its eye on the lucrative markets of the security, construction and transport sectors. It dearly wants to sell the Tetra system to many countries around the world. Barrie Trower says that one country to have rejected the system for its emergency services is the US.

The industry seeks the endorsement of the British police, which are seen as conservative, safety-conscious and well-equipped; it would be a kind of celebrity endorsement: 'as seen on *The Bill*. 'That,' says Grahame Blackwell, '[would be] a strong selling point. It's a very cynical use of our emergency services.'

Blackwell shows me extracts of e-mails from a member of a crime-scene examination team using Tetra in Lancashire. The e-mails grow increasingly desperate over the weeks, and describe

how all but one of the team is 'suffering from symptoms ranging from headaches, toothache [and] neuralgia, to high blood pressure and even a cancerous tumour in the throat... It is the tumour that has finally been the last straw'. The tumour victim, says Blackwell's correspondent, had been 'very pro-Tetra… Needless to say, he's changed his mind since finding out he has cancer'.

Just as I finish this article, Blackwell receives another e-mail. The officer with the tumour is now dead. His colleague remarks: 'We are a group of people who love our job and we are not "trouble makers", but we are genuine in our belief that these radios are killing us.'

Meanwhile, hundreds of local campaigns have sprung up around the country and are linking nationally. In Llanidloes the spirit of the Chartists lives on. Fighting for the rights of ordinary people to make the decisions affecting their lives, Chartists faced imprisonment and transportation for their part in a popular revolt. But ultimately they won. Let's hope the same is true of the people of Llanidloes. n

Jay Griffiths is a freelance journalist and author of *Pip Pip: a sideways look at time* (Flamingo); a fully referenced version of this article can be found on *The Ecologist* website (www.theecologist.org)

STOP TETRA BEING DEPLOYED IN YOUR COMMUNITY

1 Scour planning announcements in your local press for evidence of planning applications being submitted for Tetra masts. Look for references to O_2, MMO_2 and Airwave.

2 Copy this article and send it to your local councillors, asking them for a response.

3 Ask your council to let you know if there is any attempt in your locality to get Tetra masts approved as 'permitted development'. If so, encourage at least five local residents to send letters of objection, preferably by recorded delivery, to the named person from the company responsible and to your local authority's planning department.

4 Lobby your council generally. Although Tetra masts less than 15 metres high do not usually need planning permission, some councils have blocked permission for them. The telecommunications companies have gone to court, only to find the courts back the local authorities. Planning departments often say they cannot take fears over health risks into account when making their decisions. This is not so: there *is* legal precedent for health and *perceived* risks to health being accepted as material planning considerations (Skelt vs the First Secretary of State). Be aware that companies may put in two planning applications simultaneously for one mast site; both applications will need to be contested.

5 Speak to local landowners. If local people wish to make claims for ill health or depreciation of property, they can claim against the owners of the land on which Tetra masts are sited but not the companies (like O_2, for example) that own the masts. One landowner is being sued for £5.2m.

6 Adopt Motorola's slogan 'intelligence is everywhere', and stay informed. Visit these websites for up-to-date information:
www.tetrawatch.net
www.mastsanity.org
www.mastaction.co.uk
www.powerwatch.org.uk
www.starweave.com
www.em-hazard-therapy.com

7 Inform your community with leaflets and public meetings. Form a local campaign, and link up with other groups.

8 Talk to the local police, and send them a copy of this article.

9 If you are a Motorola or O2 customer, switch your phone to another company and tell Motorola and O_2 why.

10 Contact your MP and MEP. Green MEP Caroline Lucas has called for an EU-wide ban of Tetra. If her declaration for a ban were to attract 313 signatures from MEPs, it would become the official policy of the European Parliament, and Tetra could be stopped in its tracks.

11 Contact the local press.

And if your valiant attempts fail to stop the building and switching on of a Tetra mast near where you live, keep a daily diary recording your health – both before and after any masts are switched on. Your evidence may help in future legal cases against the companies using you as a guinea pig.