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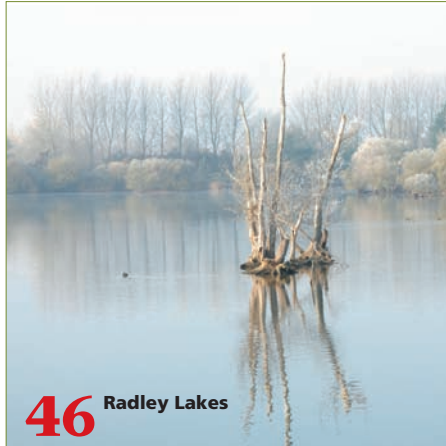
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Contents

NOVEMBER 2006 | ISSUE 9 | VOLUME 36



33 Obesity



46 Radley Lakes



52 East India Company

FEATURES

24 The British Landscape

Industrialisation is eroding our countryside, and the lives of people who inhabit it. Pictures by **John Davies**; words by **Jonathan Glancey**

28 There you go!

Somewhere in the rainforest, a tribe lives a simple undisturbed life – until someone decides to ‘develop’ them. Cartoon by **Oren Ginzburg**

30 The perils of plastic amnesia

Humanity's worst invention? The second runner-up in our essay competition says it's plastic bags

33 A big fat problem

Open any health magazine and the cure for obesity is ‘eat less, exercise more’. But what if the problem is chemicals, not calories? **Pat Thomas** investigates

46 Still waters run deep

NPower wants to tip waste ash from into local lakes. Residents want their favourite beauty spots left alone. By **Paul Kingsnorth**

52 Licensed to loot

The East India Company ran India into the ground to fill the coffers of Empire – paving the way for the modern corporation. By **Nick Robins**

COMMENTS

17 Don't take the Metro

Our cities are being flooded with free newspapers. **Jon Hughes** examines the environmental and cultural impacts of the ‘freesheet’

20 Love: batteries not included

A new film takes a comic look at the world's most popular vibrator. **Pat Thomas** asks how battery-powered sex affects human relationships

22 Detoxing childhood

The co-orchestrator of the Toxic Childhood campaign, **Richard House**, plots a healthier path for our nation's children

REGULARS

8 Up front

Justice for Bhopal?; return of terminator seeds; toxic sushi; the great wall of Texas; Warhol's green period

14 Behind the label: Flora pro-activ

It lowers your cholesterol but can it also change your sex?

44 Doomsday Funbook – Pollution by tourism

An editorial from February 1974, by *The Ecologist's* founding editor, Edward Goldsmith, examines the devastating environmental and social costs of mass tourism

57 Reviews

Why we lie; tales of sensuous seas; from slow food to quiet food; reclaiming corporate adspace; and Malcolm Tait's Wild Words

98 Cassandra

Our resident prophet grapples with spirituality and drugs

GREEN PAGES

64 November in season

Walk the talk by marching in London's biggest climate demo; enjoy real ales in Wales, organic food in Scotland, wild walks on the coast and more...

66 Slow Wines

Monty Waldin meets organic growers Bodegas Robles and Cantine Volpi and discovers how a belief in ‘prevention rather than cure’ helps them overcome the problem of rot.

69 Homemade Christmas gift special – delectable presents crafted by the *Ecologist* team

77 GREEN SHOPPING GUIDE...

Ethical gift special – a selection of gifts to buy, that don't cost the earth

85 Food & Drink

86 Home & Garden

88 Energy

90 Clothing

92 Baby & Child



75 YEARS AGO THIS MONTH...

Mao Zedong proclaims the People's Republic of China



'We must treasure our manpower and material resources, and must not take the short view and indulge in wastefulness and extravagance.' **Mao Zedong**

AND TODAY...?



Dry riverbed under the bridge that spans the Xiangjiang River in Changsha, capital of central China's Hunan Province.

Desertification affects the lives of more than 400 million people in China – 30 per cent of its population.

ecologist

Founded in 1970

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EDITORIAL

Amory Lovins of the Rocky Mountain Institute is more optimistic than most about our chances of shifting away from dependence on fossil fuels in time to avoid irreversible climate change. He often points out that America's second biggest industry in the 1850s was whale oil. Virtually every American home was lit by the stuff.



But then the price of whale oil rose as their numbers declined – or rather were wiped out. As a result, new opportunities arose. In short, within just nine years, whale oil had been entirely replaced by fossil fuels – and as Lovins points out, the whale oil traders were astonished that they ran out of customers before they ran out of whales.

Change is possible – and when it happens, it can happen fast. And there are more and more signs that suggest we're on the cusp of rapid change right now. We can see it happening at virtually every level. It's happening on the high street, where the giant retailers are desperately competing with one another to appear greenest. It's happening in the media and in our schools. It's happening in the City – where some of the country's biggest companies are openly calling on the government to provide greater leadership in the battle against climate change. It's happening in politics, where the debate has shifted away from 'if' to 'how' we deal with the biggest problem we've ever faced.

In short, it means the world is at last waking up.

Whereas only a handful of people took heed a few years ago, now even some of the world's biggest investment groups are crafting new, greener, constitutions. Last year, for instance, Goldman Sachs pledged not to invest in companies that damage the environment. Its interpretation of 'damage' was nowhere near as stringent as ours, but it was a start, and it moved the other banks to outdo it, starting a slow, but accelerating race, for once, to the top.

So, like the banks, supermarkets and politicians, the green movement also needs to respond to this burgeoning awareness of our environmental problems. That doesn't mean every corporate press release needs to be met with applause. On the contrary – more than ever, we have a responsibility to distinguish between progress and greenwash. But it also means that we need to be realistic.

Above all, the movement needs to shift dramatically towards presenting solutions – and that means understanding all the tools available to us, from farmers' markets to stock markets. For the stock market, long ignored as untouchable by most environmentalists, is the most powerful tool of all. Jonathan Porritt has described capitalism as the only game in town. It's certainly the most dominant. By acknowledging that and engaging with it rather than just turning away, the environmental movement stands a greater chance of changing what has been a force for colossal destruction into a force for renewal.

If the market has been blind to the value of the environment, it now needs to be made to see its value. Then perhaps the two can be reconciled – and the old choice between the biosphere and the economy can be bypassed altogether. Just as no one welcomes growth based on crime and drugs, so we must now reject growth based on destruction of our planet.

It goes without saying that whatever issues are faced by the environmental movement, we also face at this magazine. Our job today is to provide a philosophical context for the changes we need, to highlight best practice wherever we see it, and to present a coherent ecological vision that enables people to chart their way through the barrage of environmental claims and arguments that lie ahead. As the world around has changed, so too, over the coming months, will *The Ecologist*.

Letters

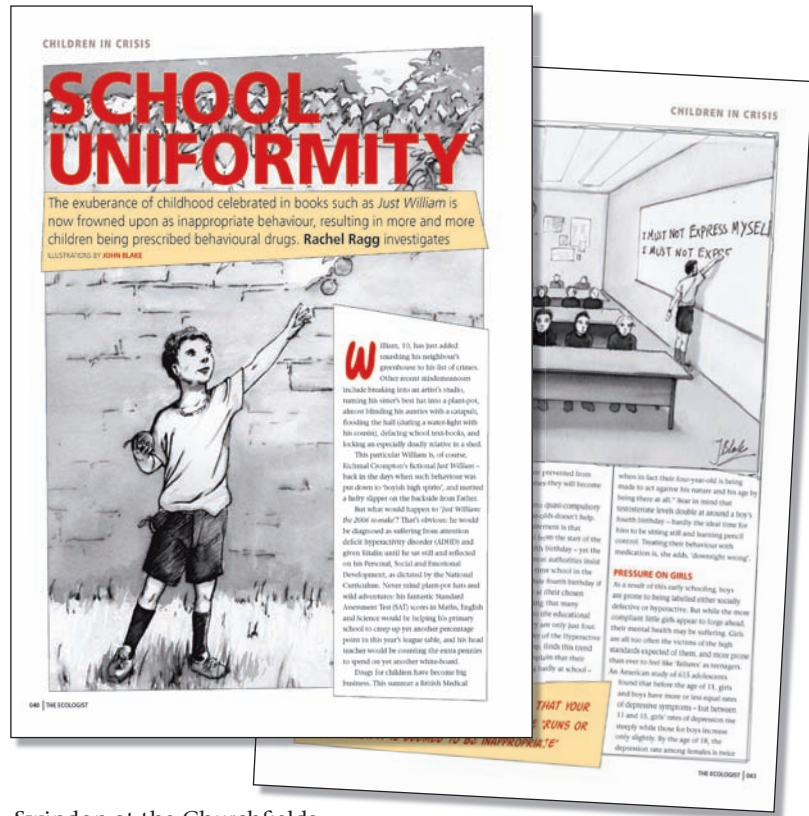
END OF THE CLASSROOM

Building on your statement that children “were never designed to be caged” (editorial, October 2006), I feel the need to say “Yes! the biggest cage is our schools and the system within them.”

The students’ basic school system has not changed since the creation of our state education system over 150 years ago. We began with a cottage industry system – called the classroom – and our school system is still based upon the classroom system, which is a teacher-centred, not student-centred, system. Like most cottage industries, which were swept away by the Industrial Revolution, our classroom system is low production (in terms of total student achievement) and relatively unchanging. You may ask, if this is so, why haven’t we changed our school system? After all, we’ve changed other social systems – banking, travel, food distribution, etc. The reason is simple: no-one saw how to cash in. It’s much easier to see the economic return of selling a magazine or a plane ticket than to cash in on a student’s better education.

Just how bad is the classroom system? It is just as bad as it would be for a doctor to see 30 different patients at the same time. The 30 students in any classroom are just as much individuals as the doctor’s patients (which is why he sees them one by one). But the teacher pretends the students aren’t individuals and instead that teacher teaches ‘the class’ a single lesson. I designed a secondary school system which is student-centred. I was about to introduce it by having the ISA sponsor a city academy in

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Swindon at the Churchfields School. But then I received a letter from the Government, telling me (after one and a half years of effort, in cooperation with a fine faculty team), to get lost. Even Don Foster, my local MP, couldn’t get an explanation.

Be that as it may, there is still the need for a new model school to demonstrate the quality of a student-centred education system and that it is economically feasible and easy to replicate anywhere and everywhere.

Karl Jaeger,
Founder, International School of America

RULES OF THE GAME?

One theme of David Nicholson-Lord’s article *The Numbers Game* (*The Ecologist*, October issue) is wonderfully illustrated on the magazine’s cover, on which you flag the article *Population and Consumption: it’s not just how many; it’s how we live that counts*. It seems that *The Ecologist* just can’t help being

politically correct! After all, the main thrust of David Nicholson-Lord’s piece was that we have to face up to the (now politically incorrect) fact that, in the industrialised world as much as elsewhere, numbers do count – and there are already too many of us, however greenly we live.

Rachel Murphy, Italy

RECYCLED RUBBISH

I wonder whether you are aware of the absolutely ridiculous state of affairs regarding the recycling collection in some parts of London. Hackney Council contracts out to ECT Group to collect our recycling, but Transport for London has given out so many [parking] tickets to ECT fleet vehicles for pausing in the bus lane in order to make their collections, that our recycling service has been discontinued without warning.

All the initiatives to do with waste in this city seem geared towards encouraging awareness and recycling, and

at the same time our recycling service is taken away and we are told to just throw everything into landfill or to carry all our recycling to the nearest recycling centre (which is some distance away). These options are clearly not helpful to someone who is incapacitated and/or cannot transport their own recycling.

Susan Kelly, by email

BIN THERE

re: *Modern Life is Rubbish* (July/August) – I spent just over a year working as a ‘recycling operative’ for a large privately run inner city waste management company in the North West and was horrified by my experiences.

Little by little I realised that the recycling operations were a farce. Good timber was shredded to make pet bedding and frequently transported far and wide because the firms contracted to take it could simply not cope with the volume. Fluorescent tubes were carefully collected from the public, stored, then smashed up and sprinkled back into the landfill waste. Plastics were collected as a PR exercise and supposedly shipped to Asia, though nobody would tell me what really happened to it. I could go on and on.

The truly saddening reality

is that daily we would have to ‘dispose’ of perfectly good materials, company liquidations, and slightly damaged goods brought in by high street retailers under the mythical banner of recycling. In one instance thousands of pounds worth of brandnew supposedly fairly traded oak furniture, wrought iron beds and handmade tiles were just dumped. Nobody apart from me asked why.

Finally I realised that this must happen hundreds of times every day across the ‘developed’ world. Why not collect these materials and give them to community projects who so desperately need them?

My point is that the public are encouraged to recycle as much as possible, but are largely ignorant to the complete inefficiency of the current system. Everyone should visit a landfill site and see for themselves the grimy truth.

Elise Hodent, by email

AN INCONVENIENT HALF-TRUTH

While the review of Al Gore’s film *An Inconvenient Truth* (October issue) was not exactly glowing in its appraisal, I was somewhat taken aback that it was given no criticism. It is staggering that Gore mentions

air travel not once in the entire film – in fact, a lot of footage shows him globetrotting, wandering around airports and sitting on aircraft.

He then goes on to advise people to buy cars which run on biofuel or convert their current cars to do so.

Many have flagged this as a highly dangerous ‘renewable’ form of energy. It may mean a choice between cheap fuel for cars and feeding the poorer citizens of the globe at some point not too far into the future. And it is likely to lead to further clearing of forests (and thus massive release of stored carbon dioxide).

Another inconsistency is that he was working on his slideshow on Apple laptops. The corporation was roundly condemned in Greenpeace’s latest annual survey of ‘eco-friendliness’ of the major consumer electronics manufacturers. The only thing that prevented it from coming rock bottom was that its recycling/dismantling policy in the US is slightly better than Lenovo’s, but is the absolute worst as far as built-in redundancy and continued utilisation of toxic and hazardous substances is concerned.

Owen Clipsham, by email

BREAST IS BEST

The article *Suck on This* (April issue) was truly excellent. I find it amazing that there are so many women who do not breastfeed their babies, in view of all the information available now, relaying how integral it

is to do so. It is very normal for women and babies to have difficulty breastfeeding at first, it is not as easy and natural as one may think. Women who have difficulty should seek help from local midwives, lactation consultants, or other mothers. Breastfeeding is part and parcel of motherhood. You owe it to your baby. And, once any initial challenges are overcome, it is a joy.

Worthy of mention, too, is that not only is the breast a source of perfect nutrition designed exactly for your baby, and no other, but it is also a wonderful ‘tool’ for mothers. It nourishes, calms, soothes, and comforts babies. It sends them off to sleep (and is designed to do this!), reduces their fear, and has even been proven to reduce the feeling of pain. The breast is a great healer in many ways.

Thank you, *The Ecologist* – you make the world a more informed place.

Alison Ramsay, New Zealand

BLT’S MISSING INGREDIENT

In your excellent feature *BLT: The Big Lifestyle Trade-off* (September 2006) there is one important omission – the soya element in the unfortunate pigs’ food. As with the palm oil in the sandwich’s bread, soya production is responsible for the destruction of large areas of tropical rainforest, with huge amounts of soya from Brazil being exported to Europe for animal feed.

Alan Drever, Isle of Skye



Ecologist poll – Should the publishers of free newspapers be compelled to pay to collect them all at the end of each day to avoid them ending up in landfill? Vote now at www.theecologist.org and read Jon Hughes’ Comment on page 17.

Results of last month’s poll – 76 per cent of respondents feel that the government should NOT allow BASF to trial GM potatoes in the UK.



Bush wrong, Gore right

The man who could break banks and is blamed for UK's Black Wednesday, George Soros, has delivered his verdict on global warming. In a statement posted on his website, the global economic guru says that former Vice President Al Gore's "persuasive presentation" is correct and that "unfortunately the Bush administration is in denial".

"The situation is not hopeless because we are likely to be more adaptable than we think, but the danger is real and there is no time to waste," he says. And in a clear warning to Bush that business is turning against him, Soros says: "Although the Kyoto Protocol came into force without US participation, future progress hinges on a change of attitude by the United States. Plans are afoot to mobilise US public opinion, and I hope that will make a difference."

CLIMATE CHANGE DENIERS ARE 'FLAT-EARTHERS'

The world's worst polluting nations have been told to prepare for decades of weather turmoil.

Environment and energy ministers meeting in Monterrey, Mexico, in October were told that every year wasted in curbing greenhouse gas emissions would cost them dearly.

Even if countries froze emission levels tomorrow, the world still faces 30 years of floods, heatwaves, hurricanes and coastal erosion, the British government's chief scientific advisor, Sir David King, said.

"We've got 30 years of climate change ahead of us even if we stop right now," Reuters reported King as saying.

"Because we've raised the carbon dioxide level in the atmosphere so quickly, the earth's climate system is falling behind. This is way in excess of anything the planet has known, probably for 45

million years," he continued.

Countries represented at the meeting included China and India. While the Bush administration refuses to accept climate change is happening, they sent a senior official, who made no comment.

"The people in denial now are the equivalent of the Flat Earth Society," British Energy Minister Malcolm Wicks told Reuters in an interview. "Humankind is in a race for life against global warming."

Mexico's Environment Minister, Jose Luis Luege, said: "Time is running out, and the size of the challenge is enormous."

Developing countries at the talks – including South Africa, Brazil and Mexico – were told to adapt for possible floods, droughts, storms and a surge in tropical diseases such as malaria.

Methane 'burps' pose fresh risk

Frozen bubbles in Siberian lakes are releasing methane, a greenhouse gas 23 times stronger than CO₂, at rates "five times higher than previously estimated", a paper published in the journal Nature warns.

Katey Walter, of the University of Alaska's Institute of Arctic Biology, said that methane emissions from the northern wetlands have been underestimated by between 10 and 63 per cent. Walter studied a unique type of permafrost, called yedoma, which contains an estimated 500 gigatons of carbon. Global warming is causing the permafrost to melt, allowing it to be released into the bottom of lakes, "providing microbes with a banquet from which they burp out methane as a byproduct of decomposition." With a significant thaw of permafrost during this century predicted, Walter said that "yedoma permafrost is like a time bomb waiting to go off."

14%

The amount by which Arctic perennial sea ice – the kind that stays frozen year-round – declined between 2004 and 2005.

LIFE'S A BOWL OF CHERRIES

Environment Minister Ian Pearson has told England's 27 million gardeners to prepare for climate change.

Ten of the warmest years on record have occurred since 1990, and July 2006 was the hottest month since records began. In parts of the south, the past two winters have been the driest in 80 years.

Pearson said that these conditions will become commonplace in future. The annual moisture content of soils was likely to decrease by 10 to 20 per cent on average across Britain by the

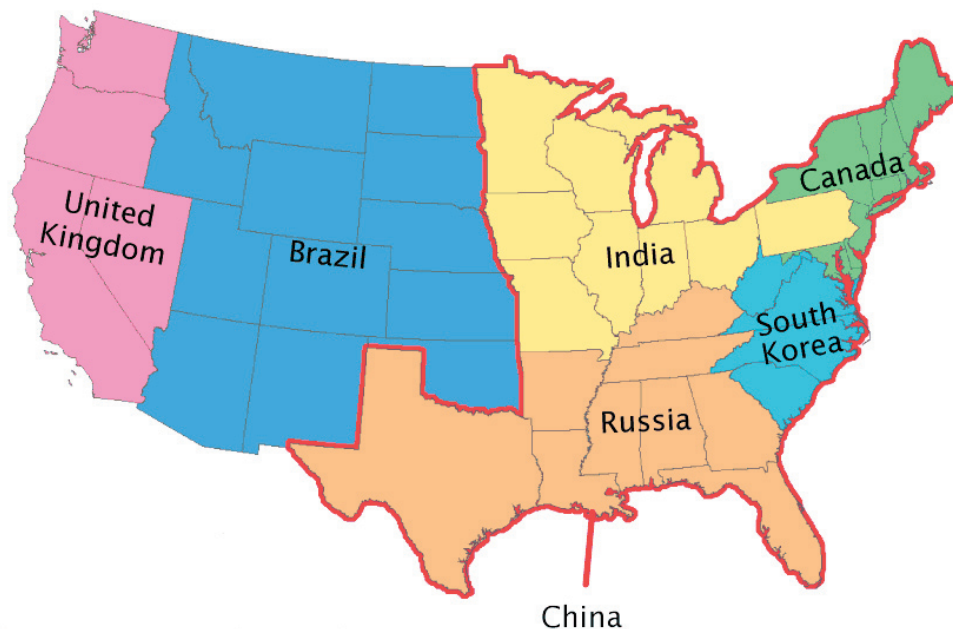


2080s – up to 50 per cent during summers.

Instead of the traditional hollyhocks, delphiniums, roses and fuschias, Pearson advised gardeners to choose drought-resistant plants such as marigolds, petunias or geraniums. They should also consider planting trees that will thrive in Britain's future climate, such as silver maple and black cherry.

The world's worst polluters

This map was created by the World Resources Institute using state emissions data from 2001. It shows how US regions compare to other major global emitters of greenhouse gases. The CO₂ emissions from all the countries represented currently account for three-quarters of worldwide emissions. China's proportion of emissions are outlined in red.



'CREATION CARE' TARGETS POLITICAL APATHY

A coalition of US churches with an estimated 45 million members has launched a campaign to get climate change on the US political agenda.

Copies of a specially-commissioned documentary, *The Great Warming*, started being screened in churches and cinemas across America in October. The aim of the screenings is to turn the large and powerful conservative Christian constituency into a voting block united behind making the reduction of greenhouse gases a top priority among politicians.

The movement by faith communities to become more active on environmental issues has been growing over recent years, with many undertaking energy-saving and energy-education projects that they describe as 'creation care'. More than 70 per cent of US churchgoers polled believed that global warming was occurring, according to a recent survey by the Pew Forum on Religion and Public Life.

Along with the documentary, the plan calls for more than 500 sermons on global warming, and includes a detailed list of questions for church members to ask political candidates. The National Council of Churches, Presbyterians for Restoring Creation and the National Association of Evangelicals are backing the campaign.

BIO FUEL

You could turn Oklahoma into an OPEC (oil producing economic countries) member by converting all its farmland to switch grass.

Richard W. Hamilton, chief executive of Ceres, a privately owned supplier of genetics technology to Monsanto.

We are facing an epic competition between the 800 million motorists who want to protect their mobility and the two billion poorest people in the world who simply want to survive.

Lester R. Brown, chief executive of the Earth Policy Institute

The U.S. Department of Agriculture reports that world grain consumption will increase by 20 million tons this year, an increase of around one per cent. Of that, 14 million tons will be used to fuel cars in the US, leaving only six million tons to cover the world's growing food needs.

DESPERATE TIMES...

To stall the pace of global warming for 20 years, climate scientist Tom Wigley of the National Center for Atmospheric Research has proposed that sulphur dioxide be funnelled into the stratosphere. The sulphur dioxide, a damaging pollutant on Earth, would form sulphate aerosol particles to shade the planet from the heat of the sun, much as the ash clouds from a major volcanic eruption do.

WHAT WE LEARNT THIS MONTH...

■ A US prison in Mason County, Texas, has been painted pink and prisoners forced to wear pink jumpsuits and pink slippers to try to stop them reoffending.

According to the local sheriff, the men are so terrified of being forced to wear pink that reoffending is currently down by 70 per cent.

■ Russian customs officers say they have discovered a mile-long pipeline that was pumping vodka to Latvia. The pipeline was discovered when local council workers started digging holes to plant trees in the area.

■ Council officials in Worcester have put up signs warning people of falling pears. The trees in Cripplegate Park, St John's, have been cordoned off and, according to the local councillor, the signs are "a lot cheaper than having a no-win, no-fee solicitor taking us to court."

■ The seemingly unstoppable rise of Tesco continues apace. The supermarket group, which recently announced half-year profits of £1bn, is the dominant player in 81 of the country's 121 post codes – up from 67 last year. Only four districts contribute nothing to its coffers.

■ The World Bank has invested more than \$US25bn in oil, gas and coal projects since 1992, when the Climate Convention, calling for such investments to be phased out, was signed. The Bank remains heavily invested in these sectors despite recommendations from its own panel of experts, which urged the bank to end all such investment by 2008.



BUSH IN CHILE GOLD RUSH

George Bush Snr is part of a multinational mining group that is set to prospect for gold under two glaciers in the Andean Cordillera region on the Chilean-Argentine frontier, a farming region that relies on the glacier-fed rivers to grow crops.

To mine the huge deposits of gold, silver and other minerals that have been found, Barrick Gold, the company behind the Pascua Lama project, proposes to break open the glaciers – something that has never been attempted before – and bore two huge tunnels; one for extraction and one to be the mine's rubbish tip.

This form of open-cast mining will kill the two rivers, as it uses cyanide and sulphuric acid during the extraction process, making it lethal to humans

and animals for generations to come. The Chilean Government had approved the project to start this year, but the farmers recently secured a temporary stay of execution. Now the farmers are trying to mobilise international opinion against the project.

They are asking people to raise petitions among their friends, "asking the Chilean Government not to authorise the Pascua Lama project, to protect the glaciers, the purity of the water of the San Felix Valley and El Transito, the quality of the agricultural land of the region of Atacama, and the quality of life of the Diaguita people"; and when the 100th signature has been raised, send it to noapascualama@yahoo.ca to be forwarded to the Chilean government.

Bhopal's search for justice

In December 1984, the Union Carbide pesticide plant in the central Indian city of Bhopal exploded, leaving between 3,500-7,500 people dead and many more maimed. Twenty-three years on the victims are still seeking justice. Their latest attempt failed in a New York court.

Without ruling on whether or not Union Carbide should be responsible for clearing up the thousands of tons of toxic wastes

abandoned in and around the factory, the court said that any order to clean up the site "will run into problems because of the impracticality of a court-supervised clean-up project on land owned by a foreign sovereign."

At least 300 tons of obsolete pesticides, including DDT, lie within the factory premises. Studies by the Indian government have since confirmed that many of these poisons have seeped into aquifers, poisoning local water supplies.

A survey conducted in 2002 by health workers from the Sambhavna Trust Clinic found that 98 per cent of the men surveyed and 95 per cent of women were anaemic. Trichlorobenzene – one of the 'Carbide chemicals' found in the drinking water – kills blood cells and causes anaemia. Union Carbide is now part of the Dow Chemicals group. Campaigners are now hoping to get the American courts to direct Union Carbide to appear in an Indian court.

See *Licensed To Loot*, page 52.





THE LESSER-SPOTTED ANDY

A little known side to Pop artist Andy Warhol has come to light. The man who saw his hallmark critique of consumerism and marketing appropriated by the industries he was attacking, was an ecologist. A series of paintings from 1976 called *Endangered Species* has recently been released to a US gallery from a private collection. In Warhol's inimitable style they depict animals that were then threatened with extinction. Warhol was influenced by Rachel Carson, whose book *Silent Spring* is often credited with sparking the modern environmental movement in America, and he collaborated with naturalist Kurt Benirschke to raise awareness about the plight of animals.

Politicians fail to grasp air pollution nettle

The World Health Organization has called on governments to improve air quality in their cities, saying air pollution prematurely kills two million people a year. But in the US and Europe, politicians are sitting on their hands for fear of upsetting big business.

The European Parliament in September put so many exemptions into the Thematic Strategy on Air Pollution it means no action will be taken before 2013. Air pollution causes 300,000 deaths a year within the EC, condemning nearly two million to a premature death.

In the US pollution experts have condemned the recently unveiled air quality standards,

which remain at the same level they were in 1997. They noted that 20 of the 22 members of the Environment Protection Agency's advisory panel called for more stringent reductions. The two who opposed the move were a former employee of General Motors and the former president of the Chemical Industry Institute of Toxicology.

Air pollution is made of a particulate matter, so small it can't be filtered out by the nose and throat so settles in the body, and is caused primarily by the burning of fossil and other types of fuel and chemical emissions.

See *A Big Fat Problem*, page 33.

Man has been empowered with reason, with the power to create. But up to now he hasn't been a creator, only a destroyer. Forests keep disappearing, rivers dry up, wildlife's become extinct, the climate's ruined and the land grows poorer and uglier every day.

Dramatist Anton Chekhov (1860-1904)

WASTED YOUTH

Health problems associated with living near a hazardous waste dumps have been 'seriously underestimated' a study has concluded. Dr David O. Carpenter, director of the Institute for Health and the Environment at the State University of New York at Albany, told Reuters Health: "Our major finding is that children living near to waste sites, whether landfills or contaminated bodies of water, are hospitalised more frequently with acute respiratory infections compared to children living in "clean" areas." The degree to which exposure to these contaminants suppresses immune system function has been "underestimated", Carpenter added. These results are consistent with the hypothesis that simply living near a waste site constitutes a risk. While the study concentrated on airborne contaminants, they are also in our food, said Carpenter.

Texas wall to halt economic migration threatens environment

Plans to build a fence along 700 miles (1,100km) of the US border with Mexico could mean the destruction of costly environmental restoration projects.

US Congress has given the go-ahead for the \$1.2 billion (€950 million) fence construction to stop economic migration from Mexico.

But environmentalists

say the plan could destroy habitats and cut off access to water for numerous animals, including the already endangered ocelot and jarguarundi.

"They move back and forth across the water," said Mary Lou Campbell, a conservation chairwoman with the Sierra Club's Lower Rio Grande Valley Group. "When you

isolate a species, you also alter their gene pool."

Some rare birds not found in other parts of Texas or the US could also lose prey and either die off or be forced to leave the area in search of food, Campbell added.

The North American Butterfly Association's International Butterfly Park also faces being pared by the project.

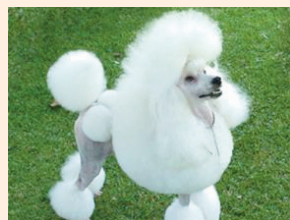


WATCHDOGS, POODLES, GUINEA PIGS AND DRUGS

When it comes to a conflict of interest, it's hard to beat that which exists between the global pharmaceutical corporations and the US drug watchdog.

Regulators usually don't negotiate their budgets with the industries they oversee... but the US Food and Drug Administration (FDA) does, and has done since the 1990s, when drug companies began paying the FDA millions of dollars to speed up the drug approval process. These fees now fund more than half the agency's critical review process. Industry groups and the FDA renegotiate the funding and its use, every five years and are currently in talks.

According to Anna Wilde Matthews, writing in the *Wall Street Journal*, the industry groups are pressing for faster decisions on labels and other conditions on approval of new drugs, and a faster review of adverts voluntarily submitted to the agency. The FDA, on the other hand, bizarrely wants more funding to monitor drugs' safety following their approval. The licensing of drugs in America is often a precursor of fast-track licensing in other countries, particularly within Europe and the UK.



KILLER SALMON

A new study published in the journal *Proceedings Of The National Academy Of Sciences* says that salmon farms are killing off wild salmon. "Before we knew there were potential problems," said Martin Krkosek, a doctoral student at the University of Alberta, who was lead author of the study. "Now it is very clear we have severe problems here."

The study found that salmon farms are massive breeding grounds for parasites known as sea lice. The parasites then concentrate in rivers and streams and kill the young salmon who do not have scales to protect themselves. Farmed salmon is also known to have higher levels of PCBs than wild salmon.



TOXIC TUNA, ANYONE?

In the US, tests on tuna sushi from top-rated Chicago restaurants found that 70 per cent of the samples exceeded guideline 'safe' levels of mercury. The survey, carried out by GotMercury.Org and Environment Illinois, recommended that restaurants and stores that sell tuna sushi, sashimi and `ahi should now post clear and concise mercury advisories so that consumers may make informed choices about what to eat. The problem of contaminated tuna has reached such proportions globally, however, that we can't be far from similar warnings on tinned and other types of tuna currently available.

Russia's uranium boom

Russia is to increase tenfold its investments in prospecting for and mining uranium in the next two years, the head of its Atomic Energy Agency has said. Expenditure will increase from 100 million rubles (\$US3.7 million dollars) to one billion rubles (\$US37 million dollars), agency boss Sergy Kirienko told the Ria-Novosti news agency. "It is not possible to limit developing countries' access to peaceful atomic energy, either from a political or an economic viewpoint," Kirienko said. The boom in prospecting is to fuel nuclear power stations being built both on Russian soil and abroad. Russia is currently finishing the construction of a nuclear power station at Bouchehr in Iran.

2kg

The worldwide average amount of pesticide used per hectare, a five-fold increase since 1961

DOG'S DEATH LINKED TO RESERVOIR

A dog died within 12 hours of being walked beside Bewl Water reservoir in Kent, the largest supplier of mains water in the South East. The reservoir has become contaminated with nitrates from agricultural fertilisers, which has led to a boom of blue-green algae. The algae produces toxins that can affect the brain and liver of animals. A vet diagnosed the dog as suffering from an acute hepatotoxic effect, and observed that her liver function had increased to 80 times beyond normal levels. A post-mortem revealed no traces of any household chemicals, yet Southern Water, the owners of the reservoir, have shown no interest in the post-mortem information. The dog's owner, Sarah Dacre, said that the dog had not been allowed swimming in the lake since the algae first appeared, in May. A spokesman for the Environment Agency said that they were "satisfied" with current health and safety precautions at the reservoir. In 2005, 28 per cent of UK rivers had high concentrations of nitrate chemicals. This flow of pollutants, combined with long, hot summers associated with global warming, causes the algae.

GOVERNMENT FUDGE ON SUICIDE SEEDS

The UK government is refusing to close a legal loophole that could allow GM plants with terminator technology into the country, says campaign group Progressio. Terminator technology describes the genetic modification of plants to make them produce sterile seeds, known as suicide seeds, so that farmers are forced to buy new seeds every year.

Although the UK is a signatory to the UN convention on bio-diversity (CBD) on terminator technology, the Department for Agriculture's position is that an application for field-testing or commercialising a product containing terminator will be dealt with like any other, on a case-by-case basis. In its view, socio-economic assessments would not be relevant in the UK and Europe since

seed saving is not deemed important here. And yet, according to the National Association of Agricultural Contractors, at least 30 per cent of all combinable crops in the UK are farm-saved.

Similarly, the Department for International Development does not seem to have a strong line against the development, testing and release of these technologies.

This is remarkable, because terminator and other GMOs have a clear restrictive purpose and could have such serious implications for the food security and livelihoods of millions of farmers in developing countries.

For further information see the insert *Say No To Suicide Seeds* in this edition, and visit www.banterminator.org



Mystery death

Philippine farmers' leader and anti-GMO and palm oil plantation campaigner Victor Olayvar was shot dead in September by unknown ambushers – five days after the Bohol Local Peace Forum, with support from the local governor and police, resolved to put a stop to political killings.

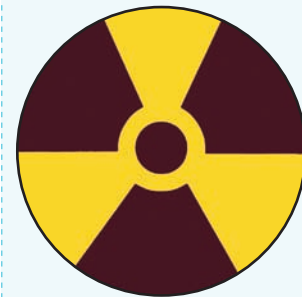
Olayvar was a respected local activist campaigning for the rights of farmers and marginalised groups, through the Bohol Network for Farmers Rights and other such organisations, which enabled the farmers to fight to retain some amount of freedom in the plants they can grow and agricultural practices they can perform. The human rights group, Karapatan, is independently investigating the case, suspicious of the snail's-pace of the official investigation.

THE EXERCISE MYTH

A report in the *British Medical Journal* says that getting children to do more exercise does not help reduce the risk of obesity. The research, which involved 545 children at 36 schools in Glasgow, divided the children into two groups. One group was allowed three additional 30-minute exercise sessions at school per week, and parents were given information encouraging them to increase their children's physical activity at home. The behaviour of the control group was not altered. The results found no significant difference in the body mass index (BMI) of the two groups of children after either six or 12 months. The researchers concluded that 'changes in other behaviours, including diet, may also be necessary.' In 2003, 8.5 per cent of six-year-olds in the UK were classified as obese. See *A Big Fat Problem*, page 33.

23%

The New Economics Foundation has calculated that we are now overstepping our annual supply of natural resources – crops, wood, fish and water and so forth – by 23 per cent. According to the research on sustainability, 'Ecological World Debt Day' fell on October 9 this year – which means that, without borrowing on our resource credit card, we should have been experiencing blackouts and the shelves should have been bare by now.



HIGH COURT CHALLENGE TO ENERGY REVIEW

Greenpeace has filed a case against the Government at the High Court over the recent Energy Review, claiming that the pro-nuclear outcome was pre-determined and unrelated to the submissions of the consultation.

The results of the Energy Review and how they were ascertained could face a full judicial review as a result of the case, with a new consultation a possibility.

Various studies that argued against nuclear power were submitted to the review process, including an independent report from WWF that showed a combination of renewable technology and efficiency investment could meet the UK's energy requirements.

"The government said it will support nuclear new build. This is a change in policy which they promised they would not make without the fullest public consultation and a White Paper. A comprehensive process might reach very different conclusions," said Sarah North, of Greenpeace.

BEHIND THE LABEL

FLORA PRO-ACTIV

Food is supposed to be good for you, which is why many people believe that functional foods such as cholesterol-lowering spreads are a 'good thing'. But are they? **Pat Thomas** reports

As a nation in search of better health, we are increasingly turning to functional foods and drinks – nutraceuticals, as they are known in the trade – such as the cholesterol-lowering spread Flora pro-activ, to supplement our diets. Last year we forked out around £375 million on the promise that these will bring better health.

With a turnover of £75 million a year and more than 50 per cent of the market, Flora pro-activ is the UK's leading cholesterol-lowering spread. It contains a high percentage of plant-based fats known as plant sterols, which medical research shows can reduce levels of 'bad' or low density lipoprotein (LDL)

cholesterol – the kind that clogs arteries.

Sterols belong to a group of chemicals that include the hormone estradiol, as well as other steroid hormones, vitamin D (cholecalciferol) and cholesterol (note the -ol ending in each name). The average Western diet contains only small amounts of plant sterols – around 250-500 mg per day. At these levels they appear to have little effect on cholesterol. But at higher levels, and with regular use, they reduce the absorption of cholesterol from the gut, with the knock-on effect of lowering concentrations of cholesterol in the blood.

Their benefits seem impressive at first glance. Approximately 3g daily can reduce LDL cholesterol levels by an average of 14 per cent within a few weeks – more than can usually be achieved through diet alone. But by focusing solely on the cholesterol-

lowering ability of plant sterols, we may have overlooked some of the potential problems associated with their use.

Hormones

Plant sterols can be derived from vegetable oils such as soya, canola and sunflower (this is the case with Flora). They can also come from the waste material from wood pulping – a potentially more toxic option to which food manufacturers are increasingly turning, as the demand for sterol additives increases.

Either way, the sterols in your spread are not in their natural state. Because they are not freely soluble in oils and fats, the sterol is first hydrogenated and then compounded, or esterified, with other fatty acids (usually from rapeseed oil) in order to make them mix better in the spread.

The next concern is about the pseudo-hormonal effects of sterols. Not long before the US Food and Drug Administration (FDA) first approved the use of sterols in foods, a Swedish review in 1998 made the chilling and largely ignored observation that "further studies



INGREDIENTS

Water, Vegetable oils (including sunflower oil), Plant sterol esters (12.5%), Modified tapioca starch, Salt (1.0%), Buttermilk, Emulsifiers: Mono- and di-glycerides of fatty acids, Sunflower lecithin, Preservative: Potassium sorbate, Citric acid, Vitamin E, Flavouring, Vitamin B6, Folic Acid, Colour: Beta carotene, Vitamins A, D and B12.

are required of [their] phyto-oestrogenic and endocrine effects, and [their] effects on growing children, particularly regarding subsequent fertility in boys.”

This research in humans still has not been done and monitoring of potential hormonal effects in regular users is likewise missing. Apologists describe the oestrogenic activity of plant sterols as weak and insignificant and extrapolated largely from animal studies.

But as far back as 1975, research identified the structural similarity between plant sterols and the morning-sickness drug Diethylstilboestrol, another ‘weak’ oestrogen associated with birth defects and reproductive cancers in women. Both in the laboratory and in the wild, plant sterols have been shown to provoke the growth of breast cancer cells and alter sex hormone levels in animals. Fish that live downstream from paper mills are routinely found to change sex due to exposure to sterol-containing effluents.

Because of all the unknowns about oestrogenic potential in humans, Flora and other sterol-containing products are legally required to carry a warning that ‘pregnant and breastfeeding women and children should not use this product’, as well as a recommendation not to exceed the recommended 3g of plant sterols daily (equivalent to three 20g servings of Flora pro-activ a day).

Another important and quantifiable concern about plant sterols is that they

reduce the absorption of some essential fat-soluble vitamins, especially beta carotene. Eating more fruit and vegetables would counter the decreased absorption of these vital nutrients – however, eating more fruit and vegetables in the first place would also lower your cholesterol levels, negating the need for a functional spread. It is worth noting that Flora pro-activ includes extra beta carotene, as well as vitamins E and D – not as an extra added health bonus but to counter the vitamin-depleting effect of the active ingredients.

No solution

While plant sterols have some benefits, they are not long-term solutions to anything and their use does nothing to encourage genuinely healthy eating.

Consumption of plant sterols needs to be considered in the overall picture of a person’s consumption of other sterol-containing foods – such as corn, wheat, rye, oat and olive oil, as well as beer and bourbon, borderline nutraceuticals such as soya, and the increasing variety of herbal medicines including wild yam, saw palmetto, pygeum, devil’s claw, ginkgo biloba, Panax and Siberian ginseng, each of which owe their beneficial actions in part to their plant sterol components.

As they are added to more and more foods, the chance of inadvertent over-consumption – and the potential health problems of this – grows more likely.

DIETARY SOURCES OF STEROLS

Using Flora pro-active will produce a higher cholesterol-lowering effect than could be achieved through diet alone, but not more than could be achieved using a combination of healthy diet and regular exercise. Furthermore, dietary modification and exercise produce long-term effects, while the effect of plant sterols lasts only as long as you continue to take them. Stop using Flora pro-activ and your cholesterol will return to previous levels.

There is no such thing as sterol deficiency, and with a few modifications most of us can get all the plant sterols we need from our diets. On average, 100g of fresh vegetables contain between 5 and 40 mg of plant sterols. Fresh fruit contains between 2 and 30 mg of plant sterols per 100g. Nuts and seeds, however, are the richest sources – sprouting seeds can have up to 120mg sterols per 100g.

Their ubiquity in fruits and vegetables could be taken as evidence that what many nutritionists have been saying for years may actually be true – that the hunter-gatherer diet, which contains a high level of plants and seeds, may really be the one that healthy humans were meant to eat.

INGREDIENTS

VEGETABLE OIL

Basic ingredient

The description on the label, “including sunflower oil” suggests that Flora is a mix of different oils. This mix can change from batch to batch according to the market price of the various oils. Most vegetable oils in processed foods are based on corn or sunflower oil, high in omega-6 fatty acids. Over-consumption of omega-6 is linked to cancer, immune system damage, hormone imbalance, heart disease and stroke.

PLANT STEROL ESTERS

Cholesterol-lowering additive

Interferes with absorption of some fat-soluble vitamins, principally carotenes. Potential hormone disrupters. Not proven safe for children or pregnant women.

MODIFIED TAPIOCA STARCH

Thickener, stabiliser

Modified food starch is a starch that has been treated physically or chemically to modify one or more of its properties. This all-purpose thickener is derived from cassava root or yucca plants and is at home in spreads as it is in adhesives, explosives, paper manufacture, and textile finishings. It is not a substance found in nature, it adds no nutritional value and there is no information on its health effects.

MONO- AND DI-GLYCERIDES OF FATTY ACIDS (E471), SUNFLOWER LECITHIN

Emulsifiers


This spread is a mixture of oil and water. Emulsifiers hold the mix together. Fatty acid esters are also commonly used in junk foods to keep them from getting stale. Flora’s use of sunflower lecithin is in response to consumer worries about the GM status of the world’s soya. Sunflower products tend to be GM-free.

FLAVOURINGS

Adds taste

Flavourings can be mixes of several synthetic chemicals. Essentially perfumes by another name, they will be derived from petrochemicals and contain the same range of neurotoxins, carcinogens and allergens as found in all perfumes.

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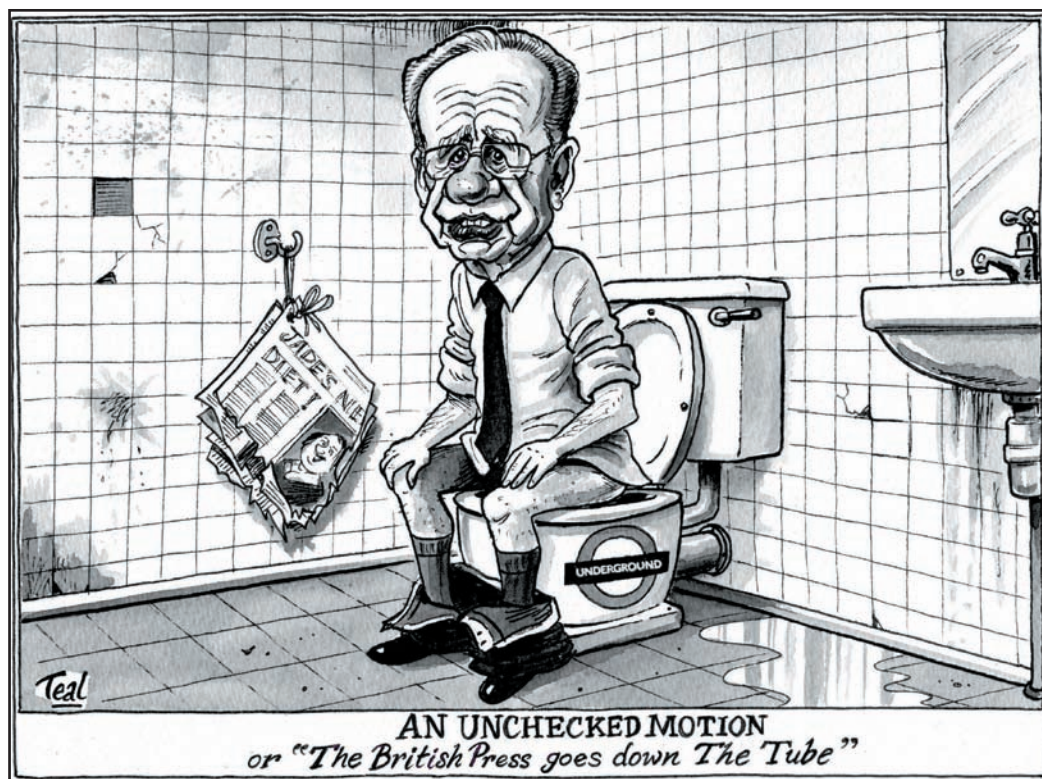
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What a load of rubbish

BY JON HUGHES

The rise of free newspapers means that hundreds of thousands of trees are pulped each week to provide us with disposable paper



London is in the grip of a turf war between the UK's heavyweight newspaper publishers. In the red corner is Rupert Murdoch's News International; and in the blue corner, Lord Rothermere's *Daily Mail* group, Associated Newspapers. Ordinarily this would be a joy to watch, in the hope that one would deliver a fatal blow to the other. But this time the stakes are too high to get any enjoyment from the ding-dong. At risk is the future of the British press, which for all its wrongs has been a mainstay of our system of democracy for centuries.

Forget the notion of the press ever having been objective: newspapers have always been politically driven. It is this fact that has always resulted in the politicians of the day being placed under intense scrutiny and exposed for wrongdoing, real or fabricated, by one title or another. Hence the press became known as the fourth estate – the counterbalance to the pomposity and hypocrisy of the Church, judiciary and executive. The current battle signals that any pretence that this situation still pertains is about to end.

Get on the London Underground today and you are in danger of being suffocated by one of a number of discarded freesheets, 1.5

million of which are being given away in and around the capital's Tube stations each day. The breakdown is as follows: Associated Newspapers' *Metro* 540,000; *London Lite* (also published by Associated Newspapers) and News International's *thelondonpaper* around 400,000 respectively, and *City AM* 65,000.

Soon to be added to this is a free afternoon paper to be distributed, like *Metro*, on the underground system, rather than outside Tube stations like the other three. And on the last Friday of September, two free sports newspapers were unleashed on an unsuspecting public. This is a problem that is growing like Topsy, which has an unchecked motion all of its own.

Look at the ballpark figures behind the 1.5 million daily papers put out by the current four. It takes 12 established trees to make one tonne of newsprint, which is enough to print 14,000 editions of an average-size tabloid. That means a daily usage of newsprint of a little over 107,000 tonnes. Which, in turn, means the felling of 1,284,000 trees.

Not directly, of course, as 70 per cent of paper used by the newspaper industry is claimed to be 'recycled'. On the face of it, this 'saves' 898,800 trees, meaning that only 385,200

“ We will become a news lite culture, further dislocating the executive from the people it should serve: us ”

“ Thanks to the rise of the freesheet, within a generation, paid-for newspapers could be nothing but a fond memory ”

are felled daily to feed London’s freesheet phenomenon. However, you have to remember that recycled paper has to come from somewhere – a virgin source – at some time. Predominantly in the UK, recycled paper usable for newsprint comes from unsold magazines.

Executives of the *Daily Mail* group and NewsCorp make great play of the possibility that the *London Lite* or *thelondonpaper* you’re reading today could be the same paper that you read two weeks ago – ie, it has been recycled. This is arrant nonsense.

To start with, recycled paper can only be used in newspapers a maximum of five or six times before the fibres become too short. Recycling may delay destruction. It does not confer immortality. And as we all know, for paper to be recycled it has to be separated out from other rubbish, such as cans and food waste, etc.

These freesheets are designed and marketed as ‘20-minute reads’. In other words, they have no retention value and none of the publishers expect them to be retained. Hence they are dumped on tubes and station platforms, or on the streets or in the municipal bins surrounding the tubes. Tube Lines and Metro Link, who run the tubes, admit that they only recycle around 10 per cent of the 100-150 tonnes of rubbish that is left on the Underground. No local authority is collecting its municipal rubbish from public litter bins and recycling it.

Just as there is no such thing as a free lunch, there is no such thing as a free newspaper when given out in such a ‘homeless’ manner. You will be paying for your supposedly free paper in your council tax, for it either to be landfilled or, worse, through the creation of an incinerator on your doorstep. Across the country, scores of these highly polluting destructor units are being planned, because burying our burgeoning waste in landfill is no longer an option – the methane released is hastening climate warming. How at this time publishers have been allowed free rein to create such litter on the streets of London, and a corresponding waste disposal problem, is a mystery. It won’t remain a London problem for long, however.

News International has registered the names *themanchesterpaper*, *theglasgowpaper*, *thenewcastlepaper*, etc, and Associated Newspapers’ *Metro* is already available in other cities, such as Brighton and Manchester, doubling its brand circulation.

The more sinister side of the freesheet phenomenon is its ultimate impact on paid-for newspapers, which within a generation could be a fond memory. The current crop of

freesheets are aimed at those who are too busy to read a newspaper or have no inclination to buy one. Rather than address the reason why the paying public is shunning their products, News International and Associated Newspapers are seeking to create revenue by numbers alone. Advertisers will be seduced with the argument that while only half a million editions of *Metro* are published, readership will be well over a million because it is dumped on the Tube.

In the long term, who is going to buy a newspaper when they have grown up having been given them for free? Already the pressure is growing. The famous *Manchester Evening News* is now given away free in inner-city Manchester in response to pressure from the presence of *Metro*.

Freesheets such as *Metro* et al operate on very tight margins. They have no care, consideration or concern about the area they serve, either environmentally or editorially. As they become more nationally embedded, whole elements of them will become syndicated, beginning with TV pages and pop gossip through to national and international news. They might tell you the what but not the how or the why. Investigations and campaigns will become rarer than they are now. Coverage of politics above the tittle-tattle of personality, less and less. At such a time, politics will correspondingly become more presidential than it has been of late and the parties will go down the road of American politics, addressing the public via TV and ‘shock jock’ adverts.

We will have our news, but it will be a news lite monoculture, further dislocating the executive from the people it is supposed to serve: us. To supply the newsprint on which all this trash is printed, whole swathes of Europe are being turned over to plantation forests, which is wiping out biodiversity. What we get for this is plantation news, with all the resonance of subjugation that word holds.

Don’t read this rubbish. Lobby your MP and local authority to seek ways to ban ‘homeless’ freesheets; withhold your council tax if they refuse to act. If the publishers of the *Daily Mail* and *The Sun* want to convert these and other paid-for papers into freesheets in order to raise advertising revenues (which, incidentally, have been dropping on their flagship titles over recent years), they should at the very least be made to deliver to homes, where there is an increased likelihood that they will be recycled, rather than carpet-bombing pedestrians.

Metro, *London Lite*, *thelondonpaper*, *City AM*? What a load of rubbish.

Jon Hughes is *The Ecologist’s* Deputy Editor.

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Love: batteries not included

BY PAT THOMAS

Relationships, like so many other aspects of modern life, are increasingly subject to the pressures of commercialisation. ‘Buy this and you’ll be happy’, suggests the marketing. And one recent product, both intimate and as impersonal as can be imagined, boasts particular success...

Women in the West are becoming slaves to a new addiction. During the day, they slip off for a quick fix; and in the privacy of their own homes a flat battery can trigger a desperate panic. So strong is the compulsion that their husbands and lovers are at a loss, the women themselves can’t concentrate at work – or don’t show up at all – and the economy is on the brink of collapse...

Women’s sexuality, it seems, has long been defined in terms of the problems it causes for men, and for the world in general. Now, with the outrageous premise that the women of the world are addicted to the Rabbit vibrator (just £28 from good retailers), the ‘mockumentary’ *Rabbit Fever* does little to move us forward from that tired cliché. This, however, is not a movie review. It is more in the nature of a reality check – because, like most comedy, *Rabbit Fever* has a dark truth lurking just beneath its single-punchline surface.

A friend of mine once opined that being sexually sophisticated and an environmentalist seemed mutually exclusive. Ecologically-minded people are notoriously (and rather unfairly) seen as sexless, hemp-wearing guardians of virtue and steely-eyed defenders of the missionary position. Yet how can anyone who espouses a slower, more genuine, more connected way of life, resist the temptation to comment on the relative virtues of slow, connected, committed sex compared to a quick-fix encounter with a buzzing, two-headed, bunny-eared, rubberised cartoon penis?

The Rabbit is the world’s best-selling vibrator. It exists in many versions and colours, with a variety of buttons to control the speed of the vibration, the rather intimidating swivel of the head, and the rabbit ear attachments that stimulate the clitoris or the anus, depending on your predilection. It is an intriguing piece of technology, efficient in its own specialised way.

But what happens if you subject the Rabbit to the kind of simple but reasonable questions that should be asked of any technology: How much and what kind of waste does it generate? How does it affect our perception of our needs? To what extent does it redefine reality? What is its potential to become addictive? What is lost in using it? What aspects of reality does it allow us to ignore? Does it reduce, deaden, or enhance the human experience? What aspect of the inner self does it reflect? Does it concentrate or equalise power? Does it foster diversity?

In the harsh light of such questions, the Rabbit

suddenly becomes much more interesting.

From a purely ecological standpoint, many vibrators and other sex toys don’t pass muster. They can be made of PVC and contain phthalates – cancer-promoting and hormone-disrupting chemicals. PVC also promotes a great deal of waste in its manufacture, and phthalates – which have been banned in children’s toys but not in grown-up toys – take a long time to break down. The lubricants necessary for the use of many sex toys can contain synthetic substances derived from petrochemicals and are likewise unsound.

There are better alternatives. Glass dildos, as a single example, are beautiful, hygienic and temperature-responsive. Unfortunately, like every other aspect of modern life, sex has become a plastic wasteland; and the Rabbit, for all its efficiency, is a big, brutal, ugly machine that requires a woman to be lubed up like a Ferrari before it can be comfortably, even safely, used.

Although the PR behind the Rabbit and other vibrators suggests that it has freed us from sexual repression, our embrace of the Rabbit has more to do with capitalism and consumerism than anything else.

In the struggle to normalise sexual diversity in our culture, sexual fulfilment has relatively recently been redefined as a human right. This is a risky strategy, because once something becomes a defined as a ‘right’ it is all too easily co-opted by commercial concerns. The ongoing popularity of the Rabbit says something very telling about how we as a society react to complex issues – usually by asking, “What can we buy to make things simple again?”

Hardly surprising, then, that vibrators are big business these days. In the UK, we buy more than two million of them each year – more than the number of washing machines sold. You can purchase them in a bewildering array of sizes, shapes, textures and colours.

They are so much a part of the Zeitgeist that you can even find ones – sporting groan-inducingly evocative names such as Audi-oh, iBuzz and OhMiBod – that plug directly into your iPod and vibrate to the beat of the music. Talk about a whole new way to play...

The popular press assumption is that frustrated heterosexual women are the sole purchasers of vibrators – though, of course, they are probably equally popular among gay men. We will never know who buys what or in what quantity, since the Department of Trade

“Although the PR behind the Rabbit and other vibrators suggests that it has freed us from sexual repression... it has more to do with consumerism and capitalism than anything else”

and Industry doesn't monitor such things.

Few people realise that the vibrator was the fifth electrical device to receive a patent – after the toaster but before the vacuum cleaner and iron. The grouping of a sexual aid with household labour-saving devices is as enlightening about our attitudes to sex as it is unsettling.

According to Rachel Maines' book *The Technology of Orgasm*, the first vibrators were steam-powered and used to treat women suffering from anxiety and hysteria. Before the miracle of steam, male physicians performed what they called 'clitoral massage' to treat these hysterical women. The manual procedure was considered to be a form of drudgery and many doctors welcomed the newer steam- and, eventually, electrically-powered devices that got the job done more quickly and efficiently.

The continued popularity of vibrators in general, and the Rabbit in particular, suggest that the ancient biases which view a woman's orgasm as both a chore and a cure persist even in the so-called enlightened 21st century.

While the Rabbit can deliver a decent orgasm, it can also be a distraction from some fundamental problems relating to the breakdown of loving relationships in the UK and elsewhere.

Earlier this year, the women's magazine *Grazia* surveyed readers to ask how often they fret about their bodies. It found that the average woman worries about her perceived bodily flaws every 15 minutes – more frequently than most men think about sex. Nearly a third of women worried about their size and shape every minute of the day. In the context of all this self-loathing, the rising popularity of the Rabbit makes sense. The Rabbit gets the job done without the potential complications and judgments that a man whose fantasy life is fuelled largely by reading *Nuts* or *GQ* would bring to the relationship.

Surveys into women's attitudes to sex are similarly depressing. Newspapers and magazines fairly groan with stories of women who can't be bothered with and aren't enjoying sex any more; stories that suggest that women do indeed see sex as a chore.

Fay Weldon's latest book, *What Makes Women Happy?*, proposes that the best way to dispatch with the chore of sex is to fake orgasm (ie lie), tell your man what a clever chap he is for making you so happy (lie some more), and then cheerfully get up and pour yourselves some champagne (and get drunk). Such an emotionally numbing solution to the lack of pleasure and connection in people's lives beggars belief. Yet it goes some way towards explaining why the Brits recently came bottom

of a list of developed countries where sex was viewed as a source of satisfaction.

For years, the vibrator has been sold as an antidote to all this. It's been hyped as a woman's strongest weapon in the battle of the sexes – a feminist-approved tool that will help women express their sexuality and release them from inhibitions. If you can't get a man, get a Rabbit. If you've got a man but he's some sort of sexual nitwit, buy two.

But the suggestion that women using a Rabbit are somehow taking a more active role in their sexuality, is like suggesting that women are taking a more active role in the laundry by using a washing machine.

The Rabbit is not about sexuality; it is about orgasm. Indeed, orgasm has become both the destination and the journey of modern sex, a quick release and temporary cure for anything that ails you. What, after all, were the women in *Sex in the City*, the TV programme that launched the Rabbit into the marketplace, looking for except a little sexual salve?

Sexual expression is a constantly evolving thing and the normalisation of sexual options is a positive thing. A broad sexual palette can make life more interesting. But the most worrisome aspect of the Rabbit phenomenon is the way it distracts us from all the stuff that makes sex so good in the first place: the sensuality and spirituality, the light and shade of lovemaking that everyone has to work at to get right over the longer term.

If we have reached a point where we can't enjoy or even imagine sex without all the bells and whistles, the jelly spikes, ridges, nodules and rotating ball bearings, then we are in trouble, because sexual satisfaction is more complex than a handful of batteries and a variable speed-control button.

Sex isn't always easy, or good, or glamorous. If it was we'd all be getting it right all the time and the Rabbit-makers would be out of business. Instead it is dependent on a complex mixture of things: the psychological state of the people involved, their health, their ability to recognise and acknowledge their own and each other's needs, desires and emotions, their level of intimacy and maturity, as well as the ambiance in the room, its temperature, its sounds, its smells and tastes.

What is more, sexual satisfaction can almost always be correlated to relationship satisfaction. A recent global survey found that the couples who are most fulfilled and happy with their sex lives are those whose relationships are based on equality rather than the will to dominate. In

“If we have reached a point where we can't enjoy sex without the bells and whistles... we are in trouble, because sexual satisfaction is more complex than a handful of batteries and a variable speed-control button”

“How we relate to each other and ourselves influences how we relate to the world. If we can't find a nourishing connection with the ones we love, how will we find the personal resources to make the world a better place?”

this context, sexual pleasure and orgasm aren't something that one partner bestows upon another but are instead part of a shared journey.

There's a bigger picture here too. The premise of a deep ecology is as valid in the bedroom as it is on the savannah, the rainforest or the wetlands. How we relate to each other and to ourselves directly influences how we relate to the world. How we treat our bodies is reflected in how we treat the environment.

If we increasingly treat sex like fast food, rush through it without consciousness or contemplation, then move on to the next item on day's to-do list, and if we can't find a nourishing connection with the ones we love the most, how on earth are we going to find the personal resources to understand the world we have created and strive to make it a better place?

Can fast, orgasm-focused sex be good sex? Of course it can. But an over-dependence on bedroom gadgets like the Rabbit can encourage a kind of sexual monoculture where fast sex, like fast food, becomes the norm. And, like fast food, it may fill a hole, but it hardly makes a dent in the void.

Pat Thomas is *The Ecologist's* Health Editor.

Detoxing childhood

DR RICHARD HOUSE

As the world wakes up to the ever-growing problems crippling our children, the co-orchestrator of the Toxic Childhood campaign points the way out of the current crisis

There are few less edifying character traits than quasi-evangelical self-congratulation; yet some of us have been banging on about the degradation of childhood for so many years that we find it hard to resist whispering 'we told you so!' to the many substantial public-policy makers who now almost seem to be claiming that they've discovered the problem themselves. Of course, 'twere ever thus; we should just be grateful that this 'powder-keg' of a media story has at long last gone off – and is now, following our Open Letter in *The Daily Telegraph* on September 12, still reverberating around the media channels of the Western world.

Nor is the outbreak of concern about childhood confined to our Open Letter, to Jamie Oliver's admirable school nutrition campaign, and the Children's Society's recently-launched two-year open inquiry into 'Good Childhood' – plus a major feature on childhood in *Newsweek* magazine recently, and Rachel Ragg's excellent polemic on the crisis of childhood in *The Ecologist* last month. What we are witnessing are concerns about childhood spontaneously mushrooming and coalescing all over the world.

Here I can only touch on the manifold concerns that Rachel Ragg did such a grand job of highlighting: the inappropriate drugging of our children (is 'ADHD' a valid scientific-diagnostic category, or merely a convenient ideological invention?); the stultifyingly utilitarian mainstream schooling centred on the chronically overloaded National Curriculum and the unforgiving testing and surveillance culture (whose demands have reached pathologically toxic proportions);

ARTS & ECOLOGY

NO WAY BACK?

A two day international conference
11 & 12 December 2006

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Taking place at the LSE, the Enquiry **NO WAY BACK?** aims to provide different perspectives on ecological issues from major thinkers of our time. Bringing together artists, geographers, ecologists, economists, sociologists, architects, philosophers, anthropologists & others, it will focus on real places and issues. The exploration will include keynote presentations, workshops, panel discussions, walks, readings, screenings, artists' interventions and will encourage dialogue with and among the delegates.

NO WAY BACK? is a joint RSA (Royal Society for the Encouragement of Arts, Manufactures & Commerce), Arts Council England and London School of Economics and Political Science event. It is also part of the RSA Arts & Ecology programme—an initiative supporting artists in examining and addressing environmental concerns in an international arena.

Information and booking:
www.rsaaartsandecology.org.uk



the ‘trouble with boys’ and the unnecessarily early formal school starting age; the economy-driven political selling of the grotesquely termed ‘wraparound child care’, when all recent research (eg Steve Biddulph’s work) demonstrates how harmful it can be; the high-tech lifestyles that replace real human relationship; the degradation of authentic play; the burgeoning rates of childhood depression and anxiety; and the disintegration in ‘late modernity’ of family and community life.

With the environmental crisis now reaching a historically unprecedented level of urgency, the reality of which even the grudging neocons on Capitol Hill are beginning to acknowledge, we are arguably approaching the tipping point of what some cultural commentators term ‘the death throes of modernity’. As the parlous state of childhood in this era is one of the many symptoms of this phenomenon, *The Ecologist* is right to make it a central issue for all who are questioning the state of the world – economically, politically, culturally and morally.

The most pressing question now is: how are we to take these concerns forward? I suggest we need to take action on practical, political, cultural-scientific and ideological levels.

First, the practical. Above all, we need parents who bring a mature awareness to the raising of their children and who develop the strength to choose, in an informed way, their own authentic parenting values, free of the seductively addictive imperatives of modern technological culture (including the cynical targeting of children by mass-market advertising). My Open Letter co-orchestrator Sue Palmer’s best-selling book *Toxic Childhood* offers copious information on what we can do as parents and professionals (including teachers) to mitigate the worst excesses of ‘toxic childhood’.

Next, the political. What distinguished our Open Letter is that it was not only *not* signed by any professional politicians; more tellingly still, it was signed by notables of every persuasion across the political spectrum. In short, this is an issue that transcends the traditional political fault lines of ‘left’ and ‘right’ – and I maintain that progressive thinkers of left, right and centre can unite in a common desire to protect childhood from modernity’s worst excesses (cf my article in the October issue of *Parliamentary Brief* magazine – see www.thepolitician.org).

There are indeed already signs of this beginning to happen – with the Children’s Society’s national inquiry, the international Alliance for Childhood’s ‘umbrella’ initiative to coordinate the manifold responses to this story

and to influence the policy-making process; and Roehampton University’s bringing together of professionals and ministers and shadow ministers for an open discussion forum on ‘Childhood and Well Being’ in December.

Third, the cultural-scientific. I agree with educationalist Rudolf Steiner that education should be the concern of the cultural sphere and relatively autonomous from the political. Any reasonably dispassionate analysis of the state of mainstream education would surely conclude that the politicisation of education has been an unmitigated disaster for everyone in the schooling system – children, teachers, parents. Steiner education is just one example of the kind of educational approach that can effectively respond to today’s crisis of childhood.

Scientific research also has a role to play, with the most recent neuroscientific studies piling up in our favour. Research on Montessori education (*Science*, 313, September 29) has shown that Montessori learning and developmental outcomes are significantly better on a range of indicators. While from a ‘new paradigm’ perspective, one might be sceptical about the kind of control-group ‘positivistic’ research that is the norm in this field, I believe that if this kind of research were replicated in Steiner and other human-scale schools, very similar results would be obtained. Indeed, perhaps Montessori, Steiner, and human-scale/humanistic approaches are successful because of what they *don’t* do to young children. That is, they don’t make the grave errors of over-intellectual, mechanistic-utilitarian early learning that mainstream settings commonly do. Moreover, these educational approaches tend to be intrinsically ecological, rather than having environmental concerns ‘bolted on’ to an already overburdened National Curriculum.

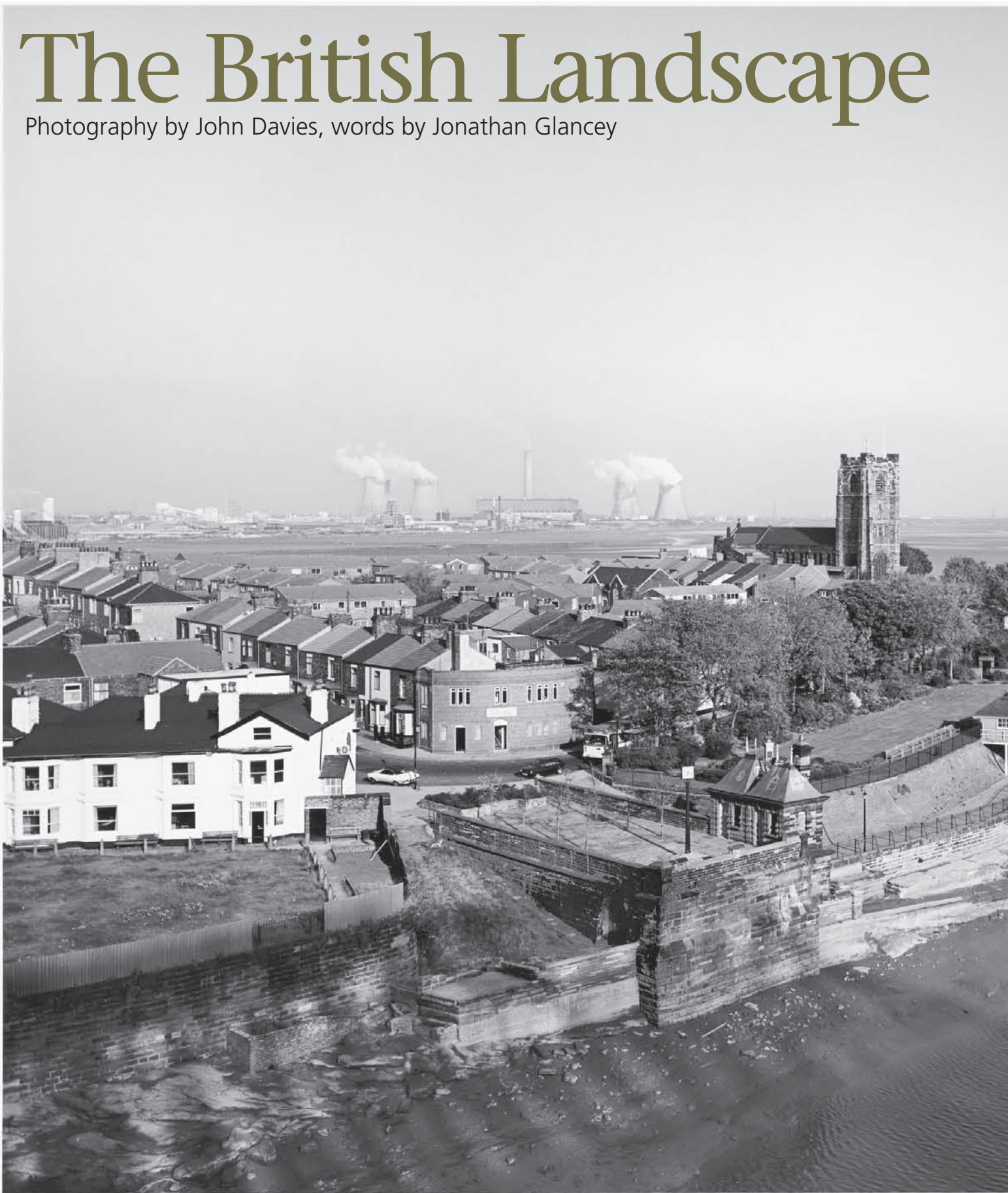
Finally, the ideological. This comment itself is an example of the ideological struggle in which we must all engage if the prevailing Zeitgeist is to be transformed, and a saner way of being with our children is to prevail over the current malaise. If concerned readers and campaigners would join in our crusade of writing to newspapers, writing articles and ringing phones about these grave issues, there will surely soon come a time when the prevailing ‘madness’

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“ The parlous state of childhood in this era is a central ecological issue for all who are questioning the state of the world – economically, politically, culturally and morally. ”

The British Landscape

Photography by John Davies, words by Jonathan Glancey





Landscapes and townscapes between Cardiff and London, as with every other slice or corridor of Britain, are in a state of permanent flux: a Heraclitian Fire where all that is solid, even in deepest winter, melts into air. Where once such a journey offered mile after fleeting mile of rolling hills, sheep grazing, ploughed fields, horses running in paddocks, stiles, steeples and farmhouses, today it can seem like one continuous roll of new executive houses, distribution depots, trunk road intersections and superstore car parks – a superfluity of man-made banality reeling by at two-miles-a-minute. Our British landscape is changing at a truly sensational pace today, the greater part of it in all too lurid colour.

Ian Nairn (1930-83), an RAF fighter pilot turned Angry Young Man on behalf of *The Architectural Review*, wrote up his particular tour of Britain in a stirring picture-driven polemic, *Outrage*, back in 1955. For Nairn, 'The Outrage is that the whole land surface [of Britain] is being covered by the creeping mildew that already circumscribes all of our towns. This death by slow decay we [by 'we' he means *The Architectural Review*] have called subtopia, a compound word formed from suburb and

utopia, ie, making an ideal of suburbia.' 'Subtopia', Nairn continues, 'is the world of universal low density mess ... a mean, middle state, neither town nor country. Subtopia is the annihilation of the site, the steam-rolling of all individuality of place to one uniform and mediocre pattern. Its symptom will be that the end of Southampton will look like the beginning of Carlisle; the parts in between will look like the end of Carlisle or the beginning of Southampton.' Like Cobbett, Nairn was a fierce individualist, who tired himself out fighting low-grade change. 'The defence of the individuality of places,' he wrote, 'is the defence of the individuality of ourselves.'

The genius of John Davies's black and white photography is that it puts the brakes on this unholy rollercoaster, stops these shifting landscapes for long enough for us to see not just what these changes are, in detail, but what they might mean. Had he photographed all these urban and rural scenes in colour, the kaleidoscopic garishness and rich detail of many of them might be distracting. In black and white, these scenes seem almost – if not quite – frozen, so that we can stop with Davies and, with a cold eye, take them in. Pore over them.

VICTORIA PROMENADE, Widnes 1986

Located at the mouth of the Mersey, Widnes became a centre for chemical industries after its alkali works were established in the 1850s. The first St Mary's Church was built in 1858 on a layer of chemical waste, and after serious cracks began to appear, it was replaced by a new church in 1910. Upstream is the coal-fired Fiddler's Ferry power station at Warrington. It was cited in 2002 among the 30 worst polluting power stations in Europe, and as the ninth worst source of dioxin releases within Britain. Efforts to combat its pollution have resulted in approval, in 2005, for the construction of a flue gas desulphurisation plant.

PHOTO STORY





ST GEORGE'S CHURCH, Manchester 1984 (top left)

When the cotton trade expanded in the late 18th century, Manchester became the centre for cotton manufacture using the new power-driven factory system. Workers who migrated to the city's factories fed a growth in the number of Nonconformist chapels, whose radical teachings found wide appeal. In response, the government of 1818 set up a Church Building Commission, which constructed 97 Anglican churches nationally within 10 years. St George's Church, Moss Side, was completed in 1823. With the development of Moss Side and Hulme in the 1960s and '70s, the original residents were moved, and St George's became a church without a congregation. Abandoned for 30 years, its conversion into 26 apartments was completed in 2005.

SKYE EDGE LOFTS, Sheffield 1981

Pigeons have long been bred for their homing skills, with pigeon racing becoming a favourite British sport during the 19th century. It was especially popular in northern England, with the National Homing Union – later the Royal National Homing Union – formed in Leeds in 1896. The row of 14 pigeon lofts on Sheffield's Skye Edge was constructed in 1967 after the Park Homing Society was moved on from a previous site. Owned by Sheffield City Council, the land is currently scheduled for redevelopment as 'Sky Edge Park'.



TRAFFORD CENTRE, Manchester 2005 (top right)

Built on a greenfield site near the preserved Wilderspool Wood, the Trafford Centre opened in 1998. The Las Vegas-style complex is the largest out-of-town indoor shopping and entertainment centre in Europe, with three miles of shop fronts, approximately 7,000 staff, and parking for 10,000 cars. Its central dome, modelled on St Peter's in Rome, is a landmark of the M60, Manchester's orbital motorway. There are 1.2 million cars within 45 minutes' drive of the Trafford Centre, which depends entirely on customers arriving by motorway.



Extracted from
The British Landscape by John Davies

THERE YOU GO!

What can 21st-century colonialists do when they want to exploit an indigenous people's land? Disguise their intention with euphemisms... **Oren Ginzburg** tells the tale



Our original aim was the same as usual: to bring them sustainable development.



in their own strange kind of way,



were already sustainable. So all we could really bring them was...



We tried income-generating activities... but some people seem satisfied with less than a dollar a day.

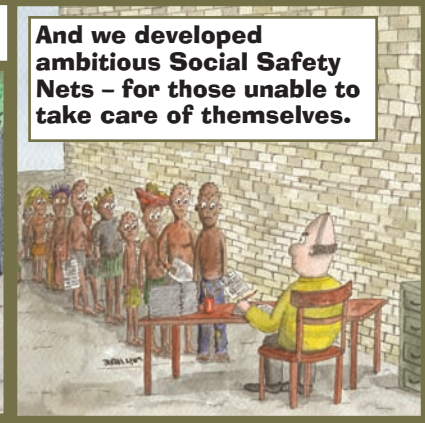


We even attempted to empower them... ...but their reaction was more powerful than expected.



So we opted for a Multi-Stakeholder Cross-Disciplinary Integrated approach.

We developed Vocational Skills adapted to a shifting economy. We developed tough conservation measures, to protect the environment from further harm.



And we developed ambitious Social Safety Nets - for those unable to take care of themselves.



However, in this specific case

we encountered an unexpected challenge.

It turns out that these people,



We started with Participatory Community Development... but they did not fully participate.



We developed innovative Private Sector Partnerships.

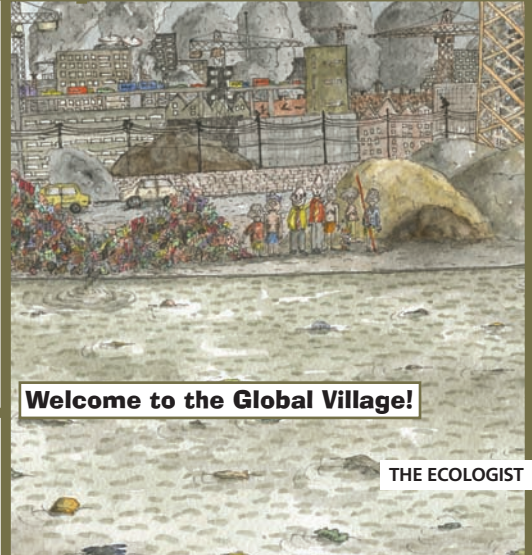
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This has been a challenging process with many lessons learned.



We certainly look forward to applying them elsewhere in the very near future. But for now let us just say,



Welcome to the Global Village!

The perils of plastic amnesia

Convenient, flimsy, costly, cynical, manipulative, wasteful, deadly... we'll never forget the plastic bag

By Matthew Carmichael

Homo sapiens, reasoned Dostoyevsky, is not an accurate description of the human race, because 'sapiens' means wise or rational. Since it is in our nature to reject happiness and seek chaos we are irrational, and he proposed that we call ourselves *the ungrateful biped*.

But even this damning label does not fully explain humanity's worst invention: the plastic carrier bag. Plastic bags certainly contribute to a degree of environmental chaos, but ask most shoppers and they will maintain that supermarket carriers encourage a sense of order. They will use words such as 'handy', 'practical' and 'hygienic'. Ingratitude alone cannot explain the plastic bag. It is a phenomenon that can only be accounted for by amnesia.

Forgetfulness is the human characteristic responsible for the consumption of roughly 500 billion plastic bags annually, or a million a minute. Only three decades have passed since the flimsy carrier was introduced to the world, but it will be another millennium before the first of these has degraded in its landfill site. Since then, several trillion have been manufactured, used once or twice to actually carry things, and discarded. Only a creature with an extraordinarily dim memory could create such a problem where none existed to start with.

The invention of the plastic carrier bag was in the first place dependent upon forgetfulness. Unlike most of the most abhorrent inventions, it was not invented to do anything new or better. The carrier bag goes back at least to ancient Egypt,



when cotton was first spun. Then they were used for shopping, and nothing has changed in 3,400 years. The modern, plastic version was a solution only for forgetfulness. It was a bag that could be provided cheaply by the vendor for those who had forgotten to bring a bag.

Or, at least, forgotten to bring enough of them. Most retailers are very keen to overcome every obstacle to your spending money in their shops, and go to great lengths to persuade you to buy more than you intended when you left home. In order to fall for their marketing ploys, you may need more bags. You will also need to forget what you really came for, and be open to being persuaded to buy things you don't need and may or may not be able to afford. Of course, whether you forget your own bags or not, you will be paying for them. The costs are passed on to consumers in the form of higher prices – \$4 billion a year's worth of higher prices in America alone. The average UK household spends £470 a year on packaging. If supermarkets could provide cheap trucks to carry more home when your vehicle was too full, you can guarantee that they would. In fact, they do. Internet shopping has provided a way in which supermarkets can carry more to your door than you can fit in your car.

Us, being used? Oh, forget it...

I ordered my shopping online once. I had forgotten to go shopping all week, and needed both to stay in and to eat. When it arrived, each item was placed separately in its own plastic bag. Initially, I assumed that some customers were fastidiously hygienic, and might complain if food items came into contact with each other. But upon mature reflection, I realised that this could not be so, since each item was already wrapped in its own packaging. Even a friend of mine with a compulsive obsessive disorder is not averse to a couple of well-wrapped fish in the same bag.

The only possible explanation for all the bags is human forgetfulness: every bag is printed with a reminder of where to shop. One might argue that advertising is a far more cynical exercise than a mere attempt to remind customers of the existence of

brands, in which case carrying a store's plastic bag requires a more wilful kind of amnesia: you would have to forget that you are being used as an unpaid sandwich-board, proclaiming someone else's gospel on every street you walk.

In terms of advertising it is no less effective to carry a Safeway shopping bag than it would be to wear a Safeway T-shirt. Even the generation who are happy to wear clothes that are essentially adverts for their creators have rejected attempts to make them advertise grocers. The casual wearer of a Sainsbury's T-shirt would immediately be understood to be making a subversively ironic statement about advertising, yet in the UK, the casual bearer of a Sainsbury's carrier may be declaring not a brain like a sieve, but

a certain superiority to the Joneses.

Our greatest talent as amnesiacs, though,

A filter-feeding minke whale was washed up in Normandy with 800 kilos of plastic bags and other packaging in its stomach

must be for allowing our memories to slip regarding the environmental consequences. Plastic is an oil-based material. In a world where even George W Bush uses the language of addiction, it is hard to be entirely ignorant of the negative impacts of oil. Prospecting and drilling for it destroys fragile ecosystems. Controlling its supply encourages authoritarianism and war. And using it to make plastic produces chemical pollutants. In the US alone, an estimated 12,000,000 barrels of oil are required to produce the 100 billion plastic bags used annually.

Then there's the litter. An estimated three billion kilograms of plastic bags, wraps and sacks enter the waste stream each year in the US. Plastic bags have been found not just in your local park's trees and on your favourite beach, but as far north as Spitzbergen (78°N) and as far south as the Falklands (51°S), and according to David Barnes of the British Antarctic Survey, "they'll be washing up in Antarctica within the decade". A filter-feeding minke whale was washed up in



Normandy in 2002 with 800 kilograms of plastic bags and other packaging in its stomach, suggesting far-reaching consequences for other marine life. The plastics used in bags act as sponges for toxic chemicals,

intensifying their effects when fish mistake small fragments for food. A study published in *Science* in May 2004 (vol 304, p838) showed a significant rise in plastic fragments in marine sediments over the past 40 years, which even small invertebrates like barnacles are capable of eating. There is no way to know how great the impact of this waste might be.

Even when we remember to put our bags in the bin, they continue to cause problems. They have the half-life of radioactive lead. Often they don't decompose at all because of the lack of oxygen in most landfill sites. The UK plastics industry parrots that only one per cent of landfill is due to plastic bags, but this doesn't account for all the litter, nor for the unknown quantity that is transported to Third World countries, where lax laws allow it to be incinerated.

Nor does it account for recycling. Depending upon whom you ask, the rate at which plastic bags are recycled is anything between 80 per cent (the UK Carrier Bag Consortium) and 0.5 per cent

HUMANITY'S WORST INVENTION

(the BBC). The CBC would count reusing a bag once as a bin-liner as 'recycling'; the less partial BBC would say that recycling should only refer to what happens when it is thrown away. Then, a number of problems make recycling economically unappealing. Ink contamination from those pesky adverts, sorting costs and the low quality of the plastics all make it hard to persuade anyone in their right mind to attempt to make money from the process.

Blights on the environment

On top of all this, in order to find a use for perhaps 537 plastic bags per person every year (the average in Canada), we have to perform the miracle of erasing from our minds one unavoidable fact: plastic bags are duff. They split at the bottom. They snap at the top. They hurt your hands. You can't carry them on a bike. They won't stand on their own. They are the absolute epitome of the phrase 'cheap and nasty', making a job that was done effortlessly for aeons look difficult. If they were food they'd be turkey twizzlers. If they were buildings, they'd be portable toilets. It is beyond human imagination to invent a less impressive bag. They are purported to hold up to 2,500 times their own weight. But frankly, if I was carrying 17.5kg in one, I'd wish my bag was a few grams sturdier.

The manufacturers of these blights on the environment complain that they are an 'easy target', in a bizarre attempt to portray the lobby against them as a kind of container bully. But half the reason why plastic bags are an 'easy target' is that they are so utterly useless. Nobody likes them. In one survey, 90 per cent of the people carrying them out of supermarkets said they'd support a tax to get rid of them.

Incidentally, plastics manufacturers also like to portray the debate in terms of whether paper bags are any better. They aren't, and that isn't the debate.

In one sense, though, plastic bags are not an easy target. It is very difficult to get worked up about a plastic bag. It is such a



naff invention that it's quite hard to care one way or the other. I find myself loath to get into confrontations with vendors over them. When I find, having asked the man at the farmer's market stall to put an item in my bag, not his, that he has first of all put it in a smaller bag 'for protection', I cannot summon up the ire necessary to undo his work. When the internet order arrived in hundreds of separate bags, I did not demand that the deliverers unpack it

Plastic bags are duff. They split, they hurt your hands, you can't carry them on a bike. They are the epitome of the phrase 'cheap and nasty'

all before they left, making themselves late for the next delivery. It would have seemed such an enormous fuss – and over what? Plastic bags? Furthermore, try asking for an expensive item in a high street store (clothing, for example) to be put in the bag you brought from home. I guarantee that the facial expression with which you are greeted will be memorable. Thus, they can be hard to get rid of.

Where progress has been made in reducing the environmental impact of plastic bags, it has had to be legislated for. In Ireland, a charge is levied which has resulted in a 95 per cent decrease in

their presence in landfill. In Bangladesh you can be jailed for up to 10 years for manufacturing them. In Germany, vendors are required by law to deal with all packaging removed from their products and left by customers. Such laws lend a little gravitas to what might otherwise seem like pettiness. They also discourage the multimillion-dollar contracts between retail giants and multinational packaging firms that result in such insanities as

unwashed but plastic-wrapped cauliflowers, and ready meals with four separate layers of packaging.

So where does this leave us? It would have been great if the plastic bag had never been invented, but, like junk mail, it was. Personally, I'd favour an Irish-style levy, since all it seems to take to overcome our collective amnesia is a gentle (5p) reminder, without treading on sensitive 'rights'. It is a reminder to do something that solves every problem mentioned above: to bring your own bags.

There is certainly a future for plastic bags – a thousand years of it for the ones already buried – but it would be nice to think that it won't be much more than that. By that time the amnesiac ape will surely have forgotten all about them.

A BIG FAT PROBLEM

Obesity is a problem that is chronic, stigmatised, costly to treat and rarely curable. Why? Because we are looking in the wrong places for a solution. **Pat Thomas** reports



BEFORE



AFTER

Open a newspaper and on any given day you can usually find a story about the growing number of overweight and obese people throughout the UK, and indeed the world. Obesity is now officially an 'epidemic'. GPs are 'alarmed'. The Department of Health is 'concerned'. And dozens of local authorities are gearing up to 'do something about it'.

The figures are shocking. Globally the prevalence of overweight and obesity has increased steadily since 1970. In August of this year, it was reported that the number of overweight people in the world has topped one billion, considerably outnumbering the 800 million who are

undernourished.

It's not just an aesthetic problem. Obesity is a health risk associated with higher rates of diabetes, heart disease and cancer. In the UK, 43 per cent of men and 34 per cent of women are overweight and one in four adults, and one in 10 children under 15, are obese. The direct cost to the NHS is £480 million.

INVESTIGATION

The indirect costs are estimated to be in the region of £2.5 billion per year, including costs to the NHS and costs to industry through sickness and absence. In the US, medical expenses for overweight and obesity accounted for 9.1 percent of total US medical expenditures in

1998, costing around \$78.5 billion (equivalent to \$92 billion today).

Most reports in the media trot out the same causes – the gluttony and sloth of modern society – and the same old solutions – eat less and exercise more. And yet if weight loss was simply a matter of cutting calories and being more active then our population should be in pretty good shape. At any given time as much as 50 per cent of the population in the UK is on a diet and/or exercise regime.

But one recent report contained a signpost to a truth about obesity that was nonetheless missed by almost everyone who read it. In September of this year a 'fat map' of Britain was published by Dr Foster Intelligence, an independent health research organisation that works closely with the NHS, and Experian, a market research company.

The analysis was a complex synthesis of data from two surveys – the Health Survey for England and the British Market Research Bureau's quarterly survey of 25,000 Britons – that provided details of lifestyle, body mass index (BMI, an indication of how overweight a person is – see box) and geographical location. Its conclusion was that people living in northern industrial towns were fatter than those living in London and more rural areas of the UK.

Across the board the reportage was unremarkable. The results, after all, echoed those of a survey produced by Experian two years ago. Having heard it all before, the newspapers avoided original analysis and focused instead on

the marvels of modern technology that allow us to pinpoint, down to a street, the places where the fattest people live.

A rent-a-quote from Dr Foster Intelligence about the threat of obesity, and the benefits of surveys like this one, made all the papers: "We need to reduce levels of obesity, and detailed health maps like these show where the risks of obesity are highest," commented the organisation's marketing development manager, Dr Marc Farr. "This will enable health authorities to target weight-loss drives in areas where this is a problem. Until now they have not had access to this accurate database; this should make a difference."

At first it may be difficult to see

how knowing where people are fattest will make a dramatic difference to the problem of obesity. Surely the real question that needs answering is why are we so fat? On this point, Farr fell back on mainstream thinking to conclude: "The reasons for obesity [in these northern towns] are not uncommon and shared by many areas: availability of cheap, high-sugar food products, unemployment, age-related failure to engage in physical activity, understanding the nature and dangers of obesity and changes to more sedentary forms of employment."

This oft-repeated explanation, of course, has some merit but misses the vital point; that the where and the why of being overweight are intricately linked.

Urban FATTIES

The reductionist explanation for the increase in overweight and obese individuals is a simple equation: calories in/calories out. A more global view, however, would acknowledge the multifaceted effect of urbanisation and industrialisation, which have had a devastating impact on what we eat, when we eat, how much we eat, how often we eat and the quality of the food we eat, as well as on our levels of daily physical exertion.

In the West these simple 'whys' of obesity are rarely questioned anymore and have become largely obscured by the solution-oriented focus of quick weight-loss schemes. But in developing nations the startling parallel between the rise in obesity and the rapid acceptance of urban/industrial lifestyles and diets is all too apparent.

Speaking in September at the International Congress on Obesity in Sydney Dr. Philip James, the British chairman of the International Obesity Task Force (IOTF), noted that in China the rate of obesity has risen from almost zero



WHAT'S YOUR BMI?

The healthy weight range that you see on many diet charts is based on a measurement known as the Body Mass Index (BMI). This can be determined in three steps if you know your weight and your height.

- 1 Work out your height in metres and multiply the figure by itself.
- 2 Measure your weight in kilograms .
- 3 Divide your weight by the answer to Q1.

However the BMI is a general guideline and is not applicable or appropriate for children, pregnant women, older people or anyone with a long-term health condition. Nor is it infallible. It is possible, for instance, for a healthy, muscular athlete with very low body fat to be classified obese using the BMI formula.

If your BMI is	You are considered
18.5 or less	Underweight
18.5 - 24.9	Normal
25.0 - 29.9	Overweight
30.0 - 39.9	Obese
40 or greater	Extremely Obese

in the 1980s to about 10 percent of the population in 2006, and that the rise can be pinned down to the growing problems of urbanisation and the infiltration of a generally nutritionally poor Western diet, which favours high-fat, high-energy products over basic fruits and vegetables. Similar increases have been noted among more affluent urban dwellers in India.

Diet failures

And so we diet to fight the flab. Yet over and over again surveys show that the majority of people who lose weight on a given diet will subsequently regain that lost weight, and more besides. There is even evidence to suggest that dietary regimes that severely restrict calories as well as types of foods (fats, carbohydrates etc) in the short-term, actually encourage rebound weight gain over the long-term.

This rebound effect, which is well

known to dieters and well documented in the medical literature, may have deep roots in human evolution. In our hunter-gatherer stage, when the next meal was not predictable, we became programmed to overeat when food was available. In times of food deprivation (including when we diet), our hard-wiring changes. Our bodies develop mechanisms, largely driven by hormones, to store calories by over-riding signals of satiety and increasing hunger signals, even when food becomes plentiful again. In essence, the body is storing up calories in anticipation of the next period of food deprivation, even if it never comes.

According to the data, this effect is more dramatic when food and drink is freely available, when the foods available are calorie dense – such as crisps, sodas, Big Macs etc – and energy expenditure is low due to reduced physical activity.

Medical science has determined a biological basis for this storage effect. When we lose weight, our basal metabolic rate (BMR) – the minimum amount of energy the body requires at rest, to keep itself alive and to maintain weight at a constant ‘set point’ – decreases. BMR is related to the actual amount of body tissue so it naturally decreases when the amount of body tissue is reduced through dieting. Constant yo-yoing of weight through dieting and bingeing plays havoc with the body’s BMR and set point, in some cases wiping it out altogether, leaving the body with no blueprint for maintaining a healthy weight.

A more complex equation

In spite of the failure of conventional diets, the comforting equation of calories in/calories out still informs most weight-loss initiatives, possibly because it makes the job of ‘doing something about it’ so effortless. Weight management programmes centred on this simple equation are easy to devise – anyone with a calculator, a calorie reference guide and an exercise manual can do it – and they shift the responsibility for the success or failure of the regime squarely onto the individual.

It’s an all too familiar scenario when faced with difficult cultural problems, where challenging the status quo could raise uncomfortable questions. Consider the way that individuals are encouraged to switch off standby electronics and change to energy efficient lightbulbs in order to ‘do something about’ climate change, or to recycle to end waste. Focusing on individual efforts – and failures – in this way deflects attention



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INVESTIGATION

away from bigger, and arguably more powerful influences, such as the government subsidies that keep polluting airlines and industries in business.

Nevertheless, the ongoing failure of 'gold standard' solutions like calorie counting has motivated some scientists to suggest that we must be

missing something, and to look beyond the usual explanations. This year, a paper in the *International Journal Of Obesity*, for instance, attempted to explore the 'roads less travelled' in obesity research and suggested at least 10 additional causes of obesity that have nothing to do with gluttony and sloth.

The authors, made up of a panel of doctors from across the US, concluded that medical science had a tendency to "focus overwhelmingly on food-marketing

practices and technology and on institution-driven reductions in physical activity (the 'Big Two'), eschewing the importance of other influences."

The panel went on to say that the influence of the Big Two on the global obesity epidemic is "largely circumstantial", relying as it does on broad surveys – not unlike the recent Dr Foster report – rather than epidemiological data focused on individuals, or large randomised studies.

They further noted that the acceptance of the idea that too much food and too little exercise is the sole cause of obesity "...has created a hegemony whereby the importance of the Big Two is accepted as established and other putative factors are not seriously explored. The results may be well-intentioned, but ill-founded proposals for reducing obesity."

In an effort to broaden the debate the authors recommended that other influential aspects of modern life (see box opposite) are influential. Among these and of particular relevance to the results of the Dr Foster survey, was exposure to hormone-disrupting pollutants – the kind you might find in excess in any industrial town in the North of the UK, where once there were mines, refineries, factories and tall chimneys belching out smoke and where now

WE SAY

"The same chemicals, which at high doses can cause weight loss, seemed to cause a fattening effect at very low levels – the same low levels that we are exposed to in everyday life"

there are chemical factories, incinerators and waste transfer facilities regularly releasing toxins into the air, water and soil.

Hormone havoc

Hormones play a major role in determining and maintaining metabolism and the body's set point. When

levels of these hormones (produced by the thyroid, sympathetic nervous system and reproductive organs) deviate from the norm, problems with weight can ensue.

Thus in January 2004, at a conference titled *Obesity: Developmental Origins and Environmental Influences*, the US National Institutes of Health made an urgent call for more research on the link between hormone-disrupting chemicals and obesity, noting that exposure during adulthood and, crucially, in the womb, can permanently disrupt the body's weight control mechanisms.

But, according to at least one scientist, if you look hard enough, the research is already out there. In 2002 Dr Paula Baillie-Hamilton, a visiting Fellow at the Occupational and Environmental Health Research Group, Stirling University, published a paper in which she proposed that chemical toxins were to blame for the global obesity epidemic.

Baillie-Hamilton's hypothesis, the culmination of many years of forensic investigation into the way that pollution is changing us from the inside out, had its roots in an article she stumbled upon that

PHOTOGRAPH GETTY



explained how toxic chemicals in the environment were affecting the fertility of wildlife.

"I couldn't understand how someone like myself, an academic with a load of scientific qualifications and papers behind me, had never heard of all these different chemicals that were out there. Yet if these chemicals were affecting the fertility of wildlife they must be affecting hormones significantly. And of course, hormones control a number of other functions in the body, including weight control.

"I spent a couple of years intensively identifying each major category of chemical and then working out how each individual substance affected the body's weight control system. I looked at all the mechanisms involved, from the nerves and hormones to metabolism, and the levels of nutrients in the body, and found that the same chemicals that at high doses can cause weight loss, seemed to cause a fattening effect at very low levels – the same low levels that we are exposed to in everyday life."

It was an arduous task made more difficult by the fact that weight gain is not always documented in trials of toxic chemicals. "For many years this data has been ignored or suppressed in the conclusions of scientific papers because there was no way to explain why it happened. And of course it wasn't accepted at the time that weight gain in animals exposed to substances like DDT could be anything other than positive," continues Baillie-Hamilton. "If weight gain was mentioned, it would be buried in the text of the paper, rather than the conclusion. Essentially what this meant was starting from scratch and reading through every single paper to find some mention of these effects."

WHAT ELSE MAKES YOU FAT?

Being overweight or obese is a modern problem and, as the results of a recent investigation in the *International Journal Of Obesity* show, many of the putative contributors to the problem have their roots in modern life. The authors suggest that even if some of these causes have only a small effect, they may interact with each other and with other factors in ways that greatly magnify their individual effects.

1 Sleep debt Too many of us are getting too little sleep and the resulting 'sleep debt' can alter hormone levels and trigger an increase in body weight. Sleep debt is also associated with insulin resistance and diabetes, and with increased hunger and appetite.

2 Pollution Hormones control body weight and many of today's pollutants drastically alter levels of key hormones.

3 Air conditioning We burn more calories when the environment is too hot or too cold for comfort. But more people than ever live and work in temperature-controlled homes and offices.

4 Decreased smoking Smoking, because of its effects on circulation and the nervous system, reduces weight. In many developed countries people are smoking much less than they used to.

5 Prescription medications Many different drugs – including contraceptives, steroid hormones, diabetes drugs, some antidepressants, and blood pressure drugs – can cause weight gain. Use of these drugs has risen exponentially in recent decades.

6 Population age and ethnicity Middle-aged people and those of African and Hispanic origin have a tendency to be more obese than younger people of European descent. Throughout the world the population is getting older and more ethnically diverse.

7 Older mothers There's some evidence that the older a woman is when she gives birth, the higher her child's risk of obesity. The average age at which a woman has her first child is rising.

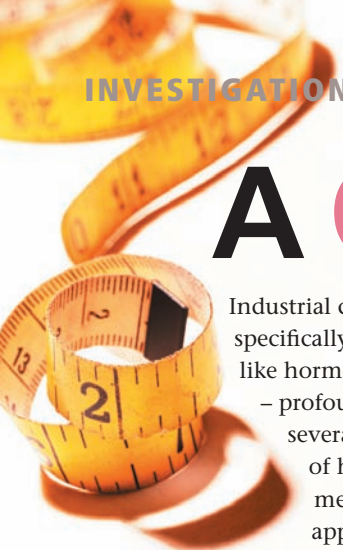
8 Ancestry and environment Some health problems are passed down through the generations. A tendency towards gestational diabetes will produce a child prone to obesity (who are in turn more likely to produce obese children). Very high-fat diets during pregnancy have been shown, in animals, to skew the metabolism of offspring two generations down the line.

9 Obesity linked to fertility Some evidence suggests that overweight and obese people are more fertile than lean ones. If obesity has a genetic component that makes it a dominant characteristic, the percentage of obese people in the population is likely to increase.

10 Unions of obese spouses Obese women tend to marry obese men. If there are fewer thin people around – and if obesity is a dominant genetic characteristic – then these couples will produce obese children, who will then go on to produce more obese children.



A CHEMICAL Cosh



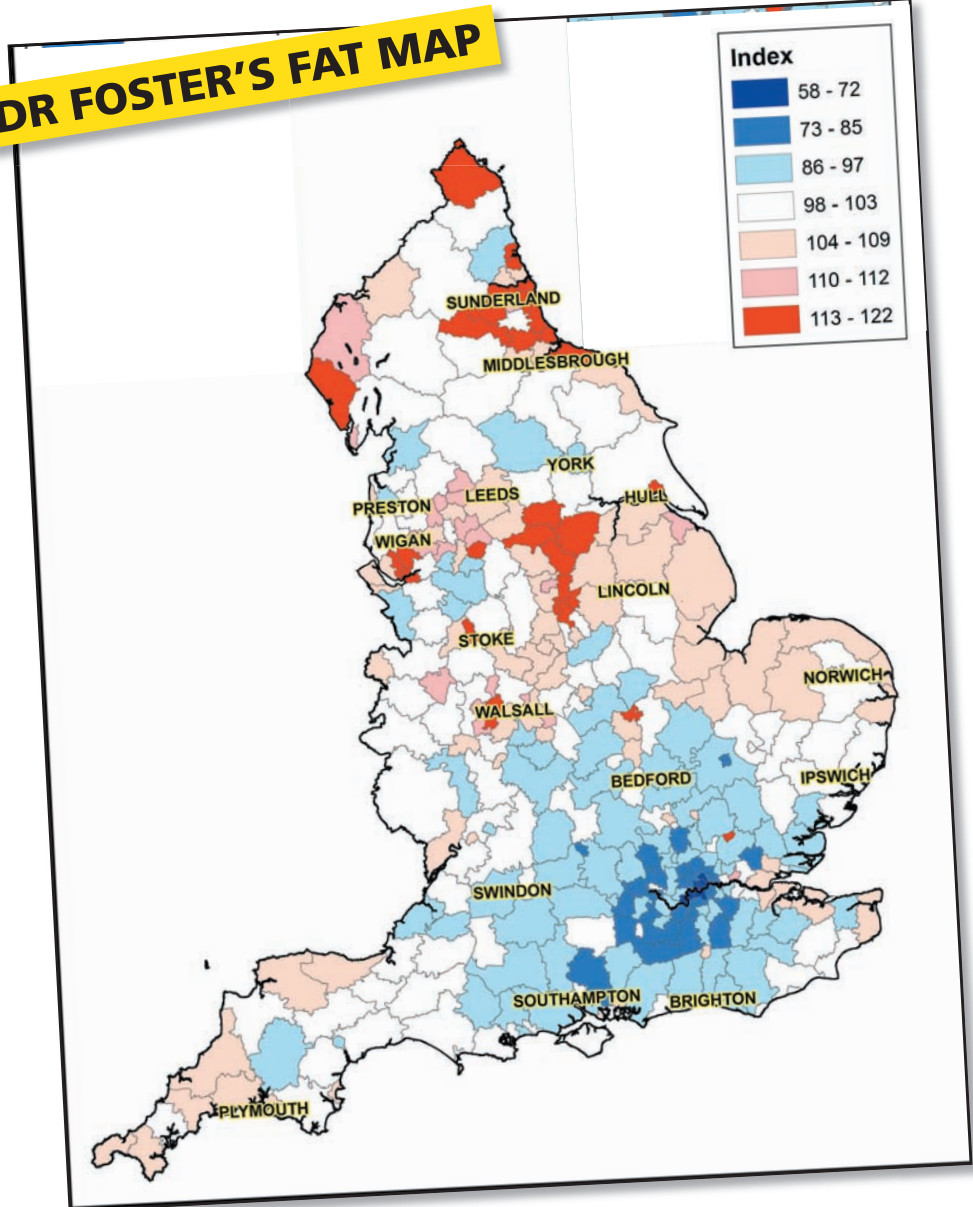
Industrial chemicals – and specifically those that act like hormone disruptors – profoundly alter several aspects of human metabolism and appetite control. Research at the

University of Laval in Quebec has added greatly to the understanding of just how wide-ranging the effects of an over-polluted body can be.

In the late 1990s Professor Angelo Tremblay and his team began to study, first in animals and then in people, the metabolic effects of organochlorines. Their interest was sparked by earlier Italian research which showed that overweight people who underwent gastric bypasses, to encourage weight loss, experienced dramatic increases in levels of the pesticide DDT and one of its breakdown products, DDE, in their blood as their bodyweight declined. The Laval studies of humans undergoing an average weight-loss programme also showed that concentrations of these chemicals rose as the pounds were shed.

Once in the body organochlorines and other industrial pollutants are generally stored in human fat cells. During weight loss the fat cells shrink and release these chemicals back into the bloodstream. The scientists at Laval found that as levels of these now freely circulating pollutants rose in dieters, levels of essential thyroid hormones – necessary for maintaining an

DR FOSTER'S FAT MAP



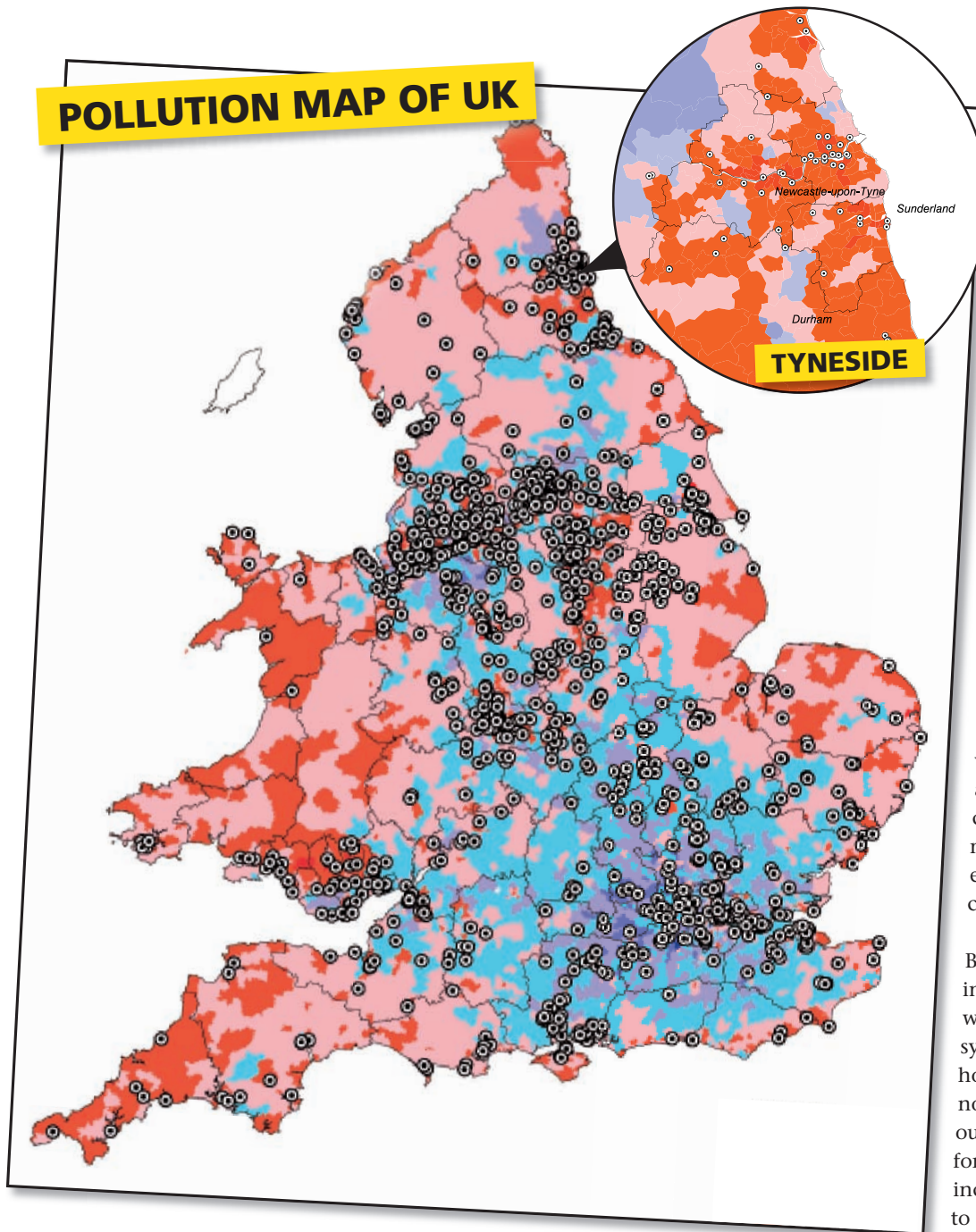
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POLLUTION MAP OF UK



These two maps show that where there are concentrations of highly polluting industries, there is a comparable concentration of obesity, expressed in the Fat Map as a risk factor of more than 100

Professor Tremblay's research has focused on organochlorine compounds, for instance the pesticides DDT (and its breakdown product DDE), chlordane, aldrin, dieldrin and heptachlor, as well as PCBs, dioxins and chlorophenols. But the list of chemicals that can cause weight gain and promote obesity extends well beyond these to include a wide variety of everyday chemicals associated with manufacturing and a polluted environment (see Chemical calories, page 42).

A key effect, says Dr Baillie-Hamilton, is the way industrial pollutants interact with the sympathetic nervous system. This system releases hormones like adrenaline and noradrenaline that suppress our appetite, particularly for fat. These hormones also increase the ability and desire to exercise, as well as increasing body temperature, so that while

efficient metabolism – fell dramatically.

A drop in basal metabolic rate (BMR) – the rate at which the body burns calories – is not uncommon in dieters. Studies into dieting show that as metabolism slows down during weight loss, levels of thyroid hormones also drop naturally. This slowdown is referred to as 'adaptive thermogenesis'.

The worrying discovery of the Laval scientists was that higher levels of organochlorine compounds were associated with much lower levels of thyroid hormones than would be

produced by weight loss alone. In dieters with these newly liberated toxins circulating throughout the body, BMR also slowed more dramatically, as did energy expenditure and levels of skeletal muscle oxidative enzymes (which determine how efficiently the muscles use energy – when levels are not optimum, energy gets stored as fat).

"If I were to put this in journalistic terms," says Tremblay "I might say that the organochlorines essentially shut down the metabolic furnace that helps the body burn fat."

you are exercising you are also burning calories more efficiently.

"Chemicals like organochlorines act directly on the sympathetic nervous system attacking each and every part of the way it works," she explains. "It's like a chemical cosh. They reduce levels of important hormones necessary for weight balance and also block and even destroy the hormone receptors in fat cells. This means the hormones can't communicate with the fat cell and the cell becomes less sensitive to those metabolism-regulating hormones that are in circulation."

Adapt and SURVIVE



Research at Laval continues to confirm that high circulating levels of organochlorines alter metabolism and may be one of the most important contributors to adaptive thermogenesis

and the rebound weight gain so depressingly familiar to dieters.

But once liberated by weight loss these chemicals are also free to attack vital organs such as the brain, liver and kidneys, and this threat triggers an even more intriguing response. As chemicals build up beyond a level with which the body's detoxification pathways can cope, the body begins to 'dilute' the amount of circulating toxins – the majority of which are fat soluble – by making new fat cells to store them in.

Recent evidence even suggests that the presence of some industrial pollutants such as bisphenol-A and organotins can signal dormant 'baby' fat cells, known as preadipocytes, to grow into fully mature fat cells, or adipocytes. As the number of fat cells increases it can become harder to keep weight down. In addition, with increasing weight the body detoxification system, which would normally facilitate the excretion of toxins, appears to shut down in preference to simply storing any toxins in available fat.

Professor Tremblay admits there is still much that is unknown about the way these chemicals interfere with metabolism. But, apart from triggering hormonal changes, the presence of organochlorines and other toxins can also act as inflammatory triggers.

allergic responses that can cause, or worsen, the problem of chronic systemic inflammation.

For Dr. Galland, it is the problem of chronic inflammation that is most relevant to rising levels of obesity. Inflammation, he argues, causes the body to release a range of chemicals that make the system resistant to the relatively recently discovered hormone, leptin. Professor Tremblay agrees that this is "entirely possible".

The discovery of leptin 12 years ago in New York at the Rockefeller Institute changed the whole map of our understanding of obesity.

"Prior to that," says Galland, "the way that everyone thought about fat was that it was just a bag of unused calories that was totally inert.

The key thing about leptin is not just that it is a hormone that affects appetite, metabolism and fat stores. It's that leptin is produced

by fat cells exclusively. So all of a sudden fat became an active player in the body. Really, fat is an organ and its function is just as intricate as any other organ in the body in that it interacts with the immune system, with the nervous system and with other systems and can produce changes that can be very complex."

Galland admits that the science is difficult, and yet some understanding of it is crucial if we are to get to grips with the problems of hard to shift overweight and obesity.

"Whenever there is inflammation, the cells respond by producing anti-inflammatory chemicals known as SOCS – suppressors of cytokine signalling. Two of these, SOCS1 and SOCS3, interfere with leptin by blocking the signal in the cells. The mechanism is very similar to the development of insulin resistance, which is also due to

inflammation. In fact, inflammation also causes production of the fight or flight hormone cortisol from the adrenal glands. Cortisol blocks leptin and it also raises blood sugar, which in turn decreases the response to any given amount of insulin."

The bigger picture of what these scientists are saying is staggering. Inflammation is fundamentally a protective process necessary, for instance, for wound healing as well as for curing infection. If inflammation arises in a polluted body it's highly likely that it is a protective response to the presence of toxins.

Body fat also has a protective effect. For example, studies show that animals that are exposed to environmental toxins while at the same time encouraged to gain weight through a high calorie diet

WE SAY
 "There is an obesity epidemic and it is associated with pollution. The reality is that the results of most weight loss treatments are lousy and new approaches are urgently needed"



PHOTOGRAPHS CORBIS

Intelligent fat

Some physicians such as Dr. Leo Galland, author and internationally recognised expert in nutrition, believe industrial pollutants can also trigger allergies and

will survive better than exposed animals that are not allowed to gain weight. In other words, body fat, because it is a repository of these toxins, also becomes a survival mechanism. Thus it is possible that the obesity epidemic, as Tremblay postulated as far back as 2000, is in reality an adaptive response by the body to a chemically toxic environment.

The bigger picture

Viewed in this way, obesity could be seen as the response of an intelligent body trying to cope and maintain balance in an overwhelmingly polluted world. Sadly, in an environment where we are overwhelmed with pollutants, this intelligent adaptation is proving lethal and continued advice to simply decrease calorie intake dramatically in order to speed weight loss may even be making the problem worse.

Clinical practice has been frustratingly slow to catch up with the conceptual changes prompted by the link between environmental pollutants and obesity.

Says Dr Baillie-Hamilton, "There is still no academic textbook that brings it all together and it takes time to get through to people's consciousness. If you are talking to an obesity specialist, whose professional life has been spent telling people that if they eat too much and don't exercise they are going to gain weight, he may not have a clue about the link between industrial pollutants and weight gain. And until the professionals do get a clue their conclusions, and the solutions they propose, will continue to be very limited."

Dr Galland agrees. "There is a worldwide epidemic and it is definitely associated with industrialisation and

pollution. And yes, of course, there may be confounding factors because industrialisation and pollution are also associated with dietary changes and changes in activity patterns. But the reality is that the results of most weight loss treatments are lousy and creative new approaches are urgently needed."

To an intelligent health service the 'fat map' of Britain would be seen as a wake-up call, an opportunity to get to grips with a difficult and challenging problem. Instead, NHS and government advice remains stubbornly allied to the calories in/calories out equation. For example, the latest Department of Health (DoH) patient leaflet *Your Weight, Your Health* makes clear that excess weight is due to 'energy imbalance', explains the number of calories needed per day, suggests ways to reduce the calories you take in each day

and lists the benefits of being active.

Another booklet from the DoH, *The Obesity Care Pathway*, for health professionals advises much the same thing and suggests that a sensitive, empathetic, non-judgemental approach should underpin all obesity-related interventions – advice that is intended to complement the National Institute of Clinical Excellence (NICE) guidelines on the prevention, identification, assessment, treatment and weight management of overweight and obesity in adults and children due to be published this month (November).

Certainly, not blaming the victims when conventional diets fail would be a good first step. Given the available data on the environmental complexity of obesity this is rather like blaming the





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CHEMICAL CALORIES

In addition to organochlorines, a range of other industrial and everyday chemicals are known to encourage weight gain. These include:

ORGANOPHOSPHATES

Organophosphate pesticides, such as malathion, dursban, diazanon and carbonates, constitute 40 per cent of all pesticides used. These chemicals are mainly used inside buildings as opposed to in agriculture. They are neurotoxins and hormone disrupters.

CARBAMATES Including aldicarb, bendiocarb, carbaryl, propoxur and thiophanate methyl, are used extensively in agriculture, forestry and gardening, and are suspected hormone disrupters.

ORGANOTINS These chemicals, which include tributyltin (TBT) and the mono- and dibutyltins (MBT, DBT), have many applications, including stabilisers in PVC and catalysts in chemical reactions. They are also found in glass coatings, agricultural pesticides, biocides in marine antifoulant paints and wood treatments and preservatives. They are damaging to the thyroid and immune system and potential hormone disrupters.

BISPHENOL A Estrogen mimic used to make clear, hard, reusable plastic products; also used in the manufacture of polymers, fungicides, antioxidants, dyes, polyester resins, flame retardants and rubber chemicals and some dental resins.

PHTHALATES Hormone disrupting chemicals, produced in large volumes, and commonly detected in groundwater, rivers and drinking water as well as in meat and dairy products. Around 95 per cent of phthalate production over the last few decades is tied to the PVC industry.

Can be found in many plastics and consumer products – everything from hair spray and nail varnish to plastic water bottles and t-shirts.

POLYBROMINATED FLAME-

RETARDANTS Added to many products, including computers, TVs and household textiles to reduce fire risk. Also found in baby mattresses, foam mattresses, car seats and PVC products. Office workers who use computers, hospital cleaners and workers in electronics-dismantling plants are at particular risk from these chemicals. Polybrominated flame-retardants are oestrogen mimics and can also affect the thyroid.

BENZO[A]PYRENE A common food pollutant that belongs to a family of chemicals known as polycyclic aromatic hydrocarbons (PAHs). It is derived from coal tar and enters the atmosphere as a result of incomplete combustion of fossil fuels. In animals it has been shown to cause weight gain in the absence of any



detectable change in food intake. It is possible that other PAHs may have a similar effect.

SOLVENTS

Neurotoxic chemicals that include xylene, dichlorobenzene, ethylphenol, styrene, toluene, acetone and trichloroethane are commonly found in human blood samples. Necessary for a wide range of industrial processes and found widely in adhesives, glues, cleaning fluids, paint and felt-tip pens, perfumes, paints, varnishes, pesticides, petrol, and household cleaners and waxes.

CADMIUM Principally used as a protective plating for steel, in electrode material in nickel-cadmium batteries and as a component of various alloys. It is also present in phosphate fertilisers, fungicides and pesticides. Cadmium in the soil is taken up through the roots of plants and distributed to edible leaves, fruits and seeds, and eventually passed on to humans and other animals, where it can build up in milk and fatty tissues. Neurotoxic and a potential hormone disrupter.

LEAD Professions that put their employees at risk of exposure to this neurotoxin include lead-smelting, -refining and -manufacturing industries, brass/bronze foundries, the rubber and plastics industries, steel-welding and -cutting operations, and battery manufacturing plants. Construction workers and people who work in municipal waste incinerators, in the pottery and ceramics industries, radiator-repair shops and other industries that use lead solder may also be among the high-exposure groups.



poverty stricken of the world for being lazy and feckless, the victims of starvation for not having had the foresight to stock up on food, and the people murdered in the twin towers for going to work that day.

There also needs to be a much more comprehensive and honest focus on the double bind in which some of the nation's poorest people find themselves in relation to good health. People in lower income brackets may already be subsisting on poor quality food that is high in sugar and fat and low in nutrition. Their general level of health will already be compromised. Add the chemical cosh of industrial pollution to the mix and the metabolic and detoxification pathways that should be protecting the body may break down entirely.

Uncomfortable questions

There is also a need to address the obvious question of why the people in polluted cities like London and New York remain slimmer than those in industrial towns and cities. Given what is already known about polluted bodies, it is a fair bet that such research might show that being thin is not the only, or even the best indicator, of a healthy population. That the particulate pollution from traffic and lighter forms of industry in and around major capitals like these behaves in a distinct way in the body and causes its own kind of chemical chaos. New Yorkers and Londoners may be thinner, but are they also, for example, more infertile or more prone to allergies and asthma and generally more immune compromised?

What stands in the way of recognising the need for such solutions, says Professor Tremblay, is simply that the concept of industrial pollutants altering body chemistry invites far too many uncomfortable questions about the world in which we live. Most of these pertain to the economic consequences of acknowledging this issue.

"There is a global context here," says Tremblay. "You see it with George W Bush's position regarding the Kyoto agreement. He says it is out of the

question to move towards any solution that might lead to what he sees as economic vulnerability. It's the same with obesity. The response is always framed by the politics and economics of addressing the reality, not by the potential health problems of exposure to substances like organochlorines."

WE SAY
The health problems associated with polluted bodies are usually unseen. The problems of obesity offer us a very visible cue that tells us that pollution is killing us, inch by ever-expanding inch

But just as the US President should be worried about global warming, he should also be worried about the fact that the 'fat map' of Britain was not unique to the UK. A just-published survey by the Trust for America's Health found that the 10 fattest states in the US – Mississippi, Alabama, West Virginia, Louisiana, Kentucky, Tennessee, Arkansas, Indiana, South Carolina and Texas – were in located in the industrial South of the nation. The report failed to mention any aspect of environment, yet the Mississippi River, which runs through several of these states, is officially the most polluted river in the US. Likewise, West Virginia, Texas, Indiana, Alabama, Louisiana and Georgia are home to some of the top 20 mercury polluting power plants in the US. Fish and wildlife in some southern states like Alabama, Arkansas and Tennessee are regularly found contaminated by organochlorines like DDT and PCBs – due to the former production of these chemicals in these areas.

Instead of falling over ourselves to promote a lot of PC nonsense about not

being judgemental about overweight and obesity, perhaps it would be more productive to acknowledge that the most pressing human problems, the biggest human disasters, don't just apparate out of thin air. They evolve in the industrial, environmental and political milieu of modern life – and modern life can be a much dirtier business in certain parts of the country.

The health problems associated with polluted bodies are usually unseen. Some, like cancer or Alzheimer's disease, can take decades to develop. The problems of overweight and of obesity offer us a rare and very visible cue that tells us that pollution is killing us, inch by ever-expanding inch.

The recognition that chemical pollutants could have such a direct effect on our bodies is possibly one of the most important new ideas in public health; one which demands a difficult but necessary shift in our conceptual understanding of the dynamics of weight control. Allied to this there is an urgent need to acknowledge the way that our actions shape our environment and our environment, in turn, shapes our lives.

In July of this year members of the Women's Institute in the UK took the initiative and dumped carloads of unnecessary food packaging back on the doorstep of supermarkets countrywide, with the message 'you created this problem, now you clean it up'. The time has come to dump the problem of overweight and obesity back on the doorstep of industry and government with the same unflinching message.

■ For more information on helping your body fight chemical calories

The Detox Diet, Paula Baille-Hamilton (Penguin/Michael Joseph) www.slimmingsystems.com

The Fat Resistance Diet by Leo Galland (Broadway Books) www.fatresistancediet.com

POLLUTION BY TOURISM

More than 30 years before the era of cheap flights, **EDWARD GOLDSMITH**, in an *Ecologist* editorial in February 1974, lamented the devastating impacts of mass tourism

In 1971, 181 million tourists visited another country, seven per cent more than the year before. Foreign travel has become the prerogative of the masses. But is it doing anyone any good, and at what cost to the environment? In the past, the traveller set off intrepidly, armed with a flower press and sketch-book, recording the curiosities of uncharted lands. Today the tourist is packed off in a batch to a resort, purpose-built to accommodate and amuse. As Baldwin points out in *Travel Agent*, 'there is little to differentiate between a high-rise hotel in Ibiza and one in Oahu... the swimming pools, sleek coffee shops, souvenir stands, even people... all bear the same jet-age patina.' Will tourists see anything that will add to their knowledge of the world, of the people who inhabit it or the societies and cultural forms they have developed?

The answer is no. A cursory look at the advertising material indicates that what the tourist is looking for is nothing other than the four S's – sun, sea, sand and sex. All four can be provided remarkably cheaply – which is why tourism is a multimillion dollar business.

But does the price paid represent the true cost? What about the effect of mass travel on health? The common cold is for us an inconvenient but mild complaint, but to those, such as the Inuit, who have not encountered it before, it can be lethal. Similarly, when we travel, we ourselves run the risk of contracting ailments ranging from diarrhoea and tiredness to typhoid, malaria, cholera and dysentery.

Mass tourism is having a devastating effect on local peoples – not surprisingly, in view of the size of the invasion. According to the Madrid newspaper *ABC*, even last year's [1973] tourists turned large parts of the country into "an alien land where foreign languages are spoken, foreign currency is accepted and Spaniards discriminated against. In 1001 small and big things one can detect the presence of a new imperialism – tourism."

With the coming of mass tourism, land

values increase, often so steeply that local people find themselves unable to buy a house. At the same time, local employment patterns change. The tourist boom draws labour from the land, usually – as in St. Lucia and the Seychelles – with disastrous consequences for agriculture, since the height of the tourist season coincides with the harvest and fruit-picking time. Similarly, in North Africa, as Julian Pettifer puts it, "the Bedouin have left their flocks to shepherd the tourists, and the ship of the desert has become a tourist boat."

Most depressing of all is the effect of mass tourism on local cultural patterns, which are distorted and displayed for touristic purposes. James Mitchell, Premier of St. Vincent, said, "The tourist dollar is not worth the devastation of my people. A country where the people have lost their soul is no longer a country."

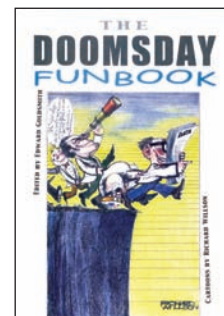
In Mexico, the choice is very much between the tourist dollar and the Mexican soul. Sixty per cent of the tourist revenue comes from the 90 million US citizens spending a total of \$600 million each year in the red-light districts of Tijuana, Ciudad and Juarez. These towns are visually unattractive, and now act as magnets for crime, as well as, of course, prostitution.

Eloquent comment on mass tourism comes from Greece, where in 1971 the Holy Synod of the Orthodox Church published a new prayer. "Lord Jesus, son of God," it reads, "have mercy on the cities, the islands and the villages of our Orthodox fatherland, as well as the Holy Monasteries, which are scourged by worldly touristic ways, and protect our brethren who are sorely tried by the modernistic spirit of these contemporary Western invaders."

It is unnecessary to dwell at length on the ruinous effect of mass tourism on the physical environment. Practically no accessible area of great natural beauty is exempt. Already a large part of the Costa del Sol, the south of France and

the Italian Riviera has been mutilated beyond redemption. The ravages of tourism are particularly evident in Hawaii, a once-beautiful island now disfigured by countless skyscrapers. Six-lane motorways cater for over 300,000 cars and, during the season, a jet with a cargo of tourists arrives every 10 minutes. The pilot, as Wehrheim points out ('Paradise lost', *The Ecologist*, Vol. 1, No. 10, April 1971), "need not check his instruments or consult his navigator to know when his plane is nearing its destination. He can spot the murky grey-brown pall that hangs over the city while still miles out to sea."

The damage caused by tourism is becoming apparent to even the blindest among us. But for how much longer will people go on spending their holidays in this saddening manner? The decision, however, may be taken out of their hands. Mass tourism is likely to be one of the first victims of the energy crisis, which will be very good news for the environment, local peoples at popular destinations and their cultural patterns, and probably not really such bad news for would-be tourists.



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Still waters RUN DEEP



Npower, owner of the UK's third largest coal-fired power station, says it will have to black out two million customers if it can't fill this lake with poisonous ash. **Paul Kingsnorth** investigates

As we stand looking out over Thrupp Lake, it begins to rain. The rain shakes the leaves of the oaks and the willows, and frays the surface of the water. Canada geese and swans look unconcerned as the five of us put up the hoods on our raincoats and huddle under the trees.

It's a strangely tranquil place. A 30-acre lake, bristling with wildlife, surrounded by mature trees and studded with islands on which waterfowl nest and gather – you could imagine, standing here, that there was not another human being for miles.

Yet we are standing in one of the most populated parts of south-east England, only minutes away from housing estates, motorways and – ominously – one of the country's biggest coal-fired power stations.

With me are four local residents, who know and love this quiet, unassuming, unspectacular but beautiful place. They walk their dogs here, come here to think, to watch wildlife or just catch a breath of air. They live nearby and, as new housing estates, business parks, road widening schemes and the vagaries of breakneck 'development' hem them in further every

year, Thrupp Lake has become a refuge.

"There are a lot of people living round here," says Jo Cartmell, a wildlife expert who has just finished scanning the mud of the banks for otter footprints. "This is a place you can come for a bit of beauty and tranquillity, which is so precious these days. For me, it's a much-treasured area. I've been here for 20 years now. I couldn't believe when I first moved here that a lake of this size, with all this wildlife, was literally so close to home."

Jo, Basil, Marjorie and Lynda walk me around Thrupp Lake as the rain continues,

creating a mist of spray in the trees. Their knowledge and love of this landscape is clear as they point out long-tailed tits in the branches and coots scooting across the mudflats. They tell me of sedge warblers, Cetti's (pronounced 'chetty's') warblers, whitethroats, otters, water voles, firecrests, herons, bats, dragonflies, terns, cormorants, carp and orchids, all of which they have seen in or around the lakes, just minutes from their homes.

They tell me about the swans that nested on one of the islands, and the fox that swam across and ate their eggs. They tell me about the old ladies who come in wheelchairs to look at the view and watch the birds; about the anglers, the joggers and the schoolchildren who enjoy it. Then they take me around the corner and show me the future.

Fifty yards away from Thrupp Lake's tranquil beauty, across an old railway line, is a wide expanse of dark grey slime, studded with weeds and scrub. The slime is dangerous and unstable – the industrial equivalent of quicksand. It is also laced with arsenic, chromium, boron, cadmium, antimony, vanadium, barium and copper. It is surrounded by a high, barbed-wire topped fence with KEEP OUT signs along it.

Four years ago this, too, was a wildlife-rich lake. Now it is a waste pit, filled with hundreds of thousands of tons of ash. The ancient, dirty, coal-burning Didcot power station, just visible above the tree line, killed the lake by piping its waste coal ash straight into it. Nine other lakes in the area have met the same fate. Only two remain, of which Thrupp is by far the biggest. Now, Didcot wants to fill it, too, with poison ash. But it is meeting fierce resistance.

The lake is a County Wildlife Site, and sits in the middle of the Oxfordshire Green Belt. Yet the county council has recommended that the dumping go ahead. The RSPB, English Nature and the local wildlife trust have not objected. Neither has the Environment Agency.

All that stands between the wildlife of Thrupp Lake and 500,000 of tons of waste ash, in fact, are Jo, Basil, Marjorie and Lynda: four determined, respectable,



NPower wants to fill Thrupp Lake (top photo) with Pulverised Fuel Ash (PFA). To the power company it is nothing other than Lake E. If its executives have their way, then in a matter of months the lake will no longer be a wildlife haven, but a pit for toxic waste, just as has happened to Lake H (bottom photo), shown here in 2003.

middle-aged middle Englanders who have set up a spirited and widely-supported campaign group called Save Radley Lakes. And what their determined local campaign has exposed goes far beyond their village of Radley, and its nearby power station. This is about more than

Coal burning creates a huge amount of localised waste. Didcot can produce 3,000 tonnes of waste ash in a single day

just the future of an Oxfordshire lake. It is about electricity, waste disposal, climate change, government policy and corporate power. It is quite a story.

It starts in 1947, when the owner of the land that is now the Radley Lakes complex began mining it for gravel. Over the next few decades, gravel extraction created 12 deep pits, which filled with water and, over time, became a collection of lakes. As wildlife began to colonise them they became popular with local people. Walkers, anglers, birdwatchers, joggers, families, cyclists and parties of schoolchildren began to frequent them and they became a popular local landmark.

By the early 1980s, the 12 Radley Lakes had become so popular and well-used that

proposals were discussed to turn the complex into a public water park and nature reserve, with separate lakes for boating, angling, windsurfing and wildlife. The idea was widely supported locally. But in the intervening period, something else had happened to seal the fate of the lakes.

Didcot's coal-burning power station began operating in 1970, on a 300-acre site a few miles from Radley. Quite apart

from its contribution to global warming, coal burning creates a huge amount of localised waste. At full capacity, Didcot can consume five million tonnes of coal a year. The coal is pulverised into dust and fed into giant furnaces, which create the heat that generates electricity. But this process also creates waste ash, known in the industry as Pulverised Fuel Ash, or PFA. Didcot can produce 3,000 tonnes of PFA in a single day – up to a million tonnes a year. And it has to be disposed of somewhere.

Until 1984, Didcot's PFA was dumped in a nearby landfill site. But this soon filled up, and other potential landfills nearby had already been booked for the disposal of waste from London. One condition of the construction of Didcot's coal plant in

RADLEY LAKES

1964 was that PFA could not be disposed of by road, because of the vast number of lorries that would be required to take it away. So the power station needed another nearby site to dump its waste, and its gaze alighted on the Radley Lakes.

In 1982, before many local people knew what was happening, Didcot had been granted planning permission to pipe its PFA into the Radley Lakes, just

five miles away. So nearly a wildlife and water park, they were now to be a landfill site for industrial waste. But there were conditions attached. Any lake filled with PFA would have to be restored by the power station to a natural state afterwards. And they would need specific approval for every stage of the operation.

Over the next 20 years, 10 of the Radley Lakes were filled with PFA and fenced

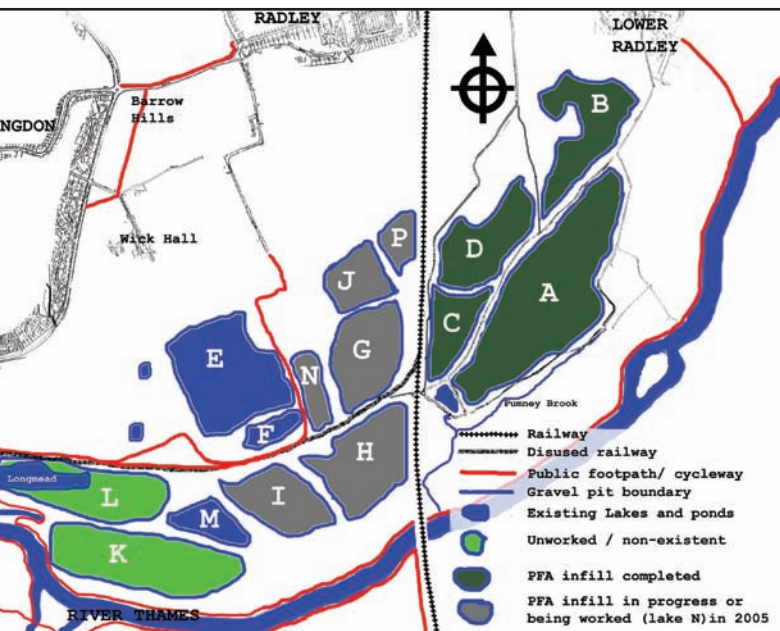
off from the public. Only two remained: Thrupp Lake and its smaller neighbour, Bullfield Lake. Local people hoped that these, at least, would be preserved.

Then, last year, Didcot's new owner, the German-owned electricity firm NPower, applied for planning permission to fill the last two lakes with PFA as well.

Standing on the thin spit of land that separates Bullfield from Thrupp Lake, Jo Cartmell shakes her head. There is a kind of astonishment in her voice, as if she can't quite believe what is happening. Jo has lived here for 20 years. She has seen the other 10 lakes disappear. She is determined to save at least this one.

"What amazes me is that the people from NPower didn't even come to see the lake!" she says. "They embarked on all these negotiations and they didn't even see the place. If they had done, and if they had even an ounce of nous between them, they would never have embarked on the plan to fill it."

NPower, of course, sees things rather



Map showing which of the lakes have been filled, and which remain. Lake E and Lake F are the only two lakes of any significant size that remain. Lake M is a small, exploratory pit.



differently. Its press officer, Kelly Brown, who says she has been to Thrupp Lake, is keen to explain to me what a good job her company does for the environment. She's also keen to stress that, in her words, there is "absolutely no alternative" to disposing of PFA in Thrupp Lake.

NPower doesn't call it Thrupp Lake, though. It refers to it merely as 'Lake E'; the latest in a long line of waste disposal pits, labelled A to P, which it says were "a scar on the landscape" when first mined for gravel, and are now being restored by the company.

"Technically," says Kelly Brown, sternly, "Lake E is not a public amenity. All these lakes that people walk around, they're actually private land. Eighteen months ago, we applied for permission to fill Lakes E and F (otherwise known as Thrupp and Bullfield Lakes) with PFA. There was a public consultation, which we studied carefully. Then we submitted a new proposal, to fill only Lake E. We have now guaranteed not to fill Lake F. And much of the land which is now Lake E – private land, remember – will be restored ecologically, and become a public park."

THE WAY she puts it, it sounds quite nice. Soothing, even. And she hasn't even got to the economics yet. "Didcot's coal burning power station meets the electricity needs of up to two million people," she explains. "And of course, it generates a lot of waste. If we can't secure a 24-hour, seven days a week means of disposing of that waste, then there's the possibility that power supplies will be disrupted. We have explored all the options very carefully, and I can assure you that there is no alternative at all. We have to use Lake E for PFA."

So far, so simple. Yet other issues lurk in the background, making the story much more intriguing and complex.

Firstly, there's the issue of PFA itself. Far from being a useless waste material, it is eminently reuseable. In great demand in the construction industry, it is used in concrete, road building, mine grouting, coastal defences and underwater construction. Didcot power station has recently built a plant to convert its PFA for industrial use – as it is keen to trumpet. But there is no legal obligation on it to do so, and less than half of its PFA is currently

reused. The rest goes into the lakes.

Secondly, as NPower is keen to point out, the law is against it in at least one respect. For years, PFA was not buried but reused. But in 1974 the European Commission introduced the European Waste Framework. In what was presented as an attempt to protect the environment, it classified PFA as a 'waste material' rather than a 'by-product'. The result, however, was that it was simpler and cheaper for companies simply to dump it than look for alternatives.

At the same time, no law exists in Britain – as it does in many other European countries – demanding that a large percentage of PFA is reused or recycled. From NPower's point of view, all this adds up to one conclusion – the cheapest and easiest thing to do

with its Didcot waste is to tip it into a series of local lakes.

Then, in 1982, when the first lake at Radley began to be filled, locals were assured that PFA was entirely 'inert' – not toxic, not polluting, not dangerous. However, this was followed by another European Directive, which enforced a new way of PFA disposal – before the waste was tipped into a drained lake, the lake needed to be lined with thick clay, to prevent any leaching of toxins into the groundwater. In other words, they PFA was potentially toxic after all. Suddenly, too, the filling of the lakes became a much bigger scar on the landscape. Whereas before, the lakes would just be filled up to ground level, they must now be surrounded by giant clay 'bunds' up to four metres high,

HOW TO FIGHT A PLANNING APPLICATION

The Save Radley Lakes campaign is an example of an effective, well-organised, determined campaign in the face of local environmental destruction. If you are trying to fight the destruction of local green spaces, consider the following points:

- **Be quick and organised. Some challenges need to be registered within six weeks of planning permission approval (see www.planningsanity.co.uk).**

- **Does the development threaten any protected species, or affect any Special Areas of Conservation? This can make your case stronger (see www.jncc.gov.uk).**

- **The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 grant members of the public access to environmental information held by public bodies (see www.cfoi.org.uk).**

- **The standard of 'Wednesbury Unreasonableness' can sometimes be invoked if an award of planning permission can be said to be 'so unreasonable that no reasonable**



person acting reasonably could have made it.'

- **If planning has already been granted, the decision can be challenged through a judicial review in the High Court (see www.earthrights.co.uk).**

- **The costs of a full judicial review can amount to £20,000. Consider applying to the Legal Services Commission for legal aid (see www.legalservices.gov.uk).**

- **Registering your protest group as a limited liability company can provide some financial protection for individual members should the case fail.**



WILDLIFE THAT DOESN'T COUNT

From top: Butterfly, otter, orchid, dragonfly and frog, all photographed at Radley Lakes. Despite this clear evidence, NPower denies the presence of otters in the lakes, claiming 'it's not the right environment for them'.

blocking off any view of what remains.

Basil Crowley, the chairman of Save Radley Lakes, has worked very hard to get his head around all the information and arguments, and he is dismissive of NPower's insistence that destroying Thrupp Lake is the only option available.

"I'll tell you what this is really about," he says. "The reason NPower are going after the lake so determinedly, and resisting alternatives, is that they want to get their money's worth. They paid £3.2 million for Thrupp Lake, before they'd even been given full permission to dispose of PFA in it." Plus, he says, the power station is coming to the end of its life. In 2015, yet another European Directive comes into play, which will require Didcot's coal plant either to clean up its act, or to close. NPower has decided to close it. "Since it's got no long-term future, it's not worth their while doing anything else," snorts Basil.

Finally, Save Radley Lakes simply do not believe NPower's insistence that Thrupp Lake will be enough to suit their needs. According to their calculations, Thrupp is not big enough to take all of Didcot's PFA waste for the next nine years. They say it will only take around 20 per cent of it before it is full and NPower will need to look somewhere else. They also point out, correctly, that on the site of Didcot power station itself sits another gravel pit. Much newer than Thrupp, and with virtually no wildlife value, it would be a perfect place to dump the PFA. It even has planning permission for dumping. But it has been bought by a company that plans to use it for landfill from London – while the waste PFA from 100 yards away is

pumped, instead, into Thrupp Lake.

"It makes no sense at all, when you put it all together," says Basil. "The reality is that for NPower this is the cheap and easy option, and no-one will stop them."

AND IT SEEMS, no-one will. English Nature couldn't designate the site a Site of Special Scientific Interest because they couldn't find anything rare enough living on it. The local wildlife trust has remained mute. The Environment Agency is happy that no laws are being broken. And NPower is keen to play down the wildlife value of the site.

"Save Radley Lakes produced a report recently which was full of inaccuracies about the lake's wildlife," insists Kelly Brown. "They say there are water voles there. They say there are otters. Well, we employed a team of specialist ecologists, who produced a very detailed report. There are no otters or water voles. It's not the right environment for them. And when we have restored the site, its ecology will be richer than it is now. Our restoration work is second to none."

Tell that to Jo Cartmell, who has seen otter tracks, or to the other local people who have seen and photographed otters there. Tell it to the Environment Agency, come to that, who verified one of the sightings. Tell it to Basil Crowley, who employed a qualified environmental surveyor of his own, who came back with evidence of water voles; or to Jo, who has studied them for years. Tell it to the kingfishers and bats who will have nowhere to nest once the filling begins.

There is also the question of what 'restoration' actually means. Before the

NPOWER AND THE ENVIRONMENT

■ NPower trumpets the green credentials of 'Juice', the partnership it set up with Greenpeace in 2001. Some of its power is generated from an NPower-owned offshore wind farm in Wales.

■ NPower remains, however, Britain's second-largest corporate emitter of greenhouse gases.

■ NPower is owned by the German power giant RWE, which owns more than 600 global subsidiaries, including hundreds of nuclear and coal-fired power stations.

■ Last year, WWF produced a list of the 'dirty thirty' most polluting power stations in Europe. Four of the top ten were owned by RWE.

■ RWE also owns Thames Water – which, according to the Environment Agency, was fined more for corporate pollution incidents in 2006 than any other British company. It has the worst leakage record of any water company in the UK, having missed its leakage targets for four years running; and has just recorded a 31 per cent rise in pre-tax profits.

gravel pits were dug here in the 1950s, it was farmland. Originally, Didcot promised to restore it to agriculture. But these days, agricultural land is much less in demand. Plus, the intervening five decades have seen the scrubby gravel pits develop into mature lakes.

Kelly Brown sends me a picture of what NPower's 'restoration' will look like. It's full of detail about the lagoon it will dig for the water birds, the native trees it will plant around the edges, the burrowing sites it will create for kingfishers to nest in, the small pond to be created especially for amphibians. In short, NPower is not restoring the original farmland – it's creating a smaller, cheaper, less wild version of the existing lake; one dug out of toxic ash, rather than soil. It's not terribly reassuring.

ULTIMATELY, though, Thrupp Lake has a problem – a problem that may doom it. It is not 'special' enough. Take the otters, for instance. "Otters have been seen here," explains Jo, "but we can't prove that they've bred here. If we could, we could stop the destruction, because otter breeding habitats are protected. But otters just being here doesn't count, we're told. It's a ridiculous bureaucratic way to look at it. We know the place is suitable for otters. We know otters have been seen here. We know otters have been seen on the Thames, five miles away, well within their range, which is 20 miles for a male otter and 10 miles for a female. Even if they're not breeding here now, it's a perfect breeding site for them. But that apparently doesn't count."

A similar rule applies to the kingfishers. Yes, there are kingfishers at Thrupp Lake, and kingfishers are protected – but their habitat isn't. Yes, it is rich in wildlife – but not rich enough, and not in the 'right' sort of wildlife to become a protected nature reserve. To the local people, Thrupp Lake is a special place. To the conservation bureaucracy, it is apparently not special enough. And to NPower, it's not even Thrupp Lake – it is Lake E; a location, not a place. A utility, not a landscape. An ideal site for the disposal of

poisonous waste that nobody wants, and nobody is supposed to see.

NPower's application to fill Thrupp Lake is currently with Ruth Kelly, the Secretary of State for local government, who can either reject it, accept it or deliberate on it for longer. NPower is confident she will accept it. If she does, Save Radley Lakes say they will take it to the High Court. In

We're all being behoven to reuse and recycle more...but a giant corporation is allowed to do this. There's no joined-up thinking at all

an ideal world, they say, they would like both remaining lakes to be locally-owned, locally-run resources. "NPower could have a great big PR coup if they said 'We've decided to give it to the community instead of dumping in it'," says Marjorie. "It would repay so handsomely for such a small amount of money."

Meanwhile, though, the fight goes on. And, as it does so, questions hang in the air. Who is to blame for this

situation? The EU, for making it harder for the company to do anything else? Oxfordshire County Council, for rolling over before a big, powerful company that provides local employment? The government, for failing to insist that PFA is recycled rather than dumped? Or NPower, for lazily dumping waste it could reuse or recycle, or for turning an immediate short-term profit by selling a potential dump on their land to accommodate London's waste?

Back on the shore of Thrupp Lake, what seems clear to me is that to fill this place with waste ash would be a crime. "What amazes me," says Jo, "is that on the one hand, we're all being behoven by the government to reuse and recycle more, and rightly so. On the other hand, a giant corporation is allowed to do this, which is fly dumping on a huge scale. There's no joined-up thinking at all. When you think about it, none of it actually makes sense."

WHAT YOU CAN DO

At the time of going to press, the fate of Radley Lakes lay in the hands of Ruth Kelly, Secretary of State for local government. By the time you read this she will have decided either to allow NPower to go ahead or to hold a public inquiry. Whatever the decision, though, Save Radley Lakes says there are three things you can do:

1 Don't buy electricity from NPower. If you already do, switch to Ecotricity (page 88). Write to the company that its destruction of Thrupp Lake has made you take your money elsewhere. Its website is www.npower.com

2 Get involved. Save Radley Lakes is looking, in particular, for legal experts to help with their case. They would also welcome donations to their fighting fund, which can be made through their website (see right).



3 Check the Save Radley Lakes website. Whatever Ruth Kelly's decision, the fight will continue, and the campaign will tell you how you can help. Log on to www.saveradleylakes.org.uk

LICENSED TO LOOT

The East India Company was the first multinational corporation – until its abuse of power caused a public backlash. **Nick Robins** examines its legacy to reveal how it set the corporate blueprint for today's firms to operate unchecked

In August 1769, two Armenian merchants, Johannes Rafael and Gregore Cojamaul, arrived at London's docks. The two were rich men and had made their fortunes in India's most prosperous region, Bengal. But their purpose was not to trade. Instead they sought justice from the most powerful corporation in the world: the East India Company.

In March 1768, Rafael, Cojamaul and two others had been summarily arrested by the Company's chief executive in Bengal, Harry Verelst, who then held them for more than five months under guard. When they were released, they found that the Company had pressured its puppet, the Nawab of Bengal, to ban all Armenians from the Bengal market.

Sailing around the world to where the Company was headquartered, Rafael and Cojamaul appealed to its board of directors, complaining of their "cruel and inhuman" treatment. When this was arrogantly brushed aside, the two went to court, suing Verelst for damages. An intense legal battle unfolded with claim and counter-claim, from 1770 until 1777, when the courts found Verelst guilty of "oppression, false imprisonment and singular depredations". The Armenians won a total of £9,700 in compensation – more than £800,000 in today's money. Thousands of miles from the scene of the crime, the principle of extraterritorial liability for corporate malpractice had been established in Georgian London.

Fast-forward more than 200 years, and Cojamaul and Rafael's revenge still has a powerful resonance for communities seeking to plug the justice gap in 21st-century globalisation. But this is not all that we can learn from the extraordinary corporate career of the Honourable

Company (one of the names by which it was sometimes known).

Founded on a cold New Year's Eve in 1600, the Governor and Company of Merchants in London Trading into the East Indies – its original full name – was the mother of the modern corporation. From its headquarters in the City of London, it managed a commercial empire that stretched across the Atlantic, around the Cape, past the Gulf and on to India and China. Starting as a marginal importer of Asian spices, the Company became the agent that changed the course of economic history, combining financial strength with military muscle to conquer India and break open China's closed economy. Always with an eye to the share price and their own executive perks, its executives in India combined economic muscle with a small, but effective private army to establish a corporate state across large parts of the sub-continent.

A TREACHEROUS DEAL

The battle of Plassey (the anglicised version of Palashi) in June 1757 was the turning point, when the Company's forces defeated the last independent Nawab of Bengal, helped largely by strategic bribery of his military commander Mir Jafar, whom it

million corporate windfall and a cool £22 million success fee for Clive.

The Company's new-found market power enabled it to drive down the prices it paid to Bengal's weavers – to such an extent that rumours spread of weavers cutting off their own thumbs to escape the innumerable fines and floggings. Eight years later, Clive followed up his coup at Plassey with a lucrative acquisition: he convinced the Mughal emperor to out-source tax collection in Bengal to the Company. The Company's share price soared on London's financial markets, almost doubling in the next three years.

But in the same month that Rafael and Cojamaul arrived in London, the rains failed in Bengal, marking the start of a ferocious drought. What turned this into a ravaging famine was the weakened state of Bengal and the Company's negligence and callousness – even increasing the tax rate to ensure that the overall revenue

remained level. Some estimates put the resulting deaths from starvation as high as 10 million, and it is certain that at least one million

people died – more than the population of London at the time – with some regions losing between a third and a half of their inhabitants. Clive managed to escape parliamentary censure for his part in all this, but died – most probably by suicide – with Dr Johnson observing that he had "acquired his fortune by such crimes that his consciousness of them

What is inspiring is how the Company's bid for unbounded power was repeatedly met by individuals fighting to make it accountable

then placed as its puppet on the throne. This is often regarded as the contest that founded the British Empire in India, but is perhaps better viewed as the Company's most successful business deal, generating a windfall profit of £2.5 million for the Company and £234,000 for Robert Clive, the chief architect of the acquisition. Today, this would be equivalent to a £232





The Company in 1778 commissioned *The Offering* by Spiridione, depicting India offering its riches to Britannia, for its London HQ

India – until on April 30, 1874, its stock was liquidated and the Company’s financial heart finally stopped beating.

At first sight, this extraordinary corporate biography might seem to be merely of antiquarian interest. There is clearly a world of difference between the Company’s operations in the 18th century and the business landscape of our own times. The Company’s establishment by royal charter, its monopoly of all trade between Britain and Asia, and its semi-sovereign privileges to rule territories and raise armies certainly mark it out as a corporate institution from another time. Yet in its financing, its structures of governance and its business dynamics, the Company was undeniably modern. It may have referred to its staff as servants rather than executives, and communicated by quill pen rather than email, but the key features of the shareholder-owned corporation are there for all to see.

THIS IMPERIOUS COMPANY

What is equally striking, looking back at the legacy of John Company (another name by which it was known, reflecting its ubiquity) is how it not only shaped the modern multinational, but also prefigured the same bundle of tensions exhibited by today’s global corporations.

In ways that are immediately familiar to us today, the East India Company lay at the centre of a web of commercial relationships. Internally, the interactions between owners, executives and employees defined the fundamental direction of the business. Externally, fiscal and regulatory interactions with states at home and abroad defined the Company’s scope for action, while in the marketplace, its standing with customers, competitors and suppliers determined its chances of success.

Ultimately, however, it was the Company’s ability to maintain a basis of trust with society at home and abroad that decided its fate – and once this trust was broken, protest, rebellion and its eventual downfall would follow. What makes the story so inspiring is how the

impelled him to cut his own throat”.

Nor did the Company’s footprint stop there. If India was the site of its first commercial triumphs, it was in China that it made its second fortune. Its ‘factory’ at Canton was the funnel through which millions of pounds of Bohea, Congou, Souchon and Pekoe teas flowed west to Britain, Europe and the Americas. In the other direction came first silver and later a flood of Indian-grown opium, smuggled in chests proudly bearing the Company chop (logo). Desperate to find a way of paying for the tea trade without exporting bullion, Warren Hastings (Britain’s governor-general of India from 1773 to 1786) first tried to smuggle opium into China in 1781, defying the Qing Empire’s trading ban. Initially unsuccessful, the Company grew increasingly brazen as its power grew, shipping ever-expanding

quantities of contraband into China, turning the country’s centuries-long trade surplus with the outside world into deficit. When the Qing eventually tried to crack down on the import of ‘foreign mud’, Britain sent in its gunboats in the first of a series of ‘opium wars’.

But before the second opium war was over, the Company itself was no more, the victim of the public backlash in Britain in the wake of the 1857 Indian Mutiny – otherwise known as the ‘first war of Indian independence’. The Company’s most senior executive, the utilitarian philosopher John Stuart Mill, pleaded with Parliament, but effective nationalisation followed the Company’s failure. Always solicitous for the needs of its shareholders, the Company managed to continue paying dividends for another quarter century – financed by taxes from

THE EAST INDIA COMPANY

Company's bid for unbounded economic power was repeatedly met by individuals fighting to make it accountable.

From the beginning, the East India Company's monopoly control over trade with Asia had been disputed by its competitors. But it was with the Company's acquisition of unprecedented economic power following Plassey that it came to be seen as a more structural threat to political liberty back home. Poems, pamphlets and plays poured off the presses, accusing the Company of oppression and corruption. For the editor of London's *Gentleman's Magazine*, by April 1767 it had become the "imperious company of East India merchants", with the issue at stake being whether "freedom or slavery" would result from the Company's immense power.

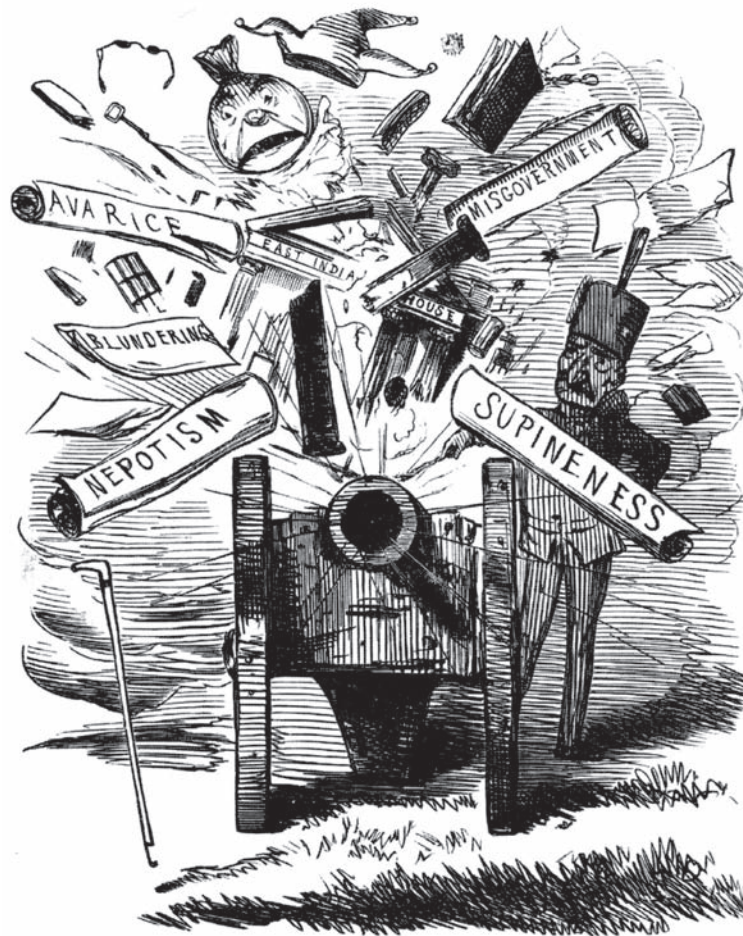
A CRITIQUE OF CORPORATE DESIGN

Nine years later, political economist and moral philosopher Adam Smith published his *Inquiry Into The Nature And Causes Of The Wealth Of Nations*, containing one of the most powerful critiques of the Company – and, by extension, the corporate form. Written in the wake of the Company's 'Bengal Bubble', Smith's *Inquiry* dissected the corporation as an institution and evaluated the factors that led to the East India Company's own particular crisis.

Uniquely, Smith was emphatic in downplaying the actions of individuals as the root cause of the problems. "I mean not to throw any odious imputation upon the general character of the servants of the East India Company," he wrote, stressing that "it is the system of government, the situation in which they are placed, that I mean to censure." The problem was one of corporate design. Monopoly didn't just create economic injustice; it was also "a great enemy to good management".

Smith was equally critical of the Company's joint stock model of corporate control, which separated managers from owners and was a licence for speculation, where "negligence and profusion must always prevail". Adam Smith was certainly a believer in open markets. But freeing the world for exploitation by corporations formed no part of his vision.

Smith's critique of the Company provided a powerful intellectual platform,



EXECUTION OF "JOHN COMPANY;"

The Blowing up (there ought to be) in Leadenhall Street.

Punch magazine summed up the feelings of the nation when publishing this cartoon. It mimics the company's practice of blasting captured rebels from cannons, blowing up East India House

but it was his friend, the statesman and philosopher Edmund Burke, who sought to bring the Company to justice in the 1780s. Often known as the father of modern conservatism for his defence of the monarchy in the French Revolution, Burke himself believed that his greatest contribution was his battle against the East India Company. In Burke's view, the Company had become financially and institutionally bankrupt, breaching the implicit terms of its Georgian "licence to operate". Drawing from the rich tradition of legitimate resistance to tyrannical government, Burke argued that "every description of commercial privilege [is] all in the strictest sense a trust, and it is of the very essence of every trust to be rendered accountable". Burke continued with a rhetorical flourish: "To whom then would I make the East India Company accountable?" he mused. "Why, to Parliament, to be sure."

When George III intervened to block Burke's East India Bill – which would have replaced the Company's board of directors with parliamentary commissioners –

Burke turned to law, like the Armenians before him. In 1787, he impeached Warren Hastings for "high crimes and misdemeanours". The trial, which began in 1788, lasted seven long years and gripped London society. Burke's mission was clear. "I must do justice to the East," he declared, "for I assert that their morality is equal to ours." Eventually, Hastings was cleared by a grateful House of Lords, more interested in imperial acquisition than points of principle.

To the leading lights of its age, such as Smith and Burke, the East India Company's rise and fall highlighted three fundamental flaws in the corporate metabolism: first, the unrelenting drive to market domination; second, the inherent speculative dynamic of shareholder-owned businesses; and, third, the absence of effective mechanisms for bringing companies to account for overseas malpractice. Looking back, the parallels with today's corporate leviathans became overpowering, with the Company outstripping Wal-Mart in terms of market power, Enron in corruption and Union

Carbide in human devastation.

The Company's example shows us that open markets and corporations do not necessarily mix – that economic diversity and enterprise often flourish best where corporations are kept in check. From Smith's contemporary analysis of the rising commercial economy of 18th-century Britain, it emerges that the truly entrepreneurial company is likely to be locally rooted, limited in size and liable for the costs it imposes on others.

Indeed, for Burke, there was something fundamentally suspicious about the Company's chartered rights. Speaking to Parliament in 1783, he made a clear distinction between human and corporate rights, arguing that "Magna Carta is a charter to restrain power and to destroy monopoly", while "the East India charter is a charter to establish monopoly and create power". It was this corporate tyranny that Burke tried – but failed – to break, urging Parliament to recognise that "this nation never did give a power without imposing a proportionable degree of responsibility".

TODAY, JUSTICE STILL GOES BEGGING

Drawing from Smith's analysis of the corporation, it is clear that the privilege of limited liability needs to be balanced with a social "duty of care" to curb the speculative quest for excessive rates of return. The Company Bill currently going through Parliament is an ideal opportunity to impose a legal duty of care upon company directors, to ensure that their actions do not damage society or the environment. At the time of *The Ecologist* going to press, the Bill in its present draft does not introduce such a duty of care, but it is being pressed for by the Corporate Responsibility Coalition (CORE), which represents more than 130 charities and campaigning organisations pressing for new laws to make sure that companies do not profit at the expense of people and planet. Through this simple, yet profound alteration in the corporation's genetic code, its inner dynamics would be reshaped to match its social obligations. Shareholders would also thus become aware of the wider implications of their investments, stimulating a search for

companies that take a pro-active approach to reducing their harmful impacts on others. Not just corporations, but capital itself would start becoming accountable.

Although he is frequently cited as the theoretical inspiration for globalisation, Smith would be horrified at the way in which the unlimited corporation now dominates economic and political life. Corporate scale magnifies an underlying problem of behaviour. When it was small, the damage that the East India Company could inflict was relatively limited. When

Adam Smith was certainly a believer in open markets. But freeing the world for exploitation by corporations formed no part of his vision

it grew in size to dominate whole markets and territories, its potential for harm grew correspondingly large.

While 21st-century corporations rarely enjoy the chartered monopolies that the East India Company fought so hard to sustain, global deregulation has meant that concentration in key markets has climbed to economically destructive and politically dangerous levels. At local, national and global levels, unrelenting action is needed to break up the corporate giants that currently hold the world to ransom. For this effort, Smith's passionate critique of the East India Company holds out the promise of new and creative alliances between those seeking open markets and those wanting to tame corporate power, whether it be 'big oil' or 'big retail'.

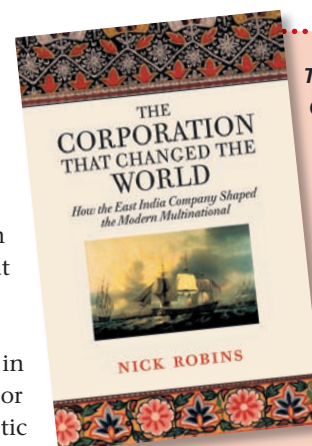
The example of the Armenian merchants winning their battle for reparations from the Company can also inspire us in today's efforts to hold corporations to account. As we know from the unrelenting pain of incidents such as the Union Carbide disaster at Bhopal, instruments of justice need to be as international as business. Rafael and Cojamaul's legal triumph can give us hope that we too can put in place effective legal mechanisms to enable those affected by corporations to bring action, either in the company's place of registration or in an international court. The realistic prospect of judicial intervention to penalise malpractice, wherever it may occur, would be a powerful deterrent,

further encouraging business to adopt responsible practices that prevent problems in the first place.

The Company's legacy still haunts both Europe and Asia; and, knowing its story, the obligation is to remember and then to act. This was certainly the stance taken by Jawaharlal Nehru, who in 1944 was serving his ninth – and final – term of imprisonment for his campaign to achieve India's independence from the British.

From his prison cell in Ahmadnagar, Nehru wrote what became *The Discovery Of India*, presenting his vision of how India's rich and complex past related to its freedom struggle. For him, the writing of history was not a

remote, academic exercise, but intimately bound up with taking action to change the present. Running through the book was Nehru's conviction that the two centuries of British rule had imposed a terrible burden on India that needed urgent removal. But it was when he describes the English East India Company and its plunder of Bengal following Clive's victory at Palashi that this cool voice of humanist reason boiled over in anger. "The corruption, venality, nepotism, violence and greed of money of these early generations of British rule in India," he thundered, "is something which passes comprehension." To underline his distaste at the Company's practices, Nehru added: "It is significant that one of the Hindustani words which has become part of the English language is 'loot'."




The Corporation that Changed the World
by Nick Robins

(Pluto Press, £15.99).

Ecologist readers can purchase copies of the book for £13 by calling 01264 342932 and quoting PLUECOLOG.

For more information about CORE, visit www.corporate-responsibility.org



“ We are now seeing the gamut of human exploitative activity played out in space, as if everything we have learnt on Earth has no bearing on our activities off it. For decades space agencies have been using the cosmos as a junkyard. Some debris is deliberately dumped there; redundant rocket stages, defunct satellites, wayward lens caps and dead batteries are simply abandoned. In 1990 the space shuttle recovered an old satellite and brought it back to Earth. Careful analysis by Nasa scientists showed that it was speckled with urine and faecal matter that had been jettisoned by previous US and Russian space missions... The space shuttle now flies backwards once it is in orbit because the engines at the rear are no longer needed once the shuttle is in space and can be used to absorb the impact of debris hitting the craft.

**Clive Hamilton,
Growth Fetish
(Pluto Press, 2003)**

”

reviews

RECOMMENDED BOOKS

WILD WORDS...

Sex sells newspapers. So do football and TV celebrities. They're the marketing man's best friends... or were, until 2006. Press-watchers will have spotted a new twist this year, as an unexpected big gun in the ratings war was pulled out: nature.

The Guardian started it with some posters adapted from the Scandinavian Fisheries Service, or suchlike. Random images of European birds, butterflies or fungi appeared, sometimes misnamed, on folded glossy paper laughingly called a wallchart; and to everyone's surprise, they went down quite well with readers.

The bandwagon was off. *The Daily Mail* launched a series of free DVDs based on David Attenborough programmes; *The Independent* produced bird charts with the support of the RSPB. The *Mail* countered with its own bird charts, while *The Guardian* brought out more posters.

To a degree, *The Independent* had already seen nature as a selling point. From time to time, it devotes its entire front cover and a few pages inside to environmental issues, such as the closing down of government-supported research groups, or the problems of house-building on heathland in the Thames Valley.

But is this all a fad? Well, "the subject is everything. The British countryside is varied and lovely". This is a quote from the introduction to a new book called *A Gleaming Landscape*, a collection of extracts from the past 100 years of *The Guardian's Country Diary*. Quietly enthusing about the natural world around us since 1904, the diary still claims a prominent slot in the newspaper, unnoticed by some, adored by many. Its longevity shows that nature has been helping to sell newspapers for over a century, long before Page 3 was invented or TV celebrities were born. Newspaper readers really do want more about wildlife.

Will we get it? The posters are a start.

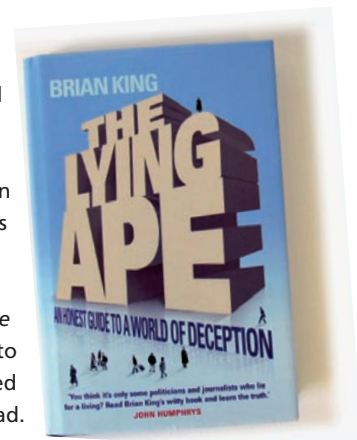
Malcolm Tait



THE LYING APE

Brian King, Icon Books, 2006 £9.99

As a species, we have a basic instinct to tell the truth. We also, Brian King argues, have an equally primal urge to lie, deceive and cheat. Few books dealing ostensibly with as grave a subject as 'truth' can give rise to as many belly laughs as this one. We are taken on a delightful journey of the lie, from its synaptic origins in our prefrontal cortex through to transcripts of its use at the hands of insurance salesman. Whilst making a serious point about the conduct of politicians and the press, and revealing the disturbing statistic that each of us lies, on average, five or six times a day, *The Lying Ape* emphasises that it is our unfortunate genetic heritage to lie. Without it, we would not be human. With stockings to be filled and holiday blues to lift, this is an endlessly quotable yule-tide read.




GAIA'S KITCHEN

Julia Ponsonby, Chelsea Green, 2001

It's not often a cookbook has praise on the backcover from James Lovelock, creator of the Gaia hypothesis. *Gaia's Kitchen*, the product of Julia Ponsonby and her friends at the Schumacher College is unusual in many ways, however.

Originally winner of the 2001 Best Vegetarian Cookbook award, this is much more than just a collection of recipes. Subscribing to scientist Lovelock's view of the Earth as a biodynamic whole, *Gaia's Kitchen* stresses developing an understanding of our relationship to what grows around us, and the importance of cooking as a part of our daily lives.





WORLD CIRCUIT
presents...

- ★ BUENA VISTA SOCIAL CLUB ★
- ORCHESTRRA BAOBAB
- ALI FARKA TOURE with Ry Cooder
- Ibrahim Ferrer and Omara Portuondo
- TOLUMANI DIABATE
- oumou sangare
- ÇAÇHATO KEINK LÊ

World Circuit Records celebrate twenty years of recording with the release of this 29 track, 2 CD collection. Best known for GRAMMY winning albums by Buena Vista Social Club and Ali Farka Touré, the label presents classic favourites alongside previously unreleased gems in a celebration of some extraordinary musical moments.

"There have been moments in pop history when you can depend upon a label to buy a record blind. Atlantic had it, Motown had it for a while, and World Circuit has it at the moment." Charlie Gillett, Billboard

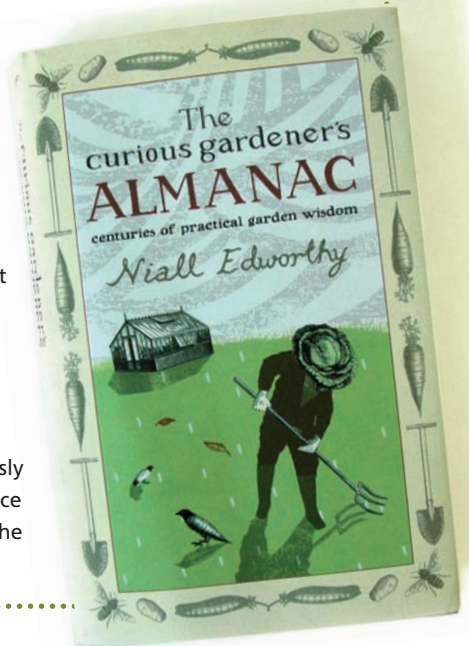
2 x CD set for the price of 1 CD

www.worldcircuit.co.uk

THE CURIOUS GARDENER'S ALMANAC

Niall Edworthy, Eden Project Books, 2006, £10

Almanacs have historically been at the bottom of the list when it comes to accuracy. Not so Niall Edworthy's brave new attempt. Packed full of recipes, sages, tips and histories, it is a perfect addition to any greenhouse collection. From the origin of gnomes to simple ways to analyse your soil, *The Curious Gardener's Almanac* is an ordered miscellany of horticultural wisdom. When the days are cold and grey, and it becomes ever-more difficult to coax ourselves out into our frostbitten veg beds, this book has the capacity to encourage, inform and inspire. And, of course, to allow us to garden vicariously from beside a roaring solstice fire. A perfect present for the green-fingered.

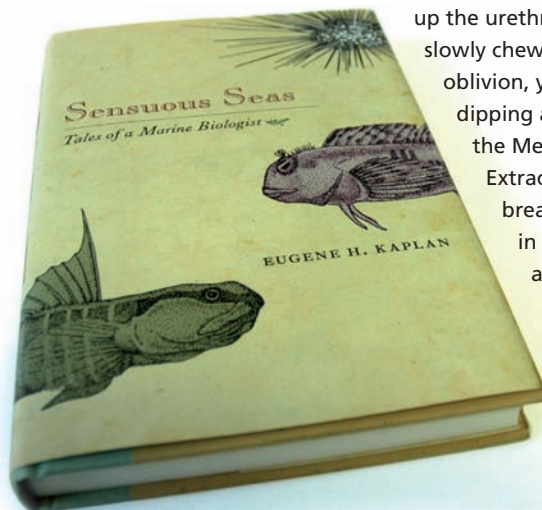


SENSUOUS SEAS: TALES OF A MARINE BIOLOGIST

Eugene H. Kaplan, Princeton University Press, £14.95

This is a book seriously undersold by both cover and title. It's best compared to the *Horrible Histories* children's books. But about the sea. And for adults. Underneath a dust jacket that would suit a biology textbook is a cornucopia of marine anecdotes that will have you both enthralled and repulsed. Kaplan, with a fireside charm, tells us marvels of biodiversity, from a queue of fish waiting to have their gills 'cleaned' by a Wrasse fish, to the symbiotic relationship between clownfish and sea anemones. It's not bedtime material, however; after reading of the

Candiru, a tiny fish that swims up the urethra of a host and slowly chews its bladder into oblivion, you won't be dipping a tentative toe in the Med any time soon. Extraordinary in its breadth and written in an extremely accessible style, *Sensuous Seas* will fire anyone's aquatic imagination.



LASALA

We are a small group of people concerned about the **future of the planet** and the welfare of its inhabitants. We see the only way forward as a **holistic and integrative approach** to life in all its aspects, e.g. medicine, ecology and culture etc.

For this purpose we have become the guardians of **Santa Bàrbara, 800 hectares of untouched land in Northern Spain**, its history touched by celts, druids, and templars.

We want to make this powerful place available to all those with similar aims as a **place for encounter**, so others can exchange ideas and knowledge and support each other in manifesting them.

Our aims are non-profit-making, but projects are being put in place in order to finance the infrastructure needed for such an undertaking. One of the first is the construction of a green burial site.

If like us, you want to **change the world**, we are looking for **investors** as well as **volunteers**, to help make it all possible.

To find out more please visit us at www.lasala.es or contact us at info@lasala.es.

www.lasala.es

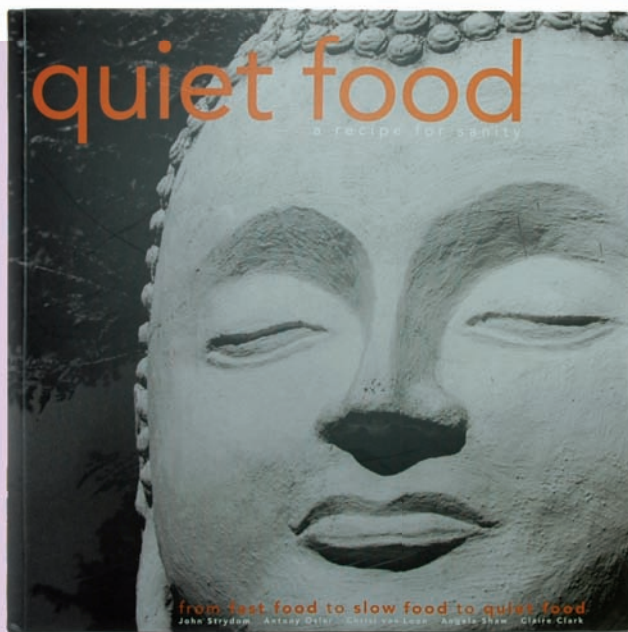
place for
encounter
holistic and integrative
approach
investors
volunteers



TALK BACK: THE BUBBLE PROJECT

Ji Lee, Mark Batty, 2006, £10.99

'Bubbling': the art of taking a 'speech bubble'-shaped sticker, placing it on a billboard poster next to a person's mouth, and writing in a suitable comment. This is now a world-wide preoccupation and, despite its essential illegality, it allows Ji Lee to produce a most amusing photo-story. There is a motive behind 'bubbling', and it revolves around the reclamation of public space away from advertisers and big corporations. It re-humanises mass culture, albeit in a very small and often contentious way.



QUIET FOOD

Edited by Chrise van Loon, Grub Street, 2006, £12.99
 In the footsteps of the Slow Food movement, comes quiet food. This book of recipes from a Buddhist retreat in South Africa challenges us not only to "experience the enchantment of preparing and consuming food". In a world where children see cows as squares of meat in clingfilm, where vast amounts of food are thrown away while millions go starving, *Quiet Food* calls on us to pay reverence to this central part of our everyday lives.
 Reviewed by Jeremy Smith

gift memberships available!

Isn't it time to Kick the car habit?

We can help. Join us!

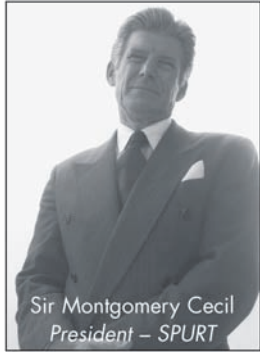
AA A 12-MONTH, 12-STEP PROGRAMME FOR CAR ADDICTS.
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LET'S NOT WORRY ABOUT CLIMATE CHANGE



Sir Montgomery Cecil
President – SPURT

Hello. I am the President of SPURT and I am a patriot.

When man conquered the skies he proved his dominance over nature. But those environmentalists just won't shut up about aviation and climate change. It's time we took a stand for decent hard-working shareholders and told the lentil mob to 'can it'.

According to the World Health Organisation 150,000 people die each year due to climate change. That's a risk we're prepared to take.

We reject the dangerous rantings of climate doom mongers and the Government's Chief Scientific Advisor. We dispute the 99% of scientific reports 'confirming' this so-called 'climate catastrophe'.

The uncomfortable truth is that aviation is good for the environment. I'm taking my cheap holiday and telling the climate whingers to get stuffed.

On behalf of the British aviation industry, we applaud the Government's leadership in listening so boldly to our policy proposals.

- ✈ **SPURT** wholeheartedly endorses the White Paper on Aviation that will ensure British skies become Europe's foremost flight path. We must fly more and damn the consequences.
- ✈ **SPURT** welcomes the promised second runway at Stansted, the third runway at Heathrow, the second runway at Gatwick, the full runway at Luton, the new runway at Birmingham, the planned new runway at Edinburgh, the runway extension at Aberdeen and the growth in traffic for Bristol, Manchester and the East Midlands.
- ✈ **SPURT** supports utterly the Government's refusal to be cowed into any kind of environmental tax on aviation.
- ✈ **SPURT** rejects out of hand the MORI poll from June 2006 reporting that 73% of people would support a green tax on aviation if the proceeds were spent on the environment.
- ✈ **SPURT** calls upon Britain's NIMBY whingers to stop complaining about flight paths, noise and air pollution and the demolition of listed buildings. Be grateful you live so close to an airport.

Want the real facts on climate change? Read on...

FACT Environmentalists only worry about things that will happen in the future - but many of us won't even be around then.

FACT Nobody wants to hear about climate change, flooding and people dying in Africa. It's depressing and doesn't even affect most of us.

FACT Everyone wants a holiday in a hot place, so what's the problem?

(Source – SPURT Research, 2006)

Support SPURT'S campaign and write to the Department for Transport.

As a frequent flier and enthusiast of cheap duty free, I call upon the Government to

- STOP** listening to scientists about climate change
- BUILD** more planes, more runways and more airports
- PROTECT** shareholders not the environment

Name _____
Address _____

Please send to: Rt Hon Douglas Alexander MP, Department for Transport, Great Minster House, 76 Marsham Street, London SW1P 4DR

Sod them. Let's fly.
www.unlimited-spurt.org

Find us online and watch our instructional video.


SPURT
towards
unlimited aviation
growth

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Make mincemeat of Christmas

Aunt Betsy's balls, Kristen's odd socks, Pat's body bars
Homemade gifts you'd be proud to give... and receive



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*use the code X5ECL to receive £5 off when you spend over £20



Ethicalsuperstore.com offers a Fair Trade Media gift wrapping service and is the UK's first online store to offer a Carbon Offset option on your delivery service.



November

Give your planet feet in London's climate march, enjoy real ales in Wales, organic food in Scotland, fresh air around the coast... and more



4 NOV MARCH FOR CLIMATE JUSTICE

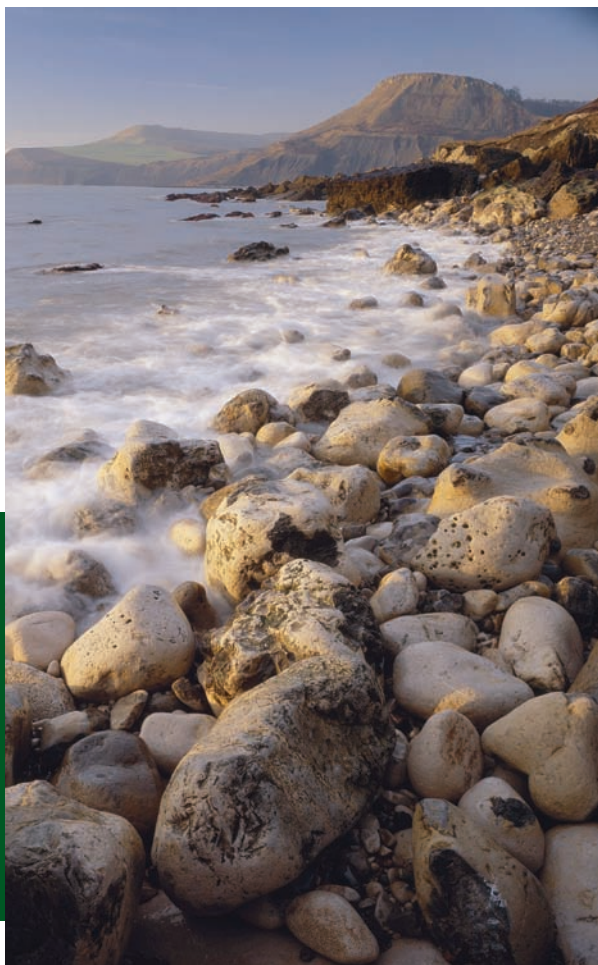
The National Climate March, in central London, is part of the Day of International Climate Protest on the Saturday before the UN Climate Talks in Nairobi, demanding urgent action on climate around the world. Visit www.globalclimatecampaign.org

- 10am – Protest Bike Ride assembles Lincoln's Inn Fields. Goes via ExxonMobil offices, Australian Embassy and Downing Street to US Embassy, Grosvenor Square.
- 12 noon – Climate Rally at the US Embassy, Grosvenor Square (Bond St tube) – with music and a comic 'mock trial' of climate criminal Bush, with speakers including George Monbiot, Michael Meacher MP, Caroline Lucas MEP, Norman Baker MP.
- 1pm – March for Global Climate Justice from the US embassy, via Berkeley Square and Piccadilly Circus to Trafalgar Square
- 1.45-2pm – March joins I-Count Mass Gathering in Trafalgar Square.

This will be the biggest ever climate demo in the UK and part of the biggest ever 'global' climate demo. Join the swelling tide of people around the world demanding urgent action on climate. More info on www.campaigncc.org

23-25 NOV THE GREAT WELSH BEER AND CIDER FESTIVAL

The largest such event in Wales offers more than 150 traditional ales, and more than 30 ciders and perries. It's all happening at Cardiff City Hall. Visit www.neilwarnock.f2s.com/gwbcf or call 07092 031080.



NOV/DEC CRAFTY CHRISTMAS

Promoting the work of British craftspeople, handmade toys, clothes, interiors, unusual stocking fillers and specialist food will be on sale throughout the UK in November and December. Visit www.ruralcraftsassociation.co.uk for more info. Or become a craftsperson yourself – see *The Ecologist's* Homemade Christmas Gift Special (page 69) for fabulous gift ideas.



WILD WEEKEND

Had enough of stuffy town air? Head to the cliff coasts for revitalising, wintry coastal walks. It's out of season, so you'll avoid the crowds. For detailed info on walks, maps and accommodation, visit www.ramblers.org.uk.

PHOTOGRAPHS NITPL/JOE CORNISH

IN SEASON RESTAURANTS

Recently opened: Bordeaux Quay, a restaurant/brasserie/bar/deli/bakery/cookery school in Bristol's Harbourside (0117 943 1200, www.bordeaux-quay.co.uk) proves it's possible to serve delicious, locally sourced, organic and seasonal fare.

At the new 'Konstam at Prince Albert' in London's King's Cross, urban chef Oliver Rowe keeps it local by sourcing all food from within the M25, for his delicious and imaginative meals. Book on 020 7833 5040.



**22 NOV- 3 DEC
EVERYTHING TREES**

The Tree Council's National Tree Week marks the start of the tree planting season. Across the country there are tree sales, plantings, dressings and more! Tree walks, talks, songs and storytelling are great for the whole family. Visit www.treecouncil.org.uk

**25 NOV INTERNATIONAL
BUY NOTHING DAY**

Resist the siren-call of consumerism and give your platinum card a rest for a day. A real time to think about how much we really need, and what our spending might cause. Visit www.ecoplan.org/ibnd

**25 NOV-24 FEB
THE GREAT OUTDOORS...
INDOORS**

Richard Long: Land and Line is a new exhibition of sculpture and 2D work by Turner Prize-winning artist Richard Long, in Sheffield's Graves Art Gallery. Long's awesome, naturally-inspired sculptures pay homage to the beauty and grandeur of the earth. Visit www.sheffieldgalleries.org.uk

**NOVEMBER
FOOD IN SEASON**



VEGETABLES

- | | |
|---------------------|---------------|
| Asian Greens | Parsnips |
| Broccoli – headed | Potatoes |
| Cabbage | Pumpkins |
| Celeriac | Radishes |
| Celery | Shallots |
| Garlic | Spinach |
| Jerusalem artichoke | Spring Onions |
| Kale | Swede |
| Leeks | Swiss chard |
| Lettuce | Turnips |
| Mushrooms | Winter squash |

FRUIT

- | | |
|--------|----------|
| Apples | Currants |
|--------|----------|

ROOTS ROCK

Roasted root vegetables is a simple and tasty recipe – great for a variety of this season's veg:

Beetroots, Parsnips, Pumpkins, Swedes, Winter squashes
Peel and cut into chunks, toss in olive oil, add chopped garlic cloves and herbs (e.g. rosemary, thyme). Place on a baking tray and roast in a pre-heated oven, gas mark 7, 425°F (220°C), for 30-35 minutes or until nicely toasted brown at the edges.

KALE

Kale is one of the few green veg that's abundant and flavourful during the coldest months. It makes a great side dish, blanched and sautéed with garlic and/or a little soy and a sprinkling of chopped, roasted nuts.

It's also an excellent ingredient in hearty, warming soups such as Scotch Broth. Visit www.eattheseasons.co.uk for information and recipe ideas.



PRODUCT of the Month

Fed up with junk TV? From blackjack to strip poker, a pack of cards can provide hours of winter fun. With the Marine Stewardship Council's deck of Under the Sea Playing Cards (£5), you can also help protect fish. Designed by 54 acclaimed artists, including Damien Hirst and Anish Kapoor, all proceeds will help the MSC promote solutions to overfishing. To buy: www.msc.org or call 020 7811 3300.



**4-5 NOV
SCOTS GO
GREEN**

The Scottish Soil Association launches its first Organic Food Festival in Glasgow's revamped Fruit Market, showcasing the best organic produce and products from Scotland and beyond. Visit www.soilassociation.org/festival for details.



FARM FOR LIFE

Thinking of going organic? The Soil Association organises 'Organic conversion' events for farmers all over the UK. Visit www.soilassociation.org for more info. Learn the principles of organic farming; how to convert a farm; how you can benefit from organic grants and business marketing opportunities.





THIS MONTH'S VINEYARDS

SLOW WINES

Monty Waldin meets organic growers Bodega Robles and Cantine Volpi and discovers how a 'prevention rather than cure' mantra helps them overcome the problem of rot

One of the most common complaints by conventional winegrowers unconvinced of the benefits of organics or biodynamics is lack of flexibility. "What if we need to spray?", they ask. The final weeks before harvest are nerve-racking for all farmers, not just wine growers, especially if it rains. Wet or humid weather increases the risk of grapes rotting.

Conventional growers can use chemical anti-rot treatments if they think the grapes are starting to rot. These are the kinds of sprays most likely to leave residues in the fermenting vats. Although such sprays are not supposed to be used within roughly one month of picking, policing this is virtually impossible. I've known growers use such sprays less than 20 days before harvest.

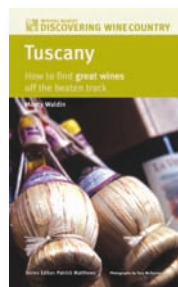
Such growers are almost invariably those with hefty debts at the

bank and, for them, spraying is like a desperate form of insurance for their valuable grape crop, in order to avoid bankruptcy.

You can hardly blame them for wanting to stay in business, but regular readers of this column will know that organic wine growers operate on a 'prevention rather than cure' approach. So, if the grapes are starting to rot just before harvest, the question to ask is not 'what should we spray?' but 'what caused them to rot in the first place?'

The answer is usually excess chemical fertilisers. These feed the vines direct, making them grow too fast. They end up weak and more susceptible to rot. Excess fertiliser also means high yields – in fact, the vines produce too many grapes. The bunches cramp each other on the vine shoots, suffer from a lack of air and sun, and rot

To order a copy of Monty Waldin's new book *Tuscany* at the special price of £9.75 (RRP £12.99), including p&p, please call 01903 828503 and quote the code MB14.



forms easily in such conditions.

Organic growers use compost instead of fertiliser. Compost works more slowly by feeding the soil, keeping it full of worms, which break down the nutrients in the soil on which the vine roots feed. The result is healthier soil and slower-growing, lower-yielding, less rot-prone vines.

There is another course open to organic winegrowers worried about rot: work with grapes in only the driest of climates. The risk of rot is virtually non-existent in sunny areas with low rainfall: such as Andalusia, in Spain, and Sicily.

Bodega Robles

Andalusia is home to a winery (bodega) founded in 1927 and run since by three generations of the Robles family. Bodegas Robles, 25 miles south of Cordoba, was the first Andalusian estate to produce a wine from certified organic grapes (in 1999). The winery produces montilla-moriles, which tastes very similar to sherry (which comes only from Andalusia). But there are key differences between montilla and sherry ('Jérez').

Firstly, montilla is made with a grape called Pedro Ximenez. This gives a more full-bodied wine than sherry's main grape, called Palomino Fino. Secondly, inland Montilla is so hot that grapes for the basic 'fino' style are rich enough in sugar (potential alcohol) not to need any grape brandy added to them – which is what happens with sherry, grown in slightly cooler conditions, next to the Atlantic, 100 miles to the south-west.

Sherry has come back in fashion because it is no longer thought of as sickly sweet – but it has also become pricy. Montilla, on the other hand, offers great value and even gave its name to the most critically admired type of sherry – amontillado, meaning 'in the style of montilla'. Poor man's sherry it is not, however – in fact, sherry producers stole the 'amontillado' name from montilla.



Cantine Volpi

Cantine Volpi

In Sicily, which rivals Montilla as Europe's hottest wine region, Carlo Volpi is also a man who likes to keep his options open. His business, Cantine Volpi – literally 'Volpi's Winecellars' – is structured like a cooperative, and as such can source organic grapes from various Italian regions, not just Sicily. Volpi concentrates on sourcing grapes from southern regions like the Marche and the Abruzzo – where the Montepulciano red wine featured in the *Tasting Notes* (right) comes from – on the Adriatic coast, and of course Sicily, where his business is based.

"In a hot, dry climate the vine really has to struggle," says Volpi. "What we worry about is a lack of grapes, especially with global warming. The green vine shoots contain not only the buds for this year's harvest, but also the reserve buds, which will flower and produce grapes in the following harvest."

One way of conserving moisture in the soil is by allowing wild grasses to grow between the vine rows – now an increasingly common practice in Italy's organic vineyards.

Back in Spain, Bodegas Robles is working with the University of Cordoba on a research project to see how leaving the bare earth between the vine rows covered with vegetation affects vine yields – the number of grapes each vine produces – and how wines smell once they are made. If vines stress from heat exhaustion during the

growing season the stress may have a negative impact on the wines' smell and taste. This phenomenon, called atypical (or untypical) ageing – ATA, or UTA – which makes wines age prematurely and makes white wines, in particular, taste bitter.

No one knows yet whether UTA is caused by global warming (which may be causing grape skins to get sunburnt), the poor quality of corks used to seal wines, vineyard chemicals, or the fact that most vineyards are farmed to look nice – all grass between the rows between either ploughed away or weedkilled to give that photogenic 'bare earth' look (which I despise) – instead of being farmed for quality.

"The only disadvantage of leaving grass to grow between the rows," says Pilar Robles of Bodega Robles, "is that we get slightly lower yields. But with lower yields we are also less likely to suffer from rot...."

CONTACT DETAILS

Bodegas Robles

Ctra. Córdoba-Málaga, N-331,
Km.47, 14550 Montilla,
Cordoba
SPAIN
Email info@bodegasrobles.com

Cantine Volpi

Strada Statale 10 n. 72, 15057
Tortona
ITALY
Email volpi@cantinevolpi.it
www.cantinevolpi.com

Tasting Notes

BODEGAS ROBLES

Bodegas Robles 'Piedra Luenga Fino'

Made from 100 per cent Pedro Ximenez grapes and with no added brandy, so the relatively high level of alcohol (around 15 per cent) is due to the ripeness of the grapes. Has a light straw colour, is bone-dry to taste, with powerful, savoury aromas and flavours of hazelnuts, freshly baked bread and a barely perceptible salty tang. Ideal chilled as an aperitif.



Bodegas Robles 'Piedra Luenga PX'

PX refers to the Pedro Ximenez grape, thought to refer to a 16th-century soldier who took this green-skinned grape from the Holy Roman Empire (in what is now modern Germany) to Spain as cuttings stored in his boots. For this wine the grapes are picked, dried in the sun to concentrate them further, and part fermented. Brandy is then added, leaving a wine with a deep chestnut colour, flavours of raisins and dried figs, and with a sweetish but not sticky texture. Ideal drizzled over pudding or sipped slowly.



CANTINE VOLPI

Cantine Volpi 'Era', Montepulciano d'Abruzzo DOCG

This dry red wine is ideal for Christmas. It is made in the Abruzzo region of south-eastern Italy from the Montepulciano grape (not to be confused with the Tuscan town and wine of the same name). It shows attractive red berry fruit, a deepish crimson colour, and a crisp but warm texture, making it quaffably soft to partner a roast and not too overpowering for salads. This wine is not made for ageing – so drink up.



Cantine Volpi 'Era', Nero d'Avola, Sicily

This dry red wine is made from Nero d'Avola, one of southern Italy's trendiest grapes right now. When yields are kept low by organic farming the Nero d'Avola's forceful tannins, which can pucker your mouth, take on a silky quality, making this a full-bodied, but not-at-all heavy red with a smooth aftertaste coming from the ripe grapes. Versatile enough to be an aperitif, but more appetising when paired with a main course.



ecologist ORGANIC & BIODYNAMIC WINE CLUB

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WINE CLUB CASE 5:

Festive Flavours

November selections

- 1) Bodegas Robles 'Piedra Luenga Fino'
- 2) Bodegas Robles 'Piedra Luenga PX'
- 3) Cantine Volpi 'Era', Montepulciano d'Abruzzo (x2)
- 4) Cantine Volpi 'Era', Nero d'Avola, Sicily (x2)

December/January selections:

- 5) Juniper Green Gin
- 6) Sparkling Perlage Prosecco (x2)
- 7) Perlage Terra Viva Merlot
- 8) Perlage Terra Viva Bianco Terre di Chieti
- 9) Port from Casal dos Jordoos



TERMS & CONDITIONS *Available in mainland GB only. Please allow seven working days for delivery. Purchasers must be 18 years or over. Offer open to *Ecologist* subscribers. One case per subscriber while stocks last. No customer substitutions. Wines supplied and delivered by Vinceremos Wines, 74 Kirkgate, Leeds, LS2 7DJ.

Homemade **CHRISTMAS SPECIAL**



PAT'S SUNCATCHERS

These eye-catching gifts brighten up windows, mantelpieces, shelves... or can be reframed and hung. Using a pane of glass from an old picture frame, decorate it by gluing on fragments of broken glass collected from the street.

PHOTOGRAPHS BY EWA DUDEK

CATHY'S CRANBERRY MIX MINCEMEAT

A traditional Christmas treat – this version is without dairy, suet or gluten. Stored in a dry, dark place, it'll keep from one Christmas to the next!

What you need:

- 100g (4oz) veg margarine
- 200g (7oz) unrefined muscovado sugar



- 250ml (8fl oz) orange juice
- 2 tsp mixed spice
- ½ tsp cinnamon
- ½ tsp grated ginger
- pinch nutmeg
- 250g (9oz) Bramley apples, peeled, cored and finely chopped
- 200g (7oz) sultanas
- 200g (7oz) currants
- 100g (4oz) dried cranberries
- 200g (7oz) mix candied peel, finely chopped
- 1 tbsp grated orange zest
- 150ml (5fl oz/¼pt) brandy

Mix the margarine, sugar, orange juice and spices in a saucepan, cook gently until margarine is melted and the mix is smooth. Add apples, sultanas, currants, peel and zest to pan. Bring to the boil, simmer until apples soften, then remove from heat. Add the brandy and leave to cool. When cold, put into clean jars and seal.

ODD SOCK PUPPETS

What you need:

- Old socks,
- glue
- and/or needle
- and thread, felt scraps, buttons, ric-rac braid, beads. For a Christmas Day treat, prepare a children's puppet show...





EITHNE'S FELT FLOWERS

They don't have to be little – you can make them enormous, if you like – but whatever size you sew, they look just perfect on the lapel of a winter coat.

✿ For a medium-size flower, cut out a strip of felt 14cm x 9cm, in a nice bright colour. (Once you've worked out how to do it, you can play around with proportions.)

✿ Cut out two leaf shapes from the green felt.

✿ Fold the strip of felt in half lengthways.

✿ Cut a fringe through the fold, stopping roughly 1.5cm from the edge. You can use ordinary scissors for a straight edge; or if you use pinking shears, the edge will be nice and crinkly.

✿ Roll up the stem. Wind a length of thread around the stem to stop the flower from unravelling.

✿ Sew glittery thread patterns or sequins onto the leaves.

✿ Sew the leaves onto either side of the stem.

✿ Sew a brooch back to the base of the stem, or use a safety pin.

What you need:

Some squares of brightly coloured craft felt, including green. These cost around 60p a square.

Sewing thread

Glittery thread or sequins, for an optional bit of Christmas sparkle

A brooch back, or safety pin.

TO MAKE A ROSETTE

A rosette can be made from ribbon or left-over strips of fabric. These take hardly any time to make, and can use those scrappy bits of leftover fabric that you can't quite throw away, but don't quite know what to do with...

✿ Sew running stitch along one of the long edges of the ribbon or fabric. Stop around 10cm (4in) from the end.

✿ Pull tightly on the end of the thread to gather up the fabric. Shape it into a circle.

The un-gathered 10cm will make a nice decorative tail.

✿ Anchor it in shape with a few sturdy stitches, through the back of the rosette.

✿ Sew a button in the middle of the rosette, and a couple more to the tail.

✿ Attach the safety pin to the top edge of the rosette.

✿ Ring the changes by ditching the decorative tail, using thinner or wider ribbon, or longer or shorter strips of fabric...

✿ For more no-sew sewing ideas, see Eithne Farry's book *Yeah! I made it myself* (Weidenfeld & Nicolson, £10)

What you need:

A strip of ribbon or fabric around 50cm x 5cm for a medium-size rosette.

A few buttons

A safety pin

CRANBERRY AND APPLE JAM

Jars of homemade preserves make wonderful presents. Design your own label, create your own range.

What you need

450g (1lb) cooking apples

150ml (5fl oz/¼ pint) of water

450g (1lb) cranberries

900g (2lb) sugar

Cut the apples into slices. Put into a large saucepan with the water and cranberries. Cover the pan tightly and cook slowly for 10 minutes, or until the 'popping' noise ends. Add the sugar, stir over a low heat until dissolved, then boil rapidly until setting point is reached. (To test the setting point, spoon a small amount into a cold plate and wait up to 60 seconds for a skin to form on the top. If it doesn't, it hasn't reached setting point.) Spoon into heated jars and seal down.

✿ A note on sealing: sealable jars are widely available; otherwise, to seal a recycled jamjar, cut a disc of greaseproof paper and place over the jam, put a larger disc over the jar, secure with an elastic band and screw the cap on.



ALTERNATIVE FIRST-AID KIT

Help your loved ones beat the cold season, the holiday blues and the daily stress of life with a natural first-aid kit.

What you need:

An old shoebox, a tin, an unused cosmetics bag or anything else suitable to hold your kit.

Suggestions on what to fill it with:

Essential oils

Lavender oil – soothing, antiseptic and useful in treating burns and as a sleep aid.

Peppermint oil – for instant headache relief, also a useful decongestant.

Tea tree oil – good general disinfectant for cuts and grazes and occasional spots.

Tinctures/Remedies

A bottle of Rescue Remedy or similar all-purpose flower remedy for the inevitable stress and fatigue of daily life.

Echinacea tincture – if you can get this in a spray, so much the better, as it can double up as a throat spray and disinfectant for cuts.

Propolis tincture – good for cold sores and sore throats.

Salves

An all-purpose herbal salve – for instance, calendula, comfrey or hypercal.

Badger balms – for a range of problems, from sore feet to insomnia, cuts and grazes.

Traumeel – a homeopathic anti-inflammatory cream made from 14 plant extracts, including

arnica, calendula, chamomilla, echinacea, hamamelis, hypericum millefolium and symphytum. Good to treat pain and bruising. Manukaree 18+ Manuka honey has well-researched antibacterial properties; honey in general is also known to be antifungal. Good for cuts, grazes and burns.

For colds

Potter's Allerclear nasal spray – based on sea salt, to help soothe and clear congestion.

Stockists:

Ainsworths
01883 340332,
www.ainsworths.com
Allerclear 01942 405100,
www.allerclear.co.uk
Burt's Bees 01227 464076,
www.myburtsbees.com
Convita UK 020 8961 4410,
www.nznf.co.uk
Hambledon Herbs 01980 630721,
www.hambledonherbs.co.uk
Helios 01892 536393, www.helios.co.uk
Neal's Yard Remedies 0845 262 3145, www.nealsyardremedies.com



Jon's Paper Boxes

Fun for children under three, to explore colour, texture and shape... collect different coloured fabrics and textures, cut them into a variety of sizes and shapes. Pack them in a box...





MAGGIE'S BAGS

A fabric carrier bag is more attractive and environmentally friendly than plastic (see page 30), and will roll/fold up and fit in a pocket or handbag, so you've always got a bag handy to carry shopping. These are made from leftover fabrics – the 'fruit' ones use upholstery fabric (nice and strong), with appliqué fruit of red felt and green velvet for the child's shoulder bag; purple cotton, maroon and green velvet for the adult's bag. Make to whatever size you want; if you do appliqué, stitch it on before sewing up the bottom and sides. The patchwork bag (work in progress!) uses scraps of cotton and velvet; you can buy ready-made handles in a craft or haberdashery store.



Laura's bath salts

The scent is sweet, but subtle.

Simply mix together in a jar:

6 cups of sea salts

8 drops of rose essential oil

12 drops of geranium essential oil

5 drops of ylang ylang essential oil

Put the cork on or close the lid

and shake vigorously.

PAT'S BODY BAR

What you need for a 100g bar:

85g (3oz) cocoa butter

15ml (½ fl oz) of an oil of your choice, such as jojoba

10 drops of an essential oil of your choice (optional)

How to make:

Melt the cocoa butter slowly by heating it in a jar in hot water, stirring while you do. Add the 15ml oil, stir and remove from heat. Allow to cool slightly, add essential oil, stir, then pour into a small square or circle-shaped container (eg. the bottom of a juice box) and leave to set hard.





PAUL AND ZAYDA'S HOMEMADE FRUIT LIQUEURS

There's no better way to spend a cold winter's day than with a glass of one of these. Why not try making plum gin, for instance? It's so easy you could do it with your eyes closed.

✿ Add 450g (1lb) of pierced plums and 450g (1lb) of sugar to one bottle of gin. Put them all in a big, sealable jar, shake daily until the sugar has dissolved, then leave in a dark place for three to six months. Strain the liquid through muslin and decant into sterilised bottles. Hey presto: a gorgeous, thick fruit liqueur.

Sloes, the fruit of the spiky blackthorn bush, bring a gorgeous flavour and colour to vodka or gin. Tradition has it that the best time to pick sloes (which grow wild along hedgerows) is after the first frost of autumn has swollen and slightly softened them.

✿ Take 1.1kg (2½lb) of sloes, 450g (1lb) of sugar and a bottle of gin. Prick each berry several times with a needle (or a blackthorn spike). Follow the same procedure as above.

✿ For a slightly different taste, try blackberry whisky. 1.8kg (4lb) of blackberries, 225g (8oz) sugar and one bottle of whisky. These drinks can be kept for years, and the flavour will keep improving. You can enjoy experimenting with other fruits and other spirits (raspberry vodka, anyone?) and see (or rather, taste) what you get!



HOMEMADE HERB GARDEN

Spice up someone's life with a personalised herb garden. What you need: a window box, some compost, seeds of your choice... Depending on when/whether you plant the seeds yourself, this can be given as a seedling garden, a full herb garden in bloom, or a DIY herb garden.

Seed stockists: www.organiccatalogue.com
Gardening tips: www.gardenorganic.org.uk



'Snow Footprint' cards

If you've got young children, let them make their mark with personalised holiday cards. At a minimum, you will need:

Blank card

Non-toxic poster paint

Dip your baby's hand or foot in paint and imprint it on the card. Allow to dry and add any finishing touches...



MAPLE BOURBON PECAN PIE

To make one 9in pie, you need:

For the crust

- ✿ All-purpose flour, for dusting
- ✿ A quality pre-prepared shortcrust pastry

For the filling

- ✿ 2½ cups pecan halves
- ✿ 4 large organic eggs
- ✿ ¼ cup dark muscovado sugar
- ✿ ¼ cup light brown sugar
- ✿ 1¼ cups golden syrup
- ✿ ¼ cup maple syrup
- ✿ 2 tbsp unsalted butter, melted and cooled
- ✿ 1 generous tbsp Bourbon (optional)
- ✿ 1 tsp pure vanilla extract
- ✿ ¼ tsp salt

1 Preheat oven to 375°F/190°C/gas 5. On a lightly floured board, roll out the pastry to a thickness of around 1/8 in.

Place the pastry in a 9in pie plate and gently press it into the bottom edges and along the sides. Trim the pastry using scissors or a sharp paring knife. Crimp or decorate the edges of the pastry, if desired. Transfer to freezer until firm (about 15 minutes).

2 Coarsely chop 1¼ cups pecan nuts and set aside. In a medium-sized bowl, combine eggs and the sugars. Whisk to combine. Add dark and light corn syrups, butter, bourbon, vanilla and salt. Whisk until well combined.

Add chopped pecans and stir to combine. Pour into prepared crust.

3 Arrange remaining 1¼ cups of pecan halves

decoratively over top of pie.

4 Set the pie plate on a parchment-lined baking sheet and bake until the pie crust is golden, the filling has risen slightly and is firm, and a knife inserted in the centre of the pie comes out clean. Depending on your oven, this can take up to an hour and a half. If the crust looks like browning too quickly, cover with foil and continue baking.



AUNT BETSY'S SURPRISE BALLS

A Surprise Ball is a personal piñata filled with tiny gifts, and can serve as a fun alternative to the traditional Christmas stocking. As each layer is removed, the ball changes shape and a new prize is revealed. This present can be made by even young children, and, as its treasures can be personalised, can be given to anyone of any age who has a sense of curiosity and wonder. The cost depends entirely on the content.

You will need:

Small objects, eg: nuts in shells, gemstones, seashells, beads, jewellery, tins of lip balm, trial/travel-sized tubes of hand cream, ornaments, wooden or ceramic animal figurines, miniature compasses, yo-yos, magnifying glasses, dice, jacks, tops, whistles, Badger Balm, birthday candles, little wrapped chocolates, small silk scarves or handkerchiefs, cufflinks, glass prisms, golf tees and balls, hairclips, money clips, balls, soaps, tiny wooden toys, miniature books and tins; in short, anything that strikes your fancy, but probably nothing much bigger than a walnut (though it all depends on how big you want your finished ball to be and how much wrapping material you want to use).

To wrap the Surprise Ball

Use crepe paper that is sold in sheets. (The crepe paper used in rolls of

streamers will not work well for Surprise Balls.) Buy at least five different colours. Without unrolling the paper, cut a one-inch strip off the short end. This will give you a strip that is one inch wide and about five or six foot long (but don't unroll it!). Cut the entire package into strips, mostly about one inch wide – with a few narrower and a few wider.

Beginning with the largest prize, wrap the prize in recycled tissue paper or gift wrap (using the same colour throughout the ball). Then begin winding one of the coloured strips around the prize, hiding the prize entirely with the crepe paper. Break the crepe paper off if the child is young, but keep winding until the strip is finished for a child with a good attention span. Wrap the next prize in tissue paper and place it at the end of the first colour. Wrap the ball again, using a contrasting colour of crepe paper. Continue this process until the ball is finished.

Finishing touches

The Surprise Ball can be simply a ball, or it can be decorated as a funny face. Sometimes the prize mix will produce an odd shape (banana, flying saucer), in which case the final colour and decorations can be selected to match.



TYLER'S HANDMADE CUSHION COVER

...can also be made into a table runner

You will need:

A bunch of old fabrics and/or cast-off clothes

Batting or quilting material

Sewing thread

A cushion

Decorations such as buttons, coloured yarn, etc

To make:

Cut out four, six or nine equal-sized pieces of fabric. Hand-sew together.

Sew the batting or quilting material underneath.

Sew on the bottom layer, which should be another big piece of old fabric.



Christmas GREEN SHOPPING GUIDE

Make every £1 you spend count



CONTENTS

78-84 Christmas gift guide

85-86 Food & drink

87-89 Home & garden

90-93 Clothing, bodycare & cosmetics

94-95 Baby & child



Christmas Gifts

SPECIAL

ORGANIC CHRISTMAS LARDER HAMPER

Daylesford Organic
A white basket hamper (see below) full of organic Christmas goodies, many created in the Daylesford kitchen. There's Christmas pudding, Christmas cake, chocolates, coffee beans, strawberries, jam, marmalade, cranberry sauce, brandy sauce, apple and mustard chutney, Cotswold honey, quince jelly, wholegrain mustard, shortbread hearts, Scottish stem ginger shortbread, Champagne, sloe gin and a kitchen diary. £245, 0800 083 1233, www.daylesfordorganic.com

ORGANIC AND ADDITIVE-FREE TURKEYS

Graig Farm Organics

Graig farm meat is known for its exceptional taste and high animal welfare standards. Its turkeys have constant access to pasture and are fit, healthy and happy – being fed no routine drugs, no growth promoters, or any other artificial additives. Which is probably why they are so delicious to eat.

Weight range from 4-10kg

Organic: £11.77 per kilo

Additive-free: £8.67 per kilo

(Additive-free turkeys are reared in the same way as the organic birds, but the grain in their feed is not organically grown and is therefore cheaper.)

01597 851655,

www.graigfarm.co.uk



BOOJA BOOJA TRUFFLES

Hotel Chocolat

For health conscious, ethically minded chocolate lovers, Hotel Chocolat's organic range is about as close to chocolate heaven as you can get. Organic, dairy-free, gluten-free, low sugar, these truffles are not naughty – just nice.

Hotel Chocolat's ethical policy means that no-one has been exploited in the process of making them. As well as

buying several tonnes of fairly traded chocolate

a year, the company works closely with cocoa communities in Ghana that provide education and training for farmers,

support local schools, and use incentives schemes offering practical prizes such as

sewing machines and bicycles for the

best-kept farms. £12.95,

0870 442

8282, www.hotelchocolat.co.uk

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8282, www.hotelchocolat.co.uk

co.uk



ORGANIC INDIAN TEA SET

Steenbergs

A wonderful selection of India's and Sri Lanka's finest organic and Fairtrade teas. Contains 50g bags of loose leaf organic Fairtrade Assam and organic Fairtrade Darjeeling, 125g tin of organic Fairtrade Earl Grey tea and an elephant ceramic mug (complete with its own ceramic filter and lid!).

£25; gift wrapping in blue/red biomark kraft paper £3,
01765 640 088,
www.steenbergs.co.uk



LOCH FYNE OYSTERS WITH ALEGRIA MANZANILLA WINE

How about this for an original present? A dozen fresh rock oysters, grown on the shores of Loch Fyne, with half a bottle of Alegria Manzanilla Wine, made in the fishing village of Sanlucar de Barrameda in southern Spain. Loch Fyne oysters feed on the naturally rich waters of this sea loch, flavoured by the fresh water of highland streams that feed into it. Mineral-rich and delicious, their velvety texture is perfectly complemented by the zingy freshness of crisp Manzanilla (fortified to 15 per cent with grape brandy). £20 (plus £5 UK delivery). **01499 600 264, www.lochfyne.com**



WINE AND CHOCOLATE GIFT SET

Festival Wines

In addition to sending out Biodynamic and Organic wines by the case, Festival Wines provides a wine and chocolates gift service. For £7.39 you get a selection of organic chocolates from Brighton's 'The Chocolate Empire', packed in a wooden presentation box with free personal greeting.

All you have to do next is choose the wine and give the postal details. The parcel is delivered to your specified address the next day.

0800 024 2969,
www.festivalwines.co.uk



ORGANIC BISCUITS

Organico

Fancy a few biscuits after dinner? Try Organico's melt-in-the-mouth crisp flutes from Belgium – great with chocolate desserts, ice cream or espresso. For a tea break, its buttery Galettes from Normandy are simple and moreish. In 2004, Organico products won 25 Great Taste Awards. Its ethical policy is equally impressive: it uses high quality organic ingredients and its 'better purchasing' policy, takes into account a company's (and a product's) environmental record in any given category of purchase. And it does not and will not use air freight for any products imported into the UK (or exported elsewhere). Flutes £1.25; Galettes £1.35, **0118 9238 760, www.organico.co.uk**

ORGANIC FAIRTRADE CHRISTMAS CAKE

Christmas cakes have some bizarre rituals associated with them. In the 16th century, one dried bean and one pea was added to the rich fruit cake mix, one in each half of the cake. It was traditionally eaten on Twelfth Night (January 5), a time of great festivities and feasting. Partygoers were given a piece of the cake – ladies from the left, gentlemen from the right side.

Whoever got the bean became King of the Revels for the night, and everyone had to do as he said. The lady was his Queen for the evening. This Village Bakery Christmas Cake contains no beans or peas – but it does use organic and Fairtrade ingredients, so that makes it pretty special.

Buy it online at Goodness Direct, £9.65 for 750g cake.
0871 871 6611, www.goodnessdirect.co.uk



CHAMELEON PRINT T-SHIRT

Terramar

Soft, organic cotton T-shirt manufactured without chemicals, £11. Most of Terramar's range of organic cotton clothing is produced under the Sustainable Textiles Programme (the rest is certified Fair Trade). Steps are taken in the process of manufacturing the garment (spinning, weaving, washing, dyeing, etc) to minimise the negative environmental impact of production. Dyes contain no heavy metals or AZOs and are therefore kinder to the skin.

07999 613 982, www.terramar.co.uk



TOY TRAIN

Myriad

Myriad sell toys that encourage children to use their imagination. Finely crafted and built to last a lifetime's play, this train is made from natural materials, is safe and non-toxic. There are many advantages to wooden toys - for children and for the environment. It stimulates the child's senses with its texture and colour variations. Wood smells good. Bacteria cannot reproduce on wood. When wooden toys break they can be fixed. And wood is recyclable. Above, Large Passenger Train, £44.90.

01725 517 085, www.myriadonline.co.uk



YOGA CLOTHES

Tatty Bumpkin

Ideal for active children, Tatty Bumpkin yoga clothes are versatile and easy to wear. Skirts and trousers are reversible and designed so that children can dress (and undress!) themselves easily. Items in the ranges will mix and match. Fabrics are the softest organic cotton, ethically sourced. Dyes are enzyme-free. Packaging is recyclable or from recycled materials. Top £15, available with lion, bee, spider, or frog. Trousers with drawstring waist £15, available in damson, navy or khaki.

01732 812 212, www.tattybumpkin.com



RABBIT BABYGROW

Belle & Dean

Designed to last and made with care, Belle & Dean's babygrows are made from 100 per cent certified organic cotton - kind to babies' skin, better for the environment.

Co-founder/designer Issy hand-illustrates their unique animal and plant-inspired designs, which are screen-printed using water-based ink. £8.50, 0118 986 9552, www.belleanddean.com



ATHLETIC TRAINERS

Fair Deal Trading

Made and produced exclusively by the Fair Deal Trading Partnership, the rubber soles of these trainers are sourced from sustainably managed forests in Sri Lanka. A premium is paid on each kilo of rubber, helping to pay for projects and services that improve living and working conditions of the rubber tappers. They're assembled in Pakistan, where a further Fair Trade premium is paid per pair. Available in men's and women's UK sizes 1-12. Low Cut £32.35, High Cut £33.50, All Black High Cut £30. **08707 665 196, www.fairdealtrading.com**

LEATHER NECKLACES, BELTS

Green Shoes

For leather that doesn't cost the earth... Green Shoes has a fantastic range of leather accessories processed using vegetable tannins, significantly lowering the environmental impact of tanning; the leather is undyed. The Devon-based company tries to source all materials from UK suppliers, minimises the workshop's energy use and waste and doesn't go mad on packaging. Tribal Necklaces designed by Alison Hastie at Green Shoes, £25 each or £60 for set of three. Curvy Belt £55 (with leaf applique, £65). Cuff bracelets £15. All available in Natural, Earth and Charcoal colours. Free p&p to *Ecologist* readers ordering before Christmas. **01803 864 997, www.greenshoes.co.uk**



ORGANIC DENIM JEANS

Ascension

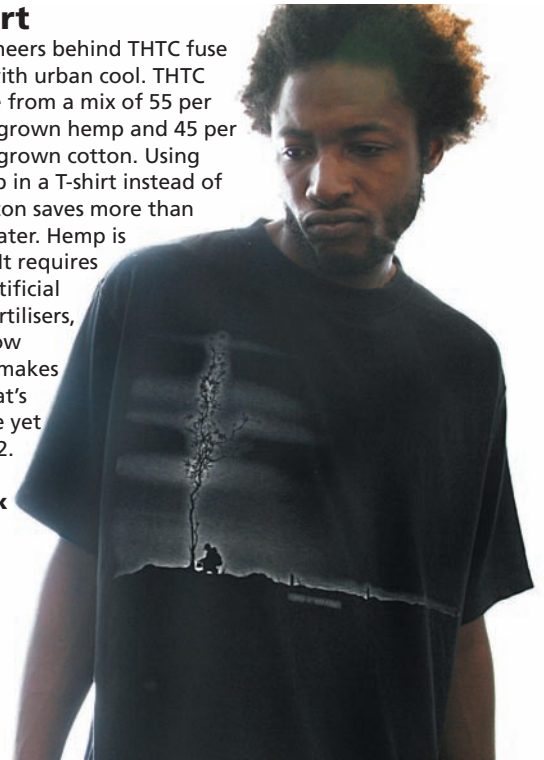
Eco jeans made from organic raw denim. Which means that not only are they made from organic cotton but they also don't go through the chemical and energy intensive enzyme washing process normally involved in making jeans. And they're dyed using non-harmful dyes. The result: a lovely dark, raw denim. The style is urban inspired with a low seat, low pocket rear, straight leg, slightly relaxed, loose silhouette. These jeans are made to last (the rear hem has a reinforced detail to avoid wear-out.) £49.95; buy online or in Top Shop. **01663 734 374, www.ascensionclothing.co.uk**



THTC T-Shirt

The inspired pioneers behind THTC fuse hemp clothing with urban cool. THTC T-shirts are made from a mix of 55 per cent organically grown hemp and 45 per cent organically grown cotton. Using 55 per cent hemp in a T-shirt instead of 100 per cent cotton saves more than 100 gallons of water. Hemp is a wonder plant. It requires reduced or no artificial pesticides and fertilisers, so it's easy to grow organically, and makes a great fabric that's soft, comfortable yet hardwearing. £22.

020 8965 5362, www.thtc.co.uk



PURE HEBRIDEAN WOOL SCARVES

Isle of Mull Weavers

The Isle of Mull Weavers use the lustrous black wool of native Hebridean Sheep to make a beautiful range of scarves, knitwear, rugs, throws and tweeds. The exact shade of wool varies from animal to animal and from year to year so that every garment made is unique, with natural colours ranging from black and charcoal brown through to silver. The wool is hand woven at Ardalanish Organic Farm & Weaving Mill. Scarf available in charcoal, black stripe or check, £25.

01681 700 265, www.isleofmullweavers.co.uk



THE ECO KETTLE

Nigel's Eco Store

If everyone boiled only the water they needed to make a cuppa instead of 'filling' the kettle every time, it could save enough electricity to run almost all the street lighting in the UK. The Eco Kettle, £34.99, makes it easy to boil only the amount of water you need – saving energy, water and time.

01273 821 683,

www.nigelsecostore.com



GROW-A-TREE KIT

Ecotopia

Give someone a gift for life with a Grow-A-Tree Kit, £7.49. Choose from Oak, Ash, Beech, Pussy Willow or Silver Birch. The pack includes a one-year-old 45-60cm/17-24in tree (it can grow up to 46m/150ft), a mesh guard and stake, as well as information on the history of the tree, how to plant it, where to site it and how big it gets.

0845 094 2181, www.ecotopia.co.uk



TREE GIFTS AND DEDICATIONS

Trees for Cities

A tree that will go on growing for years is one of the most precious gifts imaginable. The gift pack includes a beautifully designed tree card, a personalised certificate and information about the planting site. You can choose in which city you wish your tree gift to be in. You can also dedicate a tree (London project only) with a personalised plaque. Tree gift £20; Dedicate a tree £175.

020 7587 1320,

www.treesforcities.org



ORGANIC PILLOWS AND BLANKETS

Green Fibres

Sleep in organic luxury this Christmas... If you're going to rest your head on it night after night, shouldn't a pillow be non-allergenic, moisture-resistant and non-irritating? Organic wool filling is every bit as cosy as down and far less susceptible to the mites, moulds and mildews that can trigger allergies. Organic spelt filling provides firm support while also conforming to the shape of your head and neck. For an extra warmth, the camel hair fleece blanket with an organic cotton fringe is wonderfully cosy and worth every penny. Wool pillow £49, Spelt pillow £22, Blanket £236 (135x200cm) or £342 (200x200cm)

01803 868 001,

www.greenfibres.com



WIGGLY WIGGLERS

The perfect gift for someone who wants to attract a few birds... Wiggly Wigglers have an extensive range of feeders designed to serve up seed, peanut and LIVE worms and even whole apples to suit a whole range of different bird appetites. £16.50, **0800 216 990**, www.wigglywigglers.co.uk



SOY WAX SCENTED CANDLES

The Art Farm

Art Farm Soy Wax candles are 100 per cent plant-based, biodegradable and non-GM, which makes them completely natural. No harmful chemicals are released when burning, so making them the most environmentally-friendly candles available. They burn cooler (which gives a stronger aroma), cleaner (less smoke), and longer (by up to 50 per cent) than paraffin wax. Cinnamon luxury all-natural Soy Wax Candle £25, Clove soy wax candle in blue cobalt jar £6 www.theartfarm.info



PUNJA DURRY RUG
One Village

100 per cent cotton, naturally dyed and hand woven using a traditional method in villages around the Avarali hills in Haryana and Rajasthan, to the south west of Delhi. This type of weaving might have died out had it not been for the intervention by One Village in cooperation with a local centre for rural social advancement. The project provides livelihoods and improves the status of women in the villages. Available in three designs: Daybreak, Sunset, Midnight: £59 (1.5 x 0.9m), £100 (2 x 1.2m). **01608 811 811**, www.onevillage.org

GROLSCH GOBLETS

Green Glass

These Grolsch Goblets made from the iconic 450ml swing-top Grolsch bottles are best sellers. Because the bottle isn't melted down, the glasses are 90 per cent more energy efficient than normal recycled glass. Started in a garden shed in Cornwall six years ago Green Glass now makes a variety of products, including jewellery and tea lights from recycled glass. £6 for a pair of tumblers, £12 for a pair of wine goblets (pictured), **01208 812 531**, www.greenglass.co.uk



GIFTS GUIDE *Bodycare & stocking fillers*

SHEA MANDARIN BODY BUTTER AND AFRICAN BLACK SOAP

Akamuti

For a detoxifying & reviving skin saver, Akamuti's Shea mandarin body butter is pure and natural skin food. Rich, creamy, nourishing, it's made by blending large slabs of organically grown creamy shea butter with mandarin and organic sweet orange oil. We also love the Authentic African Black Soap made with 48% pure, organically grown shea butter & wildcrafted, virgin palm kernel oil. Traditionally handcrafted & fairly traded by women's co-operatives in Togo, West Africa. Body butter £6.95 for 60ml, Black Soap £3.75 for 130g, **0845 458 9242, www.akamuti.co.uk**



STOCKING FILLERS ONYA BAGS

Onya bags make fun, funky and functional gifts. They're a bright and brilliant way of cutting down on plastic bag use – in the UK we get through 17.5 billion plastic bags a year. Light and compact but surprisingly strong, you can keep one crunched up in your coat pocket or handbag – so you've got it onya whenever you go near any shops. £6.50 each, five for £32.50 or 10 for £65. **07791 835829, www.onyabags.co.uk**



ECOLOGIST SUBSCRIPTION

It goes without saying that one of the nicest gifts to give is a year's worth of Ecologist magazines... delivered direct to your door. See p.19 for a special subscription offer



WEEKEND TRAVEL PACK

Earthbound Organics

Little pots of natural goodness for the skin that can travel with you wherever you go. Most of the ingredients used are certified organic and wild crafted (handpicked from the Welsh countryside); all of them are natural. The weekend travel pack contains a moisturiser (you can choose which one), honey mud mask, shea body butter, tea tree and calendula cream – and a lovely hemp bag. £15.50, **01597 851 157, www.earthbound.co.uk**



USIKU ORGANIC BODY OIL AND BODY DEW

Jo Wood Organics

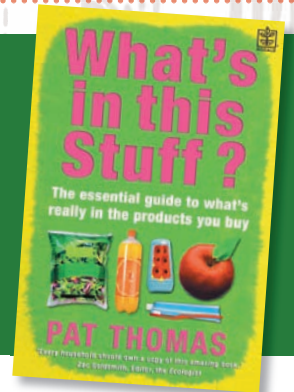
Give someone a heady, luxurious, chemical-free, pure aromatherapy experience this Christmas... Inspired by the sensual steam room of the Moroccan hammam, Usiku Organic Bath Oil has a deeply aromatic combination of cedarwood and vetiver with cardamom and ginger, to warm the heart and lift the spirits. Or try the Usiku Organic Body Dew, which energises, hydrates and soothes with a unique blend of aromas and herbs. Made with nothing but nature, Jo Wood Organics is dedicated to finding organic alternatives for widely-used natural ingredients, working with suppliers to boost the production of accredited organic crops. Bath oil £55, Body dew £45. **0845 607 6614, www.jowoodorganics.com**



PAT THOMAS'S BOOK

'Every household should own a copy of this amazing book'
Zac Goldsmith

This essential guide to what's really in the products you buy is available for the special price of £7.80 (RRP £12.99) plus p+p, by calling 01256 302 699, quoting 'M84'.



FOOD & DRINK

EAT REAL FOOD

Why not free yourself from the overly packaged, non-ripe, out of season and tasteless varieties of supermarket produce and visit one of the excellent online producers below? They will deliver their genuinely fresh, seasonal fruit, vegetables, fish and meat direct to your door. And you can feel safe in the knowledge that you're buying environmentally sound, locally sourced, delicious food that meets the highest animal welfare standards.

FRUIT & VEGETABLES

Do you live near a farmers' market? For a list of farmers' markets around the country go to www.theecologist.org/farmersmarket. Along with many greengrocers, farmers' markets are a great source for locally produced, fresh, seasonal fruit and veg. If, however, you don't live near a good greengrocer or farmers' market, the next best way to get your fruit and veg is to sign up for a local box scheme. For 15 reasons to join one, and a list of suppliers throughout the UK, go to www.theecologist.org/boxscheme

ORGANIC BEEF, LAMB, PORK & POULTRY

No local butcher? Reliant on heavily processed, packaged and factory-reared supermarket meat? Find out what meat should really taste like – order your next steak online . . .

Daylesford Organic

www.daylesfordorganic.com

Graig Farm Organics

www.graigfarm.co.uk

Helen Browning Organics www.helenbrowningorganics.co.uk

www.helenbrowningorganics.co.uk

Higher Hacknell Farm

www.higherhacknell.co.uk

Sheepdrove Organic Farm

www.sheepdrove.com

Well Hung Meat

www.wellhungmeat.com



How can I be sure my meat will arrive

fresh? Fresh meat and fish is carefully wrapped in insulated boxes with ice packs, ensuring that frozen goods stay frozen and chilled items stay chilled.



Experience your food!

- Never shop in supermarkets
- Buy local fresh food
- Cook more
- Grow food at home
- Support the small, independent and ethical producers and retailers in these listings.

FRESH FISH

No local fishmonger? Want your omega-3 fatty acids without further endangering chronically depleted fish stocks? Have your sustainably caught/reared fish delivered to your door.

Inverawe Smokehouses

www.smokedsalmon.co.uk

The Organic Smokehouse

www.organicSmokehouse.com

Deverill Trout Farm

www.purelyorganic.co.uk

Graig Farm Organics

www.graigfarm.co.uk

Loch Fyne

www.lochfyne.com

KIDS IN THE KITCHEN

Children love being involved with food. Here's a simple recipe to get kids started preparing, cooking and eating 'real', seasonal food, fast.

Pumpkin Pots

Makes four small glasses

- Small pumpkin
- Pinch cinnamon
- Dessertspoon olive oil
- Half small orange
- 250g Greek yoghurt
- Runny honey (optional)
- 25g toasted pinhead* oatmeal
- 190°C /375°F/Gas 5

- 1 Cut the pumpkin in half.
 - 2 Use clean hands to remove the seeds.
 - 3 Sprinkle a little cinnamon onto the pumpkin, then rub the oil over the flesh with your fingers.
 - 4 Put the pumpkin cut side down on a baking tray and cook for 30 minutes. Cool.
 - 5 Use a spoon to scoop out the flesh and put it into a bowl.
 - 6 Squeeze the orange and add it to the pumpkin. Put a damp cloth under the bowl, to stop it moving and use a potato masher to make pumpkin puree.
 - 7 Put the yoghurt into a small bowl, add honey to sweeten. Stir in the toasted oatmeal.
 - 8 Take a dessertspoon of yoghurt and drop it to the bottom of each glass, keep away from the edges of the glass. Level it flat. The next layer is pumpkin, divide it between four glasses and the last layer is yoghurt again.
- Pinhead oatmeal is coarse. The oats are chopped, not rolled, and are nutty. For more recipes and info go to www.stirringstuff.org or contact Fi Bird on 01575 530353.



STORE CUPBOARD ESSENTIALS

What could be more convenient than having all your cooking 'essentials' delivered to your door once a month...

Buxton Foods

www.buxtonfoods.com

Community Foods

www.communityfoods.co.uk

Graig Farm

www.graigfarm.co.uk

Goodness Direct

www.goodnessdirect.co.uk

Hider

www.hider-foods.co.uk

Meridian Foods

www.meridianfoods.co.uk

Naturally Good Food Ltd

www.goodfooddelivery.co.uk

Real Food Direct

www.realfooddirect.co.uk

ECOLOGIST ACTION FOOD-BUYING GROUPS

Why not club together with a bunch of friends and buy from the following food wholesalers – and save huge amounts of money on good, local, organic 'essentials'.

Clearspring

www.clearspring.co.uk

Community Foods

www.communityfoods.co.uk

Eostre

www.eostreorganics.co.uk

Essential Trading

www.essential-trading.coop

Organico

www.organico.co.uk

Suma

www.suma.co.uk

DRINK BEERS, ALES, CIDER, WINE & SPIRITS

Beers in a Box

www.beersinabox.com

Black Isle Organic Beers

www.blackislebrewery.com

Broughton Ales

www.broughtonales.co.uk

Dunkerton's Cider and Perry

www.orchard-hive-and-vine.co.uk

Freedom Organic Beer

www.freedombeer.com

Festival Wines

www.festivalwines.co.uk

Pure Wine

www.purewine.co.uk

Vinceremos

www.vinceremos.co.uk

Vintage Roots

www.vintageroots.co.uk

Pennard Organic Wines & Cider

www.pennardorganicwines.co.uk

Sedlescombe Organic Vineyard

www.englishorganicwine.co.uk

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FARMAROUND ORGANICS

Supplies the fruit and vegetables for the staff at *The Ecologist's* office.

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www.farmaround.co.uk

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Find out more at www.crazyjack.co.uk and www.communityfoods.co.uk

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BUILDING & MAINTENANCE DIY ESSENTIALS

Building materials, flooring, insulation, paints and windows & doors

Construction Resources

www.constructionresources.com

Ecomerchant

www.ecomerchant.co.uk

Green Building Store

www.greenbuildingstore.co.uk

The Green Shop

www.thegreenshop.co.uk

The Healthy House

www.healthy-house.co.uk

Nigel's Eco Store

www.theinsightecostore.com

CONSTRUCTION/RENOVATION

Cob in Cornwall

www.cobincornwall.com

Concept Timber

www.concept-timber.co.uk

Finch Macintosh Architects

www.finchmacintosh.co.uk

Gale and Snowden

www.ecodesign.co.uk

Insideout Buildings

www.iobuild.co.uk

Nicholas Hare

www.nicholashare.co.uk

Mike Wye and Associates

www.mikewye.co.uk

Quattro Design

www.quattrodesign.co.uk

PAINTS

Auro Organic Paints

www.auro.co.uk

Earth Born Paints

www.earthbornpaints.co.uk

Ecomerchant

www.ecomerchant.co.uk

Ecopaints

www.ecopaints.co.uk

Eco Solutions Ltd

www.ecosolutions.co.uk

Nutshell Natural Paints

www.nutshellpaints.com

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ARE YOU AN ENERGY HERO?

The Ashden Awards for Sustainable Energy 2007 is calling for entries from inspirational and innovative schemes which generate renewable energy, or reduce energy demand, at a local level and scale (within the UK). First prizes up to £30,000, second prizes up to £10,000.

Closing date for entries 21/11/06. For more info, including downloadable application forms visit: www.ashdenawards.org 0207 410 0330



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www.ecopaints.co.uk **ecopaints** 

The information web site that promotes care of the environment

envocare

Would you like to improve the environment without a lot of fuss? Visit the site designed to provide the information.

www.envocare.co.uk

Come and find hundreds of descriptions, tips, suggestions and links on a wide variety of environmental issues.

The site also offers reference articles on a range of selected topics. You can find loads of high-res backgrounds to download and send virtual cards and there's always more.

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- lfó ultra-efficient WCs. Elegance and water conservation combined.



- The Natural Paint Collection.* Natural ingredients; healthy, effective paints and woodfinishes.
- Lindab rainwater drainage system. The solid steel alternative to PVC guttering.

* Some products contain some non-natural ingredients.

To find out more, visit our website or call our sales team:

www.greenbuildingstore.co.uk
01484 854898

ECO POWER CAMPAIGN

AIM To meet the UK's energy needs from local, clean, renewable sources

In the UK we need to move from our dependence on non-renewable, air polluting, climate changing, centrally generated, hugely inefficient and increasingly expensive sources of energy – gas (40%), coal (30%), nuclear (20%), oil (5%) – to non-polluting, small-scale energy sources generated as close to users as possible, eg wind, hydro, tidal, solar, biofuels, ground source heat etc.

HOW? Supplying the current (and expected increased) energy demand in the UK, while keeping prices for energy low is IMPOSSIBLE. We either confront this and start to adapt or we stick our heads in the sand and moan about the inexorable rise in our energy bills. Each one of us, starting at home and then moving out into our local communities and workplaces, needs to:

- 1 **SWITCH** our energy SUPPLY to ECOTRICITY
- 2 **REDUCE** our energy DEMAND
- 3 **LOCALISE** our energy SUPPLY... individually, and in our communities.

We can't wait for politicians to act, and can't rely on an energy market that profits from rising energy prices and increasing demand. This is why the *Ecologist* and Ecotricity have teamed up to ease your transition from expensive centrally supplied energy to clean, locally supplied energy at home (and at work). Our combined research and practical expertise will ensure that the options we recommend for reducing demand and generating your own supply will work without costing you a fortune.

ECO POWER CAMPAIGN SWITCH TO ECOTRICITY

No matter where you live you can switch your electricity supply to Ecotricity.

WHY ECOTRICITY?

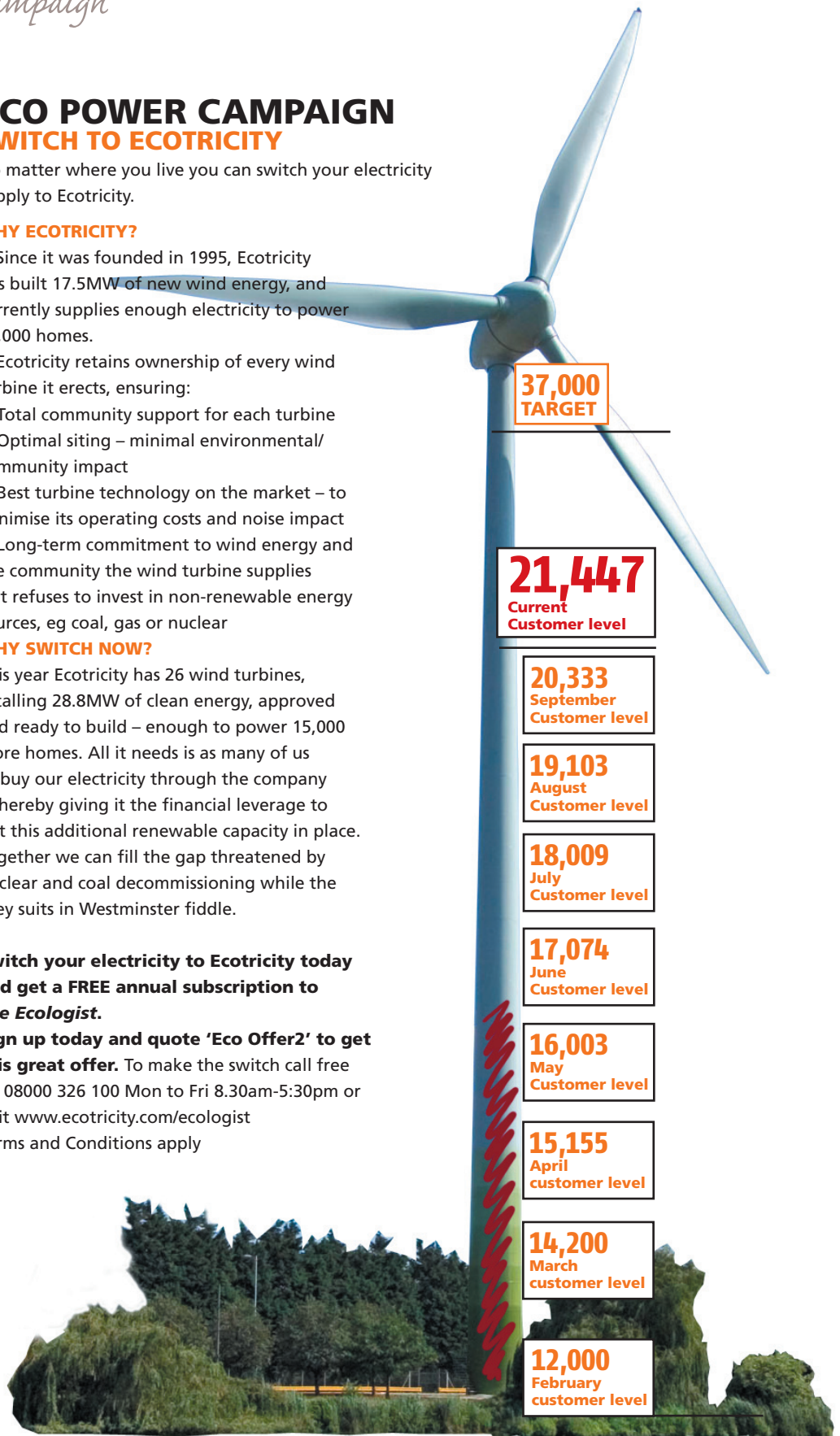
- Since it was founded in 1995, Ecotricity has built 17.5MW of new wind energy, and currently supplies enough electricity to power 12,000 homes.
- Ecotricity retains ownership of every wind turbine it erects, ensuring:
 - Total community support for each turbine
 - Optimal siting – minimal environmental/community impact
 - Best turbine technology on the market – to minimise its operating costs and noise impact
 - Long-term commitment to wind energy and the community the wind turbine supplies
- It refuses to invest in non-renewable energy sources, eg coal, gas or nuclear

WHY SWITCH NOW?

This year Ecotricity has 26 wind turbines, totalling 28.8MW of clean energy, approved and ready to build – enough to power 15,000 more homes. All it needs is as many of us to buy our electricity through the company – thereby giving it the financial leverage to put this additional renewable capacity in place. Together we can fill the gap threatened by nuclear and coal decommissioning while the grey suits in Westminster fiddle.

Switch your electricity to Ecotricity today and get a FREE annual subscription to *The Ecologist*.

Sign up today and quote 'Eco Offer2' to get this great offer. To make the switch call free on 08000 326 100 Mon to Fri 8.30am-5:30pm or visit www.ecotricity.com/ecologist
Terms and Conditions apply





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CLOTHING

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www.enamore.co.uk

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www.junkystyling.co.uk

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www.naturaldyecompany.com

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www.thenaturalstore.co.uk

Pachacuti

www.pachacuti.co.uk

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www.greenfibres.co.uk

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Inbi Hemp

www.inbi-hemp.co.uk

Natural Collection

www.naturalcollection.com

Pakucho

www.pakucho.co.uk

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www.ptree.co.uk

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www.beyondskin.co.uk

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www.birkenstock.com

Black Spot Sneakers

www.adbusters.org

Fair Deal Trading

www.fairdealtrading.co.uk

Freerangers

www.freerangers.co.uk

Green Shoes

www.greenshoes.co.uk

Terraplana

www.terraplana.com

The Natural Shoe Store

www.thenaturalshoestore.com

Vegetarian Shoes

www.vegetarian-shoes.co.uk

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www.equop.com

Funky Gandhi

www.funkygandhi.com

Icons Incorporated

www.icons-incorporated.com

Pakucho

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www.kuyichi.com

Loomstate

www.loomstate.org

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www.artworksforafrica.com

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DON'T PANIC – IT'S ORGANIC

Natural bodycare and cosmetic products are just as effective as their conventional counterparts but, because they don't rely on plastics, synthetic colours and chemical preservatives, you will find that their range, application and usage can be different. Here's what to bear in mind when using natural products:

Natural cosmetics

- Lip glosses are safer than lipsticks because they contain less potentially toxic colour, but they won't last as long because they don't contain plastics and film formers
- Mascaras won't dry as quickly, lengthen or be waterproof like conventional mascaras because they don't contain synthetic fibres or ingredients such as plastics
- Eye shadows will come in a more limited range of 'earth' colours because they will be based on a palette of mineral and plant dyes
- Choose cream blush instead of powders to avoid potentially cancer-causing talc
- Avoid sparkly make-up, which can contain ecologically unsound mica

Natural bodycare products

- Choose moisturisers based on single oils (plant or animal based) rather than complex mixtures of oil, water, preservatives and film forming ingredients. These may feel more oily on your skin at first but will be fully absorbed fairly quickly
- Natural toothpastes should be fluoride-free and won't foam as much as conventional ones because they won't contain detergents such as sodium lauryl sulphate.

ecologist
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■ To see Weleda's complete range of products visit - www.weleda.co.uk



HOW TO WIN

The first 50 readers who write to weleda.direct@weleda.co.uk (including address and full postcode) will receive a free cream.

BODYCARE ESSENTIALS

ASPIRE TO LESS – *The best way to ensure healthy skin is to maintain a healthy diet, get enough sleep and keep stress levels low. If you do buy products for your face or body, try to make sure they are based on natural ingredients. The companies listed below carry products that have not been tested on animals; they contain no parabens, no petrochemicals and no synthetic ingredients.*

- Akamuti**
www.akamuti.co.uk
- Barefoot Botanicals**
www.barefoot-botanicals.com
- Earthbound Organics**
www.earthbound.co.uk
- Ecotopia**
www.ecotopia.co.uk
- Essential Care**
www.essential-care.co.uk
- Jo Wood Organics**
www.jowoodorganics.com
- Life Giving Organics**
www.LifeGivingOrganics.com
- My Being Well**
www.mybeingwell.com
- The Organic Pharmacy**
www.theorganicpharmacy.com
- Pure Nuff Stuff**

- www.purenuffstuff.co.uk
- Pure Skin Care**
www.pureskincare.co.uk

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- Helios Homeopathic Pharmacy**
www.helios.co.uk
- Optima**
www.optimahealthcare.co.uk
- Pure Potions**
www.purepotions.co.uk
- Revital**
www.revital.com
- The Organic Health Shop**
www.baughdell.co.uk

PERFUME

- Aromasciences**
www.aromasciences.com
- Ascent**
www.hayspace.co.uk
- Dolma**
www.veganvillage.co.uk/dolma
- Primavera**
www.primavera.co.uk

ECOTIP

Use natural oils as a moisturiser.

Natural vegetable oils are more compatible with the skin, much less drying than mineral oils and better absorbed than either mineral oil or silicon (found in the majority of conventional moisturisers). Good examples include almond, coconut, jojoba, soya, carrot, wheatgerm, macademia, olive and avocado oils. Some animal-derived oils, eg emu (from a free range source) also make good alternatives.

ECODIY

SIMPLE MOUTHWASH

The simplest mouthwash is a couple of drops of peppermint oil or sage tincture in a cup of water. To make around 100 ml of a more complex blend, use:
 15ml (1tbsp) lavender tincture
 15ml (1tbsp) calendula tincture
 10ml (2tsp) aloe juice
 30ml (2tbsp) cooled boiled water

30ml (2tbsp) vegetable glycerine
 5 drops peppermint essential oil
 Mix together ingredients and pour into a bottle. Will keep up to six months. If you have an infection in the mouth or gums, substitute echinacea, myrrh or goldenseal tinctures for the lavender.
 From *What's In This Stuff?* by Pat Thomas (Rodale, £12.99)

DON'T KNOW YOUR GLYCERYL LAURATE FROM YOUR DECYL GLUCOSE?

Find out what the words in your bodycare products really mean....

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 Go to www.theecologist.org/behind_the_label.asp

Past features by *Ecologist* Health Editor Pat Thomas include:
 Clearasil deep cleansing 3 in 1 wash
 Nivea moisturiser
 Clairol Nice 'n Easy Hair Dye
 Radox Herbal Bath with Juniper
 Oil of Olay



ECOLOGIST ACTION MAKE YOUR OWN

Everyone's skin is different, so why not make your own bodycare products and cosmetics at home to suit your needs? The websites listed below will help guide you through ingredients that work for your skin and hair type, and offer a range of ideas for customising your favourite natural scents.

Aromatic

www.aromatic.co.uk

Bay House Aromatics

www.bay-house.co.uk

Cosmetics at Home

www.cosmeticsathome.co.uk

New Directions

www.newdirectionsuk.com

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onevillage.com One place, many ideas

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THIS IS NOT ACCEPTABLE

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- No petrochemicals
- No synthetic fibres
- Minimal packaging
- Organic ingredients
- Stop marketing to children under 16 years old

What we can do as consumers

- Read and understand the label
- Buy fewer products
- Buy reusable products, eg cloth nappies
- Make our own, eg food
- Challenge stockists to sell safer products
- Support the small, independent and ethical producers and retailers in these listings.

BABY & CHILD

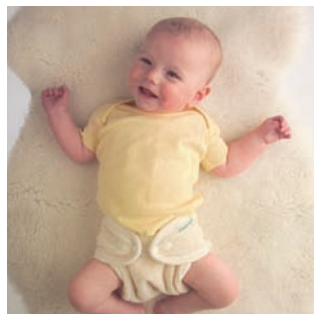
Why use disposables when cloth nappies are easy to use, easy to clean and best for your baby?



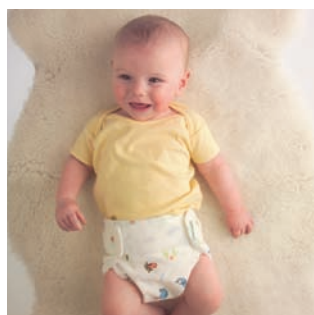
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See Saw

www.seesawnappies.co.uk

Smile Child

www.smilechild.co.uk

CLOTHING

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Gossypium

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Huggababy

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Schmidt Natural Clothing

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Tatty Bumpkin

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Earthbound

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Ends Environmental Job Search
www.ends.co.uk/jobs/about.htm

Environment Job
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Red Hen

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Family Care Funeral Services

www.ecofunerals.co.uk

Natural Endings

www.naturalendings.co.uk

Natural Death Centre

www.naturaldeath.org.uk

Green Undertakings

www.greenundertakings.co.uk

Green Ending

www.greenendings.co.uk

Olney Green Burial Company

www.thegreenburialcompany.plc.uk

Peace Funerals

www.peacefunerals.co.uk

Woodland Burials

www.woodlandburials.co.uk

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CASSANDRA

Our prophet finds both spirituality and drugs to be misunderstood.

Oxford never fails to overwhelm me. I wander around the enchantment of its medieval centre in a daze of wonder of what our forbears accomplished with only a fraction of the technologies now available to us. At every turn there is a feast of beauty to delight the spirit and to elevate an awareness of what the human will can accomplish with material possibilities. How deeply I regret I never had a studentship there – I even toy with the idea of consulting my careers advisor about applying for one, but there we are; as always, we have to be content with what we have and do what we can with that.

I was actually a student at the London School of Economics, in the days when it was still trying to be a centre of scholarship. After only one year they kicked me out – and deservedly so, for my work record was appalling and had nothing to do with my subsequent realisation that it had become a money making rat-race training centre, teaching economic doctrines which were poisoning the vitals of civilisation, a realisation that prompted me to write a book entitled *Why The London School of Economics Should Be Shut Down*.

I was actually in Oxford for a celebratory gathering of the 40th anniversary of a magazine, which Leopold Kohr, Fritz Schumacher and Sir Herbert Read (all now of blessed memory) had helped me to found in order to promote awareness of the factor of size and scale in human government. I lost control some years ago and there was nothing at all in the celebratory programme about these vital core questions, not a word, although Schumacher's name was bandied about with rather the same unreflecting abandon that football fans wave the flag of the red cross of St George. Instead there was a flood of guff and fluff about 'Spirituality' and 'Meditation' – plenary session, workshops, the lot. I tend to distrust the judgment of people who go on and on about such matters; actions do have a way of speaking

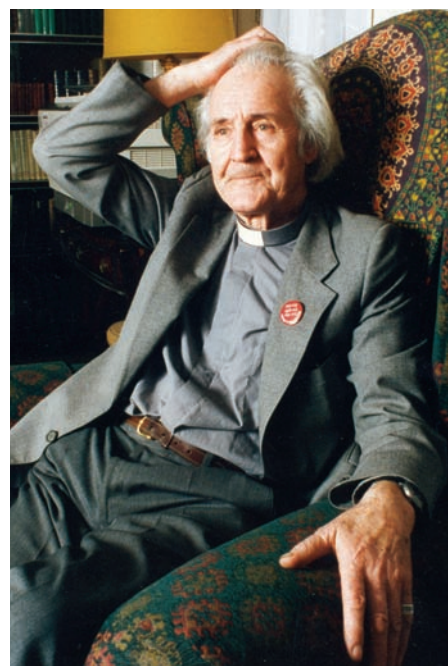
louder than words and 'Spirituality' is often a ploy used by people whose talents do not stretch to embracing the challenge of involvement in complex matters to which spiritual insights may need to be applied. It is rather like sex, in that if you experience the real thing you find you have very little call to talk about it. But there again, water is clearly not the only thing that finds its own level.

Last night a fox got at my chickens again; so Henry, my timid, literally much-hen-pecked cockerel, now has only four wives instead of eight. Perhaps his decimated harem is a result of Parliament spending weeks on deciding to ban fox-hunting, but why did they discuss the matter at all? This is surely a local rural problem; what do MPs think elected local councils are for? And how can a predominantly urban parliament be expected to talk sense on such questions instead of passing laws impossible to enforce, as well as adding to the burdens of an overstretched police force?

One can enquire similarly about the

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new laws against smoking – which, like drug legislation in general, seems to ignore altogether a significant aspect of modern life. What other generation on this planet has ever had to cope with a combination of high-speed travel, non-stop high-pressure advertising, a diet of unnatural, chemicalised foodstuffs, such a widespread incidence of family breakdown, the decline of religion as a cohesive social and spiritual force and the emasculation of local community power from over-centralised government? Or suffered the massive pupil alienation inevitable in overlarge schools, the social impoverishment and disintegration ensuing from the market elimination of local shops, and the appalling, non-fulfilling boredom of



modern work routines? Then combine all this with the ever-swelling uncertainties of the larger issues of modern life, of global war and global warming, greedy boardroom giantism clearly out of control as it creates a massive stock-market bubble which ere long will pop – causing unemployment and hunger for millions; plus impending global shortages of oil, water and food, and population numbers already in a stratospheric realm utterly beyond any sustainable limits? All this and more is

imposing immense unnatural stresses on the human psyche, stresses which inevitably and increasingly seek relief and easement from drugs such as cannabis and tobacco, to say

nothing of the harder stuff.

Our busy legislators have not yet got round to banning such drugs as tea, coffee, sugar, daily newspapers or pop music (to which latter the young especially tend to resort at ear-damaging volume, no doubt in an attempt to drown out awareness of the prevailing reality of their lives), but they will, they will. It does not for a moment appear to occur to them that the answer to the problem of drugs is to reduce the psychic pressures that drive people to resort to them, which means working for a social order that restores meaning to work, to family and social relationships, to culture, entertainment, food (and food production) and the quality of life in general. That is the real task confronting them – and us!

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