



GUILDFORD ENVIRONMENTAL FORUM

newsletter

SEPTEMBER 2007



WOOD AND THE WEED



SPECIAL MEETING FOR WASTE AND POLLUTION GROUP

Stephen Rainbird has taken over the Chair of the Forum's Waste and Pollution Working Group. He would like to meet all those concerned with the issues of waste and recycling at a general meeting to discuss opportunities and agree what the Group's priorities should be.

The meeting is arranged for Wednesday 3rd October, at 7.00pm in Committee Room 1 at the Millmead Offices.

A NEW GROUP

Trudy Thompson is to chair a new working group called Sustainable Construction. The first meeting will be on Monday 1st October at the Millmead Offices, Committee Room 2, starting at 7.00pm.

THE SMOKING BAN came into effect in England on 1st July, and has made pubs and restaurants much more pleasant places for most people. The key objective must be to reduce the chronic health effects of smoking, both direct and passive, and lessen the financial burden on an NHS already stretched to breaking point.

It is sad therefore to see pubs and eating establishments installing gas-fired patio heaters to accommodate smokers banished by the law from smoking inside. It is sad because it continues to encourage smoking and because it is disastrous for the environment. Even British Gas admits that. It quotes research showing that the proliferation of these types of heaters across the UK could prevent us from achieving our 2012 Kyoto commitments.

The concept is grossly inefficient. One patio heater can produce almost 4 tonnes of CO₂ a year, which is more than a gas-guzzling 4x4 produces in the same time period and around two-thirds of an average household's total yearly emissions.

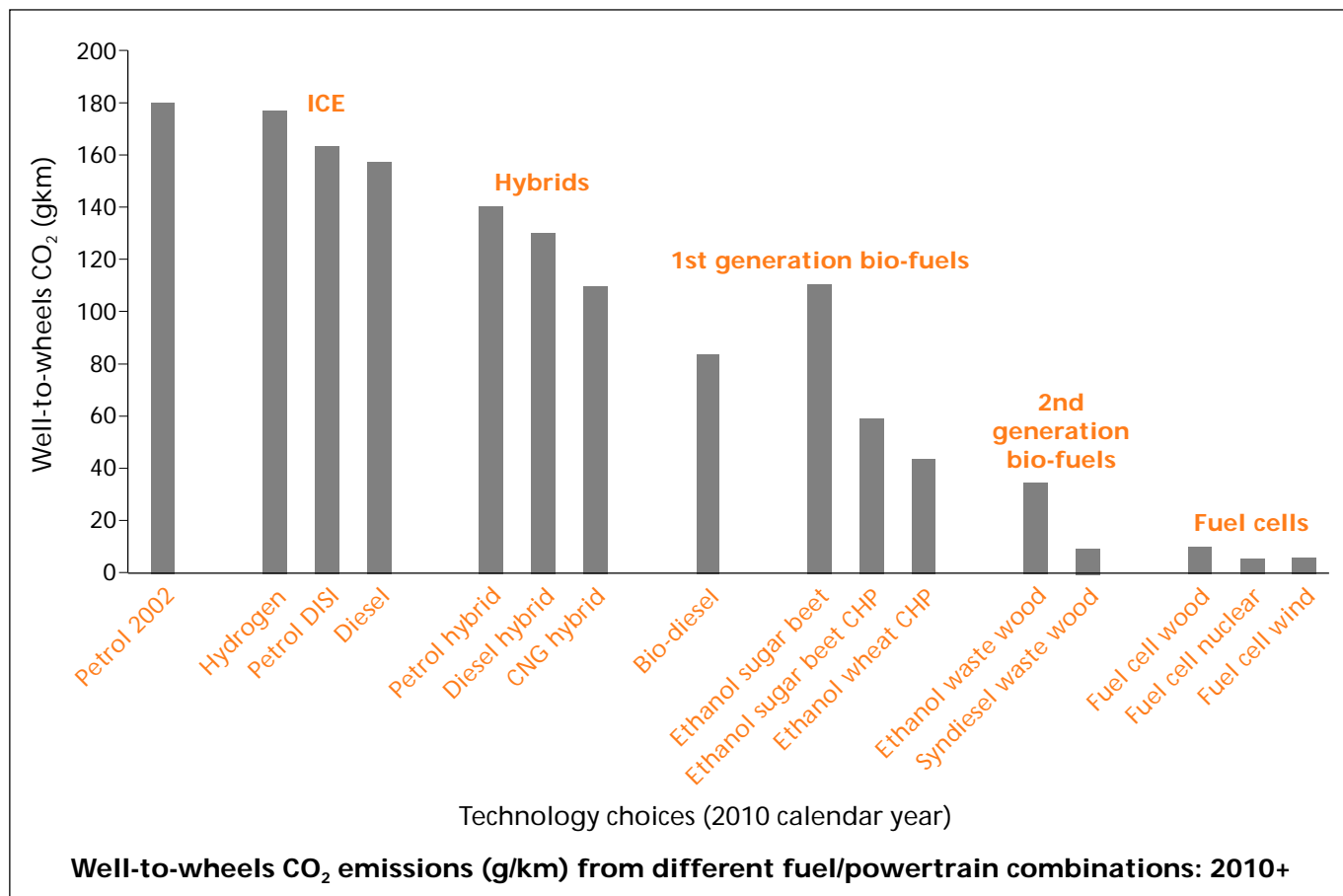
British Gas surveyed 250 pubs in Scotland following the ban there a year earlier and about half the pubs had installed patio heaters to appease their smoking customers. In just one year these heaters pumped out an extra 10,000 tonnes of CO₂. Now with English pubs following suit the figure could rocket to 160,000 tonnes of CO₂ per annum – almost 10% of the annual reduction the UK needs to meet its Kyoto commitments by 2012.

Given the rush to install patio heaters in Scotland, it is a pity the July 2007 legislation didn't head off this totally unacceptable outcome and insist on a carbon neutral solution, such as wood-burning chimeneas or pellet stoves. What a boost that would have given to the nascent woodfuel industry in Surrey.

John Bannister

The June seminar on biofuels

Report by John Bannister



THE PRODUCTION of first generation and the development of second generation biofuels are powering ahead in response to US and EU mandates to green their vehicle fuels. Some very unacceptable consequences are already emerging from this dash to cut the West's fast-growing transport greenhouse gases (GHG). Included in these is the subsidised growing of corn and wheat in the US to produce ethanol to blend into gasoline (petrol), which results in little or no reduction in GHG while the displaced foodcrops for human and animal consumption result in further rainforest depletion.

In response Guildford Environmental Forum, together with Guildford and Godalming Friends of the Earth, organised a biofuels seminar on 20 June intended to inform people about the issues. Three key speakers gave us an insight into biofuel technologies and together we explored the ramifications of these.

Deepak Rughani, *campaigner from Biofuelwatch*

Deepak outlined a fearful picture of some of the effects on the poorest people in South East Asia, South America and Africa. Where tropical forests have been cleared to grow biofuel crops, or food crops to replace those lost on land diverted to biofuels in the US and the EU, they have been dispossessed of their land and their water rights, and harmed by spraying of monoculture crops. Indigenous peoples dependent on the rainforest are particularly susceptible.

He pointed out that the Amazon rainforest was being felled at an alarming rate – originally to raise cattle, then to grow soya for cattle and now for biofuels. It is in a third year of drought and this could lead to spontaneous combustion of the forest which, instead of acting as a vital carbon sink and oxygen producer, would put huge amounts of carbon into the atmosphere.

The Indonesian peatlands hold 50 billion tonnes of carbon which could be released if forest clearance continues and they dry out. South East Asia is the source of palm oil for food and fuel.

In Europe, switching land away from food crops to biofuels makes little sense. In Germany, for example, just 1% of transport fuels are supplied by biofuels from 12% of the land.

Mike Lawson,
founder and MD of Regenattec

Regenattec is a first generation biodiesel company with a difference, and Mike told us how it is aiming to take a responsible approach to biofuels. First generation biofuels are sourced directly from pure plant oils (PPO) such as rape seed oil in this country and the EU, jatropha from India, Africa and other arid areas and palm oil from Indonesia. He said they are currently using some ethically sourced food crop oils, but will be moving over to non-food crop oils and catering waste oils as soon as possible.

The company is aiming to supply HGV and LGV vehicles, from which CO₂ emissions are rising much faster than from cars. Trials are proceeding on vehicles that have been fitted with its minor engine modification technology and using its unique fuel additive pack. A typical HGV has a carbon footprint of 700 tonnes CO₂ over a 10-year life. Regenattec can reduce this by 80%, which has been independently verified.

Regenattec is working to set up Fairtrade biofuels with small-scale farmers using jatropha and pongamia oils, where developing countries are respected and properly rewarded.

During the panel session he was questioned about the need for irrigation to grow crops like jatropha. In India they are capturing monsoon rains and releasing the water during the growth cycle. Vast areas of jatropha are being planted around the world on arid land including India, the Middle East, Africa and China. In China alone, the area under cultivation equals the entire area of the UK. On this scale irrigation is a real issue.

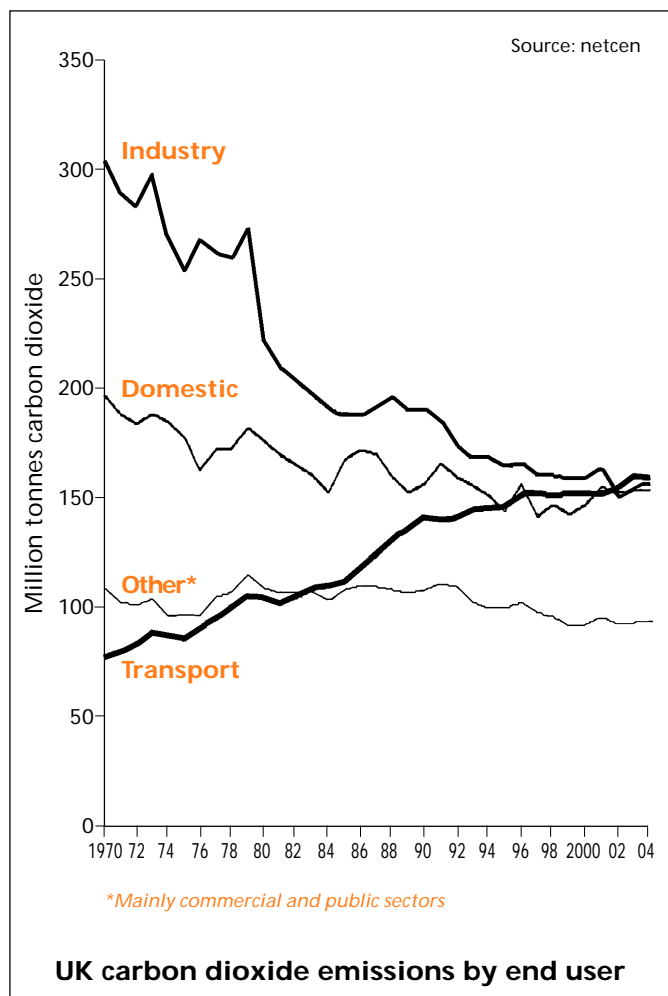
Hamish Curran,
CEO of TMO Renewables Ltd

TMO Renewables Ltd, based at the Surrey Research Park in Guildford, is one of many companies around the world that are working on second generation biofuels. These use wood waste (in the paper industry 50% of the tree is wasted) or food crop wastes (e.g. straw), which are converted to ethanol by a biological process (bacteria/enzymes). Since 2002 the company has been optimizing microbes to convert cellulosic material to ethanol. If such a process can be made to work economically, then virtually all the unacceptable consequences of first generation bioethanol can be overcome.

Hamish stated that the product from TMO's process would result in a reduction in CO₂ of over 90% compared with fossil gasoline. Since our seminar, TMO has been given planning permission by Waverley Borough Council to install a production-scale demonstration plant at the Dunsfold aerodrome site.

One of the urgent requirements being demanded of governments is that a rigorously enforced biofuels accreditation protocol is agreed that ensures total sustainability.

Re-incorporating crop wastes into the soil provides little GHG benefit compared to TMO's process because of the nitrogen needed to break down cellulose in the soil. TMO will only collect wood and crop wastes, initially from within a 50-mile radius, and its aim is to drive costs down so that small-scale production units will be viable in the future. In five to seven years time TMO's feedstock could come from algae, possibly grown on human waste using CO₂ from power stations.



Burning the rainforest to clear land for soya plantations

All three presentations are on the Forum's website: guildfordenvironmentalforum.co.uk

The UK population numbers of water voles, *Arvicola amphibius amphibius*, affectionately known as Ratty, have dropped dramatically since the 1950s.

There are many reasons for this, such as pollution, habitat fragmentation and destruction, but especially predation by a released alien species, namely the mink, *Mustela vison*. A 1996-98 national survey found that the water vole had been lost from over 89% of the sites occupied in 1939, and it is now protected under the Wildlife and Countryside Act of 1981.

Water voles used to be a common sight on UK waterways, leaving a bankside larder of vegetation (cut at 45°) and latrines to mark territory. They were a common sound too, with a 'plop' as each jumped into the water to seek sanctuary from approaching humans.

The mostly vegetarian water vole is a prey species for a number of UK predators, such as the otter, *Lutra lutra*, but the water vole can usually find refuge in its burrow. However, the burrow provides no refuge from a mink, so alas, the water vole has nowhere to hide.

Surveying in Hampshire

I joined a group of Hampshire Wildlife Trust volunteers, along with Project Manager Amanda Bassett, on their spring and summer surveys around the River Loddon and River Blackwater catchments, to look for signs that Ratty and his friends still have a home there.

An initial training session was carried out showing us the signs to watch for, but we were told that we would be very fortunate to see or hear a water vole.

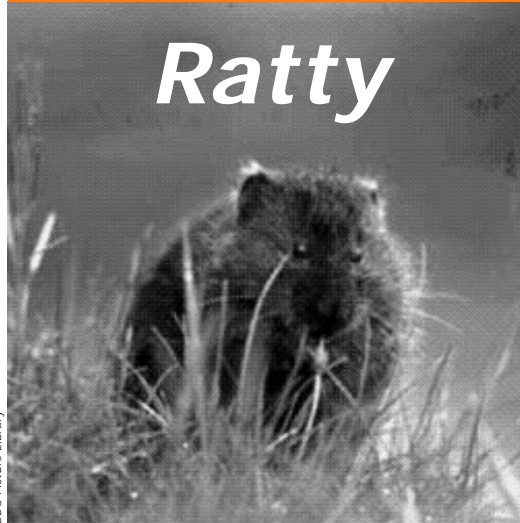
Surveys were carried out with volunteers in waders in a sample waterway, while another team member recorded environmental signs from the bank. A variety of water birds including kingfishers were recorded, as were many fish including brown trout and various

And what of water voles in Surrey?



A work party from Surrey Wildlife Trust improving the habitat for water voles

In search of Ratty



BBC Picture Library

by Stephen Rainbird

invertebrate aquatic life. We also recorded bankside vegetation, tree cover, water quality (which was very good), depth and flow, for future reference.

However the signs were not good: only a few latrines were found, with no larders, and abandoned burrows were plentiful, as were the remains of another alien species, the signal crayfish – a favourite food of mink. The high rainfall of June and July could have removed some of the telltale signs, but it is feared that mink have removed the water vole population from those parts of the Rivers Loddon and Blackwater.

Marker rafts will now be set in place to determine whether mink are present. The rafts contain bait on a soft surface that will record footprints.

The future for Ratty remains uncertain.

Dave Williams, Surrey Wildlife Trust's Mammal Officer, says there are 13 known water vole populations in Surrey, but each comprises very low numbers, making them extremely vulnerable. The Trust is constantly working on habitat improvements, especially in areas adjacent to the current populations, for example at Whitmoor Common.

Mink are the main threat, and humane control is undertaken when their presence is revealed by detection rafts. A recent worry is this summer's high rainfall, since water vole burrows are constructed near normal water levels and many may have become flooded.

People often confuse water voles with brown rats, so check out the differences on this page.

If you spot water voles, please let Dave know immediately – phone 01483 795454, or e-mail dave.williams@surreywt.org.uk

HOW TO TELL A WATER VOLE FROM A BROWN RAT

EARS

Water vole: small, fur-covered and held close to the head
Brown rat: very obvious pink ears

SIZE

Water vole: smaller and lighter, measuring 350mm including tail and weighing 200-350 grams

Brown rat: is 500mm long including tail and weighs up to 500 grams



water vole



brown rat

COAT COLOUR

Water vole: brown upper, paler underside, with finer fur than rat's

Brown rat: greyish-brown upper, paler undersides, with coarse fur

TAIL

Water vole: three-quarters body length, with some hairs

Brown rat: as long as the body and scaly

STANCE

Water vole: rounded body and blunt muzzle, squats when seated

Brown rat: low to the ground, with a pointed face

DROPPINGS

Water vole: elliptical, soft, moist and heaped in latrines

Brown rat: larger, pointed at one end, foul-smelling and left singly along their runs

URGENT – OUR SEAS NEED PROTECTION

by John Bannister

WHEREAS NATIONAL PARKS, nature reserves and planning laws give much needed protection to some of the most precious areas of dry land on the planet, very few legal frameworks exist to protect the seas beyond our shores. This is now the subject of intensive lobbying by a wide spectrum of NGOs concerned that our seas have been overlooked by conservationists.

The marine environment, covering almost 70% of the Earth's surface, includes some of the world's most diverse and productive ecosystems, and has been badly affected by human action, particularly since the middle of the 20th century. Sixty-four per cent of the total sea area lies outside national waters and is a virtual free-for-all. WWF's Marine Species Index shows that, between 1970 and 2003, the decline in species populations occurring on average across the four world ocean basins was greater than 25%. We are all well aware that certain fish stocks of economic importance like cod and tuna are decreasing as a result of overfishing. Other species are killed as by-catch such as turtles, albatrosses and many more. Mangroves – inter-tidal forests growing along tropical shorelines – are among the most productive ecosystems on Earth and provide nurseries for 85% of commercial fish species in the tropics. Yet an estimated 35% of global mangrove forest was lost between 1990 and 2000 and is being degraded or destroyed at twice the rate of tropical forests.

The UK coastline and offshore islands are home to a huge proportion of the world's seabirds, and what concerns the RSPB is that these are at greater risk than ever from human activities and developments at sea. These birds are drawn to our shores by nest sites to breed and by food from the sea. There is now clear evidence that climate change is radically changing their food supply, particularly causing a reduction in sandeel numbers, and the breeding success of some of our sea bird species has fallen sharply. And whilst nesting seabirds are protected on land, as soon as they leave their colonies they are not safeguarded in the same way. Much needs to be done to secure healthy seas, protection of marine species and recovery of species that have been decimated. Many species in the remote depths we know little or nothing about.

Only 0.6% of the world's oceans are protected at present and even so the vast majority of existing marine parks and reserves suffer from little or no effective management. This matters, not least, because the survival of millions of the world's poorest people depends on the sea. The US has established a hierarchy of marine protection designations for its waters, including "no access", "no take" and "no impact". Their

focus is on natural heritage, cultural heritage (e.g. wrecks) and sustainable production. Australia recently declared a network of no-fishing zones covering 33% of the Great Barrier Reef. The Sea of Cortez within Mexico's Baja Peninsular is apparently an amazing marine wildlife area where all species of great whales go to breed. Mexico has fought industrial salt extraction by Mitsubishi that threatened the whales. They did this after recognising that value from whale-watching far exceeded that from allowing industrial development, quite apart from the moral and environmental justifications. Mexico then took the lead in May this year among nations determined to keep the moratorium on commercial whaling in place, which was successful. Similar pressures from global business on our marine environment are taking place all over the world all the time.

Here in the UK there is only one Marine Nature Reserve and that is around Lundy Island off the Devon coast. It has taken 30 years to achieve full legal protection for this small part of the sea and has required the cooperation of fishermen, divers, dredgers, leisure sailors, water companies (sewage disposal) and other stakeholders. In 1973 a voluntary marine nature reserve was established. This became statutory in 1986. A Management Plan was formally adopted in 1994 and a Zoning Scheme produced in 1995. Finally, in 2003, a 3.3 square kilometre area on the east side of Lundy's Marine Nature Reserve was confirmed as a statutory "no-take zone", the first in the UK. This is a tiny, safe haven for fish and crabs, and some rare and endangered species: marine life is returning to pristine conditions within a thriving breeding ground. Monitoring over the past 3 to 4 years has shown a good recovery rate in the marine life, particularly in species like lobster.

New initiatives are following, including at Lamlash Bay on Arran, where a local project, called Coast, is close to securing an 8km square protected zone around Holy Isle – a reaction to plummeting fish stocks.

The push now by WWF, the RSPB and others is to build on the success they achieved in getting a commitment to a new UK Marine Bill in the 2005 UK General Election manifestos of all three main political parties, as well as a commitment from politicians in the devolved administrations. There has been consultation on a draft version of what such a bill would contain. It is vital that the pressure continues to get a Bill included in the Queen's Speech this November and in the programmes for legislation in Scotland and Northern Ireland, to give better protection of the marine environment and effective management of our seas. The Forum will lend its support to this campaign.

POLITICS on your plate

by Alwyn Marriage

IT IS NOW NEARLY 40 years since our family became vegetarians. Young, idealistic, slightly off-beat, and up for changing the world, we read in the *New Internationalist* that if everyone stopped eating meat there would be enough food to go round the whole world's population. Looking back, I suspect that the evidence for this might not have been quite as conclusive as we believed at the time; but somehow, having taken this piece of information on board, it just became rather difficult to walk into a butcher's shop and buy meat. As it happened, we were impecunious students, so cutting out meat also reduced our food bills and allowed us to survive.

We received occasional warnings that we risked missing vital nourishment, especially when we started to bring up children; but as we all enjoyed consistently excellent health, we took no notice. We did not ever try to convert others to vegetarianism: it was just a personal commitment to consider the poorest people in the world through the way we ourselves lived. Nor were we strict, so although we have never bought meat since then, we have certainly not made an issue of it when being entertained by others; so if anyone reading this has served meat to us at some point in the intervening years, please do not be dismayed: we almost certainly enjoyed it.

This last year, there has been a subtle but undeniable sea change, for it has increasingly become evident that animal husbandry is a major factor in the run-away production of CO₂ that is destroying our planet. In 2006 the United Nations published a report claiming that raising animals for food generates more greenhouse gases than all the cars and trucks in the world combined. It is one of the greatest sources of carbon dioxide and the single largest source of both methane and nitrous oxide emissions, and these are the very gases that cause the vast majority of global warming.

Since raising animals for food is a primary cause of land degradation, air pollution, water shortage, water pollution, loss of biodiversity, and global warming, the report concluded that *"the livestock sector emerges as one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global."*

Animal agriculture takes up 70% of all agricultural land and 30% of the total land surface of the planet. In the drive for more animal pasture and feed areas, huge tracts of prime forest are slashed and burned, so destroying the vital carbon sinks which we rely on to absorb carbon dioxide from the air. Vast areas of what used to be prime Amazon rainforest are now used as pastureland or for growing animal feed crops to fatten meat for rich nations. Animal agriculture also uses vast amounts of water, emits two-thirds of the world's acid-rain-causing ammonia, and is the world's largest source of water

pollution, killing entire river and marine ecosystems, destroying coral reefs, and bringing sickness to some of the world's poorest communities.

According to a study published in *New Scientist* this July, producing 1kg of beef releases greenhouse gases with a warming potential equivalent to 36.4kg of carbon dioxide. This is more than would be emitted by going for a three-hour drive while leaving all the lights burning at home. On top of this, it is also responsible for producing the equivalent to 340g of sulphur dioxide and 59g of phosphate, and consumes 160 megajoules of energy.

Carbon dioxide is responsible for about half of human-related greenhouse gas warming since the industrial revolution, and methane and nitrous oxide are responsible for another third. These gases come primarily from farmed animals' digestive processes, and from their manure. In fact, while animal agriculture accounts for 9% of carbon dioxide emissions, it emits 37% of the world's methane, and 65% of its nitrous oxide. Methane has 23 times, and nitrous oxide has 296 times, the warming power of carbon dioxide. These horrific statistics do not include emissions from managing farm equipment or for transporting meat, so the real damage is actually significantly more than these figures suggest.

Food is no longer a private matter. It is political, and it is of life-and-death importance. In deciding what and how we eat, there are three basic options:

- i. Earlier this year, Jonathan Porritt claimed that the most dramatic change one could make to cut down carbon emissions, more dramatic even than changing a gas-guzzler SUV for a Smart, was to adopt a vegan diet. I myself have not yet taken this final step, though I know plenty of people who have, and they are contributing more to the effort to arrest climate change than most of us can manage with our low-energy light bulbs and resistance to unnecessary car journeys. Veganism is worth considering.
- ii. Given the fact that producing one calorie of meat protein involves burning more than ten times as much fossil fuels and emitting more than ten times as much heat-trapping carbon dioxide as a calorie of plant protein, vegetarianism can no longer be viewed as simply a private and personal choice. It is an essential and vital step in our efforts to save the planet. So hiding behind politeness, shyness or a desire not to intrude on other people's lifestyles is no longer an option. We should, instead, be doing everything possible to persuade our friends and relations, and anyone else who might listen to us, that it is simply not acceptable to rely on meat as a major form of food.
- iii. We are unlikely to stop meat production completely; and in reality, if people were prepared to eat meat occasionally rather than regularly, livestock production might be sustainable. For those who feel they cannot give up meat completely, there is some comfort in a Swedish study conducted in 2003, which claimed that raising organic beef on grass rather than feed reduced greenhouse gas emissions by 40% and consumed 85% less energy. So those who are not prepared to be completely converted to vegetarianism, should at least limit their meat consumption to organic produce.

Forum to hold regular social evenings

On 31st July we held a social event at the Guildford Institute in Ward Street for members and friends of Guildford Environmental Forum. Even though a significant number of our members were away on holiday we still had a nice group of people turn up. Some of us brought homemade food and homegrown produce, so we ended up with an impressive buffet, which was heartily devoured.

There are so many interesting members and friends of the Forum with proactive ideas to help make Guildford more eco-friendly. It was great to have the time to just chat to everyone, without having a formal meeting or a talk to interrupt our lively conversations!

Thank you to everyone who came along, especially those who brought the food! Also, thank you to the very helpful people at the Guildford Institute.

We have decided that as it was such a success, we will host a social evening at least once a quarter at the Guildford Institute. The next one will probably be in November. If you are not a member and would like to be e-mailed when we have fixed the date, please e-mail Trudy Thompson at tt@naturallyamazing.co.uk to be put onto her invite list.

Schools and the wider community Energy Campaign

Guildford Environmental Forum (GEF) has been closely involved in a Guildford pilot programme funded by Guildford Borough Council (GBC) to help schools reduce their energy bills. GEF has worked for many years with schools through our Wildlife Gardening Competition and our energy-saving initiatives, which has given us an entrée into schools.

This new pilot programme, started in 2006/7, brought in energy experts from the Energy Centre for Sustainable Communities (ECSC), who developed a very cost-effective audit and report format. This gives each school an easy-to-understand presentation of quick payback opportunities to save energy and, where appropriate, suggestions for renewable energy. One of the key success factors in the programme is the involvement of the children in the process and the transfer of energy-saving possibilities back to their homes and to the wider community.

So far, audits have been completed at Boxgrove Primary School, Wyke County Primary School and Holly Lodge Primary School, collectively reaching an intake of over 1,000 children. Kings College will be the next school audited in September. ECSC and GEF will front the follow-up to help schools implement as many as possible of the recommendations identified, and GEF has earmarked funding to help kick-start this.

GBC is now looking to provide further funding to roll the programme forward, which we hope will be matched with funding from Guildford businesses.

Green lighting

I've never understood people who won't accept energy saving light bulbs, because if we changed all our lighting in the UK over to these we would reduce our electricity consumption by at least 5% at a stroke, and at very little cost. It would mean we could shut down a few highly polluting coal-fired power stations. It is that simple.

Modern, energy-efficient light bulbs use just 20% of the electricity that old-fashioned wasteful light bulbs do. The range and variety now available is enormous and the quality of the light much better than even two years ago. Versions suitable for dimmer switches are coming onto the market. And prices are tumbling too. You can get them for as little as 49p in John Lewis stores. Once in place all around the house they knock some £50 a year off the average home electricity bill.

Retailers have been given five years by the government to stop selling energy-wasting light bulbs, but the urgency of climate change means we can't wait that long. Compact fluorescent lights (CFLs) do contain a small amount of mercury, which is steadily being reduced, and there is a facility now in Surrey that will safely recycle CFLs. However, the amount of mercury used is three times less than the mercury released by burning the extra coal needed to power equivalent energy-wasteful incandescent light bulbs.

It's a no-brainer, so please make the switch if you haven't already. For all your lighting needs please talk to David Harnett on 01372 386026, or e-mail david.harnett@guildford.gov.uk

John Bannister

Are you trying to live sustainably?

If so, we would like to talk to you.

We are really interested in learning about efforts to live in ways that are more sustainable and/or environmentally friendly.

We would like - in the first instance - to interview you at your convenience about your experiences of doing so. What does it involve? What are the challenges? What are the rewards?

It goes without saying that your anonymity and privacy will be respected at all times. So, if you would like to be involved in our research or if you have any questions, please get in touch and we can tell you more about it.

Dr. David Evans and Dr. Wokje Abrahamse

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MUSCLE NOT MOTOR

Surrey County Council

WALKING AND CYCLING for shopping, commuting and generally getting around near where we live are excellent ways to improve our health, our sanity and help the environment. Cars are particularly damaging to the environment when used for short urban journeys, and trips of less than 5 miles account for a very high proportion of our car mileage. The UK is the most car-dependent country in the EU and we see the inevitable knock-on effects of that in our health and the levels of congestion in our streets, both incredibly damaging to our quality of life.

Key to getting people to make the modal shift out of their cars and to start walking and cycling is the provision of safe, pleasant pathways that cyclists and walkers can share, something that our continental neighbours in Germany and Holland, for example, have excelled at for years. The Cyclists Touring Club has just reported that the British cycled a total of 4.6 billion kilometres in 2006, up by 0.2 billion on the previous year, but it remains to be seen whether this is part of a real trend. (The Germans, incidentally, cycled some 25 billion kilometres in 2006.)

Of course, another key ingredient for the shift away from cars to happen is even better public transport. And again our continental friends not only have fast, efficient public transport but it is also much cheaper than in the UK. They are making a societal cost-benefit judgement here, which our mid-Atlantic thinking can't fathom.

However, cycle routes in our area are getting better. The Downs Link cycle route running south of Guildford for some 4 to 5 miles through Peasmarsh, Bramley and Grafham has been upgraded to a very high standard. Surrey County Council (SCC) has done the work and provided most of the funding from the Local Transport Plan, with additional finance from Sport England and Sustrans. A bridge has been installed to cross the River Wey at Unstead Wood and a crossing point provided over the A281 Horsham road. These things don't come cheap but it is the only way if we are to curb our car culture, which the Forum feels strongly that we must.

The Downs Link route follows the 140 year-old Guildford to Shoreham-on-Sea railway line. Potentially, improvements could continue a long way further south along the Downs Link path if it could be shown that this will help get people

out of cars onto bikes. On the section completed so far, SCC reports a fourfold increase to date in cycling between Bramley and Guildford.

Another relatively new section of upgraded cycleway in Guildford, to add to the growing number, is that from Bowers Lane in Burpham (this links up with the A3 route to Ripley) to the Spectrum Leisure Centre, where it links up with Stoke Park and thence into the heart of the town. This was funded in part by a grant from SITA. A further upgraded all-weather cycle route that is imminent is one that will run north from the YMCA to the railway bridge over Walnut Tree Close. This will completely cut out the town centre one-way system and most of Walnut Tree Close. It will link up with the existing southern section through Shalford Park and further plans are being discussed to join this to the Downs Link cyclepath.

Steadily things are improving for cyclists and walkers to make journeys well away from our busy roads. The best thing you can do to ensure these facilities continue to improve is to use them not just for leisure but in lieu of your car when making necessary trips. Excellent free cycle maps are available for the whole of Surrey from SCC, Guildford Borough Council and your local library.

Guildford Environmental Forum is a member of the Guildford Cycle Forum. Please contact Keith Chesterton on 01483 563392, or the undersigned on 01483 570468, if you want to help establish new routes.

John Bannister



Surrey County Council

Food imports

In the UK we currently import 95% of our fruit and 50% of our vegetables. In the past ten years, our self-sufficiency in food has fallen by 18%.

(Source: Country Living, July 07)

Flushing trees away

In offices, schools and hotels, most toilet paper, kitchen towels and tissues are made from recycled fibres.

However, supermarkets mainly stock these products made from virgin fibres, and in Europe this means the equivalent of 270,000 trees being flushed down the toilet each day.

WWF is calling on everyone to purchase only recycled paper products.

(Source: WWF Action, June 06)

The plastic age

Of all the waste found in 2003 on UK beaches, 57% was plastic. In the same year we each got through 290 supermarket bags.

(Source: Busbridge Parish magazine, May/June 07)

FACTS & FIGURES

Why 'ladybird'?

The name 'ladybird' originates with the 7-spot species, which has seven black spots on bright red wing-cases. It was called thus after the Virgin Mary (Our Lady), depicted in old paintings wearing a red cloak. The spots represent Mary's seven joys and sorrows.

(Source: BBC Wildlife, July 07)

Tyting Farm reborn

Following the successful campaign to save Tyting Farm as a public asset, which was supported by the Forum, the project to recreate a working farm with a strong social purpose has begun. The farm, in Halfpenny Lane just outside Guildford, is now leased by Surrey Wildlife Trust (SWT) from Guildford Borough Council and the Trust has begun conservation work to improve the land. A 20-strong herd of Aberdeen Angus cows and calves is already grazing the land under an agreement with local farmer Angus Stovold (known to many of us through the farmers market and as the son of Robert Stovold who was a member of our Executive Committee for many years). This will be an important base for the Trust's grazing operations in this part of Surrey.

SWT is working with the HALOW project to convert the derelict farm buildings into a residential unit offering assisted-living to young people with extra needs. It is a tremendous vision and the Forum is happy to support the project with a £50 donation.

IKEA walk the talk

Ikea has given all its employees six energy-saving light bulbs, with a request that they install them around their homes. It has also committed to supply all its stores worldwide with 100% renewable energy for its electricity by 2012 and to cut its total energy use by 25%. It will switch its entire car fleet to Honda Civic hybrids by next year.

Because energy-efficient light bulbs contain traces of mercury, Ikea will take and responsibly dispose of these for you – but as they last typically for 10,000 hours it will be some time before you need to worry about that. Where Ikea leads we hope others will follow.

The mayoral car

For some time we have gently hinted that it would send a powerful message if Guildford Borough Council (GBC) sold off the Jaguar as the Mayor's car and used its Honda Civic hybrid instead. The days of status symbols are gone and the Council is committed to mitigate its climate change impacts. This simple and high-profile action alone would save an estimated 2.75 tonnes of carbon dioxide emissions a year.

The Council is minded to replace the Jaguar at the end of its lease with a Lexus GS469 hybrid, which would save only 1.7 tonnes a year. So why not a Mercedes A class diesel or a BMW 5 Series diesel that would save 2.4 tonnes a year and could be switched to bio-diesel when a local, sustainable source is available?

Jenny Wicks, GBC lead member for the environment, said: "Unfortunately, it is not possible to change the current mayoral car because of the prohibitive costs relating to terminating the lease before it expires. However, we are already planning for the next one, and emissions and fuel type will be important elements to the selection of the new vehicle. As part of the process, we will be testing demonstration vehicles to assess practical suitability and green fleet issues.

"For many years our fleet has been running on alternative

fuels such as electricity and LPG. The refuse and recycling fleets have also been fitted with 'after treatment exhaust systems' and for the last nine months have been running with 5% blend bio-diesel."

Manchester to bring in congestion charge

Greater Manchester is to push ahead with plans to introduce congestion charging. Eight out of the 10 area councils have voted in favour to proceed with a bid for funding from the government's Transport Innovation Fund. The leader of Bolton Council said: "We have to send out price signals like congestion charging to achieve a low carbon economy. We need to tackle this sooner rather than later if Greater Manchester is to narrow the gap with London and attract more jobs."

The plans include overhauling the region's public transport system with more than 200 extra buses, completion of the tram system and adding extra carriages to crowded trains. Charges will only be introduced once all the public transport improvements have been completed – likely to be 2012 at the earliest. The proposal is to charge at peak congestion times using number-plate recognition. Funding comprises a £1.2 bn grant from the Transport Innovation Fund and £1.8 bn borrowed against future tolls drivers will pay over a 30-year period.



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Report by Raymond Smith

The National Trust and Leith Hill

Paul Redsell, National Trust

AS THE HIGHEST POINT in south-east England, Leith Hill, in the greensand ridge of the Surrey Hills, has been a popular visitor attraction for over 100 years.

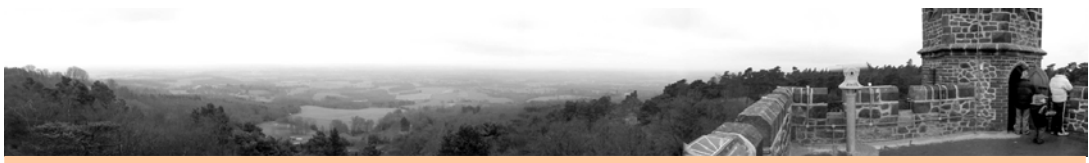
The wealth of photographs that exist show the very open character that it had into the mid 20th century. Once grazing by commoners ceased the hill took on a more heavily treed character, partly from plantation.

On the Dukes Warren part of the National Trust's estate on the hill, they have for the last 10 years been trying to recreate this open heathland with its distinctive habitats. The government-funded Stewardship scheme forming the basis of this effort has now ended and the Trust is hoping to set up a new, more intensive regime. Included in this is the fencing of much of the Warren so that it can be grazed

by cattle.

Elsewhere on the hill the Trust owns the Leith Hill Place estate, formerly the home of the Wedgewood/Vaughan-Williams family. Apart from practical building restoration they are also working with their tenant farmer to advance farm diversification, together with more sustainable practices. Hedgerows grubbed up about 40 years ago are being reinstated and new public walks created, giving access to previously closed areas. A new "camping barn" is one possible initiative.

There is a well-established area of coppicing which is still used by a hurdle maker. Experience with this has illustrated the effects of climate change, with the stools now being ready for re-cutting after seven years rather than the 13 that was previously normal.



Harnessing the marine elements

by John Bannister

WITHIN EUROPE the UK has the greatest resources of wind, wave and tidal energy. In the exploitation of its wind resource we still lag behind Germany, Spain and Denmark by a wide margin .

However, the UK is a world leader in wave energy both as developers of the technology and in its commercial exploitation, although the market is small at present. Wave energy systems can be shore-based in the inter-tidal zone – such as the marine surge air-driven turbine on the Isle of Lewis – or deployed at sea and driven by the swell.

Following four years of consultation, a decision has been made to proceed with the "Wave Hub" off Hayle on the north Cornish coast. This is essentially an electrical socket on the sea bed 18 km offshore connected to the National Grid onshore with some sophisticated monitoring equipment. Prototype wave generation systems can be tethered offshore and plugged into the "Wave Hub" and rigorously tested. The £28 million cost is being part funded by European money and the system will be operational by summer 2008. Generation is expected to be 20 MW or 3% of Cornwall's electricity demand. (The surfing community's fears over loss of wave energy have been allayed by research showing that the maximum loss will be only 3 cm.)

Turning to tidal energy, the potential for this in Europe is estimated at 12 GW, of which 4.3 GW is in the UK. Marine Current Turbines Ltd installed the world's first commercial scale developmental tidal turbine, rated at 0.3 MW, off Lynmouth on the North Devon coast in 2003. A larger demonstration unit, comprising two turbines together rated at 1.2 MW, will be installed in Strangford Lough before the end of 2007, and also planned is a small tidal farm generating 10 MW within three years. Other similar "at sea" tidal energy systems are under active development in the UK.

Much more controversial is the Severn tidal barrage scheme which has been on the drawing board for many years. It would be a 16 km barrage with road and rail running from Lavernock Point near Cardiff to Brean Down in Somerset. It would take £16 billion to build and generate something like 5% of the UK's electricity needs, but not before 2017. It faces huge opposition from environmental groups due to the national importance of the Severn Estuary for wading birds (7% of the UK's estuarine resource) and the sheer scale in terms of concrete, construction transport and ancillary development that the new road and rail transport links would attract, which include, believe it or not, talk of airport proposals.

Barbaric fishing

Non-certified fisheries kill up to 7kg of marine animals to catch 450g of sole. (Source: WWF Action, Feb 07)

No-energy paper mill

When pulped for a paper mill, straw produces an effluent by-product that is difficult to recycle. Now the UK company BioRegional has found a way to use this by-product as a renewable energy source to power the mill. The firm says that straw could replace 20% of the wood pulp imported into the UK and generate £27 million for British farmers. (Source: BBC Focus, Autumn 06)

Extinct

According to Buglife, 256 native British species of beetle have not been seen since 1970. (Source: BBC Wildlife, Sept 06)

FACTS & FIGURES

Glass – 1

Switzerland recycles 90% of its glass. Britain's figure is 30%.

Glass – 2

Each glass bottle sent for recycling saves enough energy to boil a pint of water.

Glass – 3

Returned clear glass makes new bottles. Coloured glass is crushed into 'glasphalt', a substance used to repair roads – 14 million empties were used in 2005 to keep the M6 running smoothly.

(Source: Busbridge Parish magazine, May/June 06)

Yummy toad

Great grey shrikes, famous for impaling prey on tree thorns and barbed wire, also skin toads, possibly to avoid ingesting their toxins. The bird makes an incision in the toad's abdomen, pulls the skin over its head and then digs into the meat.

(Source: BBC Wildlife, July 06)

Oil use - 1

Since 1965, there has been a 250% increase in global oil consumption.

Oil use - 2

If/when China, India and Indonesia reach average worldwide car ownership, there will be 200 million more cars.

(Source: New Statesman, 17 July 06)

FACTS & FIGURES

Pet cats

There are more tigers being kept as pets in America than there are in the wild.

(Source: WWF Action, Feb 07)

Homo urbanus?

In this year, 2007, humans on earth have become a majority urban species.

(Source: BBC Wildlife, Aug 07)

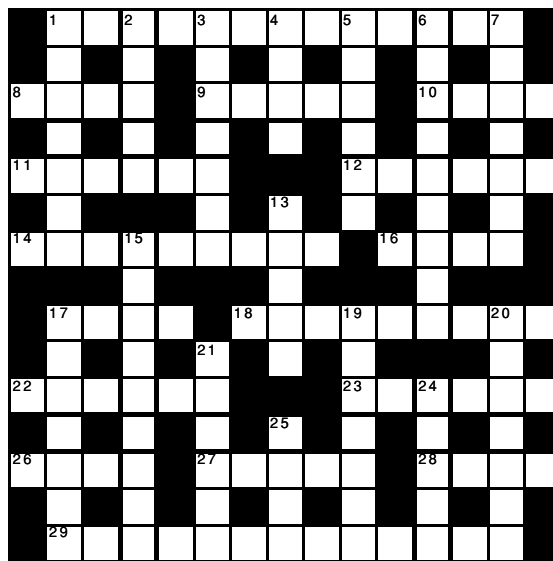
Car madness

More households in the UK now own two cars than own none at all.

(Source: 'Are We There Yet', BBC 2, 6 Mar 07)

CELEBRITIES

When the grid is complete, two Guildford-associated names will be revealed within the diagonals



Across

- 1 Made unconscious (13)
- 8 Manner or bearing (4)
- 9 Long for (5)
- 10 Kitchen appliance (4)
- 11 Nile valley plants from which paper was made (6)
- 12 Bottle to dip into (6)
- 14 Indefinite location (9)
- 16 Parched (4)
- 17 Finely minced meat product (4)
- 18 Submitting another tender (9)
- 22 All animal life in a region (6)
- 23 Pink-flowered plant of south-west USA (6)
- 26 In music, the closing section (4)
- 27 Covered with water (5)
- 28 Cricket ground (4)
- 29 Used in jewellery (8,5)

Down

- 1 In music, restlessly (7)
- 2 Irritate (5)
- 3 Through the roof! (3-4)
- 4 Cure (4)
- 5 Bowling target (6)
- 6 Thwarted (9)
- 7 Tree material yielding colouring agent (7)
- 13 Hillsides (5)
- 15 Make less severe (9)
- 17 Dish made from legumes (3,4)
- 19 The first Old Testament patriarch (variant spelling) (7)
- 20 Team game (7)
- 21 Himalayan nation's language (6)
- 24 Strong dark ale (5)
- 25 Forbidden (4)

Urban Ecology

No-one tore them down;
only snails
discreet at night
and rain
not so discreet
eroded the poems
posted that year
along the street.

But some
who were passing by
paused
made out a fading line
or two
passed on
unwitting carriers
of the word
lodged like seed
in the merest
crack of a stone.

And maybe
when new rain gently
prompts the seed
to break
free of its tomb
and bloom
out of the stone
the snails will fail to wake
and words like wallflowers
wallflowers like words
will catch the eye
of a new season's
passer-by.

Michael Tanner



Guildford Environmental Forum aims to improve the environment in and around Guildford for wildlife and for people and to build a sustainable future. Forum membership costs only £5 per year or £7 for a couple, and new members are warmly welcomed. A membership application form is available from our website www.guildfordenvironmentalforum.co.uk or by phoning 01483 570468.



CALENDAR



All the Forum's Group meetings are open to the public

Thursday 20 September

GEF Biodiversity Group. Andrew Oliver, Vice Chairman Surrey Branch, Campaign to Protect Rural England: **"Saving Tranquil Places"**.
1900. Committee Room 2, Millmead Offices. (Liquid refreshments from 1845.)

Tuesday 25 September

GEF Sustainable Energy Group. **Visit to Dunsfold Eco-Village Project**. Site tour by Jim McAllister, MD of Rutland Management Ltd, and presentation on the project which includes a proposed passenger rapid transport system and biomass CHP.

Mini-bus from Guildford and car shares organised (phone 01483 570468 for information).
Depart GBC Millmead 1800 for 1830 arrival at the Stovold's Hill gate to the aerodrome.

Wednesday 26 September

Guildford & District RSPB. AGM, followed by talk from Chris Bailey of the RSPB on **"Hope Farm"**, an organic farm run by the RSPB as an example of an arable farm that is both profitable and wildlife-friendly.
1945. Onslow Village Hall.

Monday 1 October

GEF Sustainable Construction Group. **Inaugural meeting**.
1900. Committee Room 2, Millmead Offices. (Liquid refreshments from 1830.)

Monday 1 October

Compost and Leafmould Course. Unearth the secret of making compost and leafmould – fast. Peter Hill explains how. Helpful for novice and expert home composters. Free. Call Jane Alexander to book on 01483 445085. 1900 - 2100. The Green Ark, Lido Road, Guildford.

Wednesday 3 October

GEF general meeting to discuss issues relating to **Waste and Pollution**.
1900. Committee Room 1, Millmead Offices. (Liquid refreshments from 1830.)

Monday 15 October

David Pitcher: **"Guildford Town Centre Sustainable Energy Feasibility Study"**.
A very comprehensive study initiated and part funded by the Forum.
1900. Committee Room 1, Millmead Offices. (Liquid refreshments from 1830.)

Wednesday 21 November

GEF Biodiversity Group. Speaker to be announced.
1900. Committee Room 1, Millmead Offices. (Liquid refreshments from 1845.)

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Please send contributions for the next issue to Clare Windsor by Monday 29 October 2007.

The views expressed in this newsletter are strictly those of its contributors and Guildford Environmental Forum.