



GUILDFORD ENVIRONMENTAL FORUM

newsletter

[www.gefweb.org.uk](http://www.gefweb.org.uk)

MARCH 2012



## Fight to save existing Guildford Bus Station

*John Bannister*

WITHOUT ANY PRIOR consultation on the proposal with anyone in Guildford, the Executive of Guildford Borough Council (GBC) recently decided that it would be essential to relocate Guildford bus station in order to attract a major retail and mixed use development onto this site. Immediately after the decision Westfield chose to put The Friary on the market. Guildford is small fry these days for Westfield's ambitions.

The site in question, in the heart of Guildford, has been in semi-derelict stalemate for many years waiting for Westfield to exercise its long-standing planning permission to expand The Friary with a modern bus station included. GBC Executive gives every impression of completely rejecting this same kind of renewal (namely leaving the bus station where it is) in their negotiations with any future developer that emerges.

They claim it makes any redevelopment scheme unviable. They must think again and take Guildford's residents into account.

### **What other sites?**

In 2011 consultants were asked by GBC to look at alternative sites for the bus station. They concluded that the best alternative option is the Bedford Road surface car park near to the cinema and across the river from the rail station. Good for rail users who want to connect to a bus, but these customers are currently only a very small minority. The vast majority of bus users are coming in to shop or work in Guildford and greatly value being within easy walking distance of North Street and High Street.

The council Executive pressed ahead and authorised

£250,000 to develop a more definitive brief for a bus station on the Bedford Road site. However, it has recently transpired at a meeting organised by Guildford Business Forum, with GBC and their consultants, at which the Guildford Environmental Forum (GEF) made its concerns known, that no analysis has been made of the profile of the estimated 12,000 people coming into Guildford by bus every day or of the implications for them.

## *The petition*

Keith Chesterton, former borough councillor, long-time Chairman of Guildford Ramblers and long-standing Environmental Forum member, took it on himself to organise a petition. This gathered 2,600 signatures from bus users opposed to moving the bus station to Bedford Road. Very few took a contrary view. Keith and his team, which included other GEF members, spent many hours talking to people at the bus station and outlining the council's plans.

What is very apparent is that a large percentage of bus users are elderly, many are infirm and most are carrying bags of shopping. To reach the Bedford Road site these bus users would have to walk significantly further, cross Onslow Street at the two-stage pedestrian crossing and negotiate narrow pavements into Bedford Road – a daunting task if you are elderly and infirm. Traffic using Onslow Street is very heavy and very aggressive, HGVs are quite common and the pedestrian crossing is already very busy. This crossing is one of the main pedestrian routes to the rail station and one of the notorious examples in Guildford where pedestrians are reduced to second-class citizens in obeisance to traffic.

In order for the Bedford Road site to work, a new

right turn for buses is required from Onslow Street into Bedford Road with a new set of traffic lights. This almost certainly will add to the existing town centre congestion problems. Compound this with a new Waitrose accessed from York Road and gridlock is going to get worse, probably much worse.

The petition with 2,600 signatures was presented at a full Council meeting on 9th February and debated. The council agreed at this very late stage to invite two of the petitioners to join the council in detailed discussions.

## *Keep options open*

To release £250,000 of taxpayers' money to further define the Bedford Road option seems premature if consultation is to continue, and especially as a Town Centre Master Plan is still at an early draft stage. GBC says that further consultation will be on alternative options to the existing bus station site. This is unacceptable. In our view, GBC's continuing consultation on plans for our bus station must include an option for an adequate bus station on or very near the existing site.

GBC's oft-repeated mantra is that Guildford has to compete as a retail shopping centre with Kingston, Basingstoke, Reading, even London. This means attracting visitors from a radius of up to 40 miles. So at bottom this is about providing for visitors and keeping our mostly globally-branded shops open. Admittedly it benefits the few locally-owned restaurants and businesses as well. But it is not really about providing for the residents of Guildford. Their needs and interests must be considered. The retail obsession also goes against virtually every tenet of sustainable development.

## **SUBSCRIPTIONS and GIFT AID**

**Subscriptions for 2012 are due on 11th April, 2012.**

The subscription rate is being maintained at last year's rate of £10pa (£15pa for a household at one address). This is possible because we have had an excellent response to our request for the return of standing order mandates and the completion of gift aid declarations (we recovered £600 in gift aid last year). Thank you very much indeed to all those members who have completed both returns and therefore need do nothing in respect of renewing their subscription.

Most other members will have already received a reminder by e-mail to pay their subscription or to complete a gift aid mandate. If we do

not have an e-mail address for you, there will be a reminder form with your newsletter and we would be most grateful if these could be returned to me by 31st March. We encourage members to pay by standing order as it reduces our administration hugely, but if this is not your preference, then please send me a cheque and the gift aid certificate and I will confirm receipt.

Finally, there is a vacancy for a membership secretary. I am continuing to act as membership secretary and maintain the database, while other committee members are covering the minutes and newsletter distribution. If you are interested, I would be happy to advise what is involved in this role and can be contacted on 01483 222687.

*Adrian Thompson, Hon Treasurer*

## Unique habitat

The Norfolk Broads are home to 66 species found nowhere else in Britain.

(Source: BBC Wildlife, Jan '12)

## FACTS & FIGURES

### A shameful third

Indonesia is ranked third among the world carbon emitters, after the USA and China. The reason is the draining and burning of vast areas of peatlands, releasing CO<sub>2</sub> into the atmosphere.

(Source: Earthmatters, Spring '11)

# Energy measures for a small extension

Jenny Barnes

TWO YEARS AGO we had a small extension built. As part of that, we decided it would be good to install solar thermal heating; and both the new rooms have underfloor heating. There's a schematic of how it all works below.

Our solar thermal panels provide heating for our hot water, and also a supplement for central heating for our underfloor heating, although of course not a lot of energy is picked up in the winter!

The tank acts as a large thermal store. When it's sunny, the solar thermal panels pick up heat from the sun, and transfer it to the bottom of the tank, and if it's hot enough for long enough the whole tank gets nice and hot. If there isn't that much energy to collect, it heats up (more or less) the bottom half of the tank, which is usually at a lower temperature than the top.

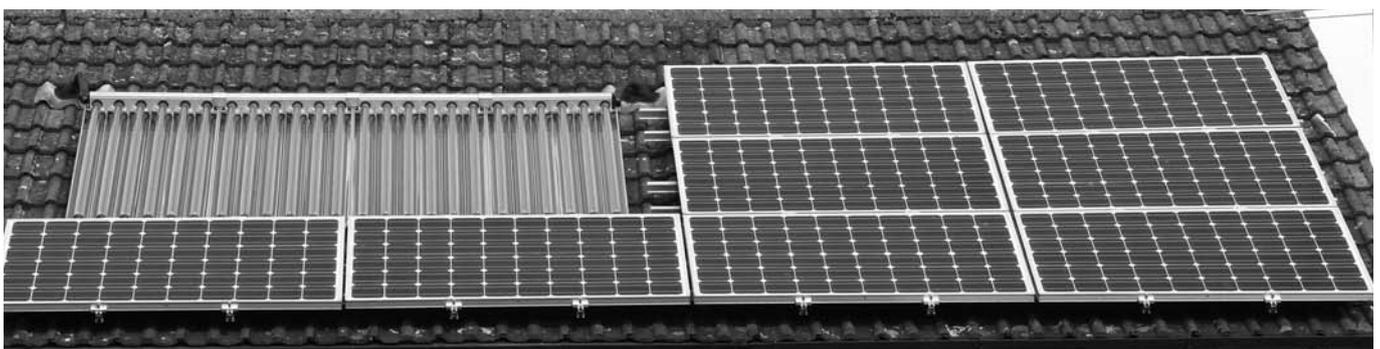
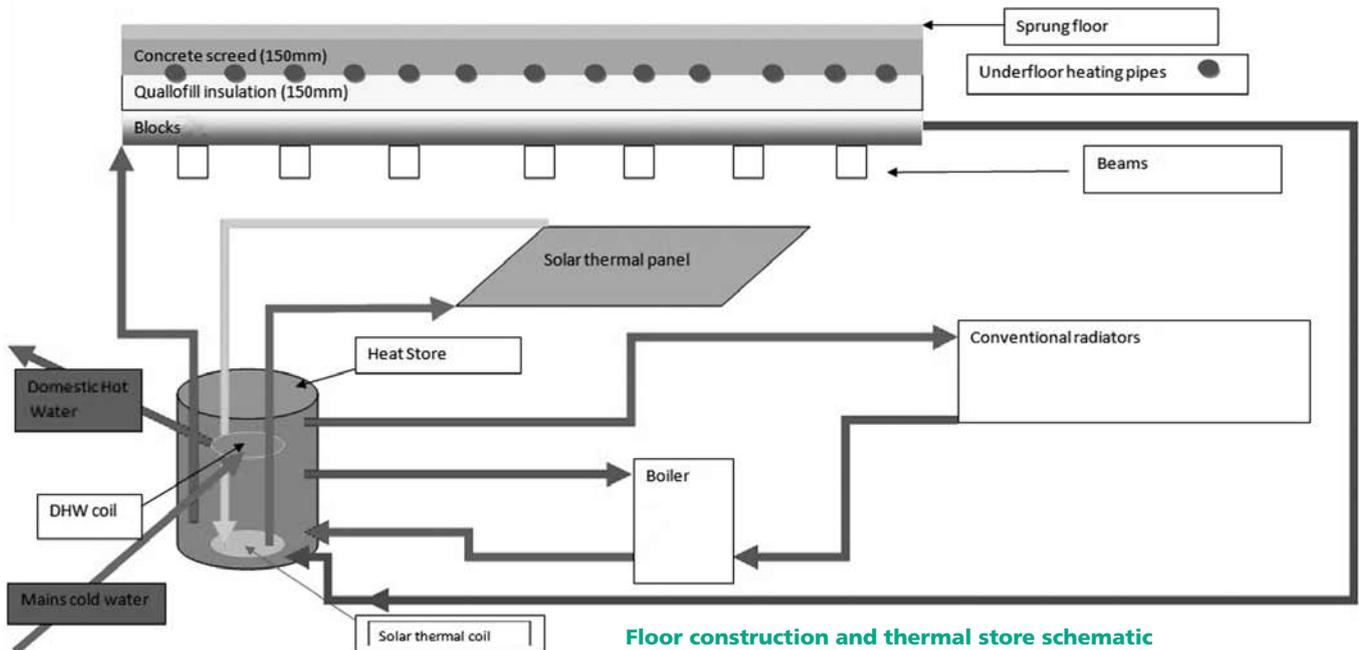
The gas boiler is timed to come on for a couple of short bursts during the day, and will fire up and heat the top half of the tank if the temperature is below about 55°C, so that there's enough heat for domestic hot water (DHW). Unlike conventional DHW

tanks, the usable hot water is inside the coil, and is heated as it travels through the tank, and then, if necessary, mixed with cold to keep it below 60°C as it goes off to the taps and shower.

When it's cold, the underfloor heating provides heat for the two new rooms. The fluid in the tank is mixed down to about 40°C and pumped through the underfloor pipes, heating the concrete slab and providing a gently rising heat in those rooms.

The rest of the house is heated by conventional central heating radiators; when the thermostat in the rest of the house calls for heat, the hot water in the tank is pumped round the radiators, heating the house. As it returns through the boiler, the boiler fires when the temperature of the circulating fluid is below the boiler thermostat setting, so if the heating is on for any length of time the top half of the tank is heated as well as the radiators.

Also, when it's been cold this winter we have been using our new woodburner stove – look forward to an article on that in the future.



Solar thermal panels top left, PVs on the rest of the roof

# BIOFUELS

## SILVER BULLET OR GREENWASH?

by Forum member Robert Palgrave

### Part 3 of 3 parts

#### UK road transport biofuels

Road transport biofuels used in Britain are currently made from food crops such as soybean oil, rapeseed, oil palm, wheat, sugar cane and beet, and from used cooking oil and animal fat (tallow).

The now defunct Renewable Fuels Agency was responsible for managing road transport biofuels use in the UK. Their most recent report, for the 9 months to January 2011, states that:

- 1,205 million litres of biofuel were supplied, which is approximately 3.3% of total road transport fuel, against an annual target of 3.5%.
- More biodiesel (61%) was supplied than bioethanol (39%).
- 20% of biofuel was reported as coming from UK feedstocks.
- Greenhouse gas savings of 55% were achieved against a Government target of 50%. This figure may not include all emissions from direct land use change and excludes the emissions from indirect land-use changes considered in the 'Gallagher Review'.
- Over the period, 49% of biofuels met an environmental standard, compared to a target of 80%

The RFA's high-level summary hides some important facts. Critically, the overall greenhouse gas saving figure of 55% is distorted by the high proportion of biofuel made from Used Cooking Oil and Tallow, which together make up half of our biodiesel. Without UCO and Tallow the GHG saving for biodiesel drops to just 33%.

The accompanying charts show the sources of UK transport biofuels and their greenhouse gas performance.

Only biofuels made from wastes are currently subsidised in the UK, getting a relief of 20p per litre on the motor fuel duty. This ends in April 2012. The temporary financial advantage enjoyed by Used Cooking Oil has led to a bizarre situation where the UK imports UCO from as far afield as the USA to fuel our cars.

Does this matter? Aside from the carbon emissions involved in shipping UCO around the world to foreign markets paying higher prices, the removal of a waste product from the local market means that local bioenergy demand will be met using crop-based biofuels. This displacement effect also applies among crops and across sectors. Use of EU-grown rapeseed oil for biodiesel for example, means food manufacturers use more of other ingredients like palm oil and soya.

On the question of whether there is enough used cooking oil to make an appreciable difference – it has been estimated that UK supplies could possibly run 100,000 diesel cars.

#### Road transport biofuels in the balance?

Transport biofuels maintain and extend our dependence on cars and the internal combustion engine; increase pressure on food prices and malnutrition; displace indigenous peoples; increase the need for agricultural land and hence deforestation; and take the pressure off car manufacturers to improve efficiency. Impacts are externalised from the UK to other poorer parts of the world, and we get a false sense of security that we are reducing our carbon emissions without needing to address over-consumption.

In addition they do not reduce local air pollution, congestion, or the need for more roads; they don't delay the onset of peak oil appreciably, nor reduce carbon emissions by any meaningful amount.

#### Other uses of liquid biofuels

##### 1. Electricity

UK government subsidies for large-scale renewable electricity are 'banded' by type of technology and known as Renewable Obligation Certificates. 'Energy Crops' such as rapeseed oil and palm oil are currently subsidised at about 9p per kWh – that's twice the level for on-shore windfarms and equal to offshore wind power. These subsidy levels were introduced in 2009 and immediately encouraged businesses to submit plans for power stations burning various forms of vegetable oil and used cooking oil. Typically up to 50MWe capacity, these power stations use diesel engines; either modified marine engines or in the case of one developer, refurbished second hand railway locomotives.

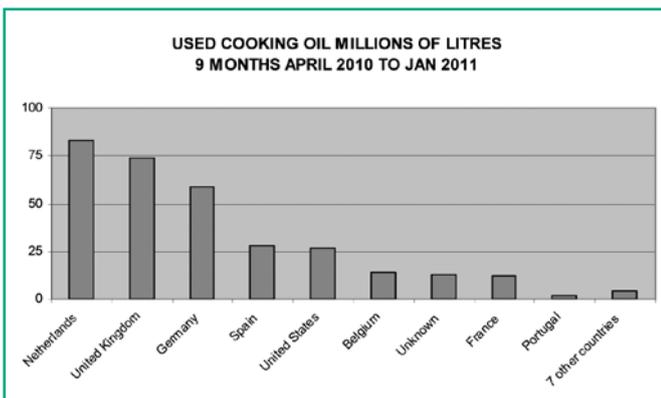
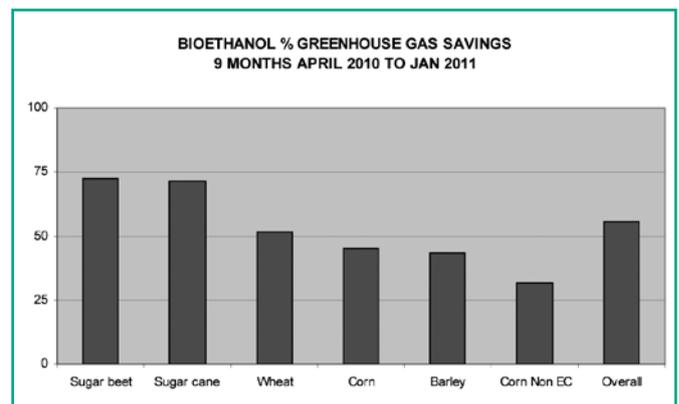
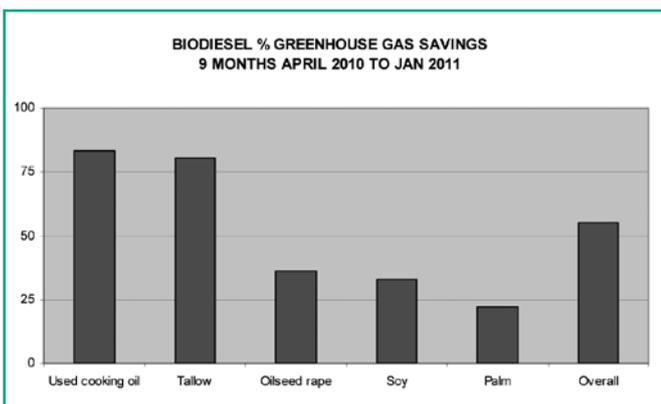
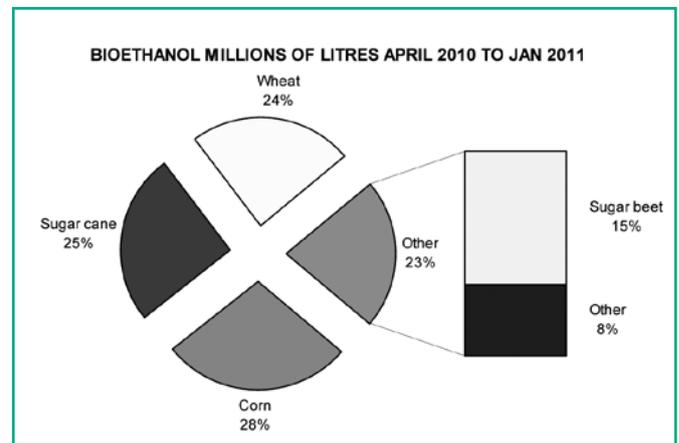
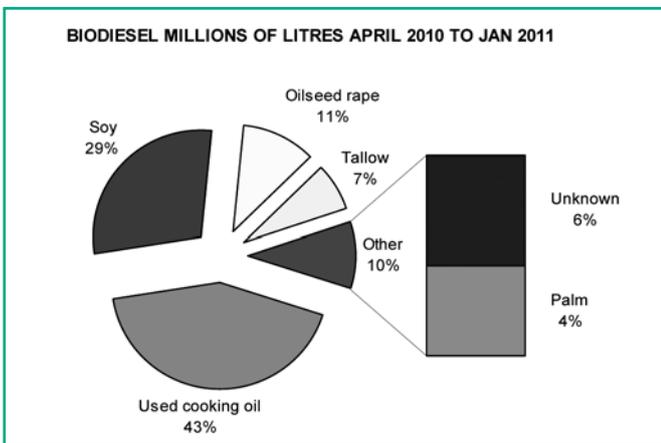
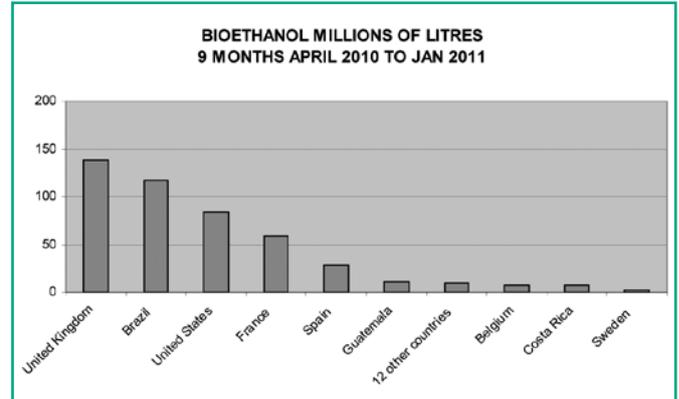
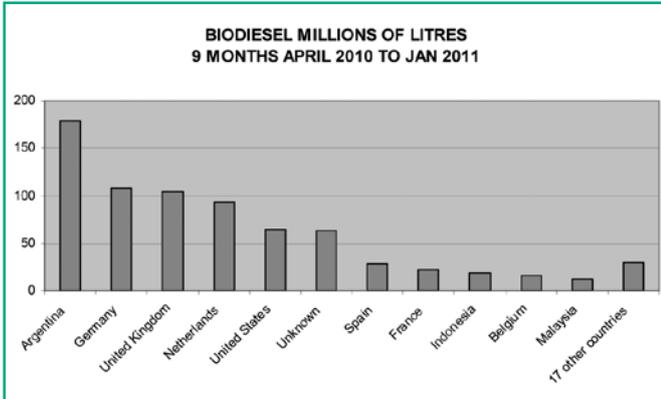
While it is unlikely that the volumes of biofuel used in such power stations will reach the same level as in road transport, the additional demand is not insignificant and brings the same set of environmental and social impacts. And it is very inefficient in land use. Using land in the UK to house a solar PV farm generates 60 times more electrical energy per year than using the same land to grow miscanthus and burn it in a power station. Using imported biofuels like jatropha with a yield of 1.5 tonnes per ha – probably an optimistic level – means we are effectively expecting other nations to give up 600 times as much land in their countries to supply us with electricity than if we installed solar panels here.

##### 2. Aviation

Few would dispute that flying contributes to global warming and depletes limited reserves of fossil fuels. But

# BIODIESEL

# BIOETHANOL



the aviation industry is intent on continued expansion and believes technology and alternative fuels will allow it to operate ever more flights but generate the same or fewer emissions.

Biofuels are expected to play a big part in reducing emissions, since there are limited opportunities to improve efficiency through better aircraft design and operating practices. The EU Emissions Trading Scheme applies to aviation from 2012: under it biofuels are treated as completely carbon neutral and are therefore financially advantaged.

The International Energy Agency has suggested biofuels could make up about a third of aviation fuel

supplies by 2050. The UK Committee on Climate Change took a more cautious line in its December 2009 report on aviation, advocating a figure of 10% in 2050 – in response to a UK government pledge that UK commercial aviation emissions in 2050 should be no more than in 2005.

The IATA has stated its aim is to restrict global aviation emissions in 2030 to 2005 levels making use of biofuels as well as higher efficiency planes and better operational practices. The biofuel required has been estimated as 180 million tonnes per year. This is a very significant demand compared to road transport – the EU-27 consumption of biofuels in 2020 is expected to be only 25 million tonnes.

Following trials by a number of airlines and aircraft manufacturers, including Virgin, Boeing and Airbus, biofuels made from plant oils and animal fat have just been approved by ASTM International for use in the commercial sector. Oils are converted to closely resemble kerosene through a process called hydrotreatment.

Aviation fuel made from wood and other solid biomass, through a process called Fischer-Tropsch gasification (or F/T Biomass-to-Liquid), has already been approved, although the energy inputs and production costs are so high that airlines have shown far less interest in this compared to biofuels from plant oils. Aviation biofuels from sugars are being studied, but are still in the early development stages.

The aviation industry and policy makers stress that they intend to use largely novel biofuels which, they claim, will not compete with food or forests, such as algae, camelina, the salt-resistant herb salicornia, as well as jatropha. Palm oil is rarely mentioned in this context, yet jet fuel from palm oil appears to be the only realistic choice for commercial aviation biofuels over the next few years.

The US Navy, US Air Force and the Royal Netherlands Air Force have also tested biofuels in fighter jets.

Honeywell subsidiary UOP, who have supplied the biofuels for most of the test flights are one of the leading developers of jet fuel from plant oil and are investing primarily in supplying the US Navy and US Air Force.

Lufthansa flew its first scheduled biofuel flight on 15th July, launching a 6-month trial in which a 200-seater Airbus A321 will operate on the Frankfurt-Hamburg route 8 times a day. It will use a 50-50 mix of biofuel and traditional kerosene in one engine, while the other engine will run on kerosene alone – so the effects can be compared. The biofuel is probably from jatropha and camelina, with some animal fat and is produced by Neste Oil of Finland.

Aeromexico successfully flew a biofuel-powered Boeing 777 from Mexico City to Madrid last month, the first ever biofuel powered commercial transatlantic flight. Its fuel was a blend of 70 per cent kerosene and 30 per cent biofuel, made from the Jatropha oilseed plant.

## The verdict?

If we are really looking for solutions to climate change and peak oil, we should forget about using biofuels in our cars. We can't grow enough biofuel crops to make a useful reduction in our emissions or fossil fuel consumption without disastrous consequences. There are other more sustainable and ethically sound ways to improve surface transport.

Aviation and road freight can only run on energy-dense liquid fuels, but the fuel volumes required will similarly be extremely difficult to provide without enormous collateral damage.

The answer surely is to recognise that fossil fuels have been a short-term blessing (or curse?) and it's time to start living with a far lower energy footprint – rather than fooling ourselves that bioenergy will provide the easy answer.

## A COUNTRY DIARY FOR SURREY

We can now enjoy reading more from our regular contributor and Forum member Michael Tanner. For he is writing a periodic *Country Diary* for Surrey, akin to those in some national newspapers. It takes the form of a 'blog', under the auspices of the *Surrey Advertiser*, who say they don't have the space to print it in the paper. The only regret is that access has to be online, thereby excluding those who have no computer.

The articles appear approximately monthly. His January 2011 introductory piece states "... my new blog is written for all who share an interest in the countryside ... Most often I shall write about the countryside in this, the South-West Surrey area ... occasionally, I shall venture into other parts of the UK or even beyond, where I have set foot or wheel."

And here are two tasters, small extracts from, firstly, April 2011: "It is quite a different story for the non-human denizens of the water meadows and river banks of the Shalford area. In the last few days there has been so

much sunlight that the plants, insects and animals of that locality have responded rather as an orchestra does to the conductor who has just mounted his rostrum ... Now he has raised his baton and his eyebrows and, on the very edge of expectation, released the symphony of summer."

And secondly, from January this year: "... a number of pedestrians using the original town bridge at the bottom of Guildford High Street, like me probably witnessed the removal of the self-sown apple tree, which for many years has grown out of the great iron pipe projecting vertically from the river bed by twenty feet or so ... One Christmas Day, several years ago, I was so moved by apples (quite large and yellow) still hanging from the tree, that I wrote a short ballad on its existence against all the odds. I suppose I knew it was doomed."

Michael's writing is not only a delight to read, but it should inspire an interesting exchange of ideas about the environment. **Directions – type 'Get Surrey Blogs' into Google, then under 'Categories' click 'Country Diary'.**

# FIT for anything?

John Bannister

## Winning the battle

In 2004, Brazil said it would cut deforestation in the Amazon by 80% by 2020. Now that goal has almost been reached, due to a variety of measures including increased environmental patrols, and indigenous Indian "smoke jumpers" who detect and fight forest fires. Most cheering is the fact that nearly 80% of the Amazon remains intact.

(Source: *Radio Times*, 31 Dec '11 – 6 Jan '12)

## Going bananas

Bananas are the most popular fruit in the world. Shoppers spend £10 billion a year on them.

(Source: *Waitrose Weekend*, 28 July '11)

## FACTS & FIGURES

### Fancy a swim?

Three seal pups were discovered to have swum a remarkable 560km across the North Sea from their Farne Island birthplace to a Dutch beach. And a radio-collared polar bear swam 672km over nine days through the Beaufort Sea off Alaska, where scientists believe bears are having to swim further because of melting sea ice.

(Source: *BBC Wildlife*, Mar '11)

### Degradation

A billion people – one in seven of the world's population – are slum dwellers. By 2050, according to the United Nations, there could be 3 billion.

(Source: *New Statesman*, 8 Aug '11)

**THE GOVERNMENT is stumbling around in a complete muddle over subsidies, known as feed-in tariffs or FITs, introduced to help promote renewable energy in this country. The previous government was little better. It prevaricated for years with all kinds of spurious arguments claiming that FITs were a bad idea, despite the clear evidence from Germany that hundreds of thousands of jobs and a massive export industry had been created there, due in part to FITs.**

## Cuts of 50%

The Labour government in its death throes did leave a worthwhile legacy of FITs on our statute book and the Coalition continued with these. But then late last year the Coalition stunned the growing confidence of the UK solar PV industry by announcing, ahead of the outcome of a consultation, dramatic cuts of about 50% in the FITs for solar PV, sending the industry into a tailspin.

A challenge made in the High Court by Friends of the Earth, Solarcentury and another solar installation company was unanimously upheld by the Court of Appeal. At the time of writing the government is taking its case to the Supreme Court. Whether this is pride or to placate the prejudice against renewable energy of the Tory right wing I will leave you to make your own judgement.

## We must plan for the future

Industry needs clear signals from government to plan the capital investment and training of people required to capitalise on a vital emerging technology. Flip-flopping around like this Coalition is doing just drives away the risk takers who build industries. Politicians fail to get this because so few of them have spent time in industry. It's still a sad fact in this country that 'engineering' and 'making things' are dirty words, and look where that has got us.

New jobs, needed for the low carbon society and to cut our greenhouse gas emissions by at least 80% by 2050, require some financial support. Let's not forget that the nuclear, oil and other fossil fuel industries continue to receive massive subsidies and tax breaks despite their wealth and maturity.

## Mismanagement

The nub of the issue is that the FIT had become too generous following a dramatic fall in the price of PV panels. No-one disagrees with this. It was the inept, abrupt and illegal way the Coalition went about reducing the FIT that caused so much anger. The demand for solar PV from householders and community groups had indeed escalated, but because the Coalition had allocated a budget of only a few hundred million pounds over three years for FITs, it looked as if it might be used up too quickly. It's like putting up train fares because too many people are using trains, when everywhere is gridlocked and air pollution remains a serious problem.

We are expected to stomach the failure of departments like the MOD, who overrun their budgets by billions due to gross mismanagement. Our survival would be better served if the UK had a smaller fleet of nuclear submarines and fewer weapons of mass destruction and instead allocated a bit more money towards a truly sustainable future by emulating the best countries on things like public transport, renewable energy and their vision to decarbonise society.

Maybe Professor Stephen Hawking sees our fate more clearly when he says "We are threatening our survival because of the exponential growth of our population and our use of finite resources and our technical ability to influence our environment for good or evil. We must survive until we can travel to the stars. We are entering a dangerous period in our evolution".

## Assessing the damage

Meanwhile, back on Earth, Coalition proposals for a new FIT regime look like being a disaster for community groups' initiatives such as our local enterprise – Wey Valley Solar Schools – that Guildford and Waverley Friends of the Earth and the Forum are involved in.

The sense we are getting is that by October this year the FIT for community-scale solar PV systems of 10 to 50 kW in size will have been reduced in the space of a few months from 31 p/kWh to about 10 p/kWh. This will neither cover the costs involved in setting up a community scheme like Wey Valley Solar Schools nor generate sufficient return to attract new investment. It will damage both the emerging community solar energy sector and the UK PV industry.

# Recycling of plastics

Lucy McSherry

## What happens to the plastic collected in recycling from your households?

Bulky rigid plastics go through five processes: sorting, shredding, washing, melting and pelletising.

All different 'types' or polymers of plastic have to be recycled in slightly different ways. Even within polymer types often associated with different numbers on plastic products, plastics can look, feel and behave differently.

With this in mind, below is a table showing some of the common polymers of plastic and what form they take.

Before recycling, plastic from mixed plastic recycling streams needs to be sorted. This used to rely on the Resin Code, but now most reclaimers and Material Recovery Facilities use automatic sort systems to identify resin.

There are two different ways for plastics to be recycled:

**Mechanical or melt recycling** – plastics are recycled directly as polymer feed.

**Feedstock or chemical recycling** – advanced technologies which convert solid plastic materials into smaller molecules which can then be used as feedstock for a range of chemical processes including polymer production.<sup>1</sup>

### Sources

<sup>1</sup> [http://www.recoup.org/shop/product\\_documents/27.pdf](http://www.recoup.org/shop/product_documents/27.pdf)

<sup>2</sup> [http://en.wikipedia.org/wiki/PET\\_bottle\\_recycling](http://en.wikipedia.org/wiki/PET_bottle_recycling)  
[http://www.wrap.org.uk/downloads/Commercial\\_Scale\\_Mixed\\_Plastics\\_Recycling\\_19\\_6\\_FINAL\\_FINAL\\_VERSION.a56b4766.7254.pdf](http://www.wrap.org.uk/downloads/Commercial_Scale_Mixed_Plastics_Recycling_19_6_FINAL_FINAL_VERSION.a56b4766.7254.pdf)

<sup>3</sup> [http://www.who.int/water\\_sanitation\\_health/dwg/wsh0207/en/index4.html](http://www.who.int/water_sanitation_health/dwg/wsh0207/en/index4.html)  
<http://www.surreycc.gov.uk/environment-housing-and-planning/waste-and-recycling/about-our-waste-and-recycling-services/what-we-do-with-your-waste-and-recycling>

## A brief outline of the recycling processes for the most widely used polymers

Post-consumer plastics including plastic bottles are sorted and separated according to polymer type, crushed, baled or granulated before being sold on by the reprocessor or manufacturing company.

Once sold, the plastics will be treated further including washing and shredding to remove the residues of labels and caps. The remaining material is in flakes and these can then be used to make other products including polyester-based items such as clothing, carpets and other plastic containers.

As the quality of plastic deteriorates the more times it is recycled, secondary material is mixed with virgin plastics to strengthen it before being made into new plastic bottles.

In Europe 1.45 million tonnes of PET bottles were collected in 2010.<sup>2</sup>

As outlined in the waste hierarchy the first step in waste management is reduction, so the first step for all consumers, producers and packaging manufacturers is to use less packaging and fewer plastics.

**Plastics should be reused wherever possible.**

In some developing countries, an innovative reuse of PET plastic bottles is to sanitise drinking water!<sup>3</sup>

Resin code	Abbreviation	Polymer name	Uses
	PETE or PET	Polyethylene terephthalate	Polyester fibres, soft drink bottles
	HDPE	High-density polyethylene	Bottles, milk jugs, recycling bins, playground equipment
	PVC	Polyvinyl chloride	Pipe, fencing, shower curtains, lawn chairs, non-food bottles, children's toys
	LDPE	Low-density polyethylene	Plastic bags, wash bottles, tubing, moulded laboratory equipment
	PP	Polypropylene	Auto parts, industrial fibres, food containers, dishware
	PS	Polystyrene	Desk accessories, cafeteria trays, toys, peanut packaging, other expanded polystyrene products
	Other		Acrylic, plastic lumber, headlight lenses, safety shields/glasses etc

From April, there will be much wider plastics recycling across the borough. See GBC's website [www.guildford.gov.uk](http://www.guildford.gov.uk)

### Rhino horn

A record 443 rhinoceros were killed in South Africa in 2011, as demand in Asia rose for their horns which are powdered and used medicinally. The street value of the horn has soared to £42,000 a kilo, making it more expensive than gold and platinum.

(Source: *The Independent*, 31 Dec '11)

## FACTS & FIGURES

### Animals only please

If the preferences of broadcasting channels are anything to go by, most people are happy to look at nature but don't want to think about its decline. When the BBC sold the international rights to its *Frozen Planet* series, a third of channels chose NOT to buy the important seventh episode, in which David Attenborough confronts the effects of climate change on the polar regions.

(Source: *New Statesman*, 28 Nov '11)

### Chocolate manufacture

The British, who consume more than 630,000 tonnes a year of chocolate, are mostly unaware of the colossal amount of water involved in its manufacture. It takes 2,400 litres of water to produce 100g of plain chocolate and 2,500 litres for 100g of milk chocolate. Also, sugar is one of the world's thirstiest crops – global production accounts for more than 3% of total water used for crops.

(Source: *Earthed*, Spring '12)

**Surrey Wildlife Trust is the largest independent conservation charity in the county, protecting and enhancing Surrey's countryside for the benefit of people and wildlife. We manage over 9,000 hectares of Surrey's countryside and have land management agreements with Surrey County Council, Local Authorities, MoD and private landowners.**

## NOWER WOOD Environmental Education For The Future

Grace Moran

Nower Wood is Surrey Wildlife Trust's flagship Educational Reserve and provides environmental or wildlife education for schoolchildren from first school up to A-levels. It is a Site of Nature Conservation Importance (SNCI) and is the cornerstone of SWT's Education service, which now reaches over 15,000 children across Surrey every year. In total, since we opened Nower Wood 40 years ago, nearly half a million children and young people across Surrey have benefitted from our Wildlife Education programme.

However, we urgently need to replace the 40-year-old classrooms, which were originally purchased secondhand and were never intended to last four decades! All the buildings need constant repair to keep them usable, and only the main classroom is heated, which means that in the winter we cannot run as many sessions as we have demand for,



The current building

and when the toilets freeze (which happens regularly!), we have to cancel bookings.

We want to replace the existing buildings with two new, cost-effective, wooden buildings, made from sustainable sources of timber. The result will deliver improved facilities, an extra classroom, benefits to teaching efficiency, and more modern and hygienic loos. The designs provide a good balance of functionality and attractive design, and fit well within the woodland site. The overall 'on the ground' footprint will actually be less than is currently occupied by the existing buildings.

The replacement timber buildings will be better insulated than the old buildings, so running costs will be lower, despite the benefit of having the toilets and all classrooms heated during the winter. Heating is planned to be by stoves burning wood pellets. We will install additional ecological features, including rainwater harvesting and reuse, and solar panels.

The anticipated total cost of rebuilding Nower Wood is £500,000. We can phase the development of the two buildings, which will allow us to gain the much-needed benefits of new loos as soon as possible! The amount we need to raise for Phase 1 of the New Build Project is £130,000.

### Here's how you can help!

**To support our fundraising efforts, we need testimonials from people who have visited Nower Wood and been inspired by their experience.** Did you visit as a child as part of a school trip? Or maybe you've attended one of the many adult courses there? Whatever your story we want to hear it!

For further information, or to make a donation, please contact Grace Moran on [grace.moran@surreywt.org.uk](mailto:grace.moran@surreywt.org.uk) or 01483 795444. Thank you!



The planned replacement

### NOWER WOOD PROVIDES . . .

. . . ample scope for studying woodland ecology, soils, trees, wildflowers, invertebrates, and the world of pond life. Important trees are oak and sweet chestnut interspersed with birch and all the ponds are used extensively for pond dipping. Reptiles are frequently observed, with all native reptiles having been recorded, and recent surveys show evidence of Great Crested Newts (a protected species) in all the ponds.

A wide range of bird species can be seen, including sparrow hawk, stock dove, woodcock, woodpecker (two species) and wood warbler. Adders are occasionally observed, whilst roe deer, badgers, foxes and bats have all been recorded, as well as dormice.

## **Guildford Town Centre Master Plan**

Guildford Environmental Forum has submitted its response to the Town Centre Master Plan. There is not space enough in the newsletter this month to publish it, but you can read it via our website [www.gefweb.org.uk](http://www.gefweb.org.uk). Select "RESOURCES", then "DOWNLOADS", and the Forum's response is under "Documents".

## **Dangerous times for wildlife**

The UK Budget on 21 March may prove to be one of the most significant moments for the environment in more than three decades. In his Autumn 2011 statement Osborne said, to Tory cheers: "We will make sure that gold-plating of EU rules on things like habitats are not placing ridiculous costs on British business".

What environmental regulations we have are absolutely crucial to preserving the increasingly threatened wildlife that still remains. Many major world-class developments have been perfectly able to comply with these regulations and in the bargain have helped create new habitats. Far from being a barrier, the environment actually underpins economic growth, and there is plenty of evidence to prove it. What we are seeing is Osborne, Pickles and Letwin preparing the ground for changes in environmental legislation and planning approvals with an automatic presumption in favour of "sustainable" development.

Witness the latest proposals for an airport in the Thames Estuary, which is a protected, globally recognized coastal wetland on which hundreds of thousands of wildfowl and waders depend. Supporters of the RSPB, the Wildlife Trusts, the National Trust and the thousands of likeminded organisations all the way down to your local Herpetological Society have votes too, and are not going to give up now without a hell of a fight.

## **The global climate in 2011**

Preliminary data compiled by the World Meteorological Organisation suggest that global temperatures in 2011 were not as warm as the record-setting values of 2010, but nevertheless ranked as equal 10th highest on record.

Arctic sea ice extent was well below normal, reaching the second lowest seasonal minimum on record. Sea ice volume was estimated at a new record low.

In the United States it was a year of extremes. Many southern states experienced extreme drought, and Texas was especially dry with the highest ever recorded temperatures. Meanwhile many northern and central

parts had heavy rain and flooding. It was also one of the most active tornado seasons on record – one tornado caused 157 deaths in Missouri, the deadliest in the US since 1947.

In parts of western Europe it was the driest spring ever recorded, and set national records in France and the Netherlands. Drought also affected China, Hong Kong and parts of the tropical western and central Pacific. Tuvalu was severely affected, and by October drinking water had to be imported on barges.

## **Renewables plug the gap**

By the end of 2011, 6 GW of wind power had been installed in the UK, up from 4 GW only a couple of years ago. A further 19.5 GW are in construction, consented or in planning. Scotland contributed almost 50% towards the 6 GW of wind power, which augers well for their target of 100% of their electricity from renewable energy by 2020.

Across the entire EU, 71%, or 32 GW, of all new electrical power generation capacity fitted in 2011 came from solar, wind and other renewable energy sources

helped by green subsidies. Italy alone installed 9 GW of solar PV in 2011, which compares with 0.7 GW in the UK (so Osborne and Barker should be ashamed: see "FIT for Anything?" on page 7). Wind contribution to the UK's electricity supply peaked at 12.2% on 28th December 2011. Wind provided on average in December and early January

5.3%, which avoided the emission of 750,000 tonnes of carbon dioxide – equivalent to taking 300,000 cars off the road. Our National Grid successfully managed this high wind contribution.

## **Mobile marine reserves**

Scientists in America have proposed a radical solution to the ongoing slaughter of endangered marine animals that get unintentionally caught as 'by-catch'. The idea is for **mobile** marine reserves – marine protection areas that are not static, but would be imposed where threatened species are expected to be found. The areas could be shifted as required, since recent advances in satellite and tagging technology have allowed scientists to monitor the seasonal movements of marine animals such as sharks, turtles and seabirds.

## **Leaders, do something!**

Writing in the *New Statesman* a few months ago, Michael Brooks made a plea for urgent remedial measures to be taken as soon as science proves that they are needed. He cited the research evidence in 1974 of the destructive power of ozone, which made



it clear that we needed a ban on CFCs, yet it wasn't until 13 years later on the discovery of catastrophic environmental damage over the Antarctic – through which cancer-causing solar radiation was pouring – that ozone-destroying chemicals were finally banned.

It was the same story with uninhibited use of pesticides in America; it was only once the damage to the natural world became too obvious to ignore that the politicians acted. Similarly, the effects of acid rain were felt long after scientists first sounded warnings, and it was still a wait of many years for legislation to curb industrial emissions of sulphur dioxide.

Sherwood Rowland, who won a 1995 Nobel prize for his role in making the scientific case for the Montreal Protocol, says: "What's the use of having developed a science well enough to make predictions if, in the end, all we're willing to do is stand around and wait for them to come true?"

### **ITlink to help disadvantaged people**

ITlink is a new initiative to bring computer access to disadvantaged people and schools across Surrey. It is sponsored by a consortium of three furniture recycling organisations – Furniturelink, the Furniture Helpline and the Woking Community Furniture Project – which already diverts goods away from landfill sites, refurbishes them and sells them at an affordable price to those who can use them. The IT facility collects, stores and sorts unwanted computers, destroys sensitive data, then repairs, tests and cleans items before assembling them into retail packages to be sold on site.

To donate or purchase a computer, or to enquire about helping to repair and restore electrical equipment, contact the scheme on 01483 506504.

### **One way to stop break-ins**

In November last year, the *Bristol Evening Post* carried a report by police that the burglary rate had gone down, by as much as 50%, in some areas of north Bristol since the street lights had been turned off to save money. Parish councillors in Oldland, who had agreed to the switch-off (between the hours of midnight and 5am) earlier in the year, recorded a saving to council taxpayers of an estimated £16,000 in electricity bills. One councillor said: "I understand from the police that burglars don't like it when it's dark. They like to be able to see their escape route and they like to 'case' a premises before they strike. They would attract too much attention if they were using torches."

### **Botany gets the chop**

The study of botany has been in terminal decline, and the last students in the UK studying for botany degrees will graduate from the University of Bristol in 2013. The study of plants is now known as 'plant sciences', avoiding historical and assumed connotations based on taxonomy and classification, and only four universities are providing this as a single-degree subject. Most offer it as a specialism within wider science degrees such as applied biosciences and natural sciences.

Already, the lack of UK graduates with a thorough grounding in plant knowledge is so severe that for five years the Royal Botanic Gardens, Kew, has recruited botanists from overseas.

### **Surrey's solar PV installations**

The UK target for 2020 is for 15% of all our energy needs to come from renewables. This will require 35% of our electricity to come from renewable sources. Data below comes from Ofgem records of FIT-registered installations at the end of June 2011. The district ranking is based on PV capacity per head of population to give a more meaningful comparison.

As context: a review in June 2010 for DECC estimated the renewable energy potential for counties and local authorities in the south-east. Woking's solar PV potential in 2020 was estimated as 27 MW – **this would require an installation rate of at least 1,000 average domestic-size PV systems every year for the rest of the decade, plus commercial and public sector buildings and the odd solar farm.** Guildford's solar PV potential was estimated as 38.7MW by 2020. Has industry the capacity to install at least 20 systems a week in each Surrey district for the rest of the decade?

DISTRICT	2010 population Surrey CC	Solar PV (MWe) AEA	kWe per head	Rank
Mole Valley	84,600	0.317	0.00375	1
Tandridge	83,100	0.268	0.00323	2
Guildford	137,100	0.404	0.00295	3
Waverley	120,300	0.338	0.00281	4
Woking	93,500	0.231	0.00247	5
Epsom & Ewell	74,300	0.145	0.00195	6
Reigate & Banstead	138,600	0.244	0.00176	7
Surrey Heath	84,500	0.131	0.00155	8
Elmbridge	131,900	0.178	0.00135	9
Spelthorne	93,500	0.110	0.00118	10
Runnymede	85,900	0.052	0.00061	11
<b>Surrey</b>	<b>1,127,300</b>	<b>2.418</b>	<b>0.00214</b>	



#### **Guildford Environmental Forum aims to improve the environment in and around Guildford for wildlife and for people and to build a sustainable future.**

Join us in our work for the town and have this newsletter posted to your door four times a year. Forum membership costs only £10 per year or £15 for a couple, and new members are warmly welcomed.

Please contact Adrian Thompson on 01483 222687 or e-mail [adrianthompson46@talktalk.net](mailto:adrianthompson46@talktalk.net)



# CALENDAR



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

## Monday 19 March

GEF Energy Group. Kinga Podlewska, Project Officer for Action Surrey – Surrey's Low Carbon Community: **"Ways to Help Yourself and Others Beat the Cold and Stay Healthy"**. 1900. Committee Room 1, GBC Millmead Offices.

## Saturday 24 and Sunday 25 March

### Surrey Green Homes Event.

Book to visit a Surrey 'green' home and find out how you can save energy and money. For more information and to book, please visit [www.actionsurrey.org/surreygreenhomes.org](http://www.actionsurrey.org/surreygreenhomes.org)

## Thursday 29 March

GEF Energy Group. John Swingler, environmental activist and Woking LA21 member: **"Tread Lightly on the Planet"**. A discussion on the state of our planet and its limits, and how this might play out in the Rio + 20 talks in June this year. 1900. Committee Room 1, GBC Millmead Offices.

## Wednesday 18 April

GEF Energy Group. Professor Ravi Silva, Director of the Advanced Technology Institute and Head of the Nanoelectronics Centre, University of Surrey: **"Solar Energy: The Drivers and the Users"**. In 2003 Ravi was awarded the Albert Einstein Silver Medal by UNESCO. 1900. Committee Room 1, GBC Millmead Offices.

## Tuesday 1 May

**Guildford Farmers' Market.** We will have a stall in the High Street to promote the Forum, Transition Guildford and Guildford in Bloom. Please call by and see us.

## Saturday 9 June

**One-day Scythe Training Course for Beginners and Improvers.** Mark Allery returns to repeat the very successful course he ran for us last year. On the Downs off Longdown Road (where the Food Group is creating a market garden). Booking essential. Please contact John Bannister for details, on 01483 570468.

## Monday 28 May

**Annual General Meeting.** 1900. Council Chamber, GBC Millmead Offices. To be followed at 1930 approx by a talk from Dr Joe Zammit-Lucia, President of WOLFoundation.org, a Board Member of the African Rainforest Conservancy and a member of the IUCN Commission for Education and Communication: **"Discovering a New, Sustainable Environmentalism"**.

# GUILDFORD ENVIRONMENTAL FORUM

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### Membership – Position vacant

(Adrian Thompson pro tem)

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Guildford Environmental Forum's newsletter is published in March, June, September and December.

Please send contributions for the next issue to Clare Windsor by Monday 14 May.

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