



GUILDFORD ENVIRONMENTAL FORUM

newsletter

www.gefweb.org.uk

MARCH – JUNE 2013

GARDEN FIRES: environmental damage and neighbourhood curse



No, not a romantic shot of clouds in Peru, but the view from an elevated position in Guildford after someone has had a bonfire in a garden below.

Text and photos by Forum member Athol Harley

This article addresses the problem of garden fires from four different aspects:

- 1. Environmental damage to air quality as a result of pollution in the form of particulate matter and other hazardous substances**
- 2. The anti-social nature of smoke emissions**
- 3. The detrimental impact on the visual environment**
- 4. Policy gaps and failings / inadequate Council response**

Inter alia, the article also seeks to expose and dispel many of the common myths and assumptions relating to bonfires, especially the notion that garden fires are innocent and that burning organic material is not hazardous to health.

Air pollution and health risks

Garden fires cause harmful pollution. All smoke consists, by definition, of particulate matter (PM). Exposure to airborne PM is associated with long term respiratory and cardiovascular illness. Because of the steep topography of many areas of Guildford, the smoke from garden fires in houses situated on lower terrain rises directly into the houses on the higher slopes. It is impossible for residents on higher slopes to escape the smoke as they effectively sit atop of the fires. This is an acute problem, for example, in our neighbourhood which is located between Chantry View Road and Warwicks Bench.

Residents who burn their garden waste are often heard to say: "But it is only organic material and therefore harmless". This is one of the myths surrounding garden fires. The DEFRA website lists

garden fires as one of the principal sources of hazardous polycyclic aromatic hydrocarbons (PAH's) in the UK. Exposure to PAH's is associated with an increase in lung, skin and bladder cancer.

As with all combustion processes in air, the burning of garden waste produces oxides of nitrogen, NOx (which affect lung function and capacity as well as enhancing allergic responses).

The antisocial nature of garden fires

In some areas garden fires are a neighbourhood curse. Even small fires cause very large volumes of smoke.

Garden fires prevent neighbours from enjoying their gardens and outside spaces and frequently drive them indoors, with the consequent need to shut tightly all doors and windows in an effort to keep the smoke and the smells at bay. Asthmatics, of whom there a number in our immediate neighbourhood, have a particularly difficult time as smoke is often a trigger for an attack.

Those responsible for lighting garden fires appear also to disregard the cumulative effect of fires in the neighbourhood. A common response to a complaint about a garden fire is: "But I only burn my waste two or three times a year". While that may be true at the individual level, the problem is that if there are, for example, 50 houses along two long parallel roads, and all householders burn their waste two or three times a year, the result is that the neighbourhood is subjected to smoke and pollution for two or three days a week.

The antisocial nature of garden fires is exacerbated by the fact that they are entirely unnecessary within certain neighbourhoods where they are lit with frequency – for example Holy Trinity Ward. Guildford



Council operates an efficient tip at Slyfield with easy access, and the previous 'green bag' scheme for collecting garden waste has recently been enhanced by the introduction of brown wheelie bins. There are no limits on how many bins an individual household can use, although there is a small cost, which one would expect could be easily borne by the neighbourhood which is the focus of this article.

Impact on the visual environment

The smoke from garden fires degrades the visual environment of both neighbourhoods and countryside. It is yet another myth that the smoke from a garden fire has only highly localised impacts. The smoke from even a small fire can spread for many miles around, as the photographs show. The problem is made worse by the frequent temperature inversions in the valley in which Shalford Park is located. Smoke from garden fires often does not rise or disperse but simply hangs over the park and along the river valley, with the result that this neighbourhood often looks more like



a war zone or a slum surrounding a Third World city rather than a supposedly civilized urban community in Southern England.

Policy gaps and failings

There is a surprising and unfortunate gap in national environmental legislation: although the DEFRA website lists garden fires as one of the main sources of PAH pollution in the UK, there is no national legislation to make burning garden waste illegal. There is a clear need for such legislation and parliament needs to address this. In the meantime, the government relies on the duty local authorities have under the Environmental Protection Act 1990 to take action in respect of complaints of "smoke emitted from premises so as to be prejudicial to health or a nuisance."

While Guildford Council has acted in a few isolated cases of egregiously large and repeated garden fires, there is much more it could do to raise awareness of the problem, to make the guidelines better known and to promote its own recycling schemes. There are strong grounds for arguing that certain urban neighbourhoods should be included in the smoke-free zone. The Council needs to do more because of the topography of much of Guildford and because existing policies are based on individual rather than cumulative impacts.

Garden fires are environmentally damaging, hazardous to health and an extreme form of anti-social behaviour. There is no excuse for simply burning garden waste in open fires instead of disposing of it in an environmentally and socially responsible manner.

Chinese mushroom

The world's largest fruiting body, of the fungus *Fomitiporia ellipsoidea*, was discovered on the underside of a tree in China. It's more than 10 metres long, weighs half a tonne, and is believed to be at least 20 years old. (Source: *New Statesman*, 8 Aug '11)

Protection money

According to the journal *Science*, the predicted annual cost of protecting global biodiversity is \$80 billion – less than 20% of the worldwide spend on soft drinks. (Source: *BBC Wildlife*, Dec '12)

FACTS & FIGURES

Synthetic fabrics

Each time a synthetic garment is washed, an average of 1,900 microscopic fibres are released. Such fibres are now a major cause of oceanic pollution. (Source: *BBC Focus*, Apr '12)

Swifts – 1

The swift population has declined by more than 70% over the last 40 years, due to changes to our buildings. Their preferred spot is the roof space of houses.

Swifts – 2

Swifts fly an average daily total of almost 500 miles.

Swifts – 3

Parent swifts collect up to 1,000 insects a time to take back to their chicks. It makes a big bulge in their throats. (Source: *Waitrose Weekend*, 21 June '12)

COMMENTS FROM THE FORUM

1. Proposed Guildford Waitrose – call-in request unsuccessful

GEF has opposed a supermarket-led mixed use development at the Bellerby Theatre site in Guildford, and subsequently asked the Department for Communities and Local Government to "call in" the proposals. Our grounds for opposing the the plans are that they:

- would have a severe impact on the existing congestion on York Road.
- add to serious noise levels and air pollution impacts on nearby residents, a nursery and Sandfield Primary School nearby in York Road.
- force children accessing Sandfield School and residents accessing the town centre to use a new surface crossing over York Road increasing their exposure to traffic pollution and accident risk.
- make poor use of a valuable site by creating a 168 place surface car park when Guildford is short of sites for new housing within walking distance of employment and good transport hubs.

We set out what we considered to be good reasons for asking for the call-in.

- The site is one of the cornerstones of the town centre master plan, which is still being defined and therefore it is premature to allow planning permission to proceed without understanding the

cumulative impacts of the whole town centre plan.

- We do not believe that the development on the Bellerby site in its own right has demonstrated that it is a sustainable development in its own right and therefore should not come forward before the overall plan is agreed.
- The transport assessment showed that the development (on its own) would increase the congestion within the town centre, the cumulative impact of the town centre sites coming forward was not tested and therefore the overall impact of the town centre sites coming forward was not tested and therefore the overall impact assessment of the development can not be defined and therefore the assessment is flawed.
- The lack of a comprehensive traffic study for all planned Guildford Town developments in aggregate and the absence of a much needed professional master plan.

The Secretary of State "carefully considered the impact of the proposal" but did not consider that there was "sufficient reason to call the application in for his own determination". Guildford Vision Group also made a separate request for a call-in.

2. Sustainability and the Local Plan

Late last year Guildford Borough Council started a new round of planning policy consultation asking for comments on their "Local Plan SA/SEA Scoping Report December 2012." In essence this Report sets out the environmental benchmarks that the Local Plan would be judged against in its Sustainability Assessment (SA).

Whilst we did not make an exhaustive response, we made a dozen points that we considered important.

1. The report failed to demonstrate properly joined-up thinking on health, obesity, wellbeing, development, transport, traffic, access, air quality, noise and climate change. There was nothing in the report identifying the critical strategic objectives for Guildford that would address all of these issues holistically. We considered this a particular deficiency given Guildford's planned growth, costly traffic congestion, rising traffic and the reality of man-made global warming. The latter is starker now than it has ever been and in most respects

alarmingly so. Far more people now accept that global warming is happening and that it presents the most serious threat we face. We argued that the Sustainability Assessment (SA) must recognise this fact.

2. We felt that the word "Sustainability" was used throughout the scoping report without a clear definition of what it means. It is open to multiple interpretations. A definition that GEF accepts is "Improving the quality of life whilst living within the environmental capacity of the Earth". As we are currently not living within the environmental capacity of the Earth we must do nothing that increases our ecological footprint and actively adopt measures that reduce it. Failure to do so will completely undermine the plan and our futures. A measure of Guildford's ecological footprint and reduction targets are needed as well as a definition of sustainability.

3. The Report states that there are "data gaps in the baseline information identified for SA Objective 14: To reduce the global, social

and environmental impact of consumption of resources" and on that basis recommends that "this SA Objective should be removed from the previous SA Framework". This, we felt, is the most fundamental of the objectives and must be retained. We do not accept that data gaps are a justification for its removal; the aim should be to fill the data gaps, albeit by different approaches to using data.

4. Climate: A metric is needed to reduce GHG (greenhouse gases) emissions in Guildford in line with the Climate Change Act. The Local Plan is not a plan for what GBC deem to be within their remit to manage alone, it is a plan shared by all stakeholders. Given the scale of developments planned in central Guildford, energy-efficient schemes such as strategically located tri-generation hubs fuelled by biomass linking to high-energy-demand buildings can play an important role. The technology is well established and one that the planning system can deliver. The time for tinkering has passed. On the CO₂/capita data presented we have to remember that 2009 was the beginning of a deep recession. There is great scope to increase the take-up of solar PV, which needs active encouragement.

5. Transport: Given rising population, a large increase in retail in Guildford (≥40% that will attract a similar increase in car shopping trips), rising car ownership, many large developments then traffic congestion will continue to worsen. Equally, air quality and noise, which are traffic dependent, will deteriorate further.

There should be a gradual reduction in car parking spaces to help the modal shifts needed to walking and cycling, together with an increase in the availability, affordability and frequency of public transport. Provision for cyclists in Guildford is far behind European standards yet is a major part of a holistic solution. The shared space concept would work well in many locations where traffic and people are in close proximity and we would like to see a number of these schemes introduced. Likewise, 20 mph limits are now generally accepted in all residential areas.

6. The Indicator "Car parking standards in new developments (this should increase i.e. the standards should be more stringent)" that is referred to in the Climate, Air and Transport sections is one we support, but feel that it should be written less ambiguously, so that it is clear that there should be fewer parking spaces per dwelling in future.

7. We note that indicators in relation to bus usage do not address the need for the availability of viable town centre provision and

of interchange facilities between bus services. We feel that these aspects should be included, especially given the likely increase of bus usage in the future.

8. Air: We do not agree that there is a good performance on air quality. Guildford has a data base and it shows three sites (two in central Guildford) that are very near or exceeding 40 micrograms/m³ NO₂ with a clearly rising trend. Ground level ozone is frequently seen in urban areas in summer. There is a clear link between the rise in respiratory problems and premature deaths due to urban exhaust emissions. The factors listed under Transport above will continue to drive these trends. Decisive modal shift solutions must be included to improve the wellbeing of Guildford stakeholders in any revised Local Plan. Constraints on car use have to be a part of the solution.

We consider it is unsafe to assume that there will not be any need for Air Quality Management Areas in the near future, and suggest an indicator that air emissions be progressively reduced to well below the thresholds should be included.

9. Rural Economy: The report provides very little new thinking on our rural economy. Food security is not addressed. Only a very tiny proportion of food consumed in Guildford comes from Surrey. Guildford's farmers' market attests to this fact. Given the importance now attached to food security a metric is needed to increase locally grown food in our shops.

10. Water: Per capita consumption of water in the south east averages over 170 lt/person/day. Guildford's consumption is probably higher still. There are simple ways to reduce domestic water consumption and we need to raise awareness of the issues. As it is such a vital resource and the south east is under water stress, a target to reduce consumption should be included.

Upstream catchments management plays an important role in flood management but is not mentioned.

11. We feel that biodiversity protection and enhancement should not only be measured in terms of an indicator for sites designated for their ecological importance, but should be measured across the whole area of the Borough. This includes the built environment (where for example, green roofs and bird nesting/roosting facilities can be created).

12. In terms of sustainable construction, in the Climate section, the inclusion of "b) Indicator – installed renewable energy generation (this should increase)" should not detract from the importance of designing buildings to minimise energy use.

Noisy seas

Research designed to reduce collisions (increasingly common) between ships and whales has uncovered the devastating impact of artificial noise on marine mammals.

Examination of stranded whales, including those that had died as a result of collisions, revealed they had suffered inner-ear damage that rendered them incapable of detecting vessels. Noise pollution is also associated with mass die-offs of invertebrates such as scallops.

(Source: BBC Wildlife, Jan '12)

Ostrich eggs

Ostriches lay the largest bird eggs, but in relation to their body weight they are the smallest eggs laid by any bird. The eggs weigh between 1.4 and 1.5 per cent of the total weight of the ostrich, which can be up to 150kg.

(Source: BBC Focus, Sept '11)

FACTS & FIGURES

Ponds

Natural ponds support more native freshwater plants and animals than are found in rivers, streams and ditches. Estimates of pond numbers in the British countryside vary from 230,000 to 400,000, not including garden ponds. However, the number of ponds has declined by at least a third between 1940 and the 1980s, and the losses are thought to have continued at a similar rate since then.

(Source: The Garden, Aug '12)

Minuscule

The world's smallest invertebrate is a tiny frog from Papua New Guinea. Its average length is 7.7 millimetres.

(Source: BBC Wildlife, Mar '12)

Toxic crop

In developing countries, cotton is thought to account for 50% of total pesticide use. Acute poisoning from pesticides is commonplace in cotton production.

(Source: Soil Association, Feb '13)

FACTS & FIGURES

Palm oil – 1

Primary rainforest in Borneo supports 220 bird species; palm oil forest just 12.

Palm oil – 2

The fruit yield of each palm tree is not much greater than a bunch of grapes. The only way to increase productivity is to clear more forest and plant more palms.

(Source: BBC Wildlife, Jan '13)

Invertebrates

A fifth of the world's invertebrates may be heading for extinction, says a report published in August 2012 by the Zoological Society of London, in conjunction with IUCN.

(Source: www.zsl.org)

What are we?

"Man is a blind, witless, lowbrow, anthropocentric clod who inflicts lesions upon the earth," says Ian McHarg, landscape architect and author of *Design with Nature*.

(Source: New Statesman, 30 Nov-6 Dec '12)

3. County Flood Strategy

Last November GEF commented on Surrey County Council's "Draft Surrey Local Flood Management Strategy"

A basic position of the Document was that:

"Sustainable drainage – We will develop an approach to sustainable drainage systems that is fully integrated with the planning system. Large development sites will be exemplars. We also want to see more retrofitting of sustainable drainage systems in high risk areas."

Whilst we felt that this was good as far as it went, it was far too limited in its ambition. The management of flood risk has to be seen as a catchment wide strategy, starting with the headwaters. The principle needs to be accepted that water should be delayed in the upper areas of river valleys, before it is spatially concentrated to the extent of causing flooding. Apart from the flood management benefits, this may also increase infiltration into aquifers, with benefits for water resource management.

We noted that in the "Arun and Western Streams Catchment Flood Management Plan", it states:

The proposed policy approach for the area is to: "Take action with others to store water or manage runoff in locations that provide overall flood risk reduction or environmental benefits".

This approach does not appear to be proposed outside of the Arun, and we felt that it could usefully be adopted in all the catchments in the county, and clearly apply to all parts of the catchment not just the lower reaches.

Similarly we welcomed the policy that:

"Our more holistic and integrated approach to flood risk management should help communities mitigate against, and adapt to, the potential impacts

of climate change. We will do this by improving community resilience to flood incidents and promoting and enabling greater use of flood management techniques. These techniques include sustainable drainage systems, in both new and existing development."

but felt more emphasis could usefully be placed on using sustainable drainage in existing areas.

As suggested previously in a GEF Newsletter (June 2012), a substantial sector which can be better managed to slow run-off is road drainage management, which is of course within the County Council's power to control. In most cases road water runs into artificial drainage systems before discharging into natural watercourses.

SCC needs to survey all our road systems and see how many of the drainage works can be re-engineered to retain water long enough for it enter the ground and recharge the aquifers. Undertaking this will require a change of attitude and the necessary investment but it will also benefit water resource management.

We were surprised that there is no reference to the anticipated requirement for county councils to set up a Sustainable Drainage System (SuDS) Approval Body under the Flood and Water Management Act 2010.

The statement in the Strategy that:

"Data within the UK Climate Change Risk Assessment suggests that 1 in 100 year flood events in the UK are projected, on average, to become approximately twice as frequent by the 2050s and three to five times more frequent by the 2080s."

we suggested does need to be modified. Whilst we accepted that the "1 in 100 year flood" is an established concept, the fact is that if such events are occurring more frequently, they cease to be '1 in 100 year'.

Pesticides linked to amphibian deaths



New research published in *Scientific Reports* states that widely used pesticides can kill frogs in an hour, suggesting that these chemicals are playing a significant role in the catastrophic global decline of amphibians. What is true for amphibians is almost certainly true for other "indicator" species such as bees and bats.

The scientists behind the study, at the University of Koblenz-Landau, exposed

frogs to widely used fungicides, herbicides and insecticides at doses approved by regulatory authorities. These same scientists had previously studied how easily frogs can absorb pesticides through their permeable skins.

But pesticides are not required to be tested on amphibians.

(From *The Guardian*, 25 January 2013)



Putting up nestboxes in the community wildlife garden in Middle Bourne Lane.



Martin Angel

THE BOURNE CONSERVATION GROUP was established in 2002 to provide volunteers to help with woodland management and the maintenance of local footpaths in and around South Farnham. Over the last decade it has evolved into a proactive group, fostering the character and biodiversity of the local area and increasingly becoming more outward-looking.

The first project we 'owned' was aimed at improving the approaches to our village, clearing scrub and planting wildflowers and bulbs at the crossroads on the A287. We then took on the management of a neglected community garden, transforming it into an oasis of high biodiversity. Our most successful action there was to dig a pond, which within a few months was full of spawning frogs and toads and patrolled by several species of dragonfly.

Our next project was to rescue the Old Churchyard of The Bourne, a small but magical site still owned by the church, but which was in danger of falling into complete disrepair. A grant from the Orchid Trust enabled us to make a real impact on the site, clearing away the invading laurel, restoring the monuments and the lych-gate, digging another pond and creating a wildflower meadow. There, for the past three years, we have collaborated with

Surrey Wildlife Trust in running training days for the general public, hosting visits by other community groups and entertaining our local Beaver troops.

In 2011 we became partners in the Wey Landscape Partnership which aims to enhance the biodiversity of the whole catchment and improve the quality of the water. A significant offshoot of this partnership has been the establishment of a Farnham Rivers Group which is focusing on the Wey and its tributaries around Farnham. One of our contributions has been gaining an award from South-East Water to clean up The Bourne Stream. This forms a green corridor through our village linking Alice Holt Forest, The Bourne Woods and the Wey Valley. For the past five years we have already worked there pulling the Himalayan Balsam, which we have now virtually eliminated from the valley. The new grant will enable us to clean out the water

course, remove fallen trees, cut back scrub and deal with rubbish. This will improve the quality of the water flowing into the Wey as well as making the valley more wildlife-friendly.

We have been monitoring wildlife for some years to demonstrate the effectiveness of our localised efforts to maintain and even improve biodiversity. In the last five years we have witnessed the arrivals of alien species like the tree bumblebee, the wasp spider, the western conifer seed bug and the ivy bee, and this January the terrestrial hopper – a new guest from Australia which has hopped in via Tresco Gardens in the Scillies. In 2012 the numbers of moths we recorded declined by 20%, probably because of the weather, but habitat loss may also have

contributed to this decline.

The records we have accumulated are already proving increasingly useful in supporting our arguments against those planning applications we consider environmentally detrimental. Planning is a hot topic and with our experience over 10 years we are finding we can usefully contribute to the emerging Neighbourhood Plan; but our focus remains practical conservation work.

You can learn more about our work and read our newsletters by visiting our website:

<http://www.bourneconservation.org.uk/>

Martin will be giving a presentation to the Forum about the Bourne Conservation Group on Wednesday 27th March, at the GBC offices in Millmead. Do come along.



Demonstrating a diversity of moths in The Bourne Old Churchyard.

GUILDFORD ENVIRONMENTAL FORUM SUBSCRIPTIONS AND GIFT AID

Subscriptions for 2013 are due on 11th April, 2013. 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 such a good response to our request for the return of standing order mandates and the completion of gift aid declarations. Thank you very much indeed to all those members who have completed both returns and therefore need do nothing in respect of renewing your subscription.

Most other members will receive 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, 2013.

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.

I hope you are getting very good value for your membership of GEF.

Thank you. *Adrian Thompson, Hon Treasurer*

Guildford WalkFest – 7th year

Guildford's Walking Festival will be from **Saturday July 13th to Sunday July 28th.**

We intend to offer a choice of 2 walks every weekday and 3 at weekends.

We are looking for people who can offer new walks this year. We like to have some new walks as well as old favourites. They can be in the town as well as the country and should have at least part of the walk within the Guildford Borough. Walks have been from 1 mile to 15 miles but the most common is around 5 miles.

In the past there have been walks led by Parish Councils, the Wildlife Trust, RSPB, Surrey University, CAMRA, Putterham Barn, Rambling Groups and many others.

WalkFest is organised by Guildford Walking Forum with administrative and some financial support from Guildford Borough Council.

If interested please contact Keith Chesterton – 01483 563392 / strider100@ntlworld.com

WALKS ARE NEEDED BY MARCH 31st.

Keith Chesterton, Guildford Walking Forum

Housing National Trust's Rangers – or not

Raymond Smith

A proposal by the National Trust to terminate the provision of housing for Rangers and similar staff has been reported in the press both locally and nationally. This is giving the Forum significant disquiet. We fear that it would compromise the outstanding work that the National Trust has been carrying out over recent years to protect and improve wildlife habitats, and have written to Dame Helen Ghosh, the new Director-General, asking that the Trust reconsider this proposal.

We emphasised the way that the Forum has enjoyed working with Trust staff on specific projects, alongside them on committees, and at events such as talks and site visits - valuing their commitment, enthusiasm and knowledge.

We fear that the proposal to withdraw the provision of houses on site for Rangers could severely undermine their ability to provide the level of protection, maintenance and understanding that they currently give, and so lead to a deterioration of these habitats.

The proposal is all the more surprising since the economics of it do not stack up. It has been suggested that the supply of housing is worth about £12,000 annually to each employee yet the compensation offered is said to be about £2,000 annually. This seems little removed from theft from existing employees – £2,000 pa in this part of the country would only pay for half of a room in a shared house.

It is understood that it is proposed to use "security" staff for the sites out of hours. Given the staff turnover in that business, they would not have the level of knowledge, let alone commitment, of the established staff. This is, of course, an additional cost, and the proposal seems to us to be a prime example of a "lose-lose" scenario.

The Land Barn Farm visitor centre where the Forum organised a walk last June across the Denbies hillside above Dorking. This is a National Trust location that currently benefits from an on-site Ranger.



Action Surrey Update February 2013

FREE Green Deal assessments for you and your property worth £150!

Action Surrey has recently been awarded some funding to kick-start a Green Deal scheme within Surrey. Get a FREE whole house energy assessment worth £150 and find out what improvements your property could benefit from and how these can be financed at no upfront cost, through this new government scheme. The first 2,000 assessments will be free, and the offer is open to all private and private rented households until **15th March 2013**. This assessment will be especially useful for those living in solid wall houses.

<http://www.actionsurrey.org/greendeal>

FREE Boiler repairs and replacements for those struggling to stay warm this winter

Action Surrey is able to repair and, in some instances replace, heating systems for those in receipt of certain benefits. Why not check our website to see if you or someone you know could be eligible?

<http://www.actionsurrey.org/boilers>

FREE 'Keep Warm, Keep Well' kits for those over 70 and/or in receipt of benefits

Free home energy assessments with handymen able to install Keep Warm kits including draught proofing, TRVs, foil behind radiators, carbon monoxide monitors and many more useful improvements to help keep you warm this winter. Subject to availability and eligibility, and up until **31st March 2013**.

<http://www.actionsurrey.org/surrey-healthy-homes>

Green Deal £125 million cashback scheme

Under the Green Deal government scheme, homeowners will be able to claim over £1,000 cashback towards improving the energy efficiency of their home. The more work households decide to have done, the more cash they could receive.

<http://www.actionsurrey.org/latestnews?item=107>

Free cavity wall and loft insulation scheme

We would like to take the opportunity to apologise to any homeowners who have contacted Action Surrey, but were let down by the sudden removal of the grant funding enabling free cavity wall and loft insulation to be offered. This was out of our control and has been extremely frustrating for the whole industry. Fortunately, as of 18th January, we have been informed that a small amount of funding has been released **for those homeowners who are over 70 years of age or in receipt of benefits**. However, this funding is very limited. Those who fall into the category above, and were told they could not access the funding through Action Surrey just before Christmas, will be given priority (existing customers). We are currently contacting those homeowners and informing them we will be able to insulate their houses for free if they were previously told they would need to pay. We cannot guarantee how long this funding will last and it will be subject to availability.

<http://www.actionsurrey.org/insulation>



BATS GONE FROM THE BELFRY

Text by John Bannister, photographs by Martyn Phillis

WE HAD AN EXCELLENT PRESENTATION at the end of January on "Bats and how we can help them" from Martyn Phillis of Surrey Bat Group. He took us through their evolution, the amazing skills they deploy and the ways in which we humans are making it extremely hard for them to survive.

Globally, bats are found on every continent bar Antarctica, and range from minute bumble bee size to those with an enormous wingspan of 1.8 metres.

Food preferences

The smaller bats, such as those found in this country and other temperate zones, are primarily insect eaters, whereas the larger bats found in hotter climates are mainly fruit eaters and so can be important pollinators and propagators of plants and trees. Some species have developed very specialist diets including nectar, frogs, small birds, other bats, blood (mainly that of horses and cattle I hasten to add), rodents and fish. Even the insect eaters specialise in particular insects and therefore favour certain habitats and locations. If you see a bat skimming the surface of a lake in this country it will be a Daubenton's bat, which is catching insects at the water surface with its large feet and transferring these to its mouth while flying a few centimetres above the water. This enables it to catch insects that other bats can't access. Daubenton's bats have been recorded travelling over 10 kilometres from their roosts to their feeding areas, navigating using hedges, rivers and canals.

Conserving energy

Bats make up 20% of all mammal species on Earth. To reiterate – they are mammals – so suckle their young, have hair on their bodies and are warm-blooded; but warm-blooded with an amazing adaptation which allows them to conserve energy by going into torpor whenever they return to their roost and when they hibernate in winter. Even in summer it can take bats up to 15 minutes exercising

to warm up and become active after their body temperature has fallen in torpor before they emerge into the night. In torpor when hibernating in winter their heart rate can drop down to 20 beats per minute to save energy and survive. This compares with 300 beats per minute to power up their flight muscles and 1,000 beats a minute when flying.

Clearly this indicates that flying uses a lot of energy, so bats have huge appetites. The tiny common pipistrelle, often seen flying around our homes, can eat around 3,000 midges, mosquitos and other small flies in a single night. Moths, beetles and craneflies are popular with other UK species. When I was living in America, people had those electric zappers you see in butchers' shops in their gardens to kill insects. This is not very intelligent, given the absolute necessity in the web of life for insects to pollinate plants and sustain birds, bats, fish, hedgehogs and other small terrestrial mammals. Martyn told us that some enlightened farmers actually create bat roosts to reduce the use of pesticides.

Another bat adaptation is delayed fertilization. Females can retain sperm and decide the optimum time to get pregnant.

Echolocation – how we think it works

Echolocation is surely the most well known bat evolutionary speciality, also acquired by some marine mammals and a few birds. Pulses of ultrasound (above our hearing range) are emitted and the reflected sound allows bats to detect prey and their surroundings at the same time in darkness. They have features such as large ears, and some others that we don't fully understand, that make echolocation a very successful survival mechanism. These pulses of sound can be very loud – 110 decibels, the same as a low-flying jet plane – but are outside our hearing range. To cope with this, bats

are able to close off their inner ear momentarily many times a second at every pulse. Most of the energy used to produce these bursts of sound come 'for free' because they synchronize pulses to their wing beats and exhale and shout at the same time.

Bats and humans

The bat fossil record goes back over 50 million years, by which time they had evolved their characteristic long finger bones with the strong, light, flexible membranes stretched between them allowing powerful, agile flight. So humans are late-comers as far as bats and many other wild species are concerned.

Bats are long-lived, typically 15 to 30 years depending on species, but have a low reproduction



The brown long-eared bat (here and previous page) uses not only echolocation but its exceptional hearing – much of its food is gleaned from bushes or from the ground, when it listens for the rustle of insect legs to home in on its prey.

rate, mature females raising only one youngster each year. This is a vulnerability. The key question is: are we going to be the species that drives bats (and much other wildlife) to extinction?

The UK has 18 species of bat, all threatened, with a total population fall of 90% since the 1950s. The "common" pipistrelle bat has declined by 70% in the last five years, and there is only one known greater mouse-eared bat remaining in the UK. Since the 1950s the global population of humans has risen from under 3 billion to 7 billion and continues to grow by 1 billion every 13 years. We are a highly destructive species that through ignorance is causing the sixth great extinction. Very few people seem to

care, certainly not governments, nor our own Defra nor the Minister for Biodiversity (yes we have one).

Yet bats and man live in close proximity because bats often choose to roost and breed in our buildings. They utilise the tiniest of spaces under tiles, in brickwork, behind bargeboards, in roof spaces, etc. So what are we doing to wipe out bats? To save space I will simply list the reasons that Martyn gave us:

- toxic timber treatments (although bat-friendly treatments are now available)
- loss of habitats – hedges, ancient forests, wetlands, traditional orchards, etc
- changes in farming practices
- multiple pesticides, e.g. from DDT in the 60s to neonicotinoids today
- persecution – bats were considered vermin in the 60s and 70s
- cats
- rail and road traffic
- solar panels and wind turbines (EU evidence of higher bat mortality)
- changes we are making to our homes, and new building regulations

Because the last item is so close to GEF's raison d'être we must expand on this.

Building regulations

In order to reduce energy loss from buildings and mitigate climate change we are adding roof insulation, cavity wall insulation, breathable membranes in place of bitumastic felt, seeking to make buildings airtight, etc. All very laudable but the unintended consequence is that bats are either excluded from roosting and breeding sites (the same must be true for starlings, swifts and some other birds) or are getting snared in the fibres used to make breathable membranes and even in sheep's wool loft insulation. We clearly need to rethink the materials and techniques we use to reduce energy loss from buildings. Martyn indicated that the Bat Conservation Trust is suggesting retaining bitumastic felt at the top of pitched roofs below the ridge line, leaving access holes, and using tangle-free insulation materials.

Bats are highly sensitive in where they chose to roost, raise young and hibernate. They are a highly protected species under European and UK law. You are not allowed to disturb bats, which includes using flash photography. You need a permit from Natural England before carrying out any work in buildings or roof spaces where bats are present. Because bats can mean delay to building work (which equates to money and we put no price on bats) you can imagine what unscrupulous owners, builders and developers do to make sure bats are gone before work starts.

For further information see www.bats.org.uk and *Landscape and Urban Design for Bats* just published.

Country Diary by Forum member Michael Tanner, 2nd February 2013

FEBRUARY THERAPY

Today, February has yet again produced one of those days which has no self doubts – a day which is bright and crisp from the start and says "D'you want a lift; jump on if you're going my way!" What can a man do unless he has to stay pinned in an air-conditioned cell behind a computer screen?

Well, our habitat in this region must afford as great an opportunity for taking advantage of such days as almost anywhere in the UK. We seem to have a beneficent microclimate and a local landscape as diverse and beautiful as many lauded on the continent. Not that you couldn't easily imagine, even in Godalming High Street, that you were in Poland or Spain or Italy, to name a few countries whose native speakers might very well be next to you in a shop or on the pavement. But we seldom suffer from the extreme examples of climate that these visitors are accustomed to.

However, the day has beckoned and in a minute or three we are on the town's very outskirts, standing beneath a plane tree stretching its magnificent limbs up towards a blue sky, trying to spot February's own bird announcing his joy or his challenge to the equally high church spire and everyone else. Of course, I should have had my binoculars but, though the singer remained invisible, his name was indelibly on the programme – you guessed, Mistle Thrush, all ten and a half inches of musical projectile. Even a highly visible magpie at the same height in the same tree was making no objection. And neither bird took any notice of the stiff northerly breeze which investigated the fastened collars of all at ground level.

Old churchyards often have majestic old trees and this one a whole row of limes where human hands have established affordable homes for bats: unobtrusive, black boxes with entrances at the base, about twenty foot up. No doubt, any takers were not in a listening mode and certainly not in a flying one.

So, on to the river Wey, now in full spate, thrusting against the ancient brick and stone piers of two adjacent bridges, hastening towards Guildford with a speed of several knots. You can stand on the narrow wooden one, fully aware of the water's volume and power, not able to observe any of the



creatures in or below the clouded currents, though they are surely there, the American Crayfish amongst them in large numbers.

A little further down, the river winds through a park and even in its present vigour bears numerous mallard and Canada geese. Today the geese, in particular, are no longer in their bold flotillas but seem almost entirely to be in discrete pairs. The mallard drakes vehemently scuttle over the surface chasing off possible challenges to their own prospects. Moorhens, which seem to abound these days, have remained on shore, and just beyond, where a little lake has formed, a hundred or so gulls ride the shining surface.

Above all it is a day of energy and promise: horse chestnut buds glisten with renewed stickiness; leeks thrust healthily upwards on the allotments; the river alders are full of little catkins; the Mistle continues to deliver his song, and all for free. Well, there is just one polite little notice in the park, advertising the opportunity for volunteers to help in a small way; tools will be provided.



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



CALENDAR



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

We apologise for printing in our last newsletter the wrong time for January's talk by the Geographical Association of Guildford. The March talk, below, has the correct start time of 1830.

Tuesday 12 March

Geographical Association of Guildford.
An illustrated talk by Prof Andrew Jones, City University:
"China, an Emerging Economy".
1830. The Auditorium, Royal Grammar School.

Wednesday 27 March

GEF Biodiversity Group.
Presentation by Martin Angel and Noel Moss:
"Preserving Our Patch" by The Bourne Conservation Group of South Farnham.
1900. Council Chamber, GBC Millmead Offices.

Monday 15 April

GEF Renewable Energy Group.
The film **"Chasing Ice"**
This is a beautiful film, but one that also has an important message about man-made impacts on our planet. Time-lapse photography is one of the techniques used to capture in a film's length the changes taking place over several years in ice movement and loss.
Whether there is time left to avoid catastrophe is the question left unanswered.
1900. Committee Room 1, GBC Millmead Offices.

Saturday 22 June

Transition Guildford in association with Surrey Wildlife Trust.
The first of Transition Guildford's 2013 scything courses.
Our trainer Mark Allery will follow his very popular 2011 and 2012 courses with another course for beginners and improvers. The location is up on the Downs near Longdown Road at our community vegetable growing site. The cost is £10 for the day's course.
Please contact John Bannister (01483 570468) for more information and to register.

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Sustainable Construction – Position vacant
(John Bannister pro tem)

Food Group for Transition Guildford and GEF – Position vacant
(Raymond Smith 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 13 May. The views expressed in this newsletter are strictly those of its contributors and Guildford Environmental Forum.