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GUILDFORD ENVIRONMENTAL FORUM

newsletter

SEPTEMBER – NOVEMBER 2016

## GEF comment on the latest phase of Guildford Borough Council's Local Plan 2016

*Text and photo by Raymond Smith*

The Forum only made a brief response to the Local Plan. Whilst we acknowledged that there are some good policies within it, we considered it to be deeply flawed in critical areas. Since so much of the Plan flows from these flawed origins we did not comment on the detail of the Plan.

The two flaws were:

**1** It fails to recognise the constraints placed on the objectively assessed needs for housing by the Green Belt. It is quite clear in the government guidance on the National Planning Policy Framework that objectively assessed needs are constrained by designations such as the Green Belt.

**2** We considered that there is no objectively assessed need for housing yet established, since the figure used is based on a Strategic Housing Market Assessment that is not transparent in its methodology. Whilst the document has been produced externally to the Council, by established practitioners in the field, and claims to have produced a measure of the "objectively assessed needs" we understand that the methodology used by them is (still) being claimed to be confidential. With the lack of opportunity for peer review of the process, let alone public examination of it, the



Sunset over the (current) Green Belt near Guildford

document and its conclusions cannot be considered to be "objective". Any plan based on this must be considered to be unsound.

Looking beyond that we felt that in general there are areas of great concern, for example the delays in providing the necessary infrastructure before any increase in housebuilding (congestion on the A3 is not being addressed until well over 5 years time). Public transport solutions would, however, be far more sustainable than proposals to keep up-grading the A3, which are likely to have limited benefits.

There do not seem to be co-ordinated plans for improving air quality, reducing CO<sub>2</sub> emissions or preventing biodiversity loss. These sections need to move beyond platitudes.

The big increase proposed in retail space is also a negative aspect.

# A bright future under cloudy skies

by Forum member John Scott, Low Carbon Communities Project Officer, Action Surrey

AS REALISATION HAS DAWNED on (most of) the world that fossil fuels must be left in the ground, many have turned to solar photovoltaics as the great shining hope for our energy future. The energy hitting the earth annually is x10,000 greater than our total global energy demand, and PV offers the chance to harness a small part of this with little effect on our resources or atmosphere. The development of this important technology has been rapid since the turn of the millennium but recent and well publicised policy blunders have left the industry with a seemingly uncertain future, at least within the UK. So what does the future hold for solar power? How can the market recover? And are there any new game changing technologies on the horizon?

To give answers to these big questions, solar expert Chris Jardine of Oxford's Environmental Change Institute kindly came and spoke to Guildford Environment Forum on 28th June, 2016. I have attempted to summarise this outcome below as faithfully as possible.

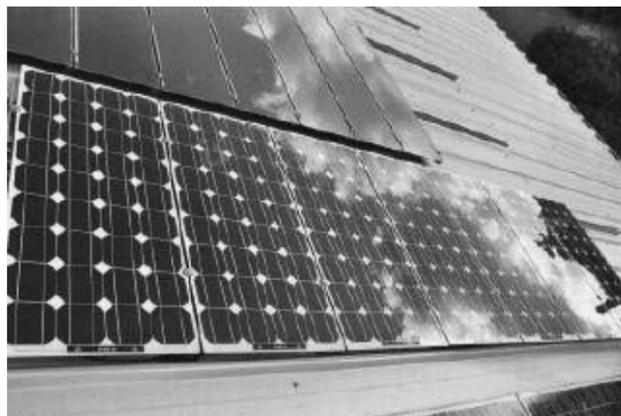
## An introduction to the technology

Photovoltaics are made from semiconductors, most commonly silicon, which absorb the energy in sunlight to generate electrical current. Silicon is the second most abundant element in the Earth's crust meaning that even in its construction, PV is sustainable. It has become such an important technology because it uses a resource potentially much larger than any other renewable form of energy, releases no harmful gases during its operating life time, has a long lifetime (25+ years) and is largely maintenance free. The decentralised nature of the supply also offers greater energy security and avoids reliance on fuel imports and tariffs. What's more, a typical system in the UK will repay all the carbon generated in its life cycle (production, maintenance, decommissioning etc) within 3 years of operation.

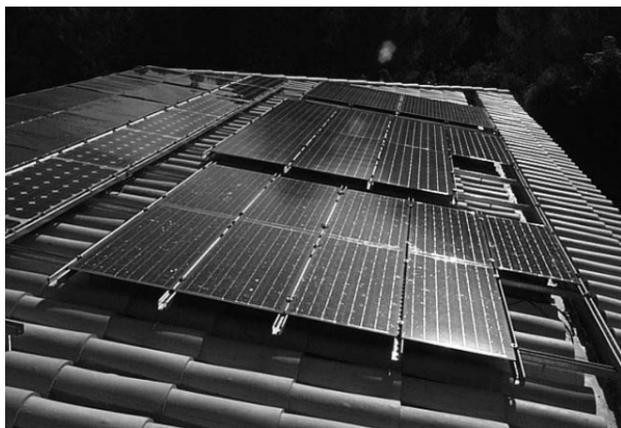
There are three main types of PV on the market at the moment. These are mono-crystalline silicon, multi-crystalline silicon and amorphous silicon.

Mono-crystalline is made from a single crystal grown from a melt, then sawn into wafers. It is the most efficient of the three, converting 16% of the solar energy hitting the cell into solar power. Multi-crystalline is cast from a melt and sawn into wafers in a similar manner to mono-crystalline, but it doesn't have rounded edges meaning increased

productivity due to a greater surface area for each cell. It is usually 15% efficient, but the extra surface area means its power production is roughly equal to mono-crystalline, as is the price.



Mono-crystalline silicon



Multi-crystalline silicon



Amorphous silicon

The other established type is amorphous silicon. It has a much lower efficiency of 6-8% but is cheaper and easier to mass produce onto a range of substrates including plastics and glass. It can also be non-rigid so has a wider range of applications. However, it has been less popular because most of the costs are usually from getting the panels onto the roof, rather than from purchasing the product itself. Therefore, financial gain in choosing inferior quality panels is usually marginal at best.

But what about the future of the technology? There are alternative semiconductors to amorphous silicon such as cadmium or indium which are more efficient, but they have their problems. Cadmium is highly toxic and would have to be disposed of carefully at the end of its life, while indium is in limited supply resulting in an ironically unsustainable renewable energy source. There is greater optimism around higher spec technology such as Sunpower all back contact panels (20% efficient), or HIT solar cells (18% efficient), although these are yet to become established fully in the market.

There has also been substantial progress in the types of mountings available. Building-integrated Photovoltaics (BIPV) such as solar tiles offer the opportunity to build PV into the fabric of buildings. BIPVs offset the cost of the conventional material that would have been used instead while performing many of their key functions such as waterproofing, insulation and soundproofing. While this is great for new builds, these technologies are harder to retrofit and have seen fewer uptakes than more established roof mounted panels thus far.

## Solar in the home

In the UK, a domestic household will typically install a 2kWp system. This can usually produce around 1720 kWh/yr, or roughly half the average household electricity use. However, the amount that panels produce can be affected by location and conditions, with panels in the south and east of the UK producing slightly more per kWp compared with the north and west.

Most household systems are designed to interact with the grid. This allows for the use of PV power in the home alongside grid electricity, while unused power can be exported to the grid as well. Because PV modules generate DC electricity, an inverter is needed to convert this into alternating current (AC), matching it to the grid. This interaction means that



1. The solar PV modules convert the energy of daylight into electricity
2. The inverter converts this into 240V AC electricity for use in the home
3. The generation meter records how much is produced
4. The PV system is wired into your main fuseboard
5. Electricity is used in lights and appliances in the home
6. Any excess electricity can be exported to the national grid
7. Your conventional import meter measures any electricity you buy from your supplier, when your solar PV system is not enough (e.g. night-time)

the system will be cut off if the grid goes down: Sadly, it is a myth that solar will keep you running in a power cut. However, it is possible to convert to an off-grid system through some battery solutions such as Tesla, although this is still a very new technology to the marketplace.

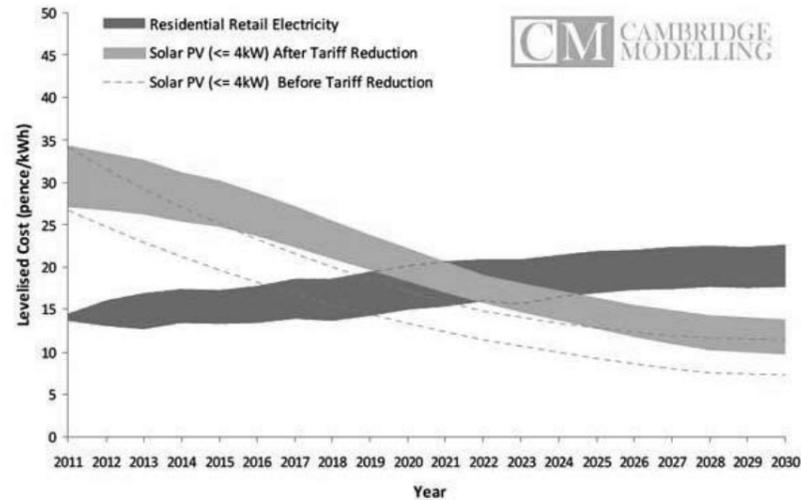
## Fields of Solar = Fields of gold?

The other popular method of solar deployment is large scale ground mounted solar fields. These are normally connected directly to the grid to provide wholesale power. Ground mounted systems are usually far easier to implement than building mounted systems. This is because buildings often involve lots of stakeholders and issues around decision making, while solar field installations are usually purely finance led, easier to install and with fewer conflicting interests to manage. There are concerns that solar fields have an impact on biodiversity, although in some situations biodiversity has been seen to actually increase due to greater shelter offered under the panels, and the cessation of intensive farming practices.

## Doing it for the money

The environmental reasons for investing in solar are obvious to all, but financial savings driven

## COST PARITY



Source: DECC Energy & Emissions Projections October 2011, Cambridge Modelling Analysis

by a free energy supply (after installation costs) have also been a major factor. On top of this, the government has offered subsidies in the form of the Feed-in-Tariff Scheme (FiTS) which pays out for the generation of renewable electricity.

There are four main business models used to justify investment in solar:

- 1. Straight purchase** – The homeowner or business buys the system, pays the costs and reaps the benefits.
- 2. 3rd party finance (rent-a-roof schemes)** – An investor purchases the system, takes FiTS payments, and the host building benefits from free electricity.
- 3. Social housing** – Similar to 3rd party finance, but with local council as the investor.
- 4. Community funded** – Capital raised by share issues with FiTS repayments split between host buildings, shareholder repayments and community benefit projects.

Obviously, if you've got the capital, straight purchase is the most lucrative option in the long run. Rent-a-roof and social housing schemes have made some of the benefits of solar more accessible to lower income householders, although drops to the feed-in-tariff have made them much less common in 2016. Community projects have also been common, but again they have become less viable since the changes in subsidies occurring since the last general election.

### Subsidies, opportunities and mistakes

During its short history, subsidies have been key to getting Solar PV into the energy market worldwide. Because the main costs involved in solar are all incurred during installation, essentially we are paying for all our energy in one go for the next 25+ years. So, while the overall cost is very low compared

to fossil fuel generation, the time required to pay back the initial investment can be long. This means subsidies are needed to make solar a viable and attractive option.

However, costs have plummeted in the past few years largely due to the rise of the Chinese markets, improved manufacturing and a more skilled and efficient network of installers. Therefore, it makes sense that subsidies can gradually be removed as the cost moves closer to and inevitably below the rising cost of traditional electricity generation (as has already been seen, for example in Spain's subsidy free solar farms).

In the UK it is estimated solar is around 5 years from achieving cost parity with retail electricity. Unfortunately, in September 2015 the Conservative government decided to initiate an 'energy policy reset', cutting the Feed-In-Tariff by 60%. This has caused around 18,000 jobs to be lost in the industry (more than 50%) with major companies such as Mark Group and Climate eEnergy both folding under pressure. The fear is that this premature cut in subsidy has stalled the industry moments before it could truly cross over to the mass market and become cost effective in its own right.

While these cuts have been very damaging, the economics of solar are unstoppable. At some stage in the next few years costs will fall below fossil fuel electricity generation as fossil fuel prices rise. At this point solar will be the most viable energy generation technology available and capacity will increase accordingly. However, policy support is still required to prepare the industry to take maximum advantage of this opportunity, and this is sadly not the case in the UK currently. If the industry is not supported then this country will fall behind, locking itself into high cost and environmentally damaging fossil fuel tariffs while the rest of the world reaps the benefits of cheap, clean, sustainable energy from the sun.

# BREXIT

AS MOST GEF members will already know, the GEF Executive meeting decided to back the campaign to stay in the EU for the sake of maintaining high environmental standards. We wrote to all the MPs who represent the Borough of Guildford to call on them to support the Remain campaign. The text of our email is below.

**"Guildford Environmental Forum writes to support Britain's continuing membership of the EU. The EU and its predecessors have been central in raising environmental standards across Europe and beyond. There are no more important issues to be addressed by humanity than the survival of the planet as we know it. It is a tragedy that the current so-called "Brexit" campaign has hijacked the debate about the improvement of conditions in Europe by taking short term advantage of what are relatively ephemeral issues, rather than focusing on the important ones.**

**We realise that of the four MPs that cover parts of Guildford Borough, only one of you has taken a "remain" position, and one (the last we heard) had yet to declare a position. We ask all of you to take a "remain" position for the sake the sake of maintaining high environmental standards, for example for wildlife which has no vote, but on which in many ways we depend for our survival and prosperity.**

**In Europe we can continue to work together to tackle global warming, reduce other air pollution in general, protect wildlife, improve the quality of our rivers and seas, maintain fish stocks by controlling over-fishing and clean up our damaged soils. Within an organisation like the EU we can be confident that our neighbours are cleaning up their act along with us."**

As to responses: from **Michael Gove** we had a standard automatic reply; we have yet to receive a response from **Jonathan Lord**; **Anne Milton's**

secretary thanked us for getting in touch and said she would pass on our correspondence, and **Paul Beresford** sent us a letter in which he set out his position and said: "I am pleased that Guildford Environmental Forum supports our continuing membership and once again thank you for taking the trouble to email. For the sake of our children we must vote to remain."

In the light of the narrow vote to leave the EU, it's not at all clear to anyone how the environmental safeguards and targets will be handled in the future. A petition has been launched on *38 Degrees*, the online campaigning organisation, to: "Ensure that current legislation, based on the EU environmental directives, is secured in the fallout of the UK's referendum decision to leave the EU and Article 50 notification." (see <https://you.38degrees.org.uk/petitions/secure-environmental-protections-gained-from-eu-membership>). This petition is addressed to the Environment Secretary.

It appears, however, that the new Secretary of State (Andrea Leadsom) is characterised by her lack of understanding of environmental issues, and she may have been given the job as a poisoned chalice to a "Brexiteer" as she will have to explain to the farming community why they may not continue to benefit from the Common Agricultural Policy that has subsidised them for many decades. Well would you want to explain to a major landowner that they should check whether they are eligible for Universal Credit instead?

Am I being unkind in suggesting that she is clueless? Just consider this quote from her in 2007: "Labour seems only to want British farmers to keep the hedgerows tidy, and ensure that there are butterflies and frogs around for their annual nostalgic trips to the countryside. The fact is, British farming will cease to exist if it is forced to become merely an extended form of landscape gardening."

However, there are more important issues here than the internal machinations of the Cabinet. Maybe we should be looking at a petition to the EU Parliament emphasising the importance of maintaining environmental protection and goals in any agreement reached on the UK's departure from the EU.

Raymond Smith



France, as seen from Kent. Will 'Leave' enthusiasts want to make the Channel wider to keep out foreign Regulations and Directives?

# THE WAY THROUGH THE WOODS

An appraisal of Hindhead Common post-tunnel by Forum member Michael Tanner

RUDYARD KIPLING's ghost would surely smile at the connotations and implications that his famous poem and its title (above) might offer to those who have recently trodden what remains of the old A3 at Hindhead:

*They shut the road through the woods  
Seventy years ago.  
Weather and rain have undone it again,  
And now you would never know  
There was once a road through the woods  
Before they planted the trees.*

To almost the day (27th July 2011) it's only five years since there was a road (the A3) through the woods which, by that date, had become very much under the woods – to be contained in the new Hindhead Tunnel. And it all happened so quickly and so efficiently both in inception and execution (partly, it must be admitted, by the wish to have it ready for the 2012 Olympic Games in July – not just as a national showpiece but also because it gave swifter access to the nautical events in those Games!).

I wrote an article about the area above the Hindhead Tunnel for the December 2013 issue of this newsletter, so nearly another three years on seems a reasonable point to review the results to date of that inspired vision, effected through brilliant organization and engineering.



## The objectives

The aims of the project were manifold but two of the foremost were very different in their nature: one was the crying need to replace a vital stretch of road between the capital and two major ports. The 2- to 3-mile stretch climbing up to the bottleneck of Hindhead was a section of one of the major A-class roads in the UK and, for that stretch, one of the most dangerous and inadequate – steep, reduced to one lane at one of its steepest spots, more twisting than a question mark, prone to water and ice, and fatally unforgiving if you plunged off it or had a collision. The accident rate for that section and class of road was at least 40% above the national average. When you add to that the increased use of the new freight lorries going to Portsmouth and Southampton, with their enormous length, weight and width, you begin to get the picture.

The second of the foremost aims, but one of an entirely different nature, which rode on the growing swell of 'Greenness', was the opportunity the economic venture provided for restoring, linking and regenerating the natural qualities of the total area, its flora, fauna and geology, simultaneously providing improved public access to the 1,000 acres involved. A rare ridge of greensand traversed the area; one of the largest, ever-flowing springs in the country issued from the rock; a huge variety of hardwoods from hawthorn and maple to oak, ash and chestnut, and softwoods from spruce to giant redwood and Douglas firs, found the necessary minerals, soil and moisture; flowers of woodland, roadside and grassland helped to support an impressive variety of insects and birds; a wealth of footpaths invited the walker, including those who were not unhappy to be lost or frequently to pause

and be inspired by views between the trees across plunging valleys. Well, how true to the vision has been the result?

## Positive results

There are many you can ask: the rangers of the National Trust; Highways England; the walkers of dogs; the trail cyclists; the mothers of toddlers or those still in buggies; the solitary militant hiker; the naturalist; the photographer; those who manage the isolated, hidden-away farms; those who serve in the National Trust café or have joined the team of volunteers; the foresters and the repairers of paths, ditches and drains.

So many people! You might well suppose that the Devil's Punch Bowl (now unseparated from Hindhead Common) has become as busy as a seaside beach, and wondered how on earth that part of the vision, of regenerated forest and heathland with new refuges for flora and fauna, could possibly be fulfilled.

I cannot pretend that there is not tension and paradox implicit in all of this but, from my many visits to the area since that July of five years ago, I believe that the essentials of that vision are being promoted and preserved. The managers of such a scheme have yearly grown more skilled in their task, which of course involves wise handling of the growing number of visitors. They have, for example, understood the appeal of the area to dog



walkers and (usually with success) urge them to appreciate that insufficiently controlled dogs will do serious harm to rare and endangered species (the birds, mammals, amphibians and reptiles whose home it is). There is now more expertise to assist them and an improved education of the public seems the sine qua non for obtaining public support and sympathy. Still, there is absolutely no room for complacency.

## Please treasure it

The whole scheme needs huge funds to support it and in times of economic stringency we often see vital aspects of cultural and moral significance become neglected by those who should know better. This is undoubtedly one of the country's and county's jewels from such a point of view and must continue to be cherished, even should the powers that be in the land become subject to a narrowing of vision through political expedience or worse. However clever MAN is at creating Disney Lands and Theme Parks, HE did not and could not create the Devil's Punch Bowl, though HE is perfectly capable of destroying its body and soul. This is something



the occasionally lost, but deeply satisfied, walker in the many less frequented parts of the 1,000 acres discovers for himself. I hope the accompanying photos will assist in conveying my point.

I have consulted several well-informed officers of various organisations before writing this and thank them for their assistance. They have promised to forward some more detailed information to me, as it becomes available, and I hope to be able to pass this on to the Forum's newsletter.

The National Trust itself has already published a free 'self-guided trails' pamphlet, entitled *Devil's Punch Bowl*, which is well worth having in your pocket when you set forth.



# Nuclear or Solar – what is the right choice for the UK?

John Bannister

Diagrams from the book 'The Switch' by Chris Goodall

**THE LONG-RUNNING** political saga over whether a new 3.2 GW nuclear power station should replace Hinkley Point C could not be more critical for the future of the UK. An almost unprecedented Contract for Difference (CfD) payment of £92.5 per MWh as a subsidy to EdF was agreed by ex-Chancellor Osborne, and this over 35 years and adjusted for inflation. All of us will have to pay this through our electricity bills.

**Incidentally**, this compares with a £79.23 per MWh CfD subsidy agreed very recently for a solar farm. The new Prime Minister Theresa May has stalled the Hinkley go-ahead by telling EdF and their Chinese backers that her government wants to review the decisions made by the recently-sacked Chancellor. This is eminently right and proper, not least because we are at an energy crossroads as revolutionary as the one that heralded the fossil fuel age 250 years ago. But is it her fear of the Chinese having some control over our electricity generation or her wanting to understand better the alternatives to nuclear that now exist?

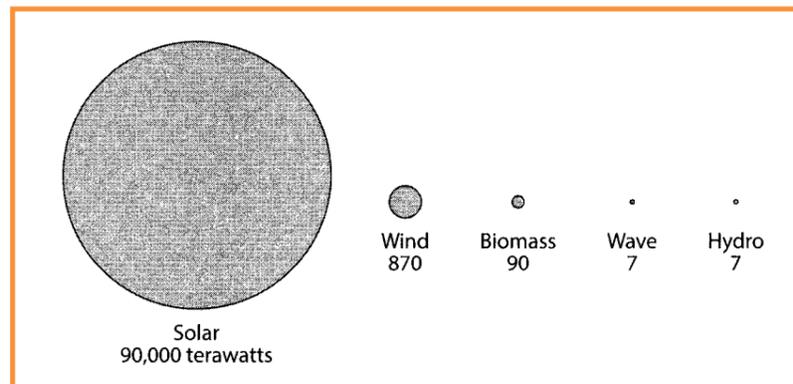
**The decision** will be made in the autumn by the new Department of Climate Change and Industry under Nick Hurd MP. What I think is important in making the decision is to recognise the full potential of the solar revolution now under way and the predictions for what solar PV will achieve over the next 20 to 35 years.

**Anyone who is** following the development of power generation from renewable energies taking place

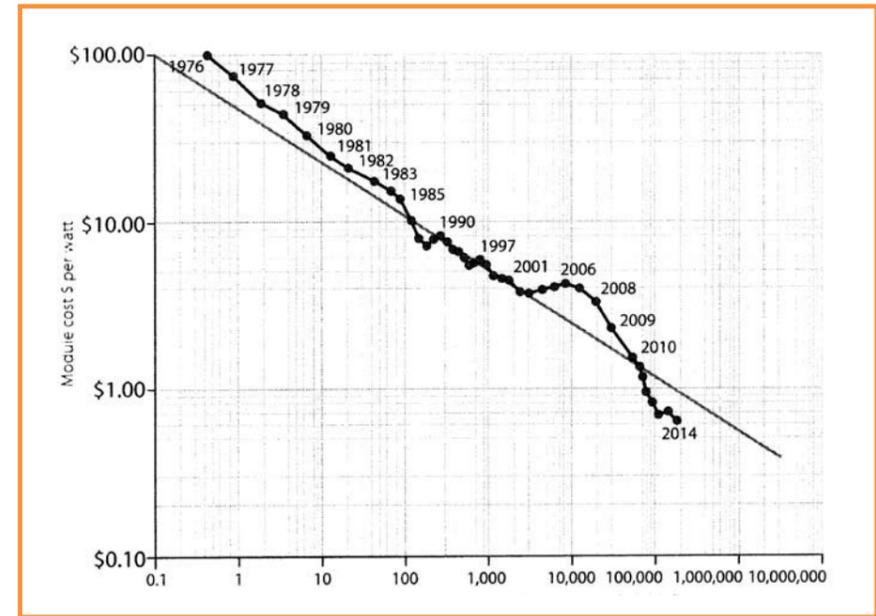
across the world can see that the switch away from fossil fuels is now happening at an astonishing rate. Corporates, states, countries, pension funds and investors are switching to solar and wind in a big way. Renewable energy distributed wherever it is needed is now unstoppable. Solar PV is cheap and getting cheaper every year, flexible, local, simple, very quick to make and install, and easily financed. It is not only the appalling impacts and costs faced from climate change, caused by our use of fossil fuels – it is the simple fact that the economics now hugely favour solar power, and in the right locations other types of renewable electricity, that is causing the fast ramp up of renewable energy and the steady demise of fossil fuels. The smart thinkers everywhere, including Shell, Total, Google, Gazprom, even EdF itself, are moving into renewable electricity in a big way. And this all started in the last year or so.

**It is worth** reminding ourselves that the coal, oil and gas we depend on today are the remains of stored solar energy locked up billions of years ago and now being released by oil companies. Our use of fossil fuels may have been very convenient and a great source of tax revenue for the government but it has caused terrible shocks to our planet in multiple ways. On the other hand, uranium, the fuel for nuclear energy, was created in minerals in the earth as it cooled billions of years ago. Everything comes from the stars and now we know, with increasing efficiency and ever lower cost, how to capture energy from the light our sun gives off and turn it

- watt – a unit of electrical power
- kW – kilowatts, 1,000 watts
- kWh – kilowatt hours, the units in which we buy our domestic electricity accumulated over time
- MW – 1,000 kilowatts
- GW – 1,000 megawatts
- TW – 1,000 gigawatts



**A clear winner: annual global energy capacity for solar (90,000 TW), wind (870 TW), biomass (90 TW), wave (7 TW) and hydro (7 TW).**



**Cumulative Module Shipments (MWp)**

Source: Creative Commons

directly into electricity. Today the reality of virtually free, everlasting energy comes from solar and, to a lesser extent, from wind, tidal and earth energy not, as was once believed, from nuclear. Nuclear has a huge carbon footprint, whereas solar and wind are genuinely green and will mitigate climate change in the short timescale required if we are to reach the goals agreed in Paris.

**Compared to** other renewable sources of energy sunlight is by far the greatest available to us, over 100 times more than the next biggest, which is wind. Averaged across a year 90,000 TW of solar energy reaches the earth's surface, which compares with 17 TW of current energy demand across the world. This amounts to only one and half hours of the available sun's energy.

**Nuclear is** proving to be too complex and virtually undeliverable, as long-running projects in northern France and Finland are demonstrating, plus the fact that the problems of radioactive waste have not been solved and will continue to be a costly risk to our society for an unimaginably long time to come. Chinese technology can't be expected to alter this, unless it is to cut safety standards. Also, rolling out a strategy now being pushed by the nuclear industry – of building many more, smaller nuclear reactors around the country – will not solve any of these problems.

**The subsidies** for solar have dramatically fallen in the last year and are forecast to fall to zero in two to three years' time. Is this what motivated Prime Minister May to call a halt? Is she revisiting the wisdom of going down the nuclear route for 35 and more years and committing an estimated £30bn in subsidy? Will she abandon Hinkley Point C and grasp

instead the reality that solar energy is the future? As Professor Michael Grubb from University College London said recently "nuclear offers last century's answer to this century's energy system". Since 2008 when Prof Grubb was on the Climate Change Committee, which recommended a new generation of nuclear stations, the economic balance has reversed. The price of Hinkley has risen by 50% while the cost of major renewables has almost halved. Solar PV has been a classic case of Swanson's Law that every time the cumulative global production of solar panels has doubled the cost has reduced by 20%. This is what the figure above shows on average over a period of 40 years.

**Several solar** energy revolutions are now going on simultaneously. Swanson's Law is expected to continue applying for at least another 20 years if PV global growth rates continue at 35% p.a., in which time solar PV will be supplying all the world's power: an incredible consequence of compound growth. Better and better batteries are coming to market that will resolve the problem of solar (and wind) intermittency. Even the linking together of car batteries joined to the grid is being floated as a way forward. Also, new materials are being researched to replace silicon that share the same property – light knocks out an electron that can be captured as electricity.

**We will use** electricity for many more things, such as cars, but also to produce hydrogen from the electrolysis of water, which can be used as a fuel for transport in its own right and to combine with CO from CO<sub>2</sub> in the air to make syngas which would power gas turbines to make electricity at about 70% efficiency. In the same way liquid compounds can be produced to make plastics and a multiplicity

of other products. With smart metering and variable electricity tariffs we can take advantage of surplus electricity to smooth the demand peaks and so reduce our electricity bills. New electricity interconnectors between the UK and Norway, France, Belgium, etc will allow us to export/import electricity to take advantage of surpluses wherever they occur across Europe.

**So the future** is electricity for just about everything, and electricity that is from renewable sources not nuclear or gas. We will not need nuclear (or gas within 20 years) to provide the electricity base, as is still commonly argued in the UK, although no longer in some countries.

**As the article** in this issue by John Scott points out, silicon is the base material for today's solar PV cells and research labs continue working on step change improvements to get the light conversion efficiency of silicon higher, maybe to 20%. Other

research in the UK, Germany, China and elsewhere is concentrating on alternatives to silicon using carbon-based compounds such as perovskites, named after a mineral found in the Ural mountains and used by Oxford Photovoltaics, and oligomer, used by Heliatek of Dresden, Germany. These materials offer at least two advantages: the extreme thinness and lower energy needed in the production of the films that can be produced and the ability to convert blue and red light, not just the red light that silicon converts, so giving the hope of raising the conversion efficiency to above 25%.

**These kinds** of new developments in solar will definitely reach commercial fruition well within the next 10 years, let alone the next 35 years, and in fact some of them are here already.

**The evidence** is quite clear that solar is the outright winner and the Prime Minister should not commit us to a fleet of nuclear White Elephants.

## Learning about Woking's peregrines

In June, the 1st Horsell Rainbows enjoyed an engaging talk from John Bannister about the Woking Peregrine Project.

They learnt about the birds and what they eat and looked at some feathers from the different prey. They were amazed that whilst feeding their chicks the parents might have to catch 4-5 birds each day. They were happy about a pigeon diet but less so for them to eat blackbirds! John explained to them that this is part of life's natural food chain, where big things eat smaller things.

The girls were very surprised when John showed them the view from the nest box – *"these birds can see places that we go all the time"*.

It's great to know that peregrines really are in Woking now, inspiring the next generation of ornithologists.



The youngsters are now independent from their parents, having learned how to catch their lunch.



James Sellen



Comma

## A GARDEN RICH IN LIFE

Text and photos by John Bannister



Gatekeeper

LIKE A TRUE ENGLISHMAN I get a lot of pleasure from my garden and look forward longingly each year to the familiar plants emerging, fresh at first and then toughening and fading, in waves of form and colour as each month merges into the next. However, my garden is a wildlife garden so my aim is to work with nature and never to fight against it.

There is barely a patch of bare earth left anywhere as plants move in of their own volition without any real opposition. Except on rare occasions, when I introduce a new plant, for example, I never water. Water from my butts is for washing and flushing the loo. So I nudge the garden gently where I want it to go with scythe, sickle and secateurs. Even the invasive ivy plays an important role for wildlife providing shelter for hibernation and autumn fruits.

I'm on chalk, home to many herbs and wildflowers. I never want to be on another type of soil. Every plant is greeted as a friend, each in its own preferred space and time. In January come the snowdrops, then hot on their heels despite the icy winds, the primroses, lilies of the valley, green alkanet, dead nettle and wild garlic. As the days lengthen and warm the rush starts and everywhere there is life that has waited for this moment. Buttercups, dog rose, red clover, vetch, red valerian, marjoram, grasses, lemon balm, trefoil and Jack by the hedge. In the dog days of summer fennel, lavender, agrimony, honeysuckle, knapweed, yellow rattle, bedstraws, hawkweed, St John's Wort, buddleia and the hollyhocks take over in their turn. Bees are in their nirvana and this year seems to have been good to bumblebees.

Most butterflies too may have had a good year in 2016 here in the south-east. Everything depends on timing: whether the right plants are there when a particular butterfly or other insect needs them. The

pussy willow trees provide a welcome source of early blossom, especially for the bees. Until the end of March and for some of April temperatures remained in single digits. In May it started to get pleasantly warm but then June and early July couldn't make up their minds. By mid July it really began to feel like summer and August has excelled.

As usual the Brimstones appeared in February whenever the sun broke through, followed by the other over-wintering hibernators – Peacocks, Tortoiseshells, the Vanessas and Orange Tips. What a thrill it is to greet these beautiful creatures. But the link has to be made – no wildlife garden no butterflies, they go together.

Painted Ladies have been scarce this year; maybe there were no south winds to blow them over the Channel. My daphne bloomed weakly so no Comma appeared at the usual time and I had to wait until August to see its wonderful flash of ochre with the distinctive white comma on the undersides of the hind wings. Blues, Whites, Skippers and Browns, including the Marbled White, have all done well in my garden but no Speckled Wood, although I've seen them in dappled lanes nearby. The outstanding success this year has been Gatekeepers, dozens of them. Something has certainly gone right for them in my garden in 2016.

Some grass is always left to grow full length as certain butterflies rely on grasses for all stages of their life. I love to see the chrysalises of the Six-spot Burnet (a day-flying moth) catching the light on swaying grass stems in the evening. As butterflies are around from February to November in my garden they provide me with a daily display nearly the whole year through, and all it takes is a wide variety of food plants and love of wilderness in the garden . . . not really very English after all.



**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 [adrian@lampcottage.net](mailto:adrian@lampcottage.net)



# CALENDAR



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

## Thursday 8 September

We are in our sixth year running **scything courses at the Rosamund Community Garden with Mark Allery**, a champion scyther. This is a full course running from 1000 to 1600 where Mark will teach beginners and improvers to hone their skills with a scythe. He will cover the history, selecting a scythe and blade, setting it up for your body shape, the technique, sharpening and how to get good results safely. This is an excellent way to enjoy outside work without harming the environment. Cost is £30 per head but concessions are available. More details from John Bannister on 01483 570468 or 07443 944347.

## Saturday/Sunday 1/2 October

We shall again be **apple pressing at the Surrey Hills Wood Fair** at Birtley House, Bramley. This is now a huge event with many stalls and attractions for families and children. Opens at 1000. Anyone volunteering to help on our stall gets free entry. Contact John Bannister as above.

## Saturday 8 October

**The Rosamund Community Garden run by GEF and Transition Guildford hosts its Open Day** from 1300 to 1600 and welcomes all visitors. There will be fresh produce and hot soup available, plus scything and composting demonstrations and much more. You can help press our apples and take home the juice. Contact John Bannister as above.

## Tuesday 11 October

The Geographical Association of Guildford will present a talk on **"Migration and Development"** by **Dr Julie Vullnetari, Southampton University**, in the auditorium of the Royal Grammar School at 1700. All GEF members are welcome.

## Tuesday 25 October

**"Surrey Safari" – Geoff Lunn, lifelong photographer and nature observer from Sands will give an illustrated talk about the wildlife he has seen on our local patch.** Geoff and his wife Patsy live opposite the Barley Mow pub in Sands, which has been part of his family for generations. I am sure he will tell us about it as well as the animals he has seen over many years. 1900. Room 6, GBC Millmead Offices.

## Thursday 10 November

**Pooran Desai OBE**, co-founder of Bioregional, will give a talk on **BedZED + 15 and One Planet Living.** He worked with Bill Dunster, WWF and partners to create BedZED in Sutton about 15 years ago and has lived there ever since. Pooran went on to found One Planet Living as a development company to build highly sustainable, mixed use, live-work settlements based on the 10 principles of footprinting. He has now built several such settlements around the world and would like to find a site in Guildford. Pooran is a member of the Surrey Nature Partnership, which is producing a Natural Capital Investment Strategy for Surrey. 1900. Room 1, GBC Millmead Offices.

# GUILDFORD ENVIRONMENTAL FORUM

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**Waste and Recycling – Position vacant**  
(Contact Raymond Smith: see Chair's details above)

**Sustainable Building – Position vacant**  
(Contact Raymond Smith: see Chair's details above)

**Treasurer – Adrian Thompson**  
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