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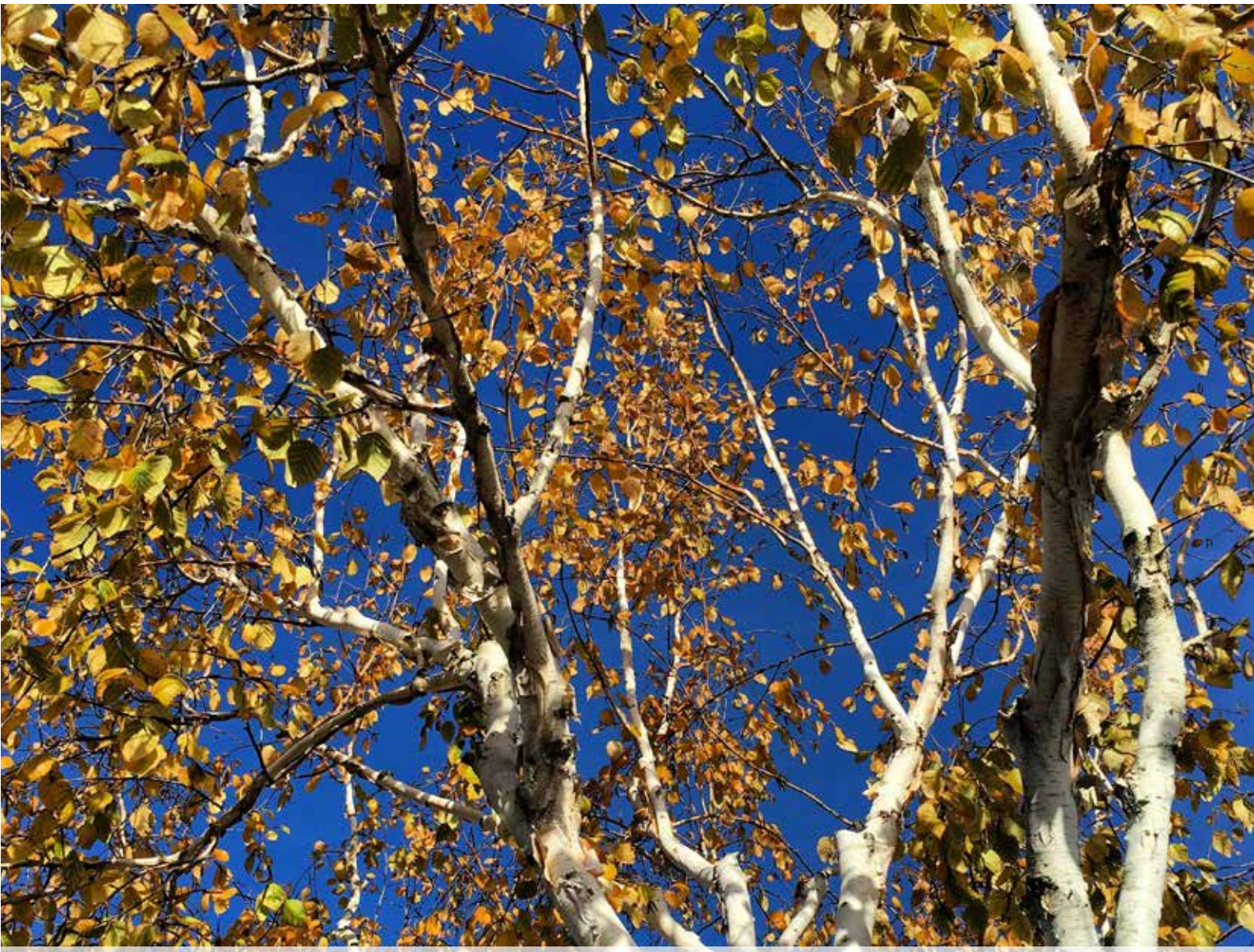
GUILDFORD ENVIRONMENTAL FORUM

newsletter

September - November 2020

www.gefweb.org.uk



Volunteers are key to the future of GEF - The quarterly report by Adrian Thompson

Hello all, and welcome to our Autumn newsletter - I hope you are all keeping well after a somewhat unconventional summer. It seems that the current pandemic has done very little to slow us down and It has been a busy three months for GEF.

I am delighted to report that, over the last few months, membership has grown further to nearly 270 and the GEF team has been hugely strengthened by a number of GEF members who have volunteered to fill important vacancies as follows:

A. New Chair of the Climate Change Group. **Richard Waters** has taken this role over from me and the Group continues to meet monthly via Zoom. The other vital members of this group in alphabetic order are Matthew Ambrose, Alistair Atkinson (lead representative on the GBC CC&IB), Steve Davis(GEF Lead on the Surrey Energy partnership), Cllr. Diana Jones, Nikki Nelson-Smith, Ian Stewart (Secretary), Henrietta Stock (Climate Reality Leader and Lead presenter), David Stokes (Chair of HTAG) and Colin Summerhayes. Richard is also working on an upgrade to the GEF website which will enable us to reflect many of the structural changes below.

B. New Chair of the Rosamund Community garden Committee and Community Hub project. Helen Harris is leading the revitalized GEF biodiversity group. We are delighted to able to announce that Helen, Clare and the Rosamund management team have been successful in raising £16,280 from the Community Foundation for Surrey (£10,000) and Guildford Borough Council (£6,280) to finance these exciting plans. Please see the article in our June edition for further background and a further article in this edition on page 4 for more details.

C. Membership Officer. Allen Johnson has taken on this role and will be the future contact for new members. To make this role easier in future, we are delighted that new member, Ruth Bolton, is currently converting the GEF membership database to new software called "membermojo". When the conversion is complete (which we hope will be this Autumn) it will make it easier for new members to join and will automate the links to our newsletter and e-mail databases.

D. Events Officer. Charlie Meakin has taken over the process of arranging future events. She has already approached all the Parish Councils, Residents Associations and Community Associations and offered to re-arrange the Henrietta Stock climate talks that we had arranged until COVID-19. We are not yet sure if these presentations will be virtual or in Village halls. This will depend on the Social Distancing rules at the time. See page 6 and 7 for more about the first event arranged by Charlie on Modern Nuclear, which was attended by 26 over zoom.

E. New Lead member for Waste and Recycling. Caroline Scott has taken over this role from John Bannister and should be contacted if you have ideas and suggestions in this area.

F. Ruth Bolton will be taking over from Matthew Ambrose as Communications Officer. I hope you will agree that Matthew has done amazing work for GEF over the last year to improve our communications with members. I believe that our regular mail-Chimp environmental updates are more interesting and readable now. However, Matthew starts his Masters year at Bristol University in September and Ruth will, hopefully, build on these changes.

Additionally, Ellie Morgan, as you will recall, took over from Clare in June and we are delighted that she continues in the vital role of Newsletter Editor.

Projects.

GEF is also able to offer a wide range of projects for any of our members who have the time, energy and enthusiasm to improve sustainability here in Guildford. Here is a list of current and future projects plus contact details to enable you to find out more:

A. The Swift project – supported by funding from the Community Foundation for Surrey – John Bannister and Sarah Davis can provide and advise on nesting boxes. Contact details are johnwbannister40@gmail.com and sarahandgary@ntlworld.com.

B. The Rosamund Community garden "Hub". In b. above we have been delighted to announce the success of the Rosamund garden team in securing grants for this exciting project. The link to find out more and to make contact with the Rosamund team can be found on https://guildfordcommunitygarden.wordpress.com.

The Climate Emergency Centre (name to be changed soon) – Volunteers will be needed if this new charity Independent of GEF) is a success. The GEF Executive is supportive of a plan to take over an empty High Street property and use the site to raise awareness of the Climate Emergency and Sustainability here in Guildford. There will be a full time manager, but volunteers will also be crucial. The contact for now is Adrian Thompson.

D. The Small Blue Butterfly project (contact Adrian Thompson). To learn more about this project, which benefits from being outside in the fresh air and is ongoing, there is a short film and much more information on https://butterfly-conservation.org/our-work/conservation-projects/england/surrey-small-blue-stepping-stones-project.

Elections at the AGM

on Tues 3rd November.

We will be electing the GEF Executive Committee at our delayed AGM on Tuesday 3rd November. It will be followed by a talk on "Action for Insects" by Mike Waite of Surrey Wildlife Trust. If you would you like to be part of the Exec Committee of GEF, helping to make Guildford more sustainable, then please let me know. We welcome new ideas and energy from our membership and are most grateful that so many have recently stepped forward to help in so many ways – see above

Our current Executive Committee consists of:

Current Exec members standing for re-election	5
New Exec members standing for election	4
Maximum Total members of the GEF Exec	10

The 5 current members standing for re-election are Alastair Atkinson (Lead on Transport and GBC CC&IB representative), Keith Chesterton, Colin Cross (GBC Councillor), Richard Seymour (link to the Geographical Society of Guildford) and Adrian Thompson (Chair).

The four members who have indicated that they will stand for election are Helen Harris (Head of Biodiversity), Sunethra Mendis (Link to Guildford Society), David Stokes (Chair of HTAG), and Richard Waters (Chair of the Climate Group). In the meanwhile, they are co-opted onto The Exec until elected. We are sad to lose Matthew Ambrose, Alan Thorogood and Nina Alphey who will not be standing or have already stood down recently. We thank all three of them for their various significant contributions to GEF.

As a result of the welcome increase in concern for our Environment over the last two years, GEF has nearly doubled its membership. Both our key missions are massive challenges. They are, of course, the Loss of Biodiversity and the looming Climate Emergency. Can you spare a few hours a week to help make a difference at this crucial time for both challenges?

If you have some time and expertise that you can give to help GEF in any way that fits with your commitments, then do please contact me on adrian@lampcottage.net. Ideally, I would hope to stand down as Chair of GEF in May 2021 and to have found a successor by then. I would be happy to stay on as Treasurer of GEF, thereafter, but I believe that we do now need to find a Vice Chair by the AGM on 3rd Nov 2020

GEF to apply to the Charity Commission for Charity status as a CIO.

The Executive Committee have agreed that the higher income levels of GEF mean that we should apply to the Charity Commission to be awarded Charitable Incorporated Organisation (CIO) status. We hope that this will not mean a change to our Constitution, but it might. This change will give GEF limited liability without having to register as a limited company. The application is being made now and I hope to report more at the AGM in November.

Thank you, Adrian Thompson, 8th August 2020.

Green light for Hub Project at Rosamund Community Garden and an exciting event with Big Leaf Foundation.

Lockdown summer has been long and hot and productive at Rosamund Garden (RCG). Lockdown social distancing and increased time at home has meant both that our volunteers have visited the garden spread over a weekly rota and that the number of volunteers coming regularly to the garden has grown to over 30. As a result of all the attention the garden has never looked so beautiful. It blazes with colour and texture: mauve echinacea, purple verbena, giant yellow and red sunflowers and blue borage and scarlet nasturtiums mixed in with kholrabi, squash, beans, tomatoes, and rosemary against the backdrop of the ripening grasses.

Lockdown has highlighted to so many of us the importance of the outdoors and our connection with nature for our own physical and mental health. I have used visits with my children to help tend the garden but also to brush up on our tree and wild flower identification, to press flowers and to have a go at making willow teepees for the veg to climb. I am pleased that lockdown life has afforded the opportunity to a few more local people to experience this beautiful place.

I am therefore extra delighted to be able to tell you that we have been successful in our second grant application to fund our Community Hub project at Rosamund. We have been awarded funding by the Surrey Community Foundation, which, together with the Guildford Borough Council Community Grant received earlier this year, means we are now in a position to start building the Hub and improved compost loo at RCG. GEF will administer the grant monies and oversee the project; the

RCG Committee will project manage. Our first step will be to finalise the design for the hub and engage a contractor to help us build it.

The Hub will be used as a meeting place and classroom to allow us to host a wider range of community groups and activities at the garden throughout the year. We are already attracting interest for the garden to be used in this way. At the time of writing we are preparing to host a (socially distanced) day of gardening activities, music and leatherwork for a small group of displaced young people facilitated by the local charity Big Leaf Foundation. https://www.bigleaffoundation.org.uk/ This promises to be a really positive day: much needed fun, relaxation and social time for a vulnerable group in our community and a great learning experience for our volunteers who will be helping to run the day. I very much hope this will be just the start of things to come at Rosamund and I look forward to giving you more news in future issues.

Helen Harris - RCG Committee Chair / Biodiversity Lead

2020 Progress Report from CCC to parliament.

by John Bannister

The UK Committee on Climate Change informs the UK government on all aspects of global heating in order to guide them on progress towards targets agreed by Parliament and to hold their feet to the fire (if that were possible). Here is a short extract from their latest interim report.

	UK emissions mtCO2e per annum:	
Sector	**1990**	**2019**
Power	204	57
Industry	219	102
Surface transport	113	113
Aviation	21	39
Shipping	18	14
Buildings	106	87
Agriculture	54	34
Waste	67	20
F- Gases	17	13

You can work out where progress is lacking. Surface transport shows no change whatsoever over the 29 years because people who don't really care about global heating continue to drive private cars. Aviation is the only sector that is increasing and government baleouts with no strings attached continue. On buildings there is still a lot of work to do.

Soil erosion problems

by Richard Seymour

Soil erosion is a natural process of the removal of topsoil by water and wind. Often the rates of erosion can be accelerated by the activities of man such as in the Dust Bowl in the 1930s in the USA. The topsoil is the most fertile soil layer as it contains a large proportion of organic and nutrient rich material and is regarded as an important resource especially in relation to agriculture and food production.

Photograph showing rill and gully erosion south of the Chantries. Taken by Mr Cowx (RGS staff)

There are different types of soil erosion which operate at various scales and in some circumstances their impact can be dramatic with the total loss of valuable topsoil. Splash erosion occurs when raindrops hit exposed soil and results in the break up of soil particles with more soil being deposited downslope due to the influence of gravity. With this type of soil erosion much depends on the intensity of precipitation.

Sheet erosion occurs when water moves over a slope at fairly slow speeds resulting in the movement of material downslope. After a prolonged cold spell the frozen ground can be impermeable, and if there is a sudden rise in temperature along with heavy rainfall this type of erosion can occur. Rills can develop by the merging of sheet wash into small channel flow and this reflects the microtopography of the area. When rills join together a gully is formed and these vary in depth, but they do result in a network of steep-sided channels sometimes eroding down to the underlying bedrock. The photographs illustrate the impact of these different types of soil erosion on the agricultural land south of the Chantries which is a scarp slope which tends to get steeper towards the top of the slope. A footpath runs across the slope and this is in part responsible for the accelerated erosion as depicted.

Other examples of a gullying can be found in the Devil's Punchbowl near Hindhead, where runoff has cut into the Hythe Beds creating a gully in the steep north facing slope close to the source of the Smallbrook.

Wind erosion or deflation is the process whereby the wind removes fine particles of soil from the surface thus lowering the overall surface. The removal of hedgerows particularly in East Anglia has tended to accelerate this process especially during dry windy spells when the topsoil is dessicated.

Perhaps the best example of wind erosion which is well documented in John Steinbeck's novel the Grapes of Wrath is the famous Dust Bowl in the midwestern prairies of the USA. The removal of prairie grasses,tilling,severe drought and inappropriate agricultural practices resulted in extreme wind erosion. It has been estimated that dust travelled over 2000 mile blotting out the Statue of Liberty on the east coast of America!

Bearing in mind the vital importance of soil to the survival of mankind it is critical that it is managed in sustainable and appropriate ways and strategies are used to reduce the ever present problem of soil erosion.

A deep gully on farmland south of the Chantries. Taken by Mr Cowx (RGS staff)

The New Revolution in Nuclear Power by Simon Johnson

In the early 1980s I worked as a reactor physicist for the UK's Atomic Energy Authority at Winfrith in Dorset. At that time people were just beginning to become concerned about global warming but nuclear power was unpopular due to legitimate concerns about reactor safety, nuclear waste disposal and the overall cost.

A lot has changed since then and it's now possible to make completely safe nuclear power stations that actually consume nuclear waste instead of producing it and this can be done with no risk of the fuel being used to make nuclear weapons. There are several new ways of doing this and multiple new reactor designs have been proposed. I want to focus on the Stable Salt Reactor (SSR) designed by Moltex Energy because this design solves all of the problems associated with nuclear power and due to its very low cost it has a realistic chance of bringing about a significant reduction in global warming.

I would like to point out that I have no financial interest of any sort in nuclear power. My motivation is simply to increase public awareness of this revolutionary technology. In this YouTube video I explain how this almost 'too good to be true' solution works: **https://youtube/-LsRHjph0b0**.

The video is aimed at a non-technical audience with no detailed knowledge of nuclear power. Hopefully anyone who sees it will gain an understanding of why the Stable Salt Reactor (SSR) is completely safe and how it converts nuclear waste into a much safer form. The design is very new and no Stable Salt Reactors have actually been built yet. However, the first build is likely to start very soon, in Canada, with an expected completion date of between 2028 and 2030.

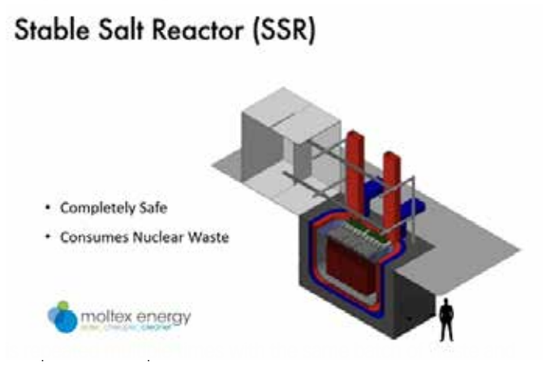
The rest of this article is a summary of the important points from the video.

There are three main problems with traditional nuclear power:

1. High Level Nuclear Waste
In the nuclear reactors that operate around the world today only a small amount (around 1%) of the natural uranium that is put into the reactor is used to produce power.

The other 99% (approximately) becomes contaminated and forms radioactive waste which is dangerous for 100,000 years. Safe storage of this waste for this sort of timescale is not an easy problem to solve. There are proposals to store the waste deep underground in rock that it is hoped will remain stable for more than 100,000 years but this is obviously a worry for future generations. Currently all of the waste is in temporary storage, much of it is in large ponds that look like swimming pools lit up by a blue light produced by the radiation – beautiful but highly dangerous.

That was the old way of doing things but now a much better alternative to storing the waste is possible. The new technique is to process the dangerous waste with an electro-refiner and then use it as fuel for a Stable Salt Reactor. The electro-refiner removes the 'nuclear ashes' that only need to be stored safely for 300 years. That part of the waste is set aside for simple storage in stainless steel drums in underground storage areas. The rest of the waste (which would otherwise need to be stored for 100,000 years) is put into the SSR to produce more electricity. This process



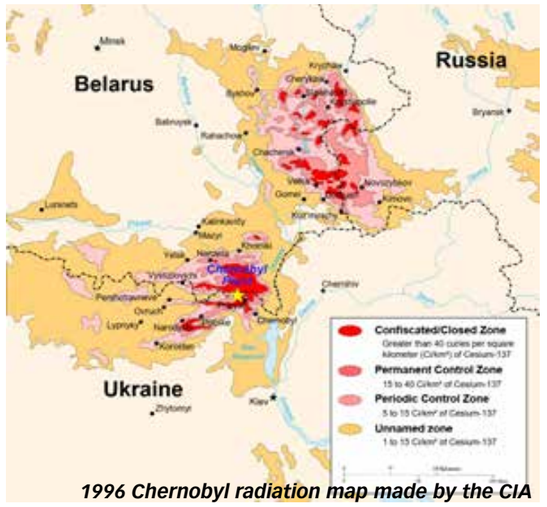
actually produces about 100 times as much electricity as was made in producing the waste in the first place. This spectacular improvement in the amount of electricity produced from the original uranium comes about because, unlike conventional reactors, almost all of the uranium is used up in this type of reactor. Eventually after the process has come to an end, most of what is left is 'nuclear ashes' which, as mentioned, needs to be stored safely for only 300 years.

For fuel, the SSR can also use old nuclear weapons or unwanted plutonium stockpiles that were created to produce nuclear weapons, Both of these sources create plentiful electricity when used in an SSR and can eventually be reduced to 'nuclear ashes' by using the same electro-refining techniques that are used on the high level waste. This process would of course reduce the risk of proliferation of nuclear weapons.

Nuclear Waste Temporary Storage

Incidentally, the electro-refining process is unable to produce weapons grade fuel so the system is 'proliferation resistant'. Also, the waste which is converted to fuel for the SSR is at all stages of the process so radioactive that it is 'self-protecting' meaning that it would not be practical to steal the material to make nuclear weapons.

2. Reactor Safety
In a conventional reactor dangerous gases produce by the nuclear fission build up under high pressure inside the fuel pins. This can be a major safety problem if the fuel pins are breached in an overheating accident. These radioactive gases can contaminate large areas of land.



1996 Chernobyl radiation map made by the CIA

In contrast, the fuel in an SSR is in the form of a liquid salt, just like table salt and all of the dangerous gases from nuclear fission dissolve into this liquid salt. This is why, unlike Fukushima and Chernobyl, the SSR cannot contaminate the land which surrounds it. The concept of contaminating large areas of land simply doesn't exist with this type of reactors.

Also the SSR losses reactivity as it becomes hotter so it can't overheat in the first place. It will cool itself by natural convection in any situation.

In any situation the operators can simply walk away from the reactor and it will sit safely not overheating. In fact even the term 'operators' is a little misleading since the reactor doesn't need anyone to operate it as such. It controls itself by the fundamental physics of its design. The more power required from it the more heat it produces and if no power is taken from the steam turbines the nuclear reaction slows down. This also means that the SSR works well in combination with intermittent renewable sources of electricity as the reactor quickly responds to a need to increase power when the wind stops for example.
Nuclear reactors are normally built well away from population centres for safety in the event of an accident. This isn't a requirement for the SSR.

3. Cost
The SSR is a small modular reactor that can be made cheaply on a production line and would be transported by lorry to the site where it is to operate. It can replace existing coal power stations while taking a smaller footprint. Although the SSR is a physically small reactor the power output is not small.

Whereas most nuclear power stations require expensive and specialised steam turbines that work with relatively low temperature steam the SSR produces very hot steam and can therefore use the cheaper type of turbines that are found in coal power station. The high temperature steam also makes the conversion of heat into electricity more efficient.

Independent studies have shown that electricity from an SSR will be cheaper than from any other source of reliable electricity and for that reason there is a real possibility that this technology will be taken up around the world and would then significantly reduce the world's CO2 emissions. The cost to build is around one third of the cost to build a coal power station, the fuel is effectively free because the companies that store high level nuclear waste will pay the operators of the SSR to take the waste away and this payment should cover the cost of the electro-refining process.

Maintenance and decommissioning are also much cheaper than with conventional power stations. The use of hafnium in the coolant helps to keep the radiation levels in the reactor containment and pipework down to a minimum. The fact that the fuel is contained as molten salt within fuel pins means that the coolant does not contain nuclear fuel (in contrast to other molten salt reactor designs) so the primary coolant circuit is much simpler to maintain.

In principle the SSR could also be used to make hydrogen economically by passing water over a catalyst at the high temperature at which the reactor operates, although research on this process is ongoing. Hydrogen is of course an environmentally friendly fuel if it is produced in this way.

The potential financial advantages of advanced modular reactors such as the SSR are key to nuclear power becoming the worldwide solution to global warming. There are competing designs for advanced modular reactor of course, such as the Lead Fast Reactor by Westinghouse but none of these designs appear to have such a strong economic case.

In my opinion, just one SSR being completed in Canada ten years from now is too little, too late. The UK government could easily fund the first SSR in the UK, they aren't expensive to build, and once it's seen in operation the power companies around the world would want to build them. There's a climate emergency and if the world can make a vaccine to the coronavirus in one year instead of ten then I'm sure that the first SSR build could be much sooner than ten years away.

For questions or comments please email Simon using modern.nuclear@outlook.com

Will the Coronavirus crisis help us to tackle the Climate crisis? By Henrietta Stock

It is strange to think that in March we were 9 presentations in to our 23 presentation campaign to engage local communities, parish councils and residents' associations in tackling the climate emergency which Guildford Borough Council declared 10 months ago. By now, had it not been for Covid-19, almost all the presentations would have been completed.

Instead, all our lives have been severely disrupted and many have been lost. Global carbon emissions are down as a result of lockdown measures[1], but are unlikely to have a significant impact on our progress to meeting the Paris climate commitments over the longer term. I hear conflicting opinions expressed in the media on whether or not the Covid crisis will help us tackle the climate crisis. When we come out of this, will we have a 'new, greener, normal'?

During the presentations I have given to local residents, I have suggested changes that we can make to our lives in order to make a personal contribution to tackling the climate crisis and I thought it might be worth revisiting these three months in to lockdown to see **what, if anything, has changed...**

The five actions were:

1. Work out your carbon footprint.
If you haven't yet done this, or even if you have, why not do it again now? There is a great calculator at www.carbonindependent.org.

How different is your footprint under lockdown conditions than under 'normal' conditions? What difference has it made to your footprint now that you are no longer commuting to work every day or taking an overseas holiday that you had planned?

Based on the difference it can make to your personal carbon footprint, how many of these sacrifices could you continue after lockdown?

2. What can be done to your property?
Aside from some people maybe having a little bit more time for DIY, Covid-19 hasn't done anything to help us improve the efficiency of our housing stock so we still have a significant part of our carbon footprint to tackle.

3. Reconsider your travel options.
Here Covid-19 has made a significant impact. With people limited initially to only exercising near home and only travelling to work if you are a critical worker, the number of car journeys has significantly reduced and many people have found pleasure in walking and cycling. But part of the reduction in transport is also because no one has had anywhere to go. No shopping trips, no days out, no meals out with friends, gyms, cinemas, schools – everything has been closed. Now that we are being encouraged to return to work and places to go are starting to reopen, we are already seeing a rise in road traffic, noise and pollution.

In fact, we may even see the levels of traffic rebound to higher than pre-lockdown now that the use of public transport is being actively discouraged by the government. To keep a lid on transport emissions we must urgently change the way we prioritise road users to give more space to pedestrians and cyclists and we must better connect those places that we want to go to with safe cycling and walking infrastructure.

Flying looks like a mode of transport that is going to take longer to return to pre-Covid levels and as one of the most damaging in terms of greenhouse gas emissions, that is welcome respite for the climate emergency. But unless we do take bold steps to limit the capacity at our airports, or only support struggling airlines if they commit to bold decarbonisation actions (as for Air France[2]), we will see growth in emissions from flying return.

4. Reduce the amount of meat in your diet.
Fortunately, there has been very little disruption to food supplies in the UK due to Covid-19 (aside from a few initial problems with the supply of certain items such as flour and eggs). The restaurant trade has been dealt a cruel blow but in general the food we are eating, at home, has a lower carbon footprint than some of the food we might eat if we were eating out. It also appears that there is now over-supply of some food items which were previously consumed in the restaurant trade and are no longer needed in the same quantities so total consumption is down[3]. Cooking more at home is also a great opportunity to try new recipes such as vegetarian or vegan alternatives. I wonder how many people have managed to do this?

Supermarket retailers have managed to scale up their home delivery service extremely rapidly and I hope that this may continue. Each individual journey to the supermarket is far less efficient than one delivery vehicle doing the rounds. If we can now persuade the supermarkets to switch to electric vehicles we will be in an even stronger position.

5. Be water and energy efficient.
As a result of lockdown, energy use across the UK is significantly reduced. On average it has been about 15% lower but the usual morning peak has been more like 20% lower, as we see the demand for electricity at home better spread throughout the day. At home our electricity use has generally gone up – if, like me, you've got two people working from home and three children using screens most of the day to access their home schooling, it's not a surprise that we will have higher electricity bills for lockdown.

The reduction in industrial and commercial electricity use, however, is so much more significant that this outweighs the increase at home and leads to the lower overall demand. Coupled with sunny weather over the last couple of months, the lower electricity demand of lockdown has accelerated the decarbonisation of UK electricity generation. During lockdown we have seen new records set for the maximum amount of solar generation (9,680 MW on April 20th) the minimum carbon intensity (46 gCO2/kWh on May 24th) and the ongoing record for no generation from coal (currently more than 50 days but increasing all the time).

This accelerated decarbonisation has come at a cost to National Grid as they try to balance unusually low demand with the plentiful supply of low carbon electricity. These additional balancing costs will undoubtedly be passed through to consumers but at least the first challenge of increasing low carbon generation has been met and the next challenge is how to reduce the cost of this.

Customers with a smart energy meter who have opted for an electricity tariff where they are charged according to the time of day they use energy have experienced a couple of periods over the last few months where prices have gone negative. This means they have been paid to use electricity at these times as it helps to balance supply and demand on the grid which allows the grid to take more renewable and less coal generation.

This is a great thing for the UK but particularly for those home owners who were recently paid around 10p/kWh (instead of most of us who typically would pay around 17p/kWh) to run the washing machine, dishwasher, bread maker and charge the car on a sunny weekend afternoon. If you don't yet have a smart meter but could do so, now more than ever is a good time to make the switch (assuming a meter operative can safely come and work in your house).
Perhaps surprisingly, we don't see the same drop in demand for water usage. Again, it is down for commercial properties such as pubs, restaurants and manufacturing plants but household usage is up.

In the case of water, the increase in household usage far outweighs the drop in commercial usage. Water demand tends to peak on sunny weekends as people water the garden, fill the paddling pool, wash the cars and shower more often. The combination of the sunny weather, extended bank holiday weekends and everyone at home has led to some of the highest recorded water demands ever in the south east of England. I increasingly see residents on my village facebook page about problems with low water pressure but since water consumption per person in this area has recently been 50% higher than the UK annual average, it's not that surprising.

The south east of the UK is a water stressed area. Two thirds of the world's population are expected to live in water stressed countries by 2025. Covid-19 has accelerated us towards crunch time.

I listened to a podcast recently produced by Climate Action[4] which included as a speaker, Mary Robinson, the former President of Ireland. She highlighted three things which she felt the Covid emergency had taught us that would help us tackle the climate emergency:

- Firstly, that **human action matters,** it's only us that stands in the way of successfully dealing with either of these crises;
- Secondly, that **science matters** – leaders must listen to the scientists and act based on the best scientific information available if they are to reduce the impact of either coronavirus or climate change; and
- Thirdly, **compassion** – we have shown more compassion to each other over Covid and the resulting deaths than we have over the many years of climate related deaths. Covid 19 has exposed the inequalities in our society and exacerbated these. The climate emergency is similarly unjust and

compounds these inequalities further. We must use our compassion to address these.

And this reminds me of the final action point I made in my presentations to community organisations. Personal action is important but, as the Covid-19 restrictions have demonstrated, it is not enough. In a speech on climate change in October 2019, Mary Robinson urged us to also "get angry and get active."

We have seen huge sacrifices during the Covid-19 crisis but we have also seen selfishness. There are people who believe their role, their livelihood or their right to meet friends is more important than the safety of others and get in the car and go to an office, or a second home, or have a party in the park or on the beach and they risk other people's lives in the process. When lockdown is lifted, do we really think people will continue to make sacrifices? Whilst arguably a bigger and more catastrophic crisis, the climate crisis is less visible and less immediate in the UK – will people voluntarily make sacrifices in the way they have for Covid-19? Imagine if we said that there must always be limits on the number of people who can attend weddings and funerals, for example, to reduce the need to travel? What if we continue to limit the number of people per m2 of office space, encouraging more home working?

These actions won't happen voluntarily and even if they did, they would still not be enough.
We need centralised, structural changes to the way society functions. This will only happen if central government action is taken and is enforced.

Remember how angry you felt that Dominic Cummings drove to Durham and Barnard Castle? You may even have been moved to contact your MP about it.

We need to channel that same energy in to pushing for political action to address the climate crisis. When I present about climate change, I show how we have the solutions at hand to address the climate emergency. What we lack is political will to change.

The coronavirus crisis has shown us what Guildford Borough Council can achieve in response to a crisis. Yet, ten months on from declaring a climate crisis, there has still been no meaningful action.

Council responds to Coronavirus (Covid-19) emergency
April 22nd 2020

An emergency budget of £15 million was unanimously agreed by councillors…last night.

"I…want to highlight the huge amount of work that is taking place within the Council to address the crisis directly. Within a matter of weeks, or even days in some cases, the Council has reorganised itself to deliver entirely new services."

Caroline Reeves, Leader of Guildford Borough Council

Here are a few things you could speak to your MP and local councillors about right now:

- With public transport bring discouraged, they must act to provide better walking and cycling facilities as well as EV charging infrastructure, to prevent a rise in transport emissions, an increase in health problems linked to air pollution and to make employment and education equally accessible to those without a means of private transport.

- Financial support for failing businesses must be strongly linked to clear decarbonisation targets to ensure that the money is used to accelerate the de-coupling of economic growth from carbon emissions. Raising taxes to support economic recovery must be done on the basis of a business's carbon footprint, penalising those carbon intensive industries and rewarding those that are more sustainable.

- They must allocate a ringfenced budget commensurate with the scale of the climate crisis and make structural organisational and attitude changes to support transformative decarbonisation.

I'm sure you can think of many more things too. The green recovery is something that will only happen if we make it.

We must do everything we can to learn from the Coronavirus crisis and make it a turning point in tackling the climate crisis.

Henrietta Stock - 20th June, 2020

1. https://www.theguardian.com/environment/2020/may/19/lockdowns-trigger-dramatic-fall-global-carbon-emissions
2. https://www.flightglobal.com/strategy/french-government-sets-green-conditions-for-air-france-bailout/138160.article
3.https://www.independent.co.uk/news/health/coronavirus-dairy-milk-farmers-throw-away-shortage-lockdown-a9457001.html
4. http://www.climateaction.org/webinars/a-decade-to-deliver

Mostly Our Very Own Patch

By Michael Tanner

A common experience throughout the UK, since Covid was recognised, has been to put it bluntly, confinement to barracks. Some have been much more fortunate than others in respect of the location of their barracks. Some have had to don battle dress and pack and sally forth to face the foe. We, in this medium sized, pleasantly located, affluent County Town have, on the whole, been quietly counting our blessings and found ourselves in a position to take advantage of cleaner air, clearer skies, more audible bird song and having access to a garden away from motorways and tower blocks, even if we could no longer catch a plane to palm trees or ski resorts. We have also, within our palisades, learned to fall back more ingeniously onto our own resources.

I have the impression that behind our national cautiousness and avoidance of hyperbole we are on the whole more optimist than pessimist, taking into account a tendency not to state too loudly that anything is going well or likely to do so: one never knows who might be listening out there. So, of course, nice and loud : 'what an impossible picture is painted by the economy!'

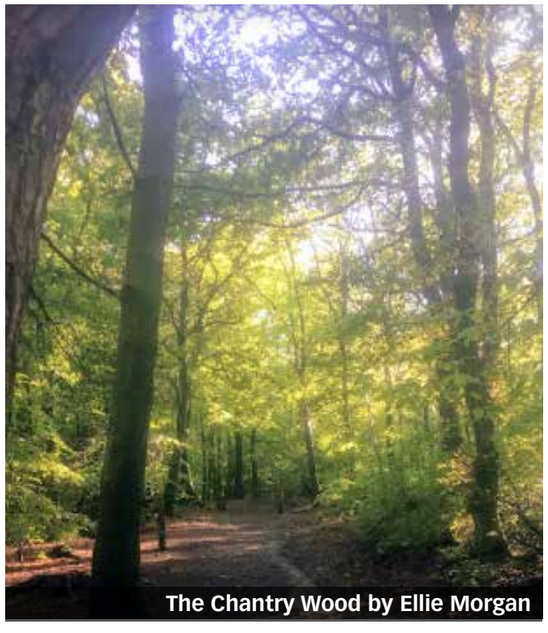
Meanwhile, 'Quiet flows the Don' or rather our own little Wey, winding its peaceful course, once more restored to normality after months of insult and a horribly reduced level from St Katherine's Lock down to the Yvonne Arnaud. There was almost an audible response from nature once this little miracle occurred. Mind you, many of the local youth were happy to discover little sandy beaches along the wooded stretch west of the waterworks, known previously only to fishes and moorhens or intrepid naturalists. Already the Himalayan Balsam has reasserted itself, together with tall nettles over acres of land few wish to explore and where one can be well and truly unable to find a path back to civilization although literally only 400 metres from terra firma and the company of others. It could be called 'The Orinoco Experience', and you don't have to catch a plane to get there! Suddenly, you hear people calling to each other, playing games or stretching themselves out on the parched grass of Shalford Park: groups of the young quite seriously taking exercise, or quite seriously not doing so with miniature barbecues. Mothers with infants learning the experience of a picnic; footballers improving their ball skills; ever present cyclists moving swiftly along the perimeter paths.

There are similar scenes in Stoke Park, on Guildown, on the triangle of grass between the Guildford Lock and the river. Long Boats, some incredibly long, journey upstream. The High Street, North Street have plenty of visitors. Am I correct in thinking there are more wearing masks over the past few days? Everywhere I Phones are consulted for entertainment and information, which itelf has long been a form of entertainment. It is centuries ago, surely, from the time of 'This is the News and Alvar Lidell reading it'. No such comforting assured tones these days; no such certainty as those days seemed to hold, in time of War. Maybe it is a good thing at certain times to be certain of nothing, like a man on an ocean or crossing Amazonia without Sat Nav. or radio.

At the moment we seem virtually agreed with the independent scientists' consensus on Climate Change and the larger part of the world's population believe the evidence they have all around them in rising sea levels, unprecedented weather occurrences: tornadoes, forest fires, countrywide flooding, yearly rising global temperature, etc. The only real debate is what to do about it and how urgently. A core number of humanity have for a long time been convinced that Man abuses his so called technical superiority to the grave detriment of most other species, as distinct from those who have to convince themselves with arguments based on false economics and hedonistic motives.. If you are unsure about the Climate Change factor do have a look at UK records just for a start. So many records broken since 1929 when record keeping began in earnest.

Of all the concerns that Covid and Climate Change have brought to the fore is that of Inequality amongst peoples everywhere and between populations everywhere. The question of The Rights of Man has surfaced again across the planet. The idea of born 'losers' is out of fashion, and like a cancer that has been recognised.

I was going to include a number of perhaps more domestic points in an article that set out to be locally focussed but perhaps I have been side-tracked by the thunderstorm currently circling Guildford. Hopefully, someone else will bring up the topics of extending cycling safety and touch on the astonishing figure, made available by the PDSA, about the numbers of cats and dogs now owned by people across the U.K. Do I hear echoes of Chris Packham on that thundery breeze?



The Chantry Wood by Ellie Morgan

Could we be done with the school run?

by Caroline Scott

Back in the 1950s when less than 30% of travel was by car, van or taxi, children would mostly either walk to school or travel by bus. My mother recalls travelling by "trolley bus" - a kind of electric bus for urban areas. But that trend has dramatically declined over the past 70 years. In the last 20 years the number of children travelling to school by car has doubled . To make matters worse, the number of bus routes have reduced by around 60% since 1950s.

The dramatic rise of the car has not only contributed to the climate emergency, but has also created traffic and air pollution problems across the world. While historically, the main cause of air pollution in the UK came from industrial pollution, these days the main source is from traffic emissions, of which school traffic forms a fifth.

Many factors feed into the rise of the car for the school run, but we have reached a point where action must be taken. Poor air quality is bad for our health, and contributes to the rise in respiratory conditions such as asthma, cardiovascular disease and lung cancer. Bristol recently hit the headlines over the lethal nature of poor air quality where 5 deaths a week are said to be caused by air pollution.

Things have only been made worse by the popularity of the SUV. Not only are they more dangerous for both drivers and pedestrians due to their size and more limited visibility, but they also emit around 25% more than an average sized family car.

Like much of the UK, Guildford has been reminded of the price to be paid for ignoring the climate crisis. Following floods in the winter, there has been an exceptionally dry spell. Dry and hot weather make fires much more likely, and in Surrey, Chobham Common is once again on fire – the second time in less than five years.

Reducing the reliance on cars will have to be part of the response to the climate emergency. The trouble with air pollution however, especially from exhaust pipes, is its largely invisible nature or what I recently saw described as "invisible litter". Since we can't really see it, it is an even more insidious threat.

Guildford is fortunate to be home to The University of Surrey's Global Centre for Clean Air, whose research often makes the national news. Their research found that idling vehicles around schools during drop off times can cause pollution levels around schools to spike by around 300%, significantly worsening air quality.

So why did children stop walking to school? Part of it is due to the rise of the car culture. Life has become gradually less local and less community orientated, while bus routes have been axed. Changes to infrastructure in the last decades have mostly been focused around accommodating even more cars - inevitably nudging out cyclists and pedestrians.

The government right now is focused on getting children back to school after a sixth month absence because of the Covid-19 pandemic. As such, the minister for transport recently announced funding for school buses and is encouraging walking or cycling where possible. Certainly the measure to reintroduce the school bus is welcome, but it seems unlikely that there will be a substantive up-tick in schoolchildren walking, and even less so with cycling.

Part of that is due to the roads not being properly set up with cycle lanes and the fact that cyclists are 15 times more likely to be killed on the roads than drivers. When it comes to walking, however, when it comes to road safety, it is actually statistically safer as a pedestrian than as a driver. Pedestrians make up 26% of road fatalities, while car users almost half.

Nonetheless, there are certainly roads which are currently too dangerous for children to walk along such as roads which have no pavements or few crossing points and parents cite road safety as a top concern when considering letting their child walk to school. Given that, more consideration should be given to planning the main walking routes to and from school, and improvements made to the signage, crossing points and traffic calming measures.

If a way can be found, there are benefits to children, not only from cleaner air, but from the proven health benefits of walking to school. It's a way to combat obesity (now affecting one in five children in the UK) and increase social interaction.

Some parents, however, are left with little option but to get in the car. The past half century has seen village schools close, with conglomerates replacing them – and little or no public transport. This, combined with the question of school selection and Ofsted ratings of "outstanding" "good" and "special measures" - has also made it less likely that children will live within walking distance of their school.

Even if alternative transport methods were improved, and roads were made safer, there remains the question of breaking the habit of the school run. On this point, schools' Parent Teacher Associations could collaborate with Eco-Schools to not only raise awareness about the dangers of air pollution from traffic around schools, but also to encourage parents to think more about the benefits of walking to school and the alternatives to individual car travel.

The Covid-19 lock-down brought us cleaner air for a brief spell, as well as the chance for many who live in urban environments to hear bird song, and see wildlife. Children could play outside in the road without the risk of cars mowing them down.

People made huge changes to their lives in the space of days. If something so radical was possible then, and citizens were willing to abide by the rules for public health reasons, then there is hope that they would also do so again if they knew about the grave threat that failing to cut emissions poses to our health, and to the future of all life on earth. Rethinking the school run can play its part in that.

https://www.surrey.ac.uk/global-centre-clean-air-research/resources/guidance-schools

To read more from Caroline visit her blog – www.regreentheplanet.blog

The Future of Education for the Pandemic Generation

by Jake Paterson

By September, a full 6 months will have elapsed with the majority of students having had no physical contact with school. The delight of this extended summer holiday for many will quickly become a nightmare as the severity of missed education comes in full force once schools reopen.

That is of course, if schools can fully reopen at all.

Encounter in rain, of an evening
by Michael Tanner

Roe-deer, three, I think, but
colour of dead bracken,
tall, dead reeds
where woodland
turns to marsh.
At dusk, one is not sure of anything.

They see me first –
two-legged Man,
bulked out in waterproofs,
clumsy through puddles and mud
until He stands
still as a post,
a post that's watching them!
Caution and curiosity
govern the four of us.

And then I mimic calling of a thrush:
"Again Again Again"
through trees, through rain
sounding not quite bird,
not quite Man.

For seconds more
they linger at the scene
but are not reassured
and vanish into dusk
with virtuoso leaps
except for one
who covers their retreat.

No dogs, no shouts, no gun --
I think they'll not go far,
before they pause
to check they're rid of me,
stooping their slender necks
once more to nibble leaves
while night and rain
establish their domain.

How long they will
recall the event
I cannot say:
One of the two-legged kind
sharing with them

the time of day,
and that odd calling
with its strange refrain -
might leave some imprint
on a wild brain (?)

From my personal experience of education through lockdown, the continuation of limited class time and the perseverance of online learning would be catastrophic to the intellectual and social development of millions of children across the UK. A recent BBC report has suggested that lost school time 'will hurt [the] economy for 65 years' as the future skills of the workforce are negatively impacted, costing billions in a reduced growth rate.

During lockdown, limited contact at my school in Guildford was allowed for those in Year 10, who were given lessons in Maths, English and Science only. Ofqual (UK exam regulating body) have made plans for some subject areas in English Literature and History to be able to be dropped for GCSE students, for fear of a lack of teaching time. As GCSE students return to be taught up to ten subjects in September, it remains to be seen how successful a full school opening will be in delivering the wider range of subjects for all students, when health is placed as a priority.

Most notably, we can question whether the effects and causes of climate change in an increasingly carbonised world will be taught effectively to a whole generation of students at GCSE level. It would not surprise me to see lessons in the atmosphere, ecology and the greenhouse effect disappear, albeit temporarily, from the science curriculum, leaving thousands of students unaware of exactly how critical knowledge of these areas is.

Regarding remote education, the quality varies upon teacher, subject and year group and most importantly, the income of your parents. The Sunday Times reported that students studying at independent schools in Surrey start the day online at 8:20 am and finish at 4:00pm. Contrast that to the teaching I have been provided which had a best-case scenario of one or two lessons a day lasting for between thirty and sixty minutes. Whilst measures remain in place, the growing connection between quality of education and affluence will be exacerbated even further. As the mother who has to share one mobile phone between four children to access learning competes with those more fortunate. Could we even suggest that economic disparity could lead again to a lack of depth when it comes to education on climate change?

Universities have also been hit hard by the pandemic, with international student numbers expected to drop dramatically, correlating with an already present issue around funding. This may result in reduced offers to attract more UK students, but is unlikely for highly ranked universities who must preserve the integrity of the course they are offering. There have also been many calls to reduce university fees as lectures move online, pushing the funding crisis even further. The credibility and accuracy of this year's exam results may also be put into question as both the GCSE and A-Level grades are set to be higher as exam boards are more lenient.

Whilst the option to defer a year of university and resit is a possibility, it won't be attractive for many, particularly with the travel restrictions resulting from Covid-19, limiting anyone's gap year to the Devon coastline.

When students return, it will be highly likely their first conversations will be centred around their time during lockdown, focussed more on the Netflix shows they caught up on, and not the vital education that they missed, which could be demonstrated by many more teenagers not adopting low-carbon lifestyles as they become adults. With both A-level and GCSE results day now passed, the future of a generation is set to be decided by the outcome of a pandemic, the knock-on effects of which we will continue to see seemingly for the rest of our lives and hence furthering the already devastating climate issues of our time.

Will the prevalent issues over education and unemployment as a result of the pandemic serve to distract young adults and students from combatting climate change? That remains to be seen, perhaps sooner rather than later as Extinction Rebellion have stated that 'From 1 September, we will come together to peacefully rebel in London, Cardiff and Manchester until Parliament promises to debate our 3 demands in the Climate and Ecological Emergency Bill and set up a Citizens' Assembly'.

I hope to see you there, alongside countless others serving to end the battle against climate change for the long term survival of mankind, not the short term effects of this pandemic.

Pewley Down Centenary. A small celebration

Pewley Down is a much loved green space and important nature reserve only fifteen minutes' walk from the centre of Guildford. It was gifted to the townspeople 100 years ago.

David Rose has written an impressive article for the Guildford Dragon about the gifting, which I really recommend reading.

Pewley Down Volunteers (PDV), who perform conservation work on the Down, were organising a celebration and exhibition involving all the pupils of Holy Trinity and Pewley Down Schools, representatives from Holy Trinity Church, the Mayor, Councillors and other local celebrities.. Sadly, COVID-19 put a stop to all this, though the lockdown has resulted in many people enjoying this wonderful open space for the first time.

The centenary didn't pass without celebration. Early on the 29th, a red ribbon appeared around the monument with birthday cards attached. In the evening, several small groups were on the Down. I joined friends from PDV and gave this slightly edited talk:

A marbled white by Jonathan Mitchell

"We're here to celebrate Pewley Down, but I'd also like to thank two extraordinary people for its existence today. Henry Haversham Godwin-Austen and Charles Hoskins Master.

Haversham was an explorer, cartographer, an expert mountaineer and naturalist, owner of the Shalford Estate and maybe Britain's first Buddhist convert. He did not seek fame & fortune, like some other Victorian explorers, of whom he was on a par, and unfortunately was bankrupted in 1899. Where his real interests lay can be inferred form a letter to the Surrey Ad at the time: "All lovers of nature will, I am sure, deplore with me the destruction of animal and bird life going on around us, which is rapidly wiping out what is left. One of the saddest things is the thought that after 50 to 100 years so many of the beautiful animals and birds will cease to exist." And, during the bankruptcy proceedings he reached into his pocket for a matchbox and took out a shell of a favourite mollusc and declared "This shell is worth more to me than all the money I owe"'. I am not sure how impressed his creditors were by this, but it impresses me.

In the 19th century, most of the land between Pewley Down and the town centre was open countryside, but by 1906 house building had severely restricted public access. This prompted Haversham to offer part of his Shalford Estate to be preserved

A view of Pewley Down by Jonathan Mitchell

for public use. In a letter in 1906 to the Surrey Advertiser he wrote, "Although there are many who must see what is coming and deplore the extinction of all open spaces, it must be said that the town of Guildford is silent about the matter. I write to direct the attention of all to the subject, for without the support of public opinion the Council cannot act. At the same time, it will show what value Guildford sets on natural beauty situated so close to its very centre." And continued, "This strip of land on the chalk ridge may be likened to the beach of a seaside place, and surely is worth preservation. Here, as by the sea, ladies and nurses may be seen any fine day sitting, reading or working while the children play, and the pedestrian can look over the many ranges of the Surrey Hills".

A massive snag was that although Haversham was no longer bankrupt, the estate was still administered by a trust, who legally required full market value, more than Guildford Council could afford. The offer was made again in 1907 and 1912, but the outcome was the same. Neither the Council nor the public could afford or raise the money. Fortunately, during WWI the land remained unsold and Fort Road un-extended. In 1919 there was a call for a permanent war memorial and the acquisition of Pewley Down was the most popular suggestion. This time, the local Friary brewery owned and chaired by philanthropist Charles Hoskins Master stepped in and purchased the Down, "wishing to express in some substantial way their feelings of thankfulness for the successful conclusion of the war".

Charles came from a Surrey family. After Eton, Cambridge and training as a barrister, he decided against a legal career and, coming to his senses, bought the local Friary brewery. He was a noted philanthropist and believed that "many companies were in the position of having funds which they could spare towards the provision of objects to keep in health the working classes, whether by the provision of parks, better houses or other philanthropic objects".
Thus, on 29th July 1920, Pewley Down "was given too Guildford Borough as trustee for the benefit of all dwellers in Guildford, so that the 21¾ acres may be preserved for time immemorial as a playground for the people of Guildford". Charles hoped that gift would not be a unique example in the annals of the history of Guildford.

In our uncertain times I find it striking that both men saw well beyond the short term and recognised the benefit of acting for future generations. Haversham's foresight regarding the destruction of the natural world is particularly poignant given that in in 1920 it would have been hard to predict the immense loss of chalk downland that would follow, especially the 80% loss after WWII. It wasn't until the late 1960's that the significance of Pewley Down as a scarce natural habitat became apparent.

I am sure Pewley Down will continue to prosper and hope that in another 100 years, Pewley down will still be both a "playground for the people" and an outstanding nature reserve, and that someone will be standing here and raising another toast to thank the foresight of to two remarkable men: Haversham & Charles.

So, let's ready our glasses for this centenary's toast and raise a glass to "Haversham, Charles and Pewley Down!...

(For the record we toasted with a bottle of Pewley Down Vineyard 2013 Sparkling Rose. Which was excellent!).

By Jonathan Mitchell

A swift update

By John Bannister

Apart from providing swift nest boxes for those wanting to install them on their house, church or a public building, the main activity this past quarter has been protecting the six or so pairs of swifts nesting at a large Victorian house in Epsom Road. Firstly, nest boxes, I still have a few swift nest boxes left if people want to collect them from my house. They are made of woodcrete – a mix of FSC woodfibres and concrete – so quite heavy and guaranteed for 10 years minimum. They come with all the necessary fittings. Get in touch with me please by email, text or phone (07443914347) and arrange a time to collect.

The house in Epsom Road is another story and an ongoing one. In May Sarah Davis was alerted that work was taking place on a house used by swifts. All nesting birds are protected by law in the UK and swift numbers are falling quite dramatically in the UK. They return each year to the UK and other northern countries from Africa to breed.

A main reason for their declining numbers here is loss of nesting sites. So Sarah had to move quickly. The house was being scaffolded ready to be repaired and a resident alerted the RSPB and Sarah's name came up. The swifts couldn't have chosen a better champion. The house in Epsom Road is shared by several families and individuals and to their great credit, they and their contractors, and through Sarah's diplomacy, they stopped work and took down the highest level of scaffolding leaving the eaves free. Six nest sites were counted after weeks of careful monitoring with volunteers.

A common swift in flight by Piotr Szczypa

A big thank you to our volenteers

Sarah then organised a rota for the volunteers to monitor the swifts, their comings and goings, the times of arrival and departure each day, right up to 11th August, by when the last adult and it's young had left. Our devotion was rewarded as using a powerful telescope we were able to look into one nesting hole and see the anxious young swift waiting for its parent to return, which it did.

Now work has to start in earnest to liaise with the contractors and swift experts to repair the building with future generations of swifts firmly in mind. The residents have waited patiently, as the law requires them to, so we owe it to them to organise the next crucial stage as efficiently as possible

GUILDFORD ENVIRONMENTAL FORUM

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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 or emailed to you four times a year. Forum membership is only £10 per year or £15 for a couple, while for age 21-25 it's £5 and for under 21s it's free. New members are warmly welcomed.
Please contact Adrian Thompson on 01483 222687 or email adrian@lampcottage.net

CALENDAR

All the forum's meetings are open to the public.

Saturday 10th October,
Open Day at Rosamund Community Garden, Longdown Road GU4 8PP.

Freshly pressed apple juice from our apple press (bring your apples and clean plastic bottles to take away juice), activities for children, soup from garden produce, cakes and food. Do come and support GEF at your local community garden where we grow veg, fruit and flowers. Might even have few swift nest boxes left.
1200 to 1600.

Tuesday 3rd November
Guildford Environmental Forum AGM and a talk on "Action for Insects".

Talk by Mike Waite MCIEEM, Living Landscapes Manager, Surrey Wildlife Trust: "Action for Insects". Mike will discuss Surrey Wildlife Trust's "Action for Insects" campaign. He will cover the recent research into insect populations, the drivers of their decline, and the various actions we can all take to change the future for insects".
1830 to 2100. The Council Chamber,
GBC Millmead Offices, Guildford GU2 4BE (or Zoom, if necessary).

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Please send contributions for the next issue to Ellie Morgan (details above by Monday 9th November.

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