



GUILDFORD ENVIRONMENTAL FORUM

newsletter

www.gefweb.org.uk

SEPTEMBER – NOVEMBER 2017

Wednesday 2nd August was **EARTH OVERSHOOT DAY** this year

Earth Overshoot Day, calculated by the international research organisation Global Footprint Network, marks the date when humanity's annual demand on nature exceeds what Earth can regenerate in that year. The date of 2nd August this year is the earliest date since the world first went into overshoot in the early 1970s. This means that humanity is currently using nature 1.7 times faster than ecosystems can regenerate. This is akin to using 1.7 Earths.

The costs of this global ecological overspending are becoming increasingly evident around the world, in the form of deforestation, drought, fresh-water scarcity, soil erosion, biodiversity loss, and the buildup of carbon dioxide in the atmosphere.

But it is not too late. Cutting food waste by 50% worldwide could move the date back by 11 days; reducing the carbon component of the footprint by 50% would move the date back by 89 days.

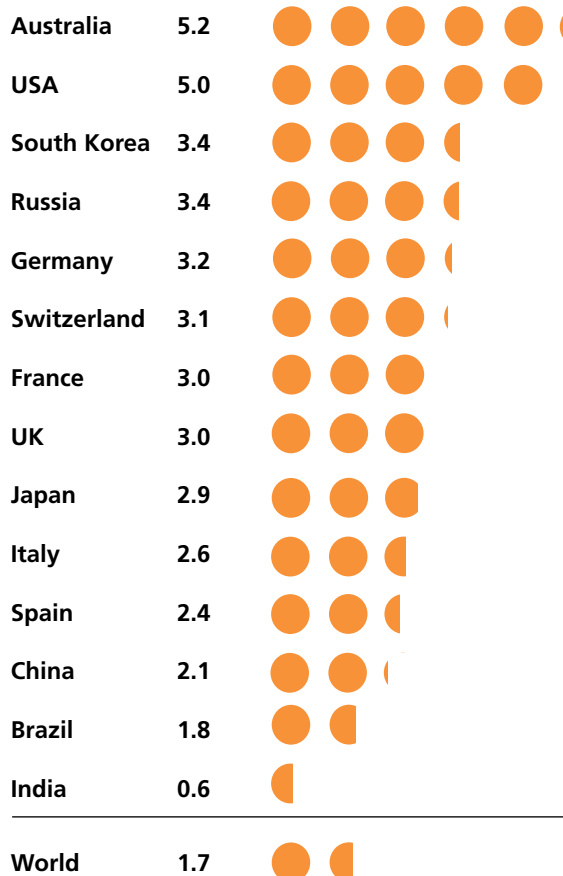
Global Footprint Network and its partners worldwide are encouraging individuals to help #movethedate by making pledges. The Network will also launch a new online Ecological Footprint Calculator to allow users to calculate their personal Earth Overshoot Day. The current calculator is used by more than 2 million people a year.

There are encouraging signs that we are starting to move in the right direction. For instance, the US per capita Ecological Footprint fell nearly 20% from its peak in 2005 to 2013 (the latest year data is available). This significant shift, which includes a post-recession pickup, is associated mostly with decreasing carbon emissions. US per capita GDP grew about 20% over the same period.

Despite the US government's backtracking on climate protection, many US cities, states and large businesses are redoubling their commitments. In addition, China, the country with the largest total

Ecological Footprint, is firmly committed to building an Ecological Civilisation in its latest five-year plan, with many initiatives to accelerate its carbon peak. Scotland, Costa Rica, and Nicaragua are other examples of countries that are rapidly decarbonising their energy system.

Number of Earths needed if the world's population lived like:



Based on an article by Philipp Kronsbein of the Global Footprint Network

We are a voluntary group of individuals who encourage Guildford residents to take action on issues relating to climate change, wildlife and sustainability. We were founded in 1993 and are funded by membership fees, donations and gift aid.

OUR MISSION

1. GEF encourages and helps Guildford Residents to live sustainably within our share of our planet's resources for the benefit and wellbeing of present and future generations.
2. GEF encourages the Guildford community to think differently about how we live our lives, and to adopt a way of living where quality of life improves as we reduce our impact on our planet so as to achieve positive outcomes for the environment.

OUR PRINCIPLES

Our actions aim to:

- a) Create a greater awareness of the urgency of action required on climate change.
- b) Advocate the principles of "One Planet Living".
- c) Ensure that the less well-represented areas of the community are included in the process, particularly younger people who will inherit our world.
- d) Create collaborative networking opportunities for individuals, groups and local businesses, especially through events, talks and our quarterly newsletter
- e) Stimulate effective local action.
- f) Influence local policy to help achieve our mission.

KEY ACTIONS

GEF members are encouraged to adopt sustainable lifestyles such as:

1. Adoption of low- and zero-carbon lifestyles and technologies
2. Reducing consumption and waste (including water), and maximising re-usage and recycling.
3. Travelling more sustainably (more walking, cycling, use of public transport; less driving and flying).
4. Valuing the local production of food and other necessary goods and services.
5. Supporting improvements in the protection of green spaces and natural habitats to promote biodiversity.
6. Fostering strong local communities by working together for the common good.
7. Participating in decision-making for the long-term needs of our communities and the environment.
8. Promoting sustainable living to others.

Dated 31st July, 2017



MISSION STATEMENT

Pollution reeks

The harsher, simpler smells caused by pollution, uncollected rubbish and even messy homes are corroding our ability to detect the nuanced hues of nature. Dr Kara Hoover, an expert in olfactory evolution, says that those with an impaired sense of smell are more likely to be obese because they crave salty and fattening food. They are also at a higher risk of mental health problems such as anxiety and depression.

(Source: telegraph.co.uk, 22 Feb, '17)

Hungry mouths

All the world's spiders eat as much as the world's whales – 400-800 million tons of meat annually, according to research published in *The Science of Nature*. Indeed, they could polish off the entire human population in a year. Happily they don't seem to have worked that out yet.

(Source: BBC Wildlife, Jun '17)

FACTS & FIGURES

Not all that cold then

The Arctic archipelago of Svalbard was so warm in 2016 that the average annual temperature could end up above freezing for the first time on record, say scientists at the Norwegian Meteorological Institute. The normal average temperature in Svalbard is minus 6.7°C.

(Source: i Weekend, 26 Nov '16)

GEF's response to the Guildford Local Plan

Many of our regular readers will be aware of the long drawn-out process relating to the Guildford Local Plan. The previous Local Plan was completed in 2003 and the first documents of the current Plan were released back in 2013. GEF's submissions were summarised over four pages in our December 2014 newsletter. Additionally, our December 2015 newsletter summarised GEF comments on the "Guildford Town Centre Master Plan" and most recently our September 2016 newsletter summarised our brief response to the 2016 version of the Local Plan.

The Local Plan is now nearing finalisation and covers the period to 2034. Guildford Borough Council released the 2017 version for further targeted public consultation between 9th June 2017 and 24th July 2017. However, responses were limited only to changes from the previous draft. In this context GEF's response to the 6 questions included the following:

The Environmental Sustainability and Climate Change Study (updated 19.06.2017)

GEF commented that "although in many ways a very useful summary, it is somewhat out of date. We note that this Study contains very little new data since 2014 and that much of the evidence (see pages 43 to 46) dates back to 2007 to 2010. It refers on page 12 in clause 3.17 to new technical standards that will be introduced (ie in the future) in 2015. We do, however, agree with the substance of the Executive Summary of this report which stated:

- Guildford Borough has higher carbon emissions than any other Surrey Borough (para 4.15 on p.18), mainly as a result of high road transport emissions.
- Guildford Borough's carbon emissions in respect of household energy consumption exceed even those of Scotland, where the climate is much cooler (para 4.33 on p 22).
- Small scale renewable energy production is lower in Guildford Borough than other parts of the UK (clause 4.42 on page 24).
- Our water consumption is very high compared to England and Wales, while availability is low (clause 4.46 on page 25).
- The potential for extreme climate change, and the possibility that

change may come quickly, as the 2020s projections show, means Guildford will need to make plans for adaptation to begin in this plan period (Clause 5.13 on p. 29)."

GEF's response also commented that: As regards the *Surrey State of Nature Report*, this valuable 32 page document has been produced by Surrey Wildlife Trust on behalf of the Surrey Nature Partnership in 2017. We have found no reference to it in the Local Plan 2017, but we believe that the update on biodiversity that it contains should be taken account of in the 2017 Local Plan.

In its conclusion it states that "We are entering a new phase and scale of development to deliver housing and related infrastructure across the county. Our resources will be stretched ever tighter to ensure these proceed as sustainably as possible, by incurring no further losses to Surrey's biodiversity but instead offering opportunities that result in a genuine net gain".

GEF would recommend that pages 24 and 25 of this Report, which discuss the importance of "Natural Capital", should be incorporated by GBC in the Guildford Local Plan. We note that the Surrey Nature Partnership plan to produce a "Natural Capital Investment Plan" in 2017 and would recommend that GBC consider this seriously in implementing the Guildford Local Plan.

As regards to whether the Plan is legally compliant, GEF commented that **"The Climate Change Act 2008** (c 27) is an Act of the Parliament of the United Kingdom. The Act makes it the duty of the Secretary of State to ensure that the net UK carbon account for all six Kyoto greenhouse gases for the year 2050 is at least 80% lower than the 1990 baseline. Even if there is currently no law requiring Guildford Borough Council to incorporate this in this Local Plan, which extends to 2034, GEF believe that Guildford, like Woking, should set local targets to achieve that aim and monitor its performance annually and that the planning should start immediately."



GEF commented on the Proposed Changes to Particular Paragraphs as follows:

In general, GEF believe that the 2017 Plan is a big improvement on earlier versions and that the reduced number of homes planned (p21) and the reduction in planned increase in retail floorspace (p22) are welcomed as being improvements. However, in the detail, GEF have noted the following issues arising from changes to the Guildford Plan:

1. Clause 2.13 on page 13, accepts that "there is a fragmented and disjointed network of cycle routes, consisting of routes both on and adjacent to local roads, with the latter often comprising shared lanes for pedestrians and cyclists. Many cycle lanes and tracks are narrow and some are unattractive to the average cyclist." Furthermore, clause 2.14b states that "A growth in cycling has occurred despite limited improvements to facilities for cyclists." However, we have been unable to find proposals to improve this situation, which is unacceptable as this should be a very

significant way to reduce transport emissions. Funding contributions are understood to be available from organisations like Sustrans.

2. On page 38, we welcome the changes to recognise the need for more family houses and accessible accommodation for older people. We believe that The Council could do more through the Council Tax system to encourage the use of empty houses and discourage the overinvestment in luxury houses.
3. GEF welcomes the additional clausing on page 61-63 to recognise the importance of Climate Change in planning policy. GEF would strongly recommend that:

- Carbon emission targets should be set, as is the case in Woking, so as to set the framework for at least an 80% reduction in emissions by 2050. This requirement is set in law as a result of the Climate Change Act, 2008.
- GEF believe that the performance against these emissions reduction targets should be monitored annually and action taken to ensure that the overall targets are achieved.

4. GEF welcomes the additional support on page 113-14 in respect of energy efficient CCHP systems.
5. **Biodiversity.** Clause 4.6.33 on page 134 of the Plan has been amended to state that: "A positive approach to the provision and maintenance of Green Infrastructure is crucial to the maintenance, protection and enhancement of biodiversity and wildlife in the borough, not least through the creation of new habitats and by providing connections between existing habitats. It can further assist in adaptation to climate change by providing pathways for species dispersal and migration, climate change adaptation through providing the cooling effects of tree cover, and in the natural management of fluvial flooding, for example, through floodplain re-connection and restoration, provision, connectivity and which

Misnomer 1

Hydrangea serratifolia means 'with serrated leaves'. It actually has smooth leaves but the original sample had been nibbled.

Misnomer 1

Lichen aromaticus has no aroma, but the original specimen had arrived in a perfumed envelope.

(Source: 1,342 QI Facts)

FACTS & FIGURES

The dark side of LEDs

LEDs (light-emitting diodes) are being installed on roads worldwide, being cheap, energy-efficient and long-lived. However, the negative effects have not been investigated. Despite modern LED road lights being directed downwards, some are so bright that a proportion of their emissions is reflected upwards and outwards, and unregulated sports lights turn night into day across a wide area. This not only creates light pollution but affects night-flying insects and the creatures that rely on them.

(Source: buglife.org.uk, Summer '17)

Crazy fares

An 'anytime' day return train ticket from London to Penzance via Plymouth costs £250. But if the journey is split – London to Plymouth, then Plymouth to Penzance – and the same combination is used for the return journey, the cost is £50.

(Source: I Weekend, 18 Feb '17)

"There's no point bleating about the future of pandas, polar bears and tigers when we're not addressing the one single factor that's putting more pressure on the ecosystem than any other – namely the ever-increasing size of the world's population."

Chris Packham, naturalist and patron of Population Matters

can also result in the creation of new wetland habitats."

GEF agrees with these changes, but GEF would recommend that, additionally:

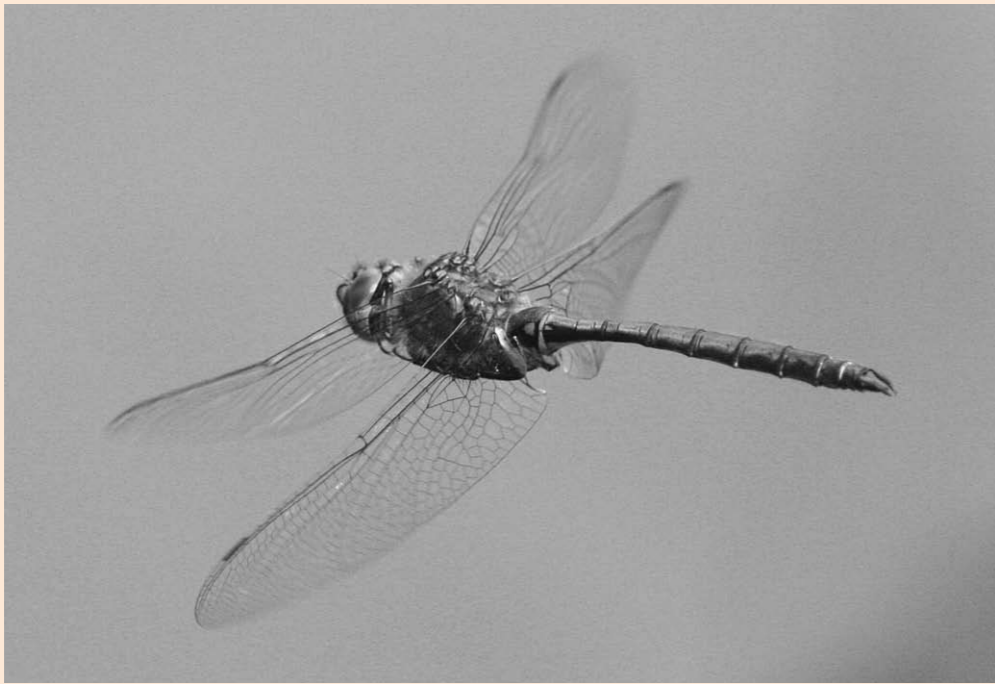
- The words "...without any one dominating over the others" should be added at the end of the new definition in clause 4.1.2a.
- In clause 4.5.20 the words "replace 110 litres/person/day!" should be replaced by "less than 110 litres/person/day using fittings approval". The evidence base for this alteration is the Gov. UK Approval Document G 2016 updates.
- At the end of clause 4.5.28a, we consider that the words "any CHP system should also help address power security system limitations in the town centre" should be added at the end of this new clause.
- After the word "restoration" in clause 4.6.33 that the words "and for retaining water for longer in upper catchment areas" should be added.
- In the next clause 4.6.34, the last sentence should be modified to "which is indicative of how much richer in wildlife the borough could become". The evidence base for this is The State of Surrey's Nature, published by the Surrey Nature Partnership 2017.
- We are pleased to note that GBC are "Planning a Green and Blue Infrastructure Planning Document
- The Council should immediately start developing a "Biodiversity and Green Infrastructure Strategy and Action Plan" for the period to 2034. , which is much more specific in its aims than the draft Countryside Vision published in April 2017.
- The Council should appoint a Councillor with the title "Portfolio Holder for the Environment, Wildlife and Sustainability and Chair of the Council's Climate Change Working Group".

GEF believe that the recent publication of the *Surrey State*



of Nature Report shows that Guildford should plan for a net gain in biodiversity and not accept the significant declines that were recorded in *The Second State of Nature Report for the UK* which was published recently. This shows that over the past 50 years, 56% of our species have declined and that 15% of those assessed are at risk of national extinction. The UK has lost more nature than the global average: we are now one of the most nature-depleted countries in the world. As an affluent town, Guildford should be leading the way and thus ensuring that the Borough is a better place to live in 2034 than it is now.

With regard to Question 6 – Any other Comments, GEF responded as follows: "The importance of all the points that we have made above has been highlighted by the publication this week in a new International study that identifies the most effective ways that people can cut their carbon emissions. With the average person in the UK currently adding 7 tonnes of CO₂ every year, it is accepted that the target must fall to 2 tonnes by 2050 so as to limit temperature increases to 2 degrees. The report stated that the main savings could be made from having fewer children, selling a car (2.4 tonnes), saving a transatlantic flight (1.6 tonnes) and becoming vegetarian (0.8 tonnes). Guildford Environmental Forum have huge experience amongst our members and many ideas to help Guildford Borough Council to reduce the impact of Climate Change and to stem the loss in biodiversity. We would welcome the opportunity to share those with the Council."



Brilliant Emerald in flight at Thursley Common

Get inspired by Surrey's dragonflies

David Hepper, British Dragonfly Society

DRAGONFLIES ARE MY PASSION and I make no excuses. Their flight is incomparable and Surrey has some of the finest species in the country. All you need is a slim ID guidebook, a pair of close-focussing binoculars (such as the excellent Pentax Papilio), a pair of boots and some sunscreen. There is even a comprehensive ID guide to the larvae for those prepared to risk getting wet while guddling in ponds and bogs.

The **Small Red-eyed Damselfly**, so-called because it is slightly smaller than the long-standing native Red-eyed Damselfly but with similar and characteristic eyes, has been making its way steadily across Europe from the Balkans over the last 35 years and reached the South East of England in 1999. Rather than tackling Surrey head-on, it has made a pincer movement by colonising the infamous Bluewater shopping centre near the M25 in Kent and across the Thames in Essex, while also infiltrating Hampshire from the Isle of Wight. For such apparently delicate insects this is quite a feat. The species had already colonised westwards across Europe, then skipped the English Channel without the need for invasion barges or ferry tickets. By the summer of 2008 it had reached North Norfolk, the Midlands and Gloucestershire. Covering 50 km per year, it is still marching, or rather fluttering, up England.

This is even more remarkable when you consider that studies in the New Forest have shown that individuals of the **Southern Damselfly**, a similar-looking species not recorded from Surrey, rarely

move more than 50m from where they emerge from the water. It is unsurprising that the Southern Damselfly is rare to the point of needing statutory protection under the Wildlife and Countryside Act. Unlike its more mobile cousins it may be unwilling or unable to move elsewhere if conditions at its home site become unfavourable.

The adult Small Red-eye is 3cm long, weighs next to nothing and can live for several weeks after spending the best part of a year as a larva. The head is dominated by a pair of bulbous eyes, giving it the all-round vision needed both to catch small flying insects and to avoid its own predators such as birds and larger dragonflies. It flies gently but purposefully just above the pond surface and prefers larger ponds with Hornwort, floating mats of algae (bright green weed made up of long strands) and other water plants where the female lays her eggs. The carnivorous larvae look a bit like tiny crayfish and spend their time fossicking in the water weed for smaller creatures such as water fleas to catch and eat. In Surrey, the best time to see the adults is between July and September, for example at Surrey Wildlife Trust's Bay Pond nature reserve at Godstone. When this species reaches a suitable pond the population often explodes. It is not unusual to see hundreds flying on a single day.

Climate change and competitive pressures work both ways, however. The rare **White-faced Darter** died out in 1999 from its most southerly location in the UK at Thursley Common, near the A3 – shortly after a special boardwalk was installed to its pond.



The spectacular Golden-ringed Dragonfly can be seen patrolling small streams and runnels at Thursley Common, Fox Corner, Farnham Park and other sites

Since it is considered that Surrey is now too warm for it, introductions to (hopefully) suitable sites are being attempted further north. You could even go down in history by spotting the first arrival of the **Large White-face**, a related Darter species and one of ten on the British Dragonfly Society's watch-list of potential new immigrants from France and the Netherlands.

Additional dragonfly records are always welcome wherever you go and one of my roles within the Society is to maintain the scientific records of sightings, assisting a small army of observers around the UK, along with their County Recorders who vet and verify the sightings for their patch. The Society welcomes those with any kind of interest in natural history and we try, in particular to recruit birders who've "been there and done that". Come and join us!

Another of my roles is to co-ordinate the **Hampshire and Surrey Borders Group** of the British Dragonfly Society. We meet each January to plan a programme of field meetings for the coming year, visiting new and unknown sites across Surrey and Hampshire and even straying as far as Berkshire and Kent – wherever there be dragons. I would also like to expand our activities by leading school trips to our excellent nature reserves.

www.british-dragonflies.org.uk
records@british-dragonflies.org.uk

Stepping Stones for Surrey's Small Blue

Bill Downey, Transect Coordinator, Butterfly Conservation Surrey & SW London

PATCHES OF WILDFLOWERS will be grown in Surrey as part of a new project to connect areas of habitat for the benefit of a rare butterfly.

The **Small Blue** is Britain's smallest butterfly and can be seen on the wing from mid-May to late June. This tiny butterfly appears brown when settled but looks bluer in flight. The species was common at the beginning of the 20th century but is now nationally rare and has declined by 38% since 1976.

In Surrey, the Small Blue is restricted to a handful of areas of chalk grassland on the North Downs where Kidney Vetch is found – the only plant that the butterfly's caterpillar will feed upon. Kidney Vetch colonises disturbed ground and over time is outcompeted by other plants: it can only thrive on bare ground where some disturbance is taking place or in sparse sward. It is also a short-lived plant and needs a yearly recruitment of seedlings to maintain a colony.

The butterfly lays its eggs on the flower head of Kidney Vetch and the emerging caterpillar will stay

on or near the plant until it pupates the following spring. The life-cycle of the Small Blue is therefore inextricably linked to its food plant without which it will not survive.

Small populations of Small Blue can be found on the North Downs near Guildford and at Box Hill – but there is almost nothing in between. Butterfly Conservation is therefore launching a project to link up these habitats by growing additional areas of Kidney Vetch. These habitat 'stepping stones' will provide the Small Blue with more areas to breed and allow its population to grow, spread out and cope with the pressures of a changing climate.

The Small Blue Stepping Stones Project will work in partnership with the National Trust, the Surrey Wildlife Trust and local farmers to create a network of habitats. The project will also train volunteers to monitor and sustain these habitats after the end of the two-year project.

The project also seeks to build on – and learn the lessons from – the previous 'Conserving the Small

Blue on the Guildford Downs' project in 2013. This saw scrapes for Kidney Vetch put into the chalk at a number of locations around Guildford: at The Mount, Pewley Down and Newlands Corner.

The reason that butterfly species are lost is that, due to human activity, areas of suitable habitat become fragmented. Populations then become isolated, lose their genetic vigour and over time just fade away.

What is important for the species is to increase the number of population groups, enabling individuals to move between them and to share genetic material. In poor butterfly years they will contract their range into core areas: in good years they will expand into other areas of habitat.

This is what lies behind the strategy of the



The Small Blue butterfly is completely reliant on Kidney Vetch. Eggs are laid on the plant, and the caterpillars stay on or near it exclusively until they pupate.

Pictured at The Mount in August is transect walker, Ros, standing in a large patch of seeding Kidney Vetch. There is a lot more of the plant in the area this year, which is very encouraging for the Small Blue.



stepping stones. The creation of suitable habitat at regular intervals along the North Downs provides the linkage which enables the butterfly to move through the landscape and to mix. This will be of benefit not just to the Small Blue but to other rare butterflies as well, such as the **Grizzled Skipper**.

A Project Officer has just been appointed and the project officially began in August. The area of focus is the North Downs from Guildford to the Mole Gap, although Butterfly Conservation has the long-term ambition to create better linkage between the Small Blue colonies on the Downs and others which exist on the dip slope of the chalk around Epsom, Cheam, Ewell and Croydon.

If you would like to get involved with the project please email me at billdowney@sky.com. The intention is to hold a number of training sessions for volunteers and also run conservation work parties to improve habitat.

2017 has so far been a good butterfly year with the hot weather in June pushing numbers up. The Small Blue has been recorded on butterfly transect walks at The Mount, Pewley Down, Merrow Downs and at Merrow Park & Ride. Particularly encouraging has been the growth of Kidney Vetch in the sward at The Mount, suggesting that numbers may increase there in 2018.

... and also in Guildford

One other piece of butterfly news is that the rare and elusive **White-letter Hairstreak** has been found at a number of locations around Guildford. This species, which is totally dependent on elm trees as the food source for its caterpillars, has declined massively in the United Kingdom since the 1970s and the ravages of Dutch Elm Disease.

However, healthy elm can still be found and one of the trees which supports the butterfly is the large Siberian Elm (pictured left) in Guildford High Street, opposite the grammar school. An urban setting is no impediment to this species: indeed we have found it on planted trees at a site in Vauxhall in view of the Houses of Parliament!



The Surrey Suburban Back Garden



by Forum member Michael Tanner



"GARDEN". IT'S DIFFICULT TO think of another word in English that affords such a wealth of pleasing connotations and virtually none that are unpleasant: innocence, delight, privacy, relaxation, discovery, mystery, romance, colour, light, shade, music, escape, refuge, fertility. Even when one experiments with placing a modifying word or phrase before or after – water, herb, vegetable, Chelsea, of remembrance, etc. – "Garden" has the virtue of blessing by proximity. What genius thought of the Eden expulsion story as a metaphor of the human dilemma. The more you think of it the more it seems to apply. (No offence intended to fundamentalists of any religion.)

Gardening itself must be one of the limited number of human tasks which is genuinely rewarding and addictive at the same time, however much the ageing back and knee suffer in May. Humans are not yet so evolved they have outlived the essential need to cultivate, contact the soil, keep in touch in fact with the cycles of growth and decay.

And then you have something entirely different. The Grenfell Tower Block catastrophe must have made many in this country and in particular in this well endowed county of Surrey, reflect on the huge differences of private space available to families and individuals living in Great Britain.

As I write this I am by an open window looking out onto my back garden. The sun is shining, wood pigeons cannot resist announcing their presence, a variety of flowers of differing colours stand absorbing the sunlight, fresh air comes into my lungs without impediment. I am vaguely aware of aircraft heading to Heathrow and of traffic on the A3 and not far off a workman has been doing something with a hammer where someone is having a loft extension.

Yesterday, from the same window, I watched a little girl looking for snails in the same garden, totally absorbed in what she was doing. No need for an adult to look out for her here. She normally lives in a high-rise flat in Moscow and to her snails are a wonder. At the present moment she is still in bed and a magpie is looking for the snails, or is it sensing out where a squirrel has buried something worth eating? Its mate is not far off. One of them will surely signal to other interested parties when its all-seeing eyes spot the local vixen passing behind some currant bushes.

It is satisfying to have planted much of what I am looking at – apples, tomatoes, flowers, and shrubs – and fascinating to reflect how the seasons affect them and us. How butterflies, moths, bees, hoverflies, dragonflies and a host of species in numerous genera visit and use this space. More than 30 kinds of bird and goodness knows how many kinds of what we conveniently call weeds also use this space. How many kinds of what we conveniently call pests could be added to the list by one skilled in such areas?

What a privilege to share such a space with so many far less obtrusive creatures than ourselves. What an even greater privilege to have the time to do this. But surely in a healthy world such things should not be in the privilege category. The benefits of living and working in close contact with fresh air, with growing things and with other creatures are universally agreed, yet an increasing number of people even in this affluent county do not have daily access to such things as a private back garden where they may have the satisfaction of growing things or simply resting.

Witness the diminishing plots of land on which even the more expensive homes are being built – and that is in the relatively few places where house building is taking place.



One of E M Forster's short stories, *The Machine Stops*, outlined very effectively where we seemed to be heading with increasing velocity. Increasingly we seem to depend on technology to offer solutions and increasingly we allow technology to dictate where we are heading. It seems too often that we are losing touch with essentials to our survival as fully equipped human beings. In Forster's story humans have become totally captives of a synthetic environment. 'Climate Change' adherents, of whom I am one, think the message is clearly on the wall, as our already inadequate house planning is confronted by major problems of drainage and other aspects of infrastructure.



However, when one looks at certain facts and figures one is left with some decidedly puzzling questions. As recently as the summer of 2016, the UK National Ecosystem Assessment (NEA) was completed and published. It showed, for example, the following percentage figures for proportions of Urban Landscape in the UK: England 10.6%; Scotland 1.9%; N. Ireland 3.6%; Wales 4.1%. Amongst several surprises, just over 54% of land in towns is counted as greenspace of which domestic gardens account for 18%.

Of course, all statistics can be deceptive for the uninitiated as for example, in London, it is estimated that 3,200 hectares of FRONT garden are now covered in such materials as concrete, gravel or forms of paving (a good example of land which can no longer soak up rainwater). Yet the proportion of English landscape actually built on is still surprisingly low at 2.27 %.

If the deficiency of available natural land is really just in our perception, as the figures strongly suggest, perhaps the moral is "we should get out more." That



is scarcely something you could comfortably assert in the face of thousands who, even in their leisure time would find it daunting and too expensive to escape from the concrete jungle in which they have always found themselves. No wonder they jump once a year on Easy Jet and head for the Costa Del Sol, or similar, where the fact that they are in another concrete jungle is obscured by sunshine, sea, alcohol and apparently exotic fast food.

With its countless footpaths and density of woodland much of the Surrey countryside is accessible to the Surrey dweller, but for how long will he/she be able to benefit from this proximity?

When in Sheffield recently I was pleasantly surprised by the extent to which back and front gardens were obviously cherished despite the evident fact that so many streets in that city are built on seemingly impossible gradients, a factor which has also diminished the possibility of large gardens.

So I come back to where I started: the above-average-sized, Surrey suburban back garden tended often by hired help, frequently enjoyed by the retired but often offering the commuting owner the kind of refuge so many more would hugely benefit from. Such are those children in high-rise apartments which deprive them of that right which all should have, of contact with things that grow, the soil they grow in and the satisfaction of the planting and tending.

Our young, in particular, need to be able to walk and run on the earth (not concrete and tarmac). They need to be able to observe cause and effect in nature. They need to be aware of natural systems and their own relationship to natural things. They need to preserve and enhance their physical and mental capabilities in a saner environment than that offered by smarter and yet smarter machines evolving from Silicon Valley.

Aldous Huxley and many others had the same apprehensions as Forster, but young people are capable of thinking for themselves when not constantly seduced by paths of synthetic pleasure.

So where does the Surrey suburban garden come in? Well I am just so grateful for the privilege of having such a space, and sad that so many are denied anything like it in so many parts of these islands where space is often abused by the greedy, the short sighted, the misinformed or the purely selfish. But who am I to throw stones?

Hopefully, someone somewhere is already engaged in a serious assessment of the biodiversity of the English garden, flora, fauna, fungi, soil composition, toxic levels, geology, etc., and above all ways of making it more available in the daily lives of people of all ages even if they do not live in affluent Surrey.

(With grateful acknowledgement to Mark Easton, BBC Home Editor, who has centred attention on the UK National Ecosystem Assessment (2016).

"MANAGING OUR CARBON EMISSIONS or HOW CAN WE BE MADE TO DO SO?"

THIS WAS THE TITLE of a masterful talk given by Dr Bill Kyte OBE to the Forum in April. After a long and distinguished career in industry and in the European and International arenas, helping to arrive at mechanisms to manage our carbon emissions to avoid the worst of climate change, Dr Kyte was perfectly placed to take us through the stages starting in 1970 and still ongoing, from UK, European and global perspectives. He certainly did not disappoint us. His presentation is on GEF's website www.gefweb.org.uk – I cannot do it full justice here so please look at it.

The agreed target is a global average temperature rise resulting from human activities not exceeding 2 degrees centigrade from pre-industrial levels (1870). Above this (and some think above 1.5 degrees) "dangerous" impacts will follow for us and the planet. We have already increased the global temperature by almost 1.0 degree and are seeing the alarming affects. Our greenhouse gas (GHG) emissions from all of man's activities have resulted in a steady build-up in the concentration of GHG's in the atmosphere, which is causing the Earth's temperature to rise. This has already led to glaciers melting, drought, forest fires, desertification, warming and acidification of the oceans, crop damage, etc. As Bill explained, these effects won't just stop if we cut our emissions to zero tomorrow, as shown by the graphs below. Future generations are in this for the long haul.

We have to cut global emissions very quickly to first stop the ongoing rise by 2050, and then continue on a steep downward path to near zero by 2100. (Please note that the emissions associated with imports – food, manufactured goods, etc in the case of the UK – are not included in a country's emissions but in the exporting country's.) One of the things

desperately needed is a way to reflect the economic losses from climate change as well as to factor in all the opportunities for the green economy.

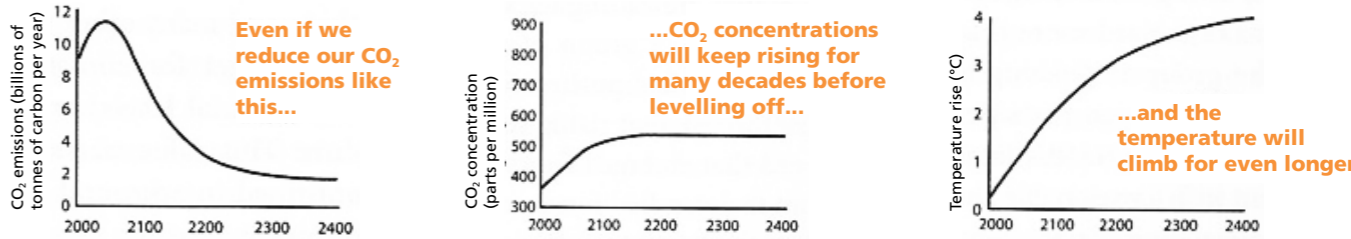
To halt then reduce the rise in our global carbon emissions Bill explained the use of "wedges". (See Bill's talk on our website.) Each wedge is designed to take out a 1 Gt/annum slice of carbon emissions using a particular technology that is already fully proven or considered close to being feasible, such as renewables, carbon capture and storage (CCS). Seven of these wedges are needed to get us onto a flat profile and then more to get us heading down to near zero by 2100.

There have been many international meetings since 1972, when the first Earth Summit took place in Stockholm, leading to the 1992 Rio Earth Summit and later the 1997 Kyoto Protocol, at which binding targets were agreed for the first time. The IPCC (the International Committee on Climate Change) was formed in 1992, since when many meetings of the parties have been held, many of which Bill attended in his official capacity.

Finally, he took us through the tools and instruments critical to getting the necessary international agreement and desperately needed action. The way the EU Emissions Trading System works is a key element and the EU led the world in Cap and Trade models since adopted elsewhere. Business likes this approach because if applied uniformly it gives the least cost solution to cutting carbon emissions across the world. London runs the EU Carbon Exchange where the deals are done.

All in all it was a tremendous talk covering the whole range of issues and means to cut our global carbon emissions. We thank Bill for putting a huge amount of work into his presentation and explaining a complex topic so very well. *John Bannister*

It is not simple



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



CALENDAR



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

Tuesday 26 September

Geographical Association of Guildford. Talk by Dr Oliver Mould of Royal Holloway College:
"Globalisation and Culture – the Emergence of a Global Culture".
1730. Auditorium, Royal Grammar School, Upper High Street, Guildford.

Saturday/Sunday 30 September/1 October

Apple pressing at the Surrey Hills Wood Fair, Birtley House, Bramley.
We will have our usual stall at this ever-expanding event, providing fresh apple juice for everyone to sample and buy.
From 1000. Please come and support us.

Saturday 7 October

Rosamund Community Garden Open Day at our Longdown Road site.
FResh fruit and veg from the garden for sale. Hot soup and other refreshments.
Pressed apple juice from our and our neighbour's orchards. Activities for children.
1200 to 1600. Do come and join in.

Tuesday 17 October

Geographical Association of Guildford. Talk by Mr Peter Fergusson,
South Coast Projects Engineer, Coastal Group, New Forest DC:
"Monitoring, Management and Engineering of the Coastal Environment".
Peter is the lead engineer for Southern Region coastal authorities.
1730. Auditorium, Royal Grammar School, Upper High Street, Guildford.

Monday 6 November

Talk by Jim Jones, Living Landscapes Project Manager, Surrey Wildlife Trust:
"Hedgerow Heroes".
The history and benefits of hedgerows in Surrey, and the Trust's new Citizen Science project.
1900. Room 6, Hurtmore, GBC Millmead Offices.

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Please send contributions for the next issue to Clare Windsor by Monday 13 November.
The views expressed in this newsletter are strictly those of its contributors and Guildford Environmental Forum.