



# ENVIRONMENT PLYMOUTH

## FEEDBACK JAN 2021

### A Fist Full of Dollars ? An Update on GMOs

Remember how the development of GMO's (genetically modified organisms) prompted concern, arguments and direct action in the 1980s and 90s ? Well, things have moved on but have the changes made any difference ? Should we still be concerned about the technologies being used ? At the January meeting Dave Curno talked us through the background and progress made and it prompted some dynamic debate.

Unfortunately the meeting didn't record but Dave's Powerpoint presentation is available on request and his presentation is set out in this edition of the Newsletter. Copies are available.

The next online meeting will be on Tuesday 9<sup>th</sup> February at 6.30pm and will, hopefully, be on the topic of food waste collections (subject to the availability of the speakers from the University). The zoom link and confirmation of the theme for the night will be sent out just before the next meeting.

GMO's – still propping up  
Monsantos or have things moved  
on ?

Birds, litter, flytipping, plastics,  
beach cleans, ocean health,  
cycling, Fairtrade, funding and  
more.....

Forthcoming events, dates for  
2021, new workshops and  
updates on exciting local  
projects.

Please note that Environment Plymouth does not produce formal minutes. The proceedings of meetings are reported in the Feedback Newsletter which is ratified at the following meeting. Environment Plymouth is the city's independent, strategic network for those interested in all things environmental and sustainable. Membership details available from Co-ordinator, Jackie, at [info@environmentplymouth.org](mailto:info@environmentplymouth.org) or by calling 01752 672537

# FEATURED SPEAKERS

## A FISTFUL OF DOLLARS ?

## AN UPDATE ON GMOs.....Dave Curno



< Genetic modification began about 45,000 years ago

But it didn't end well >



All life is determined by its genetic makeup.....how often have you heard the phrase 'it's in our DNA ? But those profiles are responsible for all the good and bad traits we see.

It was really the introduction of selective breeding in agriculture approximately 10,000 years ago that benefited from the first GMO options. Crops such as wheat, rice, root crops and maize in South America, cattle and farm animals (including horses, cattle, sheep, goats and poultry) and many fruits, nuts and seeds all emerged as a result of deliberate, selective 'breeding' ...often for the specific traits that would benefit farmers, growers and food supply.

From the 19<sup>th</sup> Century and on in to the 20<sup>th</sup> Century this selective breeding became more intensive and scientific with the backing of Darwin's theory of evolution. From the 1950s various methods were used to randomly modify genes; including radiation and chemical variance and, perhaps worryingly, viruses were often used as a vector for gene modification.

It was the 1980's that saw GMOs rise to the top of the list of 'environmental concerns when Monsanto used GMO to insert genes in to species and, in particular, to make plants species resistant to the herbicide glyphosate in a process called being Roundup ready. The use of glyphosate and Roundup is still of huge concern today. The process used was very much that of a 'sledgehammer' as it used 'marker' genes to try and target locations. Animal genes were often used as these markers and, for example, jelly fish genes were used to introduce fluorescence. Monsanto patented these genes to protect its investment and to prevent farmers from using the seeds for the following years' planting. What are referred to as Bt corn and plants gave inherent pest resistance.



The popularity of GMOs was worldwide. The US favoured GM and approved many modified crops; some of which have been growing now for over 20 years. Europe was a little more cautious and required strict proof that the genes would not escape in to the wild. Only one food crop and forty-eight others (including cotton and animal feed) were approved. GM crops were also favoured in Asia, although Japan required very strict labelling. Africa saw very little regulations and, as they were so influence by the US, South America also favoured their use.

In the UK GMOs were the focus for many demonstrations. In terms of legislation the UK followed the EU rules on food crops until 31.12.2020 and our withdrawal from the European Union. However, from 31.12.2020 the UK has embedded the current EU rules in to UK law but, as of 01.01.2021 the UK can change these to suit its own needs. It's worth noting that non food crop legislation is less restrictive than that applied to food crops.

There are still some issues with the use of GM. Animal DNA is often used in plants – an option that makes many feel uneasy about the science. The continuing use of a Glyphosate resistant gene ties the issue of GM with the use of pesticides and herbicides. Genes are still patented. GM genes have 'escaped' into wild plants; resulting in various weeds becoming Glyphosate resistant. There is the risk of creating a virulent or invasive species and the process of inserting additional genes to assist targeting or measuring can be considered questionable.

However, there is a positive side to this. The process has been used for 20 years with no detectable harm to health in the US where it has been used the most. The 'Golden Rice' project started in the 1980s suggested great potential for better human health and was approved for use in several countries in 2018. Bt products (corn and potatoes) gave protection against caterpillars whilst not harming other beneficial insects such as bees and beetles and Bt gene products require very little pesticide application.

Over the years the whole process has moved on with the latest process, CRISPR Cas 9 winning its developers, Jennifer Doudna and Emmanuelle Charpentier, a Nobel prize for chemistry – the first all female team to achieve this. This new process is a precise gene editing process that can target, cut, insert and splice genes at specific points in the genome. It is used in a wide range of processes and not just agricultural products and in gene therapy. It is even a part of the A Level syllabus.

The list of CRISPR modified products and crops is extensive and includes crops, cattle and farm animals, mosquitos, pets, cats, dogs and rabbits, fish, bacteria, viruses and in one unapproved case, humans (in China).

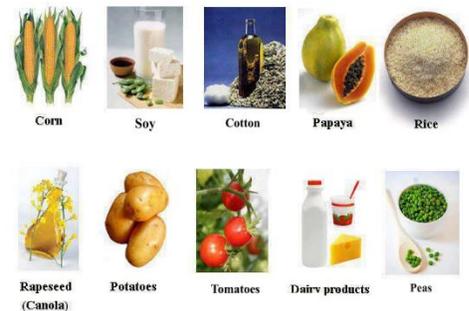
CRISPR is more precise and more flexible. There is no need to target genes or marker genes. It is a quicker process and it is available to more people. Its use does not have to be dominated by the big companies. However there may yet be some problems with CRISPR – There may be parts of genome that it cannot access. It is too easy to use so smaller labs may use it inappropriately and there is the potential to create, or re-create, organisms such as small pox.

So where are we now. Well, CRISPR was used to develop the Oxford / Astra Zenica, Pfizer / Biontec and Moderna vaccines for Covid 19 so they are all classed as Genetically Modified Organisms but it's not something that is well explained. Gene therapies are being tested for the most serious genetic diseases and in certain other circumstances. For example, its use in mosquitos produces males that do not produce offspring. This is highly specific and effective means of controlling mosquitos. This results in a massive reduction in pesticide use and in the reduction of female mozzie populations – they are ones that bite and pass on a number of serious conditions. There is even the potential to produce an organism that destroys plastic in the environment.

So what about the economic implications ? The original selective breeding was cheap but very slow and unpredictable. It was helped by the discovery of DNA but there was no sequencing of the genome. Genetic Modification was/is faster and more predictable but it is expensive. It is only really an option for big organisations. The genome sequencing starts but it is slow (eg the Human Genome project).CRISPR is fast cheap and much more specific, available to small organisation and even for home use. The genome sequencing is now quick and accurate.

It remains to be seen where things will go from here. The science has moved on and has become simpler, cheaper and more flexible but there is still the underlying potential for misuse. The story is ongoing and, like the use of herbicides and pesticides, something to keep a watching eye on.

### Top 10 Genetically Modified Foods



# DID YOU KNOW ?

We're in lockdown again and, although the vaccine programme is being rolled out, there is still a desperate need to stay safe. We really would encourage you to purchase and wear reusable face masks. We are going to need them for some time yet and they make a huge difference but the disposable ones are already having an impact on our environment, seas and wildlife.

Apparently we are currently ditching 102 million disposable face masks a week and not all of them find their way in to proper bins. If you use these, please dispose of them properly and cut the ear ties so they don't snag wildlife.

## PLASTICS PLASTIC FREE PLYMOUTH

### Phase 2

We are very proud of the 135 local businesses – both large and small – who've made the commitment to going plastic free but what do you do if you want to take that commitment further ? That was the question way back in July 2019 when the SAS Community Leaders met down in Cornwall. One of the most popular suggestions at the time was some form of 'award' scheme.....rewarding businesses for the different levels of action taken and recognizing that some might have a bigger challenge than others.

The SAS Plastic Free Communities campaign is now introducing Phase 2 and is currently considering what an 'award' scheme might look like. This is something we are very keen to support as, despite lockdowns, quite a few of our Pioneers and Ambassadors have asked how they can do more to target their use of single use, and other, plastics.

The third of our workshops addresses this and asks 'Which actions do you think should be included in a bronze, silver or gold award ? How challenging should the new categories be ? What would you like to achieve in Phase 2 ?

We will still be encouraging businesses to join in via Phase 1 (identifying 3 items of SUP and 3 actions they could take in future) but, hopefully, we'll be able to kick start Phase 2 in Plymouth over the Summer.

**If you've got any ideas but can't attend the workshop on 18<sup>th</sup> Feb, just email the ideas to me on [info@environmentplymouth.org](mailto:info@environmentplymouth.org)**

## THURSDAY MUNCH AND LEARN WORKSHOPS NEW TIMES

Our latest Plastics Workshops in January went down extremely well but, in response to popular requests we will be changing the timings of those being run in February.

They will now be run between 6.30pm and 7.30pm to allow those people who work during the day to take part. The third of these...The Next Steps...will specifically look at what Phase 2 of the campaign might do to encourage businesses to take their commitment even further.

Plymouth's Plastic Free Campaign – an introduction (for anyone new to the project):

Thursday 4<sup>th</sup> February

At 6.30 pm for an hour.

Becoming a Plastic Free Pioneer – what businesses can do.

Thursday 11<sup>th</sup> February.

At 12.30pm as above.

Plastic Free Plymouth – Phase Two.

Thursday 18<sup>th</sup> February.

At 6.30pm again.

All part of our ongoing commitment to Plymouth's Plan for Plastics and the SAS Plastic Free Communities Project .

# CLIMATE CHANGE

## Action on Climate Change

The Low Carbon Devon project at the SEI Hub was launched on 10<sup>th</sup> December with a presentation from Emily Reed on the Interim Devon Carbon Plan which needs your comments (See <https://www.devonclimateemergency.org.uk/interim-devon-carbon-plan-launches/> ). The consultation opened on 7<sup>th</sup> December and is open to all...Plymouth is still in Devon after all !

Low Carbon Devon is an ERDF funded project that will be looking at helping small and medium sized businesses with all things carbon related – so whether it's apps, a carbon management plan or the chance to work, for free, with an intern for 1 to 3 months next year, please have a look at their website at <https://www.plymouth.ac.uk/research/sustainability-hub-low-carbon-devon> and get in touch. We hope to be working with them through the Chamber of Commerce and there will be a whole range of related events as 2021 progresses.

The Devon Climate Emergency team are also looking to extend the governance of the project and to establish a county-wide Citizen's Assembly as soon as they can in 2021. Environment Plymouth has made contact with this team too and we hope to bring you more news very soon.

Our own Climate Emergency Declaration is based on the Devon-wide Declaration

**If you want a copy of our Climate Emergency Declaration please get in touch on [info@environmentplymouth.org](mailto:info@environmentplymouth.org)**

## The Devon Carbon Plan – Devon's Food, Land and Seas

Progress is being made on the Interim Devon Carbon Plan too with a series of webinars and consultation opportunities. You can also access the slides and chat files from the most recent discussion – on Devon's Food, Land and Seas - on their website as well as booking for future events. Just scroll down beyond the links to register:

<https://www.devonclimateemergency.org.uk/interim-devon-carbon-plan-webinar-series/>

## ON HS2

From Chris Packham via concerned Environment Plymouth members....

At 11pm on the 6<sup>th</sup> January, in under two days, we reached the halfway point with our [e-petition](#) ... 50,000 signatures. It's been heart-warming to see the rapid growth of signatures, showing our deep concern for nature and democracy. Sadly the destruction of ancient woodlands and wildlife sites is still considered 'essential' work in lockdown.

**We now need another 50,000 signatures to secure a debate in Parliament over the future of HS2.**

[If you haven't already, please sign the e-petition, here.](#)

# OCEAN EMERGENCY

Our Plastic Free Communities campaign has very close links with Surfers Against Sewage's dedication to protecting the future of our oceans. Their Ocean and Climate Petition has just been launched.



Hey

**This is an emergency.**

We are at a critical point in tackling the climate crisis and **we need your help.**

Today, we have launched the **Ocean and Climate Petition** to demand the UK government recognises the importance of a thriving ocean and to utilise its capacity as a solution to the climate crisis.

The UK will host the 26th UN Climate Conference (COP26) in November 2021. Our government has a responsibility to our blue planet, and the populations who depend on it, to place the ocean at the centre of climate change negotiations. To ensure this happens, we are calling for:

- 1. Ocean rewilding and blue carbon habitat restoration**
- 2. Implementation of Highly Protected Marine Areas**
- 3. Recognition of the importance of marine ecosystems for human wellbeing**

**SIGN THE PETITION**

## Why is this important?

The ocean is under threat from human activity. Alongside the destruction caused by deep-sea mining, unsustainable fishing and pollution; climate change is causing ocean temperatures and acidity levels to rise dramatically. These changes are driving marine ecosystems and species to extinction and putting populations here in the UK, and across the world, at extreme risk.

As much as we depend on all blue spaces for our mental and physical wellbeing, the ocean now depends on us for its survival; and as we step into the UN Ocean Decade, we must come together to shout for the ocean, before it is too late.

[Sign the petition today](#) to make sure the voice of the ocean is heard within the climate crisis.

## Want to Learn More About The Climate Crisis?

[READ THE 2021 OCEAN & CLIMATE REPORT](#)



**OUT NOW: 2021 Ocean and Climate Report.** Find out about how climate change impacts the ocean and how the ocean provides natural solutions to help tackle the climate crisis

[READ THE REPORT](#)



**We are going Net Zero!** It is vital that we all work together to minimize our impact on the blue planet. We want to be as transparent as possible. Follow our journey to becoming Net Zero.

[FOLLOW OUR JOURNEY](#)

# LOCAL CASE STUDIES

## Mariner's Guest House Green Tourism Award

We asked James May to tell us what inspired him to go green ! He said "It all started when I used to go fishing with my father in the late 60s. I have returned to that place frequently since and observed the decline and pollution destroying that beautiful place. It planted seeds in my mind to make a difference. I trained as an applied biologist which made me aware of the damage we our doing and continue to do..

Thanks to what happend last year we've had the time and motivation to change our carbon footprint and try our best to do our bit in slowing pollution and damage to the environment. We looked at how and what we do in our business and how we could change it .

We installed solar panels and a battery ,which has helped greatly with the cost but also made us vastly reduce the reliance on corporate suppliers ,we joined surfers against sewage so we could check on what is going on environmentally locally ,we have taken a large amount of single use plastic out of our business. We have an all electric car and a couple of electric bikes that our guests can use rather than use the bus or car. By the time you read this we will have installed a solar thermodynamic panel system for our hot water which works up to minus 15 degree of weather day and night .

Our next project is far infra red heating panels for rooms to help eliminate 90%of gas usage because the government will eventually put pressure on and the prices up to meet the low carbon targets which will start from 2030. That's only 10 years. I am also looking at zero pollution at this moment in time. This will make us almost self sufficient in energy usage.

If you are interested in looking at this technology please email me [marinersguesthouse@blueyonder.co.uk](mailto:marinersguesthouse@blueyonder.co.uk) and we can explain it to you and, as a footnote, there are green grants available to help with the cost. I think it's £5000 per household at the moment.

**Congratulations James and Marie !**

**If you have any cases studies of best practice you'd like us to feature then please get in touch on [info@environmentplymouth.org](mailto:info@environmentplymouth.org)**

# BIG GARDEN BIRDWATCH

**29<sup>TH</sup> TO 31<sup>ST</sup> January 2021**

**<https://www.rspb.org.uk/get-involved/activities/birdwatch/everything-you-need-to-know-about-big-garden-birdwatch/>**

Join in online whenever you can

# COMING UP

## THE GREAT BRITISH SPRING CLEAN 2021

**28 May - 13 June 2021**

Building on five years of success, we are delighted to announce the dates for our sixth annual mass-action environmental campaign, the Great British Spring Clean.

This year our outdoor spaces and places have mattered to us more than ever before. They have been a sanctuary during challenging times, and from 28 May 2021, we will be calling on hundreds of thousands of #LitterHeroes from across the UK to join us and show some love for those special places that helped us through lockdown.

We have moved the campaign dates a little later in the year than usual, as our great nation starts to recover from the pandemic.

And whether life has returned to normal, or we are still taking precautions to protect ourselves and others, we will provide all the advice and support you need to safely take part in the Great British Spring Clean 2021.

So grab your litter-pickers and get ready - 2021 is going to be our biggest year yet!

## Wembury Environment Groups 'Winter Talks Series'

We have 5 more fantastic talks for you to enjoy this winter...

**3rd February, 7pm - South Dartmoor Community Energy**

**17th February, 7pm - Cal Major**

**3rd March, 7pm - Sir Gary Streeter MP**

**31st March, 7pm - Mya Rose-Craig**

**Book your ticket here:**

<https://www.ticketsource.co.uk/wembury-environment-group>

## Food and Fairtrade

The next Food Plymouth Partnership & Network meeting is coming up on Wednesday 10th February from 1-3pm. It would be great to see you there. The link for this meeting can be found by clicking here : [Here's a link](#) if so.

Fairtrade Fortnight will be held between 22<sup>nd</sup> Feb and the 7<sup>th</sup> March 2021...more in next month's Newsletter.



# PLYMOUTH GREEN & SCIENCE BOOK CLUB

## With Transition Plymouth and Environment Plymouth

We are delighted to have **Rob Hopkins**, founder of the international Transition Town Movement and now the Catalyst and Outreach Manager of Transition Network, give a **40 minute presentation** on his latest book, **with 50 minutes for Q&A and discussion.**

**From What Is To What If:**

**unleashing the power of imagination**

**to create the future we want**

Wednesday, 24 February, 2021 at 6:30-8:00 pm.

To join the meeting, go to [Zoom.us/sign](https://zoom.us/join) in. In the top right hand corner of the page click on Join a meeting and enter the info below.

Meeting ID: 950 5690 8739      Passcode: 719961

*From What Is to What If* is a call to action to reclaim and unleash our collective imagination, told through the stories of individuals and communities around the world who are doing it now, as we speak, and witnessing often rapid and dramatic change for the better.

As defined by social reformer John Dewey, imagination is the ability to look at things as if they could be otherwise. The ability, that is, to ask What if? And if there was ever a time when we needed that ability, it is now. **This event is open to all.**

**With thanks to the Eden Project, the Sustainable Earth Institute and the University of Plymouth for their support. Contact Alan Ramage for more detail on [menzalan@blueyonder.co.uk](mailto:menzalan@blueyonder.co.uk)**

## From the Newton and Noss Environment Group

Following the meeting on pesticides, ad news that the Govt is supporting the continued use of these on sugar beet crops, Peter Brown of NNEG sent this through. He recommends Moor Meadows and their talks. See **Moor Meadows:** [www.moormeadows.org.uk](http://www.moormeadows.org.uk)

The new online meadows forum, the **Meadow-Maker's Forum:** <https://moremeadows.org.uk>

The **next talk** is by Stephen Moss, one of Britain's leading nature writers, broadcasters and wildlife television producers.

**Why Meadows Matter - and why we need more of them, 3<sup>rd</sup> February, at 7.30pm:**

<https://stephenmosstalk.eventbrite.co.uk>

**And from their last meeting.....**

# On Pesticides.....

**From Dave Goulson, a leading environmental scientist and bee expert:** 'Our environment minister has just approved the use of a neonicotinoid banned in the EU. We've been told it's a one off emergency derogational use for sugar beet which doesn't flower during its cropping time, so is very unlikely to affect bees. What are your thoughts about that?'

'These things were banned for good reason; they are incredibly poisonous to all insect life and they are really persistent. Once they get into the soil they stay there for years and years, they leach into rivers and kill aquatic life, they get into wildflowers and hedgerow plants and kill bees and so on. People may have heard sugar beet is a non flowering crop so it's not a problem as bees don't visit it....but specifically the ban in 2018 was on the use of neonicotinoids on non flowering crops because it had become clear that broad-scale environmental contamination was leading to bees being exposed anyway by feeding on any flowers that grew anywhere near the contaminated soil the crop had been grown in, so they don't have to feed on the crop directly to be poisoned'.

There are 3 petitions going round if people are interested in this subject. Dave suggested 'signing them all and maybe we can turn this around'.

1. [Government petition](#)

2. [Change.org.uk](#)

3. [The Wildlife Trusts](#) one generates a letter to your MP, explaining what the issue is and asking for a u-turn on the derogation. Professor Goulson said: 'I would urge people to really do that so our MP's are bombarded with letters saying we do not want neonicotinoids used in this country'.

Dave Goulson's next book is coming out t soon: **Gardening for Bumblebees; a Practical Guide to Creating a Paradise for Pollinators (April 2021)**

It's a full-colour guide to the very best plants to attract and feed pollinators of all types, plus other techniques to encourage and provide breeding and nesting sites for these vitally important insects, including creating your own min wildflower meadow. It can be pre-ordered [here](#)

## FUNDING

We are always working to secure the funding needed to keep Environment Plymouth going and, in particular, to deliver our Green Recovery Plan over the next two years. Although our bid to the Green Recovery Challenge didn't get anywhere (very few of the bids made did !) the fund is going to reopen later in the Spring and we will try again.

We have made a bid to the POP Collective Fund for £3000 and are currently going through the approval process which will include an advice session and then approval (or rejection...depending on how things go). The fund will help us deliver the basics of our plan with the help of some of our key partners.

And we've made an enquiry about the Active Communities funding from the People's Health Trust. If we can persuade them of the importance of green space and a clean environment to people's health and wellbeing we may have a chance of securing the fund for the next two years.

# Clean Devon

Progress is being made on a soon-to- be launched and county-wide Action Plan for combating litter and flytipping and some good news.....despite the problems with excess littering encountered last year, Plymouth is reporting a dip by one third in the number of flytipping incidents !

**FUTURE  
PLYMOUTH  
2030**

Future Plymouth 2030 is a series of fortnightly webinars to be delivered online from now until May 2021 on a whole host of topics ranging from the practical skills and technologies required to design and build better performing new buildings, how to tackle retrofitting existing buildings, biodiversity and carbon sequestration to behaviour change required to achieve any of this. More topics are emerging as partners are engaging and the programme is really taking shape.

These online events intend to discuss collaborative journeys required to achieve reduced carbon development, presenting some of the tools necessary to realise a sustainable city and help to define a better path for a viable future for Plymouth.

Get booked up and take part in this useful series of toolkit talks and debate, to learn, share and take practical steps towards a sustainable future for Plymouth!

To find out more and book please visit [www.futureplymouth2030.co.uk](http://www.futureplymouth2030.co.uk)

For More Information Contact : Claire Bower, RIBA Architectural Communities Coordinator SW Region

[Claire.bower@riba.org](mailto:Claire.bower@riba.org) or Mob 07553 371364

**STOP PRESS** : Environment Plymouth will be taking part in the debate on 10<sup>th</sup> March !

Details to follow.



Illustration Joe Meldrum - Plymouth Design

# Keeping in touch

**Meetings for 2021** Online via zoom unless otherwise stated (hopefully we'll get to meet up at some point !). Always a Tuesday evening 6.30pm to 8.00pm unless otherwise stated.

**February 9<sup>th</sup>:** 'Food Waste Collections' – with Charlotte Abraham's University Project. 6.30pm. An email with the zoom link will be sent out just before the day.

**March 9<sup>th</sup>:** 'Green Roofs and Infrastructure' with Caroline Blackler and the Biosolar Team

**April 13<sup>th</sup>:** TBC (possibly 'The Circular Economy – building back greener ?')

**May 11<sup>th</sup>:** TBC (possibly the National Marine Park update)

**June 5<sup>th</sup>** (a Monday): Our 4<sup>th</sup> Birthday Celebration

And then July 13<sup>th</sup>, a field trip in August sometime (hopefully), Sept 7<sup>th</sup>, Oct 12<sup>th</sup>, Nov 9<sup>th</sup> and Dec 14<sup>th</sup>.

## Getting in Touch

Don't forget you can always get in touch by email, text, twitter (via Stuart or Ruth – thanks for your continuing help by the way !!!) or phone.

**Email :** [info@environmentplymouth.org](mailto:info@environmentplymouth.org) or **Twitter :** @EnvironmentPlym

**Text to 07970 909912 or phone Jackie on 01752 672537**

**If anyone wants to chat or email over the next few weeks please don't worry.....I will still be at home and happy to talk or email !**

**Our New Website at : <https://environmentplymouth.org/>**

## Please stay safe.....hope to see you soon !

**With thanks to : Dave Curno, Penny Tarrant, Hugh Janes, George Wheeler, Sophie Paterson, Ricky Lowes, Richard Sroka, Sheila Evans, Brian Vincent, Tim Purches, Jenny Floyd, Neve Peat, Oly Skulsky, Paul and Nicky Hatherell and Delphine Holman.  
With apologies from Sue Dann, Ed Donoghue and Roger Mitchell.**

*Sending our best wishes to Steering Group member Roger Mitchell who is recovering from a fall and Covid 19 with his daughter in Cheltenham. Get well soon !*