Quarterly Environmental News

New Year, new you...

Or at least, so go many of the headlines around this time of year. But if, like me, resolutions don't work, it is perhaps better to think about a reset, a recalibration, and look at how a few manageable lifestyle changes can encourage better habits.

With the earth lying dormant, it is a good time to think about all things green, and how some of the new habits we can cultivate can help us to live in a way that is healthier (for us and the planet) and sustainable.
I also think about caring for the planet not just as 'going green', eating only what I grow, increasing biodiversity or trying to reduce my milage, but also thinking about what and how I consume – both what I eat and the stuff that I buy.

I find I can sometimes get a bit glum thinking about these things – it is incredibly difficult (unless you are really determined, hardy and self-sufficient) to move beyond the consumer culture, but I remind myself that every little bit does matter. It isn't only about the physical impact of what I am doing, but it is about the attitude that it cultivates.

Changing habits takes time, so here are three things that I am going to work on this year (adding in a couple of others later in the year) in an effort to be better in my stewardship of planet earth:
Reduce food waste – menu planning and using a shopping list are a first step to not buying too much, thus reducing food waste at the outset. Composting anything that is left over or can't be used (or putting it in the food waste collection) will also help reduce what goes to landfill.

Buy Local – starting with farmers markets, local veg and meat can seem challenging. I've got used to eating what I want, when I want. But reducing my carbon footprint by limiting imported fruit and veg, reducing my meat consumption and buying high welfare meat from reputable sources will be a first step. Even more daunting is changing how I shop for stuff – clothes, books, toys, homeware – but here I will aim to consider what I am buying and if I need it (rather than want it) (reduce), can I buy it used rather than new (reuse), and maybe even consider repurposing something. I suspect we will all be quite surprised at how we can use a lot less than we think!

Get better at repairing things – I am not very good at this, and it is often cheaper and easier to buy something new than get it fixed. But if we all start with small steps, and think about whether there is life yet in a favourite piece of clothing or a not-very-old appliance, we will begin to move away from throwaway culture. Of course, when you don't really know what you're doing, the first (and perhaps most difficult) step is asking for help!

So if you have any ideas for greener living for 2026, or skills that might help others learn how to give a new lease of life to something, do let us know.

Jenny Wright
Canon Residentiary

'Dead Hedge' Project

Ely Cathedral Embraces a Growing Garden Trend

It may come as no surprise to learn that Ely Cathedral is firmly on trend, having recently created a "dead hedge" in the Dean's Paddock. According to the Royal Horticultural Society (RHS), dead hedges are becoming an increasingly popular way to repurpose woody garden waste while creating valuable habitats for wildlife.

Members of the Cathedral's Biodiversity Team were recently accompanied by a robin while working on the hedge, although the feathered visitor proved a little too camera-shy to be photographed.

In a further example of sustainable thinking, the Cathedral's Christmas tree has been recycled as part of the project. Its branches and smaller sections of trunk have been cut up and used as filler within the hedge, which is being constructed to help protect the young apple trees planted in the Dean's Paddock last year.

Dead hedges gradually decompose over time, naturally feeding nutrients back into the soil. As a result, they require periodic topping up to maintain their structure and effectiveness. Looking ahead, you may like to consider donating your Christmas trees to the project in future years.

For those interested in a more exotic interpretation of a dead hedge, inspiration can be found in The Nest at RHS Wisley: https://www.rhs.org.uk/garden-inspiration/design/the-nest-at-rhs-wisley

Rebecca Mundy
Member of the Biodiversity Team

Decarbonising Transport

Transport is now the largest single Green House Gas (GHG) emitter in the UK accounting for 28% of all GHGs and is the only one that is still growing. Though cars are becoming more efficient the savings have been outweighed by the trend towards large SUVs and a big increase in mileage. The total UK emissions are currently around 169 Te CO_2 equivalent.

Figure 1 Emissions by mode

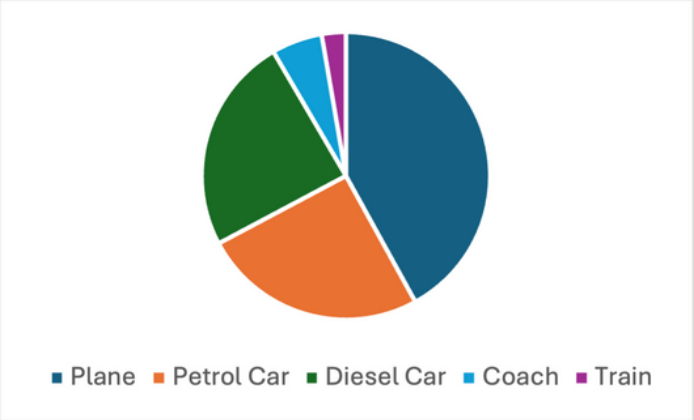

Figure 2 CO_2 for a journey from London to Glasgow

Private Cars & Light Vans

The answer here is battery electric vehicles (EVs) coupled with a zero CGC power supply. Whilst this is technically possible it will need a huge investment in infrastructure to generate the additional electricity and upgrade the distribution network to provide charging point. A simple calculation shows that we would have to almost double our generation and distribution capacity if all cars and light vans were to become EVs. Hence some modal shift to public transport, walking and cycling will be essential.

Heavy Goods Vehicles

This is much more difficult; the problem will be limited payload or the need to tow a trailer just for the batteries. Hydrogen could be more promising but will have the same problems as all hydrogen powered transport in that it is less than 30% efficient. The best solution is to go for much more railway electrification for long haul with battery delivery vehicles for the last mile.

Buses and Coaches

Battery buses have been around for quite a long time, Cambridge City has over 40and the plan is for a complete replacement by 2030. but th
ey are very expensive and need charging facilities. Their range is quite short (300 km), they also take some time to charge, about 2.5 hours, hence they are more suited to urban than rural routes. Hydrogen powered buses have been in use in London for over ten years and though they have a larger range they still need special refilling facilities and are very inefficient. The alternative is to follow international practice and use trams and trolley buses.

Figure 3 New Battery bus for the University U Service

Aviation

This is the fastest growing source of transport GHGs and the effects are much worse because of the altitude at which the gases are discharged and the large amounts of NOX emitted by aircraft engines. Whist some work is being done on both battery and hydrogen powered aircraft, mostly for small aircraft and short range operations, most effort is being put into the development of sustainable aviation fuel (SAF). This is essentially biofuel produced from crops in the same way as biodiesel and bioethanol though the process is more complex. The argument is the same in that CO_2 is absorbed during the growing process so the fuel is net zero. It has been calculated that if all the UK aviation fuel was sourced this way it would require more than half of the UK's agricultural land. Hence the only solution is to drastically reduce the amount of flying, France is setting an example by stopping most internal flights. There is some research into the production of totally synthetic SAF from green hydrogen and CO_2 from the atmosphere, but this will be expensive and very energy intensive.

Shipping

Shipping is responsible for 3% of global emissions and is again a very difficult one to decarbonise. Marine diesel is a particularly dirty highly polluting fuel with high SO_2 as well as CHG emissions. The problems are like aviation and heavy goods vehicles in that alternative energy sources take up valuable cargo space. A number of alternatives fuels are being investigated including green methanol, hydrogen and ammonia and battery hybrids for short haul ferries. Ammonia can either be used as a source of hydrogen or burned directly in marine engines. All come with major cost implications and fuel availability problems. Maersk has a large methanol/diesel container vessel on order, an ammonia fueled tug is on order in the USA and P&O has two diesel hybrid ferries on order for the Dover Calais route though they will not be recharged in Dover due to limitations in the local power network.

Railways

At the moment about 40% of the GB rail network is electrified though it carries over 60 % of passenger traffic. The rest relies on diesel with a target of elimination of all diesel trains by 2040.There was a rolling plan of electrification, but it has been cancelled in England and Wales on cost ground. It has been suggested that a combination of battery and hydrogen powered trains could be used and there will always be a need for this in some areas where full scale electrification can never be justified such as the highlands of Scotland.Some electric locomotives and trains can also run on diesel on non-electrified lines.

Figure 4 New electric/battery/diesel locomotive

Conclusions

Apart from private cars, light vans and rail there are no proven solutions so we must reduce the amount of travel and goods transport, holidaying at home, buying local, making and growing more in the UK and not expecting non-seasonal food etc. Technology can only do so much, we need lifestyle changes as well.

Bob Skelton
Ely Cathedral Enviroment Group