



*Dear Members,*

With spring approaching and the first green shoots beginning to appear, not to mention the first early daffodils, I hope you are getting out again and not been put off by the stormy weather. In my walks I have seen a number of fallen trees but in comparison with NE England and the Scottish Borders we do seem to have got off lightly. Also I hope the floods have not affected you. The picture (right) is taken from my front door but fortunately the flood plain is 5m lower down although the Environment Agency thinks it stretches half way up Kenton Drive!



*Figure 1: Floods  
(Andy Gordon)*

We are continuing to send the Newsletter by email and surface mail to all who were members in 2020 in the hope that they will re-join.

There is still time for members to send in photos for the competition on March 8th, our next meeting. Peter Aspin is also kindly bringing in some less usual plants as prizes and as a competition and we hope that the fact that it is also our AGM will not put you off from attending. We have three vacancies on our Committee and hope that you will come forward and offer to join it. Most of our contacts are by email but with restrictions now eased we will probably have three or four in-person meetings in a year. We tried one Zoom meeting during the pandemic but that was not a success!

Please note the mistake I made when drafting the programme for the Membership Card. The visit to the Swain's garden at Bicton is on **Sunday** 14th August not Saturday 14th so to avoid clashing with the Shrewsbury Flower Show. *Andy Gordo*

## **Dougald Perce's talk on 'Tree Carbon and Climate Change' Tuesday, 8 February 2022**

This time, Dougald's talk for us had quite a different approach to trees but one we all welcomed because he helped us through this 'minefield' of whether trees are helping to take up greenhouse gases, to hold more carbon and to increase much-needed biodiversity.

He told us that, at a global level, forest carbon sequestration is facing many challenges. The Amazon rainforest has been depleted by 17% from its original size to increase the area for agriculture. Rainforests of south east Asia have been reduced, their land replaced

by palm oil plantations. Reasons such as these together with all the other causes of forest loss such as logging, forest fires, urban sprawl, rises in sea level and salination, are responsible not only for reducing those opportunities for trees to sequester greenhouse gases but they also deny forests any chance to create much-needed biodiversity. An interesting statement made about the Amazon rainforest by Dougald (and I suppose it would be true for any other forest system) was that once tree loss reached 20% to 25% it would stop functioning as a self-perpetuating ecosystem. Very worrying indeed.

So what are these greenhouse gases that we hope that trees will sequester? Dougald gave us lots of statistics during this talk but I don't think we should be put off by them. In fact I shall include a number of them here because I think it valuable that we record these for our own use. He told us that human-produced greenhouse gases included CO<sub>2</sub> 56%, Methane 18%, CFCs 13%, plus Ozone, Nitrous Oxide, Hydrofluorocarbons and particulates. So how much do trees actually take in these greenhouse gases? Dougald focused on Carbon and Carbon Dioxide.

Biomass contains mud and water along with the vegetative material. If we dry out this material, then 50% of the resulting dry mass is carbon. In a standing tree, the proportions of its constituents made up of carbon are as follows: Leaves 1% carbon; Branches 11%, Stem 62%, Roots 26%. This does, of course, depend on other factors such as the tree species, its location, type of soils and so forth but it is a good rule of thumb. We were given, as an example, the figure of a Sycamore with a height of 12 metres and a stem DBH of 52 cm. Dougald had calculated that this tree contained 3.67 tonnes of CO<sub>2</sub>. I'll leave it for you to calculate how much of this was in leaves, branches, etc.!

I'll leave out much of Dougald's methods of calculation and move to some of his results. If we look at a mature Beech of 24m height and with a DBH of 105cm, for example, it is likely to have stored 3.15 tonnes of Carbon and 11.54 tonnes of CO<sub>2</sub>. A Douglas Fir (Height 29m; DBH 75cm) will have stored 1.33 tonnes of Carbon and 4.88 tonnes of CO<sub>2</sub>. And a young Lime (Height 10m; DBH 21cm) will have stored 0.096 tonnes of Carbon and 0.354 tonnes of CO<sub>2</sub>. So, given time and space, trees can sequester large amounts of Carbon and store them for a very long time.

Dougald told us that there is a total of approximately 4,016 million tonnes of Carbon stored in forests in the U.K.. This is within the biomass of the trees themselves but also above and below ground, in deadwood, litter and in the soil. Soil Carbon can be more than half this total figure, possibly as much as 72%.

He then looked at how woodland compares with other habitats. There are similar amounts of Carbon in the vegetation in Coniferous and Broad-leaved Deciduous Woodland, but more in the soils beneath the conifers. It seemed that in Dwarf Shrub habitats, Acid Grassland, Neutral Grassland and Improved Grassland, there was very little Carbon stored in the vegetation but significant amounts in the soil beneath.

Wood products can lock up Carbon for longish periods as they, generally, have a long lifespan, although it does depend what they are. Dougald cited research from Germany:- (The figures are lifespan in years) Newspaper (0.2), Magazines (0.5), Packaging (2), Furniture – low price (10), Outdoor Use (15), Books (25), Furniture – high price (30), Building (30). I was surprised at how low some of these figures are, particularly for books, furniture and building. Dougald thought we should be concerned about using products not made of wood and suggested that wood might replace products with a high greenhouse footprint.

Finally, Dougald made a few remarks of concern and what might be done about these. Apparently a U.K. person's Carbon footprint fell to 5.4 tonnes of CO2 in 2018, the lowest since 1858! So, as an individual, we would need to plant 3 trees person per year of our lives and these trees would have to reach full maturity. If you think that an impossibility, what about this.... *'we would have to plant in the U.K. twice the national land area and then manage the resultant forest sustainably in order to address our current levels of emissions'*.

But the rates of change in forests are considerable. We need to build up levels of resilience, often through increasing biodiversity, and we possibly need to grow stock from further south, stock accustomed to higher temperatures.

This was a very useful talk from the point of view of giving us information that answered so many of our questions and Dougald used very relevant and clear slides of photographs and tables to support what he told us. We thank Dougald for giving us this talk, for which he didn't charge us, and leaving us with so much to think about. *John Tuer*

## February Planting report

About 19 people from CPRE, Trees for Shropshire and Severn Tree Trust members turned out for the planting at Affcott Hall Cottage, Church Stretton. This is part of the CPRE Hedgerow planting project. On this day We planted a 140m hedge with 840 whips in about 2 hours. **A big thank you to all STT members who turned up to this seasons planting days.** This was the last planting of the 2021-2022 season for the Severn Tree Trust. However anyone interested in more planting can help Trees For Shropshire. They have one more session on the 5th March at Little Hobarris Farm, Clun, SY7 OBX.



Figure 2: Affcott Hall Cottage (Richard Dorrell)

CPRE has a planting on the 10th March but I am waiting for address details. This is the CPRE Facebook page report on the planting at Affcott Hall Cottage. *'Our last but one hedge planting morning near Craven Arms. 1 40m of species-rich mixed hedge plants were put in with a good number of volunteers, many of which were returners! They included several members of the Severn Tree Trust-thank you to them! WE had done it all by 11.30am. Thanks to Justin at Trees for Shropshire for completing all his plantings on behalf of CPRE Shropshire this season. Our final planting day this winter is 10th March on the northern slopes of the Long Mynd in conjunction with the Stepping Stones project. If anyone would like to join us please email us at [admin@cpreshropshire.org.uk](mailto:admin@cpreshropshire.org.uk) and we will send you further details.* Sarah Jameson

**Don Mansell** You will remember we wrote about Don's passing in another newsletter, but we must add that a company that one of Don's daughters works for has given us a donation of £100. How wonderful is that? Thank you Linda for talking to your company

about us. We knew we were to receive a donation but only found out how much when we received last month's bank statement. We have written to thank Linda's boss. On top of that, the husband of another daughter kindly gave us £20 at the funeral. So a big thank you to Don's family for their generosity.

## **THE SEVERN TREE TRUST – Membership Renewal 2022**

For those who completed a Standing Order form last year or earlier, please use this form to correct your details if necessary.

For those renewing their membership by cheque, please complete the following and send it to our treasurer.

**John Tuer, Evergreen, 5 Woodside, Homer, Much Wenlock, TF13 6NQ**

(please tick as appropriate)

Single Adult membership (£15) \_\_\_\_\_ Under 21s Membership (£5) \_\_\_\_\_

Double Adult Membership (£20) \_\_\_\_\_

Title (Mr.)      (Mrs.)      (Ms.)      (Miss)      (Dr.)

Name(s) \_\_\_\_\_

\_\_\_\_\_  
Your email address if you have one (This is to confirm that we have your correct current email address) and phone number.

\_\_\_\_\_  
Address

\_\_\_\_\_  
**Receipt of newsletter.** If possible we would like to send you the newsletter to you by email as it saves on postal costs. However our editor will post it to you if you have no email access.

Some people with emails have NOT been receiving the newsletter by email, mostly due to Firewall settings. Some have had trouble opening pictures and attachments. If you have had any problems in receiving the newsletter, usually sent during the last ten days of the month please indicate below.

Newsletter received by email \_\_\_\_\_ Newsletter received by post \_\_\_\_\_

(newsletter always available on the website)

Newsletter not received or other problem

\_\_\_\_\_  
Membership cards: These will be sent out on receipt of your subscription but can also be collected at the next talks and the AGM in March. ***Thank you for renewing your membership. The committee will do its best to provide an indoor and an outdoor programme as restrictions permit.***