



Broadsheet

The Magazine for Broadland Tree Wardens

Issue 212 – December 2022

I'm Dreaming of
a Green Christmas

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The Monthly Magazine for
Broadland Tree Wardens



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This Month's Cover Picture

Do you really not know what this is?

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I'm Dreaming of a Green Christmas

ALL my previous Christmas editions of Broadsheet (and there have now been quite a few!) have been full of merriment for the festive season, but this year I find that very difficult as instead of matters improving during 2022 they have got worse ... much worse!

First of all, of course, we had the awful spectacle of our government needing a couple of attempts to elect a new leader ... a new prime minister.

I have to say that if I had made a decision like that during my career, I would have been out of a job straight away. I wouldn't have been given a second chance and I would have hung my head in shame at the trouble I caused, not to mention the financial cost!

So now we have Rishi Sunak undoing all that Liz Truss did ... not that that's a bad thing.

Reports vary, but according to the Sunday Times' Rich List for 2022, the net worth of Rishi Sunak and his wife, Akshata Murty, is estimated to be in the region of £730 million. This makes him richer than King Charles III, who is worth an estimated £600 million.

So they won't be worrying about their energy bills, will they?

Anyway, that aside, last month the world held its breath as leaders assembled for COP27. You know. That little jaunt where they can make new promises that none of them have any intention of keeping.

I shall never forget what Greta Thunberg said as she excoriated global leaders over their promises to address the climate emergency, dismissing them as "blah, blah, blah". This time Greta didn't think it worth even attending. The situation has got that bad.

Now Greta would make a good prime minister!

There is a full report on my view of COP27 and the promises made in this edition of Broadsheet and future editions will no doubt report on the failure to fulfil those promises.

HAVING started this editorial with gloom and doom, I'm delighted to report two very important pieces of news from Broadland District Council.

Not only is the council important to us as a Tree Warden Network but it now also gives us hope for the future. Our local authority not only appreciates the environmental threats being faced by our planet, but it is taking positive steps to reduce those threats.

The authority has pledged to be Net Zero by the end of this decade, 20 years ahead of the government's national target for the UK. Net Zero can be achieved by a combination of emission reduction and emission removal, changing the way the council works, innovation through technology and by planting trees that remove greenhouse gases as they grow.

Broadland District Council Leader, Cllr Shaun Vincent said "Broadland District Council is leading the way on changing how we work and making decision that will have a real and lasting effect, resulting in us achieving Net Zero. We have often been asked to declare a climate emergency, but this is just rhetoric and ours is a council of action. Our recently published Environmental Strategy shows our commitment to this vital issue for our planet and we are

looking at every service we provide to see how it can be changed to help us reduce emissions and achieve Net Zero by 2030."

Broadland District Councillor, Judy Leggett, portfolio holder for Environmental Excellence said "The Council has made reaching Net Zero by 2030 one of our main priorities and we have already taken significant steps towards making this happen. The Council has switched the fuel for our refuse vehicles from diesel to hydro-treated vegetable oil and our new office, the Horizon Centre, is more energy efficient with more than 2,500 solar panels which will generate clean electricity.

"To achieve net zero emissions, we will need to reduce our emissions as far as possible, however there will be some emissions that will be more difficult to remove. We will develop projects both for the Council and for our communities to offset these remaining emissions including grants for better insulation of housing, grants for heat source pumps and grants to plant trees."

The council's actions over the last twelve months have already had a huge impact reducing carbon emissions by over 70%. Work already planned for next year will result in a further reduction of at least another 17%.

Net Zero means achieving a balance between the carbon emitted into the atmosphere and the carbon removed from it. This balance – or Net Zero – will happen when the amount of carbon added to the atmosphere is no more than the amount removed.

The Council has calculated its annual carbon footprints since 2018. [Read the reports on its website.](#)

THE Wildlife Trusts' website reported that commitments to HS2 and Sizewell C undermine Government promises on climate. While The Wildlife Trusts are pleased that the Government's Autumn Statement remains fully committed to the UK's climate obligations, including a 68% reduction in our own emissions, it is still not on track to meet this target and its actions in other areas undermine their promise.

The chancellor has failed to listen to experts warning that our unsustainable engagement with nature is putting future prosperity at risk. Of particular concern, are the HS2 and Sizewell C major infrastructure projects.

Elliot Chapman-Jones, head of public affairs at The Wildlife Trusts, said "Despite the green rhetoric and promise of meeting distant climate targets, the Chancellor passed the buck on dealing with the climate and nature crises today. New funding for energy efficiency won't be made available until 2025, which does nothing for struggling households this winter. Instead, the Chancellor used the budget to launch a tax raid on renewables and electric vehicles.

"Even more worryingly, the Chancellor failed to mention the urgent need to get nature into recovery. Our economic prosperity is entirely dependent on a healthy natural environment. A Treasury review commissioned just last year

found that our unsustainable relationship with nature is endangering the prosperity of current and future generations. Despite being one of the most nature depleted countries on the planet, the Chancellor has decided to instead continue with the extremely damaging HS2 project, the building of Sizewell C, and a greater reliance on offshore wind, over other renewables, at the expense of the marine environment."

Many were hoping that the extremely damaging HS2 project would be reassessed. Instead, the Chancellor reaffirmed commitment to HS2 from London to Manchester, leaving the huge project on course to destroy so much.

The Wildlife Trusts have long argued that the vast scale of destruction to wildlife and wild places resulting from the construction of HS2 does not comply with the Government's commitments to nature's recovery and that we need to stop and rethink the whole HS2 programme.

The Wildlife Trusts' report, [What's the Damage?](#), evidenced the serious risk that HS2 poses to nature; over 66,000 people wrote to the former Prime Minister asking him to review HS2. The Autumn Statement's announcement means that it is more critical than ever that the whole project is redesigned to avoid continued unnecessary damage.

Sizewell C will destroy vast swathes of the Suffolk coastline in one of the most beautiful natural parts of the UK. People visit this part of Suffolk from all over the country to enjoy the wild countryside. An area of the coast the size of 900 football pitches will be directly affected by the development.

The environmental impact of building Sizewell C is huge and will lead to the loss of crucial natural habitat and endangered wildlife. Research has also shown that the cooling system will kill around three million fish a year, which could decimate entire marine ecosystems along the east coast.

Nuclear power stations are expensive and take a long time to build. While we rapidly need to move away from using fossil fuels, nuclear energy is not the saving grace that it is being billed as by some. Successive governments have focused on nuclear power instead of scaling-up home insulation, energy efficiency, and smart storage technologies.

Suffolk Wildlife Trust has fought this enormous threat to the beautiful coastline in an Area of Outstanding Natural Beauty, a Special Area of Conservation, a Special Protection Area for years. Having campaigned for so long against this outcome, the charity will now work in every possible way to limit the damage that the development will cause.

In an excellent article titled "Why High UK Energy Bills Were Decades in the Making", Joshua Nevett, BBC Politics, gave several reasons, one of which he said hinges on choices made by Mr Cameron's government.

"The first and most important one was 'getting rid of the green crap'," he said. The crude phrase, splashed on the front page of the Sun newspaper, was the "PM's solution to soaring energy prices" in 2013. Back then, Labour was campaigning hard on the cost of living, promising to cap energy bills if the party won the 2015 general election.

In a surprise reshuffle Charles Hendry, Conservative energy minister, was replaced by John Hayes, who vowed to put "coal back into the coalition".

"He wanted to see a huge growth in coal," Mr Hendry said. "He did really throw the low-carbon agenda into reverse."

Over the next two years, subsidies for

renewables were cut, planning rules for onshore wind were tightened, and a zero-carbon homes policy was scrapped.

Had those green policies remained, estimated annual energy bills would have been £9.5bn lower under the October price cap, according to research by energy analysts Carbon Brief.

The culling of the green deal for home insulation was particularly disappointing for Mr Huhne, who sees the policy as one of his key legacies.

For too long, politicians "haven't wanted to do the boring stuff", said Emma Pinchbeck, chief executive of Energy UK, a trade association. Instead, they've focused on the "big infrastructure projects, which are sexy", she said.

"For the last decade in this country, every single year we've been missing out on installing energy efficient measures and clean heating, which would have reduced our exposure to these prices and those decisions were made because of pretty short-term politics."

REBECCA Speare-Cole, writing on the Independent, reported that National Trust have rejected motions criticising its involvement in Pride events and rewilding projects.

More than 127,000 of the charity's members voted on new proposals and council candidates at the Annual General Meeting on 5 November.

The National Trust's membership has been divided in recent years, with campaign group Restore Trust criticising the charity's policies on social inclusion and rewilding, but the majority of members voted down a motion to condemn the National Trust's participation in Pride events with 65% voting against it at the AGM.

Meanwhile, 70% rejected a motion to criticise recent rewilding and re-wetting projects on National Trust farmland as well as the charity buying farmland for that purpose.

Members also voted against a motion asking the charity to rethink its support for a £1.7 billion two-mile tunnel for the A303 near Stonehenge.

Restore Trust, which has been seeking to gain more control over the direction of the charity, saw little success as both its motions failed to get enough support to be carried forward.

A majority of 68% voted against its motion to establish an ombudsman to oversee the charity's work.

The group's motion to abolish the proxy vote system – where members who do not attend the AGM are given the option to hand over their vote to the chairman – also failed to get support from a majority of members.

None of the seven candidates that Restore Trust backed were elected to the council. However, all seven candidates recommended by the existing council members' Nominations Committee were elected, including Harris Bokhari, founder of the charity Patchwork Foundation, and Sally Hunt, a trade union leader.

Hilary McGrady, director general of the National Trust, said: "Our Annual General Meeting is one of the most important events in our calendar. It is an essential part of our democratic governance process, as it gives our members the opportunity to ask the questions on the subjects that matter most to them and to have their say on the direction and focus of the National Trust."

"Our AGM is also a celebration of everything we do: our stories, our places and our people. I am delighted that we were able to share so much of that today."

A Restore Trust spokesman said: "While all the members' resolutions were defeated by the block vote, that is, by people ticking one box to vote automatically with the Trustees' recommendations, our resolution calling for the abolition of the Chairman's discretionary proxy vote received the most support of all six resolutions, with over 50,000 votes."

"Our candidates this year won many more votes than the ones we supported last year. Again, they were only defeated by the National Trust's candidates who benefited from the "quick vote", that is to say, people who voted for all seven recommended candidates by ticking only one box.

"We are satisfied with the increase in our support, but disappointed that the voting system now makes it all but impossible for members to get resolutions passed which are not supported by the Trustees or for Council candidates to get elected who are not recommended by the Nominations Committee. We are concerned that this system will keep independent voices out of the Council and that the Trustees will not be held properly to account."

I COULDN'T help but chuckle when a I read that a man has been given a conditional caution for criminal damage after trying to cut down a large tree ... with a bow saw.

The 52-year-old was filmed taking a bow



saw to the mature *Acer* in Roundhill Road, in Kettering, in May. Residents reported it to Northamptonshire Police and, during an interview, the man admitted causing criminal damage. He was ordered to pay £2,000 compensation to the local council and £500 to an environment charity.

Harriet Pentland, North Northamptonshire Council's executive member for climate and the green environment, said: "I am sure many local residents will be as saddened as I was to see the video evidence of someone deliberately and intentionally killing a mature street tree."

Speaking about the caution and fine handed to the offender, she added: "We hope this will send out a strong message that the council and the police will seek to prosecute anyone who deliberately causes damage and harm to the much-loved community trees."

Neighbourhood police officer PC Mike Ryan said: "There is often a false perception that we do not respond to incidents of criminal damage, but we do, and I hope that message is loud and clear to potential future offenders."

As the infamous Del Boy Trotter would have said ... "What a plonker!"

I WAS appalled to read an article by Simon Parkin, Crime Correspondent for the EDP, reporting that Norfolk has been identified as the worst county for the killing of birds of prey.

Protected species continue to be illegally killed in high numbers, particularly in relation to land managed for gamebird shooting, the RSPB has warned. Its Birdcrime 2021 report, pub-

lished in November, reveals 108 confirmed incidents of bird of prey persecution in the UK.

The total includes 50 buzzards, 16 red kites, seven peregrines and three goshawks. Rare hen harriers and white-tailed eagles continue to be affected. The majority were either shot, trapped or poisoned.

Over two thirds of all confirmed incidents of raptor persecution related to land managed for gamebird shooting, where birds of prey are seen by some as a threat to gamebird stocks and illegally killed. Norfolk, which has a long history of pheasant and partridge shooting, is the worst county based on 2021 data with 13 incidents.

Among recent successful RSPB prosecutions in Norfolk was gamekeeper Matthew Stroud who dosed dead pheasants with strychnine to kill buzzards near Weeting Heath and Breckland Forest, both protected sites.

All birds of prey are protected by law under the Wildlife and Countryside Act 1981.

Scientific papers, intelligence and satellite tagging studies for key species such as hen harrier suggest the figures are only the tip of a far larger iceberg and that many killings go undetected and unreported.

Beccy Speight, RSPB chief executive, said: "The evidence shows that the illegal persecution of birds of prey - which is time and time again linked to gamebird shooting - is holding back the recovery of some key species.

"This year's Birdcrime report is another reminder of the appalling methods deployed by some, and why there is a need for swift and effective change in our countryside."

Other raptor crime hot spots include Dorset and North Yorkshire, which includes heathland grouse, pheasant and partridge shooting.

The RSPB report calls for an introduction of licences for all driven grouse shooting and better enforcement of existing regulation and additional regulation for pheasant and partridge shooting.

Mark Thomas, head of investigations, said: "The illegal shooting, trapping and poisoning of birds of prey has no place in modern society. In a nature and climate emergency, the deliberate destruction of protected species for financial gain is devastating and unacceptable."

WRITING on the Norwich Evening News website, Sophie Wyllie reported that developers believe they have found the solution to a housing conundrum catching thousands of homes in a planning backlog.

Natural England has told Norfolk councils they must not grant permission for any projects involving overnight accommodation until developers prove the plans will not lead to more nutrients flowing into waterways. To overcome the nutrient neutrality challenges developers have had to create mitigating features.

Orbit Homes previously had its reserved matters application to Broadland District Council for 272 homes on former orchard land north of Smea Lane, Great Plumstead, delayed because of the Natural England ruling.

In its amended plans, Orbit proposes to build a small-scale treatment plant to abate environmental concerns and this, experts believe, could be the key to getting Norfolk's house building boom firing again.

Eleanor Laming, Green district councillor for the Brundall ward, said: "Nutrient neutrality has halted a lot of planning applications. This is one of the first times I have seen plans for a community treatment plant. I don't know if this could turn out to be common."

Ian Mackie, Thorpe St Andrew's Conservative county councillor, said developments

should look to include "small clusters of infrastructure" including treatment centres and solar panels. He added: "Protecting the environment has got to be paramount. Being innovative, sustainable and accessible are important for developments."

The planning statement for the project added: "This plant will require adoption by an OFWAT registered sewerage undertaker and Waterlevel have provided an agreement in principle to adopt the facility. In addition to the proposed foul water mitigation, the proposal has been amended to include additional surface water treatment trains that will reduce nutrient run-off from the site."

Orbit could not confirm how big the plant would be but, if approved, work on the new site would start in Summer 2023.

Phil Courtier, director of place at South Norfolk Council and Broadland District Council, said: "Developers are absolutely coming with their own schemes to try to address the requirements. There is a challenge because a scheme has to be a few hundred houses to be able to provide that sort of on-site mitigation."

A Natural England spokeswoman said: "Natural England, working alongside our partners, will support planning authorities and developers to build sustainable new homes that contribute to healthy rivers, lakes and estuaries nearby. "Without mitigation, extra wastewater from new housing developments can contribute to the decline of our protected wetland sites such as the Broads, and undermine our efforts to recover these sites back to the healthy habitats they should be.

"We are unable to comment on this individual application at the current time as we are still in the process of making our statutory response to Broadland District Council."

I MUST apologise to you all for the postponement of our AGM scheduled for 16 November but it would have been nothing short of chaos if we had gone ahead and only 12 of you would have been able to join.

As those of you who have attended our on-line training sessions via Microsoft Teams recently will know only too well, the software has been unstable, only 12 of you could join and the software shut down after one hour.

That lead your Executive Committee agreeing to purchase Microsoft Teams Business so that we can have almost unlimited time and attendees.

I duly signed up but immediately became worried when the invoice stated Microsoft 365 and the Microsoft Teams software was no different than before. I have my own personal subscription to Microsoft Office Home and Business and therefore have no need for 365.

Anyway, it was obvious that Microsoft had made an error so I tried to call them, but it is almost impossible to speak to a human being at Microsoft and if (and I mean if) you get a reply to an e-mail the English used makes it apparent that there is no way the person understands what you have said.

I finally managed to get the e-mail address of the senior executive of Microsoft complaints and she had someone from the Microsoft help department call me. After three hours on the 'phone (yes, I really do mean three hours!) Microsoft agreed cancel our subscription to 365 and refund the payment they had taken from my account.

Unfortunately though, I also discovered that the unlimited time for up to 120 users for £7 per month that the advert had stated really meant £7 per user per month. Instead of £7 per month we would have to pay £266. That wasn't on.

After some haggling, they agreed to give us a one-year free subscription and that's what we have but I now have to register each of you as a user and assign each of you a password.

Maybe we'll have our AGM in a village hall somewhere.

AS we approach the end of 2022 and, without doubt, our most successful year to date, I can reveal that we now have 38 Tree Wardens covering 28 of Broadland's 63 town and parish councils and parish meetings.

That gives us 41.3% coverage and we must remember that 5 councils have stated that they have no interest in supporting the Network.

When you also remember that we are participating in a project of national importance, ie The Sentinel Treescapes Project, I think that we are doing pretty well ... but there's still room for improvement!

I want to send special thanks to Mark Symonds and Jamie Henry at Broadland District Council for their continued help and support to the Network during the year. From a personal point of view they certainly help to make my role as your Chairman and Network Co-ordinator that much easier.

When one considers that the changes going on with the increased "sharing" of resources between Broadland and South Norfolk District Council cannot make life very easy for these guys (and everyone else concerned of course), then our thanks are even more appropriate.

So Mark and Jamie, thank you so much and our very best wishes go to you and your families for Christmas and the coming year.

It is also appropriate for us to send Christmas greetings to our parish councils and Broadland District Council Members who give us such valuable support. Please make the effort to do so.

I MUST admit that I am looking forward to a good break at Christmas. It's been a very busy year, not only co-ordinating the Network but with the practical work I've been carrying out.

I plan to have a break from 23 December until 3 January. The work Richard Farley and I have been carrying out in Low Farm Wood in Brundall (750 hours this year) has been very tiring and has made us both realise that we're not as young as we used to be. We both need a rest.

I also need a break from my co-ordinating duties during that time. Making the change to me now ordering our trees and training, placing purchase orders and making things as easy as possible for Richard, our Treasurer, when we have to pay the invoices has taken quite a bit of time as you can imagine. Keeping a detailed account of our expenditure for Broadland District Council is also very time consuming.

Having said that, I still thoroughly enjoy my role and I trust that you are all happy with what I do.

So, if you try to contact me during that time please understand if you don't get a response.

Finally, I must thank our Executive Committee Members for the valued support they give me. I really am most grateful.

LESLEY and I wish you all (Tree Wardens, parishes and the good folk at Broadland District Council) and your loved ones, a very happy and peaceful Christmas and to thank you all for your efforts and support during 2022.

John Fleetwood

The Broadsheet Guide to COP27

What promises were made and what lies were told at the COP27 United Nations Climate Change Conference in Sharm el-Sheikh, Egypt, plus what is likely to happen and what is unlikely to happen

THOSE who know me fairly well will tell you that the older I have become the more cynical I have become and yes, I agree that I am getting on a bit and yes I have become very cynical. Maybe the two go hand in hand. Maybe I'm not as gullible as when I was younger and, without doubt, I've heard it all before and no longer trust politicians (*Homo sapiens var liars*) of any description.

So I shouldn't have been surprised to read an article by the BBC News Reality Check Team revealing that prior to the commencement of COP27 there was criticism on social media of delegates arriving by private jet.

The day before the conference began, hundreds of environmental activists stopped private jets leaving Amsterdam's Schiphol Airport, by sitting in front of their wheels and riding around the airfield on bicycles.

Data from FlightRadar24 shows 36 private jets landed at Sharm el-Sheikh between 4 and 6 November, the start of the summit. A further 64 flew into Cairo, 24 of which had come from Sharm el-Sheikh.

Nine of the flights came from the UK, with others from European countries including Italy, France, and the Netherlands. Two were from the US to Cairo - one from Atlanta and one from Washington DC.

FlightRadar24 says there may have been more scheduled private flights it was unable to track because of limited coverage in the area, but fewer private jets appear to be flying to COP27 than COP26, in 2021, in Glasgow.

One of the reasons for this may be there have been fewer world leaders attending the Sharm el-Sheikh summit.

Flights produce greenhouse gases, mainly carbon dioxide (CO₂), from burning fuel. These contribute to global warming. Emissions per kilometre travelled are significantly worse than any other form of transport.

This varies considerably depending on the size of the plane; how efficient its engines are; and how many passengers it carries. However, private jets generally produce significantly more emissions per passenger than commercial flights.

There are many different models of private jet but the one flown the most often into Egypt ahead of COP27 was the Gulfstream G650, which uses about 500 gallons (1,893 litres) of fuel per hour.

If a private jet had managed to take off from Amsterdam, despite the demonstrations, it should have taken about five hours to reach Sharm el-Sheikh, using about 9,465 litres of aviation fuel.

The Department for Business, Energy and Industrial Strategy (BEIS) says 2.5kg (5.5lb) of CO₂ is emitted for every litre of aviation turbine fuel burned. So this flight would produce 23.9 tonnes.

However, to "capture the maximum climate impact" of flights, BEIS recommends, CO₂

emissions figures should be multiplied by 1.9 to reflect the non-CO₂ emissions released by planes at high altitude which, scientists say, increase the warming effect.

Therefore, the total emissions for this flight would be 45.3 tonnes of CO₂ equivalent and if the maximum capacity of 15 was filled, each passenger would be responsible for about three tonnes on their journey.

These emissions figures are estimates for the actual journeys. They do not include the emissions associated with making the private jets in the first place.

If our COP27 delegates had opted for a commercial flight from Amsterdam to Egypt, assuming they travelled premium class, their emissions would have been about half a tonne each, according to the International Civil Aviation Organization (ICAO) calculator.

Even though a commercial flight uses more fuel per hour, it can fly far more passengers than a private jet and therefore produces fewer emissions per person.

The UK prime minister and foreign secretary arrived in a government-leased Airbus A321-253NX. That uses about 2.6 tonnes of fuel an hour, depending on factors such as the amount of cargo and the altitude.

Using the government's conversion factors, that means the flight to Sharm el-Sheikh will have emitted about 41 tonnes of CO₂. Using the BEIS multiplier takes that to 78 tonnes of CO₂ equivalent.

BBC News asked Downing Street how many other passengers were on the flight to Sharm el-Sheikh but No 10 would not say.

A government spokesperson said: "This delegation travelled on one of the most carbon-efficient planes of its size in the world and carbon emissions from these flights are also offset."

The Energy and Climate Intelligence Unit's international lead told BBC News that focusing on world leaders taking private jets to COP27 was "missing the point".

He said "The emissions are negligible compared to the impact of decisions and commitments made at these summits. If you want emissions to come down, you want leaders in the room and media, scientists and stakeholders asking the important questions."

LET'S now look at what has happened since last November when global leaders met at the UN climate summit COP26 in Glasgow to agree next steps to tackle climate change.

Georgina Rannard and Esme Stallard, BBC News Climate and Science, reported that climate experts have told the BBC that progress

in 2022 has been slow with governments around the world distracted by global energy and financial crises. Last month the UN warned the world is heading towards catastrophe, but there are rays of hope, including fresh US legislation and a change of government in Brazil that could reverse the Amazon rainforest's destruction.

Following COP27 in Egypt last month, we look at seven key players to ask who is leading the way and who is dragging their feet.

USA: A climate leader again? The US made a huge leap forward this year when it passed sweeping new laws to confront climate change. Measures within the Inflation Reduction Act could reduce US greenhouse gas emissions by 40% by 2030.

"This is the biggest investment in climate solutions in US history. It's a huge sign of progress," Dan Lashof, US director at the World Resources Institute, told BBC News.

The bill aims to make green energy the default in major sectors like electricity, transport and industry. The most obvious result for consumers is a tax credit of around \$7,500 (£6,500) for those who buy an electric car.

However, it is not all good news. After a senior US politician controversially visited Taiwan, China ended its co-operation with the US on climate, which could seriously affect international climate negotiations and in response to the energy crisis, President Joe Biden released 15m barrels of oil from reserves on to the market and approved new leases for oil and gas drilling.

The US has also not delivered its fair share of finance to support developing countries suffering the most from climate change, which could damage relations at COP27.

UK: Leadership and 'dithering'. The UK hosted COP26, secured major global pledges and showed itself to be a clear international climate leader, but the UK went to COP27 "weaker" with "disappointing" leadership, says Alyssa Gilbert, Director of Policy at Imperial College London's Grantham Institute.








Last month Prime Minister Rishi Sunak performed a U-turn from his earlier decision not to go to Egypt due to other priorities. Experts say this has compromised the UK.

"One of the key things about COP is political leadership from the top. Dithering from the Prime Minister is worse in a year when we are the presidents of COP," explains Ms Gilbert.

Furthermore, the UK has not increased its ambition to tackle its role in climate change, according to analysis by Climate Action Tracker of plans submitted to the UN. (These are called Nationally Determined Contributions - part of the landmark Paris Agreement in which countries promised to regularly increase ambition to

How are countries doing?

Search...

Country	Emissions per person (CO ₂ e 2021)	Climate money committed to other countries* (USD, billions, 2016-2020)	Share of electricity from coal (Jan-Jul 2022)	Tree cover change (2010-2020)
China		0.00	69%	9%
US		5.47	20%	1%
EU		105.00	15%	2%
UK		3.78	2%	5%
India		0.00	79%	4%
Brazil		0.00	5%	-3%
Australia		0.87	51%	3%

*Developing nations Brazil, India and China not required to pledge climate finance. Source: Australian government, Brazilian government, CAT, China Global Times, Climate Change Home News, CSE, Donor Tracker, EIA, EU, European Commission, Government of India Ministry of Power, IEA, ODI, Reuters, UK government, UNFCCC, and World Bank.

BBC

tackle climate change).

The global energy crisis also led the UK to back-track on commitments to end new oil and gas extraction in the North Sea and close down coal-powered stations.

These changes may not fundamentally alter the UK's energy balance but they "send the wrong signal", explains Robert Falkner, professor of International Relations at the London School of Economics.

EU: Squeezed by Russia. The EU is historically progressive on tackling climate change, but Russia's invasion of Ukraine and the impact on energy supplies to Europe have undermined that.

"Leaders extended the lifeline of coal-fired power plants and we estimate that European emissions actually increased by about 2% in the first six months of this year," says Prof Robert Falkner.

Climate Action Tracker now rates EU's climate targets, policies, and finance as "insufficient", and the EU has not updated the UN with new NDC plans, but Prof Falkner considers the return to investing in fossil fuels a "temporary setback" and suggests the EU could take this opportunity to make itself energy secure by investing in renewables.

A new plan, the Repower EU plan, aims to increase the EU's share of renewable energy in 2030 from 40% to 45%.

India: Big ambitions hampered by coal. India is one of the few countries to have published updated climate targets in 2022. "It is almost impossible to talk about India without talking about progress," says Kamya Choudhary at London School of Economics.

It promises to reduce emissions intensity by 45% by 2030, meaning it plans to reduce emissions per dollar. It also wants 50% of installed energy to be renewable.

However, India's plan to re-open 100 coal power plants (coal is the most polluting fossil fuel) could be a barrier to those ambitions.

Professor Navroz Dubash at Centre for Public Policy and UN climate advisor told the BBC that tariffs on coal are helping to pay for key infrastructure, and the loss of that income needs to be plugged.

Nevertheless, as in other countries, Mr

Choudhary suggests this is a short-term measure to copy with the energy crisis.

Climate Action Tracker says India's pledges are not very ambitious - they could be achieved with limited government action.

Brazil: New president, new hope? Brazil holds one of the keys to fighting climate change. Its massive Amazon rainforest, the lungs of the planet, soaks up huge amounts of carbon.

In a dramatic election last month, President Jair Bolsonaro was ousted by Luiz Inácio Lula da Silva, potentially changing overnight the future of the Amazon. "Brazil is ready to retake its leadership in the fight against the climate crisis," Lula said on Sunday.

In 2021 alone deforestation increased by 48%. Renata Piazzon, executive director at Instituto Arapyau, puts this down to President Bolsonaro championing more mining in the Amazon.

Since Glasgow, Brazil's targets have been criticised as "less ambitious" than pledges made in 2016, and for failing to meet promises.

Historically, Brazil has used hydropower to provide large amounts of green energy, but a drought in 2021 drained its dams. In response, it invested in oil and gas with predictions that its use of oil will increase by 70% by 2030.

However, the International Energy Agency predicts that solar will compensate for the loss of the nation's hydropower.

Australia: Making up lost ground. Politics has seen a change of face in Australia too. Elected in May, new Prime Minister Anthony Albanese has accelerated climate plans, ending a decade of backsliding.

The country submitted new targets to the UN, promising to reduce emissions by 43% by 2020 - a big leap forward from its previous target of 26%, but Bill Hare, CEO of Climate Analytics, says it only seems like significant progress because of how far behind Australia was.

"There has been so far been little change in policy and certainly not in the area of fossil fuels," he said.

Australia's states have led the way in increasing renewable energy, but the country remains in the top five producers of coal in the world and although Australia promised at COP26 to end deforestation, it was classed in

2021 as the only developed country that is a "hotspot" for tree loss. Nearly half of forests in eastern Australia have been destroyed.

China: A 'terrific' polluter investing in renewables. China has a complicated role in global climate action. Unlike countries in the developed world, it is not responsible for historical greenhouse gas emissions that scientists say have caused climate change so far, but it is now a "terrific polluter" because of its very rapid economic growth, explains Neil Hurst, senior policy fellow for energy and mitigation at the Grantham Institute. It burns half of the coal in the world, and is reluctant to cut back because of energy shortages.

However, China is also by far the biggest investors in renewable energy. A quarter of newly-registered cars in China are electric. "They're making big efforts and setting demanding targets, including peaking its carbon emissions by 2030," explains Mr Hurst.

Furthermore, it has big ambitions to address carbon emissions with tree planting. In May, President Xi Jinping pledged to plant 70 billion trees by 2030.

GEORGINA RANNARD, BBC Climate reporter in Sharm el-Sheikh, reported that Young people are a more powerful force than ever in the UN climate summit, according to the UN's youngest climate advisor.

"Young people are definitely shaping outcomes here at COP27," Sophia Kianni says.

Swedish campaigner Greta Thunberg has skipped the Sharm el-Sheikh meeting, calling it a forum for "greenwashing", but young people from countries at high risk from climate change say they are "calling it out" from inside.

In an address, climate activist Vanessa Nakate from Uganda told governments to wash their "oil-stained" hands and they must end the "moral and economic madness" of funding fossil fuels and prioritising short-term politics.

Activists from developing countries say they agree with Thunberg that COP is compromised by the large presence of oil and gas delegates, but they say their work has an impact there.

Ayisha Siddiqi, 23, from Pakistan, was one of the headline speakers at the Children and Youth Pavilion. It was the first time young people had a dedicated space like that where activists held a formal meeting with UN Secretary-General Antonio Guterres.

It was one of the most buzzing areas of COP27, with activists jostling to find space to sit and chat on the floor and Ayisha said she was proud of the space.

"This is for the youth, organised by us. Unlike government and business areas, there's no corporate branding everywhere," she said.

She said questions about Greta miss the point about the reality of climate change. This summer, devastating floods killed 1,700 people in her home country Pakistan. "The world has come to an end for people... For me, the stakes are so high that I can't just give up hope for change," she says.

Kenyan Mana Omar, 27, worries the summit will not deliver the climate finance that her country needs, calling COP27 more like a "trade fair" but she still travelled there to represent her nomadic community severely affected by drought. "My community are missing here, their voices are totally unheard, they live in areas with no internet. I just hope I can do my best to bring their message here," she explains.

She says her role is to have "hope where there is none" and she wants a better future for her one-year-old daughter.

However, many activists, particularly from

developing nations, say they faced significant barriers in attending the summit in Egypt.

Imran Hussein, from Bangladesh, lost his father in cyclone Aila in 2009 and says he is extremely worried about sea level rise in his coastal home. He was at COP to get "climate justice" for his mother, who has worked in a garment factory since Imran's father died.

Imran and his colleague Sohanur Rahman explain they got grants for travel and hotels, but they could not afford to eat at the conference. Delegates faced costs of about \$4,000 a week for accommodation, as well as the costs of travel and visas.

Activists say future climate summits must include special funds and accommodation for young people from civil society, but waving their passes, Imran and Sohanur were proud they had been given spaces on Bangladesh's negotiating team. It gave them access to conversations behind-the-scenes where countries stake out their positions on final agreements.

Negotiations between countries on how to curb climate change went on for the rest of the week, with reports suggesting a large gap remains between rich and poor nations.

Youth activists are hopeful they will secure more money for communities devastated by climate change, and a firm commitment from leaders to radically phase out fossil fuels, but most admit they will probably have to come back next year.

IN ANOTHER article, Georgina Rannard reported that Brazil is back, president-elect Luiz Inácio Lula da Silva has told rapturous crowds at the UN climate summit COP27 in Egypt.

Walking into a room of supporters singing his name, Lula promised to restore the Amazon rainforest and chase down climate criminals. Huge numbers gathered to see him speak, making him one of the superstars of this summit.

Just two weeks after his narrow election win, Lula was making his first appearance on the international stage, meeting leaders including from the US, China and the EU at the climate conference.

Saying that climate change would have the highest priority for his government, he said "We must stop this rush to the abyss. There is no climate security for the world without a protected Amazon. We will do whatever it takes to have zero deforestation and the degradation of our biomes."

While there is no doubt Brazil's president is full of ambition when it comes to tackling climate change, analysts say the challenge will be to make these promises come true. Brazil is deeply divided over Lula's return to power and his job to unite the country won't be easy.

The president told the summit that Brazil would prove that it was possible to generate wealth without destroying the environment, saying it was impossible to separate tackling global warming from poverty.

Striking a harder tone, he said Brazil would ensure that developing nations got the money they are owed to deal with the effects of climate change. He also pledged to protect indigenous people, whose land has been targeted under current President Jair Bolsonaro. Indigenous people in traditional dress stood up cheering and shaking maracas.

However, Lula faces an uphill battle at home in Brazil where he faces significant opposition in Congress and a divided society.

Under Mr Bolsonaro, who will hand over power to Lula in January, deforestation of the Amazon reached record highs. Puyr Temb , an indigenous leader from heavily deforested Par 

state, told BBC News that Mr Bolsonaro completely dismantled laws protecting the Amazon.

US climate envoy John Kerry said he was confident Lula would bring a complete turnaround on Brazil's approach to the environment.

Former environment minister in Brazil Isabella Teixeira told BBC News that "the world" is now "embracing Brazil at COP27".

Reflecting the challenges at home, Lula told the summit there was just one Brazil and he would govern for all.

In order to make progress on his agenda, Ms Teixeira said Lula would need to convince people and Congress members to agree, not disagree with each other.

Lula must reverse Mr Bolsonaro's legacy by rebuilding environmental protection agencies, unfreezing the Amazon Fund which promotes conservation and tackling criminals in the Amazon, according to Marcio Astrini, executive secretary of Brazil's Climate Observatory network.

He says that civil society will not hesitate to challenge the new government if it fails to keep its promises. "When the government is succeeding, we will support them, but if it fails, we will criticise them."

However, Brazil and the world must be prepared for "mistakes and failures", suggests Roberto Waack, a business leader and chair of Arapya  Institute.

He said "Climate is a complicated problem, Lula has ambitious pledges and we will face disappointments because of the political situation in Brazil. You can't just say stop deforestation and the next day the problem is solved."

Young Brazilian activists at COP27 met Lula. "It was hugely emotional, I cried a lot. It is unbelievable to feel part of Brazil again," Gabrielle Alves, an environmental racism researcher who is part of the Clima de Mudan a coalition, told BBC News.

There are still wide divisions between countries on key issues. The question of who will pay the bill for irreversible climate damage remains hotly debated, as developing countries want finance urgently earmarked to cover their losses, but developed nations are resisting any question of compensation from countries who historically caused the majority of emissions.

There is concern too that the crucial aim to limiting temperature rise to 1.5 C, which scientists say is crucial to avoiding the worst effects of climate change, is in jeopardy.

L AURA KUENSSBERG, the had-hitting presenter of Sunday with Laura Kuenssberg, wrote that spin back 12 months to the COP26 climate change summit in Glasgow and you couldn't move without tripping over a world leader, a FTSE boss, even the Archbishop of Canterbury.



The conference was an enormous affair where hours and hours of negotiations took place about how countries large and small, north and south, could work together to try to slow down climate change and manage its impact.

There was another vital ingredient last year

though: political energy.

There was no doubt that the then-Prime Minister Boris Johnson took the issue seriously. There was a visible desire in the government to act to manage climate change and for the UK to take, and be seen to take, a prominent role.

There were some grumbles in the Conservative Party but the political push from the top to grasp the issue last year was strong and clear. The UK had to be at the forefront of tackling climate change, and couldn't afford not to.

The dynamics of COP are truly international, and as climate editor Justin Rowlatt notes, the summit in Sharm El-Sheikh saw the world's poorer countries pitted against the rich nations who they feel have backtracked on the financial commitments made in Glasgow.

However, as leaders touched down for COP27, was the UK's commitment still as strong?

First off, the simple optics of the previous few weeks suggest not. There was a straightforward argument against Prime Minister Rishi Sunak's attendance at COP. He had only just moved into No 10 and the economy is in bad shape. Summits are, putting it politely, not always a good use of important people's time.

There was also a good case for him to go - to show personal commitment and interest in the subject, and of course to take the opportunity to rub shoulders with other world leaders, but changing his mind sent a different message. One climate expert said: "The Sunak flip-flop doesn't demonstrate the level of leadership Johnson had."

If you forget the fuss about Mr Sunak's change of heart, there are signs that climate change has moved down the agenda since last year.

COP26 chief Alok Sharma was shunted out of the cabinet in the last few weeks which sent the signal, intentional or not, that the new administration is less concerned about the issue.

During her brief time in office, Liz Truss announced plans for 130 new oil and gas licences, although her tenure in No 10 was too short to approve any. Furthermore, the UK hasn't yet provided all the cash to help the countries hardest hit by climate change that it promised last year.

That doesn't mean the UK has abandoned all of its efforts, but the political urgency has noticeably faded. One well-informed climate source says "there is a reasonable question about whether we really have our climate credentials in the right place".

The demands of short-term politics often shove the desire to solve long-term problems down the list. As one COP insider said: "Ukraine and serious climate catastrophes this year have made clean energy and action no less important, but domestic worries about the economy and winning elections prevail."

However, there is a different question being asked too: what is the new prime minister's attitude to climate change? How much does he really care?

During his short attendance at COP, there were warm and determined words, perhaps a new commitment or two. Just before COP Mr Sunak said "there is no long-term prosperity without action on climate change", but there are doubts about his stance.

One source, normally familiar with the government's plans and instincts on the issue, says "there is a big question about what he really thinks".

Another climate insider worries "it doesn't feel like he's acting out of conviction and belief" while one industry source says "he's never been a naysayer but he has never been a fan", adding

that during his time in the Treasury "he was a big sceptic about the cost".

The costs are enormous, of course. A Freedom of Information request for our programme shows just how big the price tag would be even for making public buildings green. An enormous £25-30bn at a time when cash is short.

When people are worried about keeping the lights on, it's not surprising that some voters also might feel less fussy about where their power comes from, but Rishi Sunak's political opponents sniff an opportunity, with Labour believing they can make the case for a faster move to green energy.

With recession approaching they are developing plans to go much further and faster with UK-generated renewables. There are important questions about how realistic their plans really are, but it's notable that they see political advantage in putting those ideas front and centre.

One Labour source said Mr Sunak's "will he, won't he" attendance at COP "sent a message round the world with his hokey-cokey on attending COP that the UK is out of the climate leadership business... the world desperately needs climate leaders, but it's not going to come from Rishi Sunak".

More diplomatically, Claire O'Neill, the former MP and energy minister who was partly responsible for the UK becoming the COP president last year, told me the UK is "playing defence, not offence".

ACCORDING to an article published on www.openaccessgovernment.org the UK has increased biomass subsidies for bioenergy by £2 billion annually, which involves mass deforestation. Only days after the UK committed to increased forest protections at COP27, a new report reveals that it is still financing almost £2 billion a year in forest logging for bioenergy.

Despite the UK Government hosting last year's UN Climate Summit and Prime Minister Sunak's pledges to prioritise the environment, this year's meeting in Egypt was undermined by replacing burning coal with spending billions on burning the world's forests.

The report by Trinomics highlights that the UK gives more subsidies to bioenergy than the 11 other European countries investigated, where in 2021 alone the UK gave £1.8 billion in subsidies to the bioenergy industry, which is a 70% increase from 2015.

The UK government subsidies for electricity generation and combined heat and power (CHP) from solid biomass, which was commissioned by the Natural Resources Defense Council (NRDC), show that deforestation is being funded by big companies for this "green energy".

The UK gives the vast majority of these subsidies to Drax, which is Britain's top polluter. Drax takes burning wood from precious primary forests in Canada, the US, Estonia and numerous other countries.

The UK gives a large sum of money annually – which is still increasing – to a false renewable energy known as 'bioenergy'. The issue with this energy is that it costs a lot on the planet to adapt away from traditional energy resources.

Though net zero is important, trees also account for this goal. Deforestation takes a huge toll on carbon sinks, worsening our chances of reaching net zero. Indeed, Trinomics calculates that the UK's future subsidy payments to a bioenergy carbon capture project at just one power plant may add up to £3.8 billion to UK families' energy bills.

Instead, that amount could instead insulate

over 2.5 million homes in the UK, ultimately making them more efficient and saving them money by lowering their energy bills.

Elly Pepper, the Senior Advocate for NRDC, said: "The UK Government is forcing families and forests to pay the bill for an industry that is burning trees and worsening climate change. The UK and other governments, by wrongly claiming bioenergy is zero carbon, all have a hand on the axe that is bringing down the world's forests.

"As we face climate disaster, governments like the UK must stop burning our planet's forests for fuel under the guise of renewable energy. We need our forests to stop climate change and save nature. The UK Government should be subsidising real energy solutions that will actually save families money and keep them warm this winter."

Lord Randall of Uxbridge added: "The fact that the UK just committed to halt and reverse forest loss at COP27 while it hands £2 billion a year to an industry that destroys forests is deeply disappointing. The UK cannot be a world leader in combatting climate change and biodiversity loss while putting bioenergy at the heart of its plans to meet net zero."

Phil MacDonald, Chief Operating Officer of energy think tank Ember, said: "We now know that burning forest bioenergy is not just very expensive – it can contribute to climate change. A cheaper, cleaner alternative exists: the UK's enormous wind power resource, which is being rapidly harnessed to generate electricity and lower energy bills.

"In the middle of an energy bill crisis, the UK must end wasteful funding to bioenergy, and instead focus efforts on building truly emissions-free sources of electricity."

E**SME STALLARD, BBC News Climate and Science, reported that a new report suggests emissions of CO₂ are rising so quickly there is now a 50% chance the world will cross a crucial climate change threshold soon.**

Emissions for 2022 are expected to remain at record levels, lifted by people flying again after Covid.

The report said that if emissions stay so high, the world faces a 50% risk of breaching a key 1.5°C temperature rise threshold in nine years having sweeping consequences for poorer and developing countries.

Average temperatures are now 1.1°C above pre-industrial levels and that increase has already caused major climate disasters this year. If global average temperatures were to rise to more than 1.5°C, the UN says it would expose millions more people to potentially devastating climate impacts.

The researchers have said emissions were rising in 2022 because of an increase in flying and the use of coal.

The report, published by the Global Carbon Project (GCP), used monthly energy data to estimate that global greenhouse gas emissions will rise by 1% this year. This is in stark contrast to a recent UN report that global emissions need to fall by 45% by 2030 to keep temperatures below 1.5°C.

Nations agreed in 2015 to "pursue efforts" to limit global temperature rises to 1.5°C above pre-industrial levels.

The UN climate body, the IPCC, has said keeping temperature rises below 1.5°C, rather than 2°C, would mean 10 million fewer people would lose their homes to rising sea levels; a 50% reduction in the number of people experiencing water insecurity; and a reduction in coral reef loss from 99% to 70%.

The GCP report, prepared by more than 70 scientists, was launched at COP27 in the Egyptian resort of Sharm el-Sheikh, where countries are in the middle of climate change negotiations.

Dr Robin Lamboll, Research Associate in Climate Science and Policy at Imperial College London said: "The report should remind negotiators at COP27 that their actions so far have been inadequate."

At last year's Glasgow climate summit, COP26, countries were asked to prepare more ambitious targets before coming to Egypt, but only 29 turned up with new plans.

Furthermore, last month another group of climate experts at Climate Action Tracker predicted that even with these new pledges, world temperatures would rise 2.7°C above pre-industrial levels by 2100.

India is expected to be the largest contributor to the growth in emissions in 2022 as it continues to increase its use of coal, the most polluting of fossil fuels. However, Dr Kamya Choudhary, India policy fellow at London School of Economics, thinks this is a short-term measure to cope with the ongoing energy crisis.

One of the report's authors, Robbie Andrew, a senior researcher at CICERO, pointed out that even though developing countries like India are increasing their emissions quickly, they are still significantly lower per person than in Europe.

In addition, European countries are also turning to dirtier fossil fuels to cope with energy shortages driven by the Russian invasion of Ukraine. Germany is burning more coal this year than last and the UK has asked energy firms to delay the closure of end-of-life coal plants.

Although Professor Vanesa Castán Broto, UN climate expert, acknowledges that the report is "bleak", she says there are reasons to be hopeful: "There is evidence of responses from the public and private sectors, and from NGOs, community organisations, and individuals."

"These voluntary efforts must be accompanied by agreements to regulate the use of fossil fuels," she added, but divisions emerged in Egypt at the UN climate summit. Some developing nations such as Senegal and South Africa want to make use of their gas resources whilst they transition to fossil-free energy sources.

The Idy Niang, head of climate change programme, Department of the Environment, Senegal told the BBC at COP27: "We just discovered gas and petroleum, and we start exporting it, so we cannot abandon it as we are LDC and need to enforce our economy for development."

M**ATT McGrath, the BBC Environment Correspondent, reported that analysis shared with the BBC shows that the number of delegates with links to fossil fuels at the UN climate summit has jumped 25% from the last meeting.**

Campaign group Global Witness found more than 600 people at the talks in Egypt are linked to fossil fuels. That's more than the combined delegations from the 10 most climate-impacted countries.

Around 35,000 attended the COP27 summit in the Red Sea resort of Sharm el-Sheikh. These conferences have always attracted significant numbers from the coal, oil and gas industries, who are keen to influence the shape of the debate.

At last year's summit in Glasgow, a similar analysis of official attendance lists found 503 delegates connected to fossil fuels. This year that figure has gone up to 636.

"COP27 looks like a fossil fuel industry trade

show," said Rachel Rose Jackson, from Corporate Accountability, one of a group of campaigners who released the data along with the Corporate Europe Observatory.

"We're on a carousel of madness here rather than climate action. The fossil fuel industry, their agenda, it's deadly. Their motivation is profit and greed. They're not serious about climate action. They never have been and they never will."

The researchers counted the number of individuals registered who were either directly affiliated with fossil fuel companies or attending as members of national delegations that act on behalf of the fossil fuel industry.

The data shows that this year, there were more fossil fuel lobbyists than total delegates from the ten countries most impacted by climate change, including Pakistan, Bangladesh and Mozambique.

The biggest single delegation at COP27 was from the United Arab Emirates, who will host COP28 next year. They had 1,070 people on the ground here, up from just 170 last year.

The analysis found that 70 of that delegation were connected to fossil fuel extraction.

Russia's delegation had 33 lobbyists for oil and gas in their delegation of 150.

African lobbyists pushed to exploit reserves. "If you are not at the table, you'll be on the menu". That's the view of Dr Omar Farouk Ibrahim, the head of the African Petroleum Producers Organisation, speaking to the BBC at COP27.

He said he was there to try and influence negotiators to support the development of oil and gas in Africa. He said there were 600m people across the continent who don't have access to electricity.

He rejects the idea that Africa should forgo its large reserves of oil and gas in exchange for renewable technology and funding from the richer nations.

"We've been failed in the past and there is no guarantee that they wouldn't fail us again," he told BBC News.

However, rather than being a powerful influence, Dr Ibrahim says his group and others struggle to make an impact at the highest levels.

"I guarantee you, even if we are to pay to come here, they will not allow us to come because they don't want the other voice heard."

There is some evidence that the arguments being made by those in favour of oil and gas are having an impact. There has been a "dash for gas" recently among some African nations, keen to exploit their resources at a time of increased demand in Europe and elsewhere.

Senegal is one of the African countries that wants to exploit its recently discovered reserves of gas. "What is important for us is how can we use these resources to develop our country and reinforce our economy and to export it to emerging and developed countries," said Idy Niang, from the Senegal delegation.

However, others attending were clear that the climate situation was now so serious, there should be no room at any COP for those backing fossil fuels.

"If you want to address malaria, you don't invite the mosquitoes," said Phillip Jakpor, who's from Nigeria and works with Public Participation Africa. "As long as we have the fossil fuel lobby and machinery in full swing, we will not make progress and we have not made progress," he told BBC News.

1: The biggest win on climate since Paris...?

A new funding arrangement on loss and damage - a pooled fund for countries most affected by climate change - has been hailed as a "historic moment". It can be seen as the most important climate advance since the Paris Agreement at COP 2015.

For decades the victims of a changing climate were the ghosts the richer world just couldn't see. Money has long been available to cut carbon or help countries adapt to rising temperatures, but there was nothing for those who had lost everything.

"For someone who has seen his home disappear in the floods in Pakistan, a solar panel or a sea wall isn't much use," explained Harjeet Singh from the Climate Action Network.

The COP27 decision on loss and damage won't fix that immediately. The fund comes with many unknowns. What will be the criteria to trigger a pay out? Where will the money come from, and will it be enough?

Compare the EU's €60m contribution against the \$30bn costs that Pakistan faces.

However, establishing the loss and damage fund is about more than money or compensation or reparations - it is really about solidarity and rebuilding trust.

Despite the dramatic impacts the rising temperatures will inflict on the world, this fund signals that no one will be left behind.

It is a concrete demonstration that we really are all in this together.

2: ...Or the biggest loss on climate change since Paris?

For many countries, the last hours of the negotiation represent a real step backwards in the fight against rising temperatures. While the loss and damage text represented a big win, the overall cover decision is being seen as a missed opportunity in the fight against climate change.

The man who ran the COP26 negotiations in Glasgow put it bluntly. "Emissions peaking before 2025, as the science tells us is necessary. Not in this text," said Alok Sharma.

"Clear follow-through on the phase down of coal. Not in this text."

As well as all these limitations there was also a sharp U-turn on the language around fossil fuels. The text now includes a reference to "low emission and renewable energy".

This is being seen as a significant loophole that could allow for the development of further gas resources, as gas produces less emissions than coal.

3: The spirit of 1.5°C is strong, even if the text is weak

There's a fifty-fifty chance over the next five years that we'll go over this important marker of temperature increases, compared to pre-industrial times. We're likely to pass it permanently by 2031.

However, at COP27, the EU and other developed countries were willing to die on the hill of strengthening the promise to keep 1.5°C alive.

Their efforts were ultimately in vain as the cover text failed to include a reference to the phasing out of all fossil fuels, seen as a necessary advance on last year's decision to phase down the use of coal.

"I wish we got fossil fuel phase out," said Kathy Jetnil-Kijiner, the Climate Envoy of the Marshall Islands, who along with other island states fear annihilation if temperatures rise above 1.5°C.

"The current text is not enough, but we've shown with the loss and damage fund that we can do the impossible. So we know we can come back next year and get rid of fossil fuels

once and for all."

There's a deep sense of solidarity by the richer nations with the island states on this issue of keeping below 1.5°C

Faith in the threshold has also become a key differential between the US, EU and other richer countries and China, which is markedly less concerned about the goal.

While the world will undoubtedly be a better place the closer we stay to the 1.5°C guiderail, belief in the ideal is also a political and economic bridge to the developing world.

So even as the science and the COP process falter on 1.5°C, expect the diplomatic attachment to grow stronger in the coming years.

4: The fossil fuel industry has finally come out of the shadows

One key takeaway from COP27 was the presence and power of fossil fuel, be they delegates or countries. Attendees connected to the oil and gas industry were everywhere. Some 636 were part of country delegations and trade teams.

The crammed pavilions felt at times like a fossil fuel trade fair. This influence was clearly reflected in the final text.

Demands from India and others for all fossil fuels to be phased down didn't survive, despite the backing of the EU and many other countries rich and poor.

Many African countries were also keen to use the COP as a platform to promote new oil and gas initiatives in their countries.

"The fact that the outcome only talks about 'phase-down of unabated coal power' is a disaster for Africa and for the climate," said Babawale Obayanju, from Friends of the Earth Africa.

"We don't need more gas extraction in Africa, devastating our communities for the benefit of rich countries and corporations. What we needed from COP27 was agreement to a rapid, equitable phase out of all fossil fuels."

That battle will resume at COP28 in Dubai.

5: Democracy really matters for the climate

The undoubted darling of the COP was Brazil's president-elect Luiz Ignacio Lula Da Silva. Just as he did in Copenhagen in 2009, Lula electrified the conference with his promise of zero deforestation by 2030.

More than his commitment to the Amazon, Lula restored people's faith in the power of the ballot box to solve the climate problem.

So too, in his un-showy way did President Biden. The retention of the Senate by the Democrats most likely ensures that his Inflation Reduction Act will not be overturned or watered down. At a stroke it puts the USA's carbon cutting goal for 2030 within reach.

The affirmation that democracy is an effective weapon against climate change was also demonstrated in the actions of the host country.

With security and surveillance everywhere, the conference took place in an atmosphere best described as barely restrained intolerance.

As well as the ongoing troubles over human rights, the Egyptian hosts paid scant attention to basic functional needs of a conference such as food, drink and decent wifi.

When push came to shove, there was a distinct lack of empathy from negotiators for the presidency. This really mattered in the final showdown.

COP27 could have been a major advance against climate change. That it ultimately didn't hit that mark is at least partly down to the hosts.

Editors comment – I won't be holding my breath. For COP read COP OUT !!!

MATT MCGRATH, BBC Environment correspondent, summed up the conference by giving "five key takeaways from COP27".

COP27 Boosts Carbon Trading and ‘Non-Market’ Conservation: But Can They Save Forests?

An article by Alec Luhn published on the excellent Mongabay website

- *For the first time ever at a climate summit, the final text of this month’s COP27 included a “forests” section and a reference to “nature-based solutions,” — recognizing the important role nature can play in curbing human-caused climate change. But it’s too early to declare a victory for forests.*
- *By referencing REDD+, the text could breathe new life into this UN framework, which has so far failed to be a game-changer in the fight against deforestation as many hoped it would be.*
- *COP27 also took a step toward implementing Article 6.4 of the Paris agreement, a mechanism that some see as a valid market-based climate solution, though others judge it as just another “bogus” carbon trading scheme.*
- *Many activists are pinning their hopes instead on Article 6.8, which aims to finance the protection of ecosystems through “non-market approaches” like grants, rather than with carbon credits.*

AS POLITICIANS, activists and journalists celebrated the historic breakthrough to create a loss and damage fund at COP27 and bemoaned the failure to call for a phase-down of fossil fuels, few noticed that the summit took a step, albeit a very controversial one, toward preserving forests and other ecosystems via pledges made by carbon-polluting countries and companies trying to meet their climate goals.

Decisions issued at COP27 set a timeline to implement all parts of Article 6 of the Paris agreement, which regulates carbon trading between the parties, as well as non-market investment in conservation. Those decisions also include a verification mechanism that could see countries sell “sovereign carbon credits” for the preservation of ecosystems. With an area the size of Ireland deforested globally last year, it’s a pressing issue.

Many COP participants now see carbon markets as the best way to increase investments in ecosystem preservation to benefit the climate, especially carbon-rich rainforests in the global south. Others worry the carbon trading focus could encourage dubious carbon accounting and offsetting, and argue instead for “non-market approaches,” which also got a step closer to reality at COP27.

“It is too optimistic to say that this is a victory for forests,” said Diego Pacheco Balanza, Bolivia’s lead negotiator and a key voice on Article 6. “We are opening several venues for supporting forests financially to help keep them alive, but those are resisted by developed countries. They only want to push the commodification of forests, which of course is a fatal scenario.”

First time inclusion of “Nature-based solutions”. COP27’s incremental achievements reflect a growing recognition that ecosystems provide vital carbon sinks as well as havens for wildlife, and that protecting them simultaneously addresses the global climate and biodiversity crises. Primary forests, for instance, both absorb carbon from the atmosphere and store it in a way that enhances resistance to wildfires and disease. So, say negotiators, countries and companies deserve rewards for conserving them.

This year’s COP cover text enshrined the import of “ensuring the integrity” of forests, the ocean, and the cryosphere, and underlined a

need for “protecting, conserving and restoring nature and ecosystems” to meet the Paris agreement goal of limiting warming to 1.5° C.

The final text also included a dedicated section on forests for the first time, which referenced “nature-based solutions” — actions to protect ecosystems while easing global warming.

A similar reference to “nature-based solutions” was rejected at COP26 in 2021 in Glasgow. However, the final cover decision text approved at COP27 in Egypt, reflects only a partial victory, say campaigners. That’s because the final text only “encourages” signatories to consider such solutions. In the jargon of the UN Framework Convention on Climate Change, this is a weaker signal to a country or company updating its climate policies than “invites,” “urges,” “strongly urges,” “requests,” or “instructs.”

New life for underperforming REDD+.

The other item addressed in the forest section, though controversial, has been hailed by some as a win for climate justice. It quoted a section of the Paris agreement that urged parties to implement REDD+, or Reducing Emissions from Deforestation and Forest Degradation, enshrining a mechanism for sustainable management of forests in developing countries.

The REDD+ framework was originally designed to evaluate, quantify, and support avoided emissions via the preservation, rather than the exploitation, of carbon-storing ecosystems including forests. The COP27 text could allow developing nations to sell vetted sovereign carbon credits, making it more profitable to keep ecosystems intact rather than disrupting them for timber, minerals or agriculture.

Honduras negotiator Malcolm Stufkens told Mongabay and other journalists during a break in the late-night overtime talks in Sharm El Sheikh on Saturday that his country, which is 48% covered by forest, was pushing for a REDD+ reference to be included in the text so that his nation’s trees would have “more value standing than not standing.”

“We’ve been working a lot on protection and conservation, so we’re here to see that the

mechanism has to build up also to [nations getting] paid for all the [preservation] activities we’re doing, and [for] protecting our forest,” he said.

Kevin Conrad, director of the Coalition for Rainforest Nations and a negotiator for Papua New Guinea who was instrumental in developing the framework back in 2005, held up the negotiations in Glasgow in 2021 in a failed push for REDD+ to be included in the text. This year it also seemed REDD+ would get left out. Ève Bazaiba, the deputy prime minister of the Democratic Republic of Congo, even flew into Sharm El Sheikh at the last minute to rally parties for its inclusion.

Ultimately, the nod to REDD+ made it into the final COP27 text, as did a significant footnote stipulating that not only countries, but also private companies, could buy sovereign carbon credits.

“What developing countries are concerned about is being trapped into commitments that the poorest countries can’t implement,” Conrad said. “They didn’t cause the [climate] problem, but they’re willing to help, as long as there’s sufficient finance, and that’s the [private corporate] link we need.... We don’t want just to rely on some public finance.”

Projects implemented under the framework so far have shown mixed results, and academics have even wondered if “REDD+ is dead”, but some forest activists see it as the lesser evil.

“We compromise on REDD+ with results-based payment to keep it outside of carbon markets,” said Souparna Lahiri of the Global Forest Coalition.

Climate financing or offsetting? Article 6 of the Paris agreement is meant to help countries cooperate to reach their climate targets, and COP27 took steps toward finally putting it into action.

The first item, outlined in Article 6.2 allows one country to pay for an emissions reduction in another country and count it towards its own net zero goal. Article 6.2 working rules were agreed to at COP26, and are beginning to be implemented. At this year’s summit, Ghana and Switzerland authorized the first-ever

"internationally transferred mitigation outcome" under Article 6.2.

In that landmark agreement, Switzerland installed efficient lighting and cleaner stoves in Ghana so up to five million households there will no longer need to burn carbon-polluting wood for cooking. Switzerland can now count those emission cuts in Ghana toward its own goal of halving Swiss greenhouse gas output by 2030. It has signed similar agreements with 10 other low-income countries.

The next key section, Article 6.4, allows the trading of carbon credits on an open market, rather than under an agreement between two countries. A text issued at COP27 moves that process forward, asking a technical committee to issue recommendations before the next COP on what qualifies to be sold as carbon credits. It also requests parties to weigh in on whether those credits can be applied to countries' net zero targets.

At issue is "emission avoidance," an ill-defined term that applies when nations keep carbon-storing ecosystems intact, "regardless of any evidence that such carbon would [ever] be released to the atmosphere," said Caroline Prolo of LACLIMA, a Brazilian network of climate law experts.

A supervisory body has not yet finished its recommendations on how to address the risk of carbon storage reversals, such as when a forest already sold as a carbon credit burns down. This lack of detail has left critics complaining that elements of Article 6.4, as agreed to at COP27, feel rushed and may "fail on delivering the high level of integrity that is expected," Prolo said.

Big emitters like the United States have pushed for the creation of carbon markets, arguing that they make the fight against climate change profitable and add incentive, rather than just relying on public-minded donors to invest in mitigation in another country.

However, these kinds of markets have long been criticized for shoddy accounting. 80% of credits traded on an early carbon market under the Kyoto Protocol climate agreement were "almost completely bogus," undermining a third of the European Union's claimed emission cuts. There's also the fear of double counting: Experts feel that the Article 6 rules discussed at COP27 could allow both the country that sold a carbon credit, and a company that bought it, to count it toward their net-zero goal.

Carbon markets are ultimately a form of offsetting, say some critics, which can allow bad actors to pay their way to net zero, never reducing their own high emissions, while buying credits for reductions elsewhere. The voluntary



carbon markets that already exist are contributing to "net-zero greenwashing" by countries and companies due to a lack "standards, regulations and rigor," a report commissioned by UN Secretary General Antonio Guterres said this month.

Non-market approaches. "At the very best, [with carbon markets] you just get a cancellation of emissions, just a balancing out, but that rarely happens in practice because you have so many issues, so many assumptions that have to happen for that to be real," said Catalina Gonda of FARN, an environmental law NGO based in Argentina.

To head off that problem, Balanza and others demanded during the Paris agreement negotiations that Article 6 also include Article 6.8, which affords emission reductions through "non-market approaches." These are essentially grants rather than credits.

The CLARA network of conservation and land rights groups, for instance, has suggested placing levies on oil drilling, stock trading and air travel that could fund projects to protect and restore forests.

Article 6.8 remains the ugly stepchild of Article 6, given little shrift by carbon polluters focused on offsets, as well as activists focused on big-picture issues like loss and damage. Opponents say the forces of supply and demand will do better at creating value for climate action, but forest campaigners argue 6.8 can effectively match donors to promising mitigation and adaptation initiatives, all without creating incentives for shady accounting.

COP27 offered a major breakthrough on Article 6.8, analysts said. Decisions in Egypt

finally put it on a timeline for implementation in 2023-24, by asking experts to start identifying non-market approaches and who can participate.

"6.4 is creating a trading mechanism that Shell and Total and [big] airlines can continue," said Peter Riggs of Pivot Point, an NGO. "Whereas with 6.8, 100% of the benefit will accrue to the developing country that hosts the activity."

Once implemented, Article 6.8 could be a way of regulating the many international investments in preserving ecosystems announced annually, including those under the Glasgow Forest Declaration. At COP27, the UK said £2.3 billion had been paid out under that forest pact, with a total £10.1 billion pledged.

However, analysts say, a lot of international finance has failed to make it to the places where deforestation is occurring on the ground, such as in the Democratic Republic of Congo. To avoid that fault, the funds should be vetted and monitored under a UNFCCC mechanism like Article 6.8, proponents say.

Asked why he supports voluntary carbon cuts over the quid pro quo carbon markets for climate mitigation, Balanza pointed out that significant political will has already emerged to protect the Amazon rainforest through initiatives like the Amazon Fund, by which Germany, Norway and Brazil finance inspectors to fight agriculturally driven deforestation.

"There is a pathway, a real pathway, to start working seriously on how we should address the climate crisis," he said, "with cooperation of parties, and opening an alternative to mercantilism."

Natural Environment?

I RECENTLY attended a local meeting where people were talking about "protecting our natural environment". One person wanted to protect people living on a busy road from the traffic fumes that ruin their "natural environment". Another wanted to protect the "natural environment" of our countryside. When I said that it wasn't possible because there is nothing in our environment that is "natural", they looked at me in amazement.

I pointed out that there is almost nothing in a Broadland parish that has not been created or moulded by man.

The "natural environment" of a busy road is vehicle fumes. The cars and roads have been made by man for his own use.

The "natural environment" of Broadland's countryside has long disappeared as a result of farming, quarrying and other effects of man

using the land for his own purposes.

Indeed, today we probably have more brownfield land than greenfield land because, like young children, we aren't very good at clearing up when we have finished with something!

It is highly questionable if we have any "natural woodland" and our precious few ancient woodlands have been managed and changed

by mankind over the centuries

Until we realise this fact and are willing to admit it, talking about improving or protecting our "natural environment" shows a lack of understanding of the problem.

Please, please, please, forget the word "natural". Admit that we've messed up big time but, at the same time, don't stop trying to "improve" our environment.

The Namibia-Botswana Oil Project Being Called a Sin

By Lebo Diseko, Global Religion Correspondent for the BBC

AS POLITICIANS met to discuss how to cut carbon emissions, descendants of Southern Africa's first inhabitants raised concerns about an oil and gas exploration project. Religious leaders have also spoken out, with one saying the project is a sin, and calling on COP27 delegates to curtail the activities of fossil fuel companies.

In the Southern African country of Botswana lies one of the largest inland deltas in the world, a landscape the UN has called "exceptional" and "rare" in its beauty.

The Okavango Delta is an oasis in the heart of the Kalahari Desert. Its waterways and floodplains are home to some of the world's most endangered species of large mammals, like black rhinos. The plants, birds, fish, and animals that live here make up a particularly delicate ecosystem.

It's so precious it has been designated a World Heritage Site but there are fears it is under threat, because of fossil fuels.

A Canadian company, Reconnaissance Energy Africa (ReconAfrica), believes there could be a wealth of oil and gas under the ground in the north of Botswana and neighbouring Namibia. It holds exploration licences for a 34,325km² area straddling the border of the two countries. Three test wells have already been drilled in Namibia.

"The project is a sin, and a serious one," the recently retired former Anglican Bishop of Namibia tells me.

Luke Pato spent the last months of his time in Namibia campaigning against the project with a group of other religious leaders. As we sit in the garden of his home in Johannesburg, he tells me why.

"Jesus said, 'I have come so that they may have life and have it abundantly.' He would never be on the side of anything that has the potential to destroy life, to destroy the environment in which people live. I have no doubt that Jesus would find a way of pulling the carpet under the feet of those who are still wanting to engage in the exploration of fossil fuels. I would like drilling to stop, this company to pick up its machines and go."

Bishop Pato is worried about the effect that the drilling in Namibia may have on underground water reservoirs that connect to the Okavango River. The river runs along Namibia's border north of the drilling sites, carrying water to the delta in neighbouring Botswana.

ReconAfrica says its exploration poses no pollution risk. Mwanengwa Shapwanale, head of communications for ReconAfrica's Namibian subsidiary says the company is working with Namibia's government "to make sure that not only are we in line with what is expected from us to protect the environment, especially the water, but also to make sure that we go the extra mile."

However, Bishop Pato also has another

concern: he thinks the exploration of African natural resources by a Canadian owned company amounts to a "new wave of colonial-ism". He wants delegates at COP27 in Egypt to put forward "a resolution that would tell companies that are drilling outside of their own countries not to do so".

Namibia's government rejected his criticism, telling the BBC it had a responsibility to develop the country's natural resources for the benefit of its people.

"Reneging on that responsibility will be reckless, therefore as a sovereign democratic country, Namibia will sustainably explore and develop its natural resources," it said.

It pointed out that Namibia's greenhouse gas emissions were "insignificant compared to that of the developed nations". Africa as a whole is responsible for less than 4% of the world's greenhouse emissions.

The issue of whether African countries should continue to exploit fossil fuels is emerging as a point of division at this year's COP. A number say they should be free to exploit oil and gas deposits, in order to grow their economies and end energy poverty, but Bishop Pato remains unconvinced.

"When there are potential cleaner sources of energy, why take a step back to fossil fuels?" he asks.

In Botswana those concerns are echoed by descendants of Southern Africa's first inhabitants: the San. For millennia San communities inhabited what is now Southern Africa, living a hunter-gatherer lifestyle. Now there are thought to be around 90,000 left, concentrated in Botswana, Namibia, South Africa and Zambia.

Key to their culture and belief systems is living in harmony with nature. San spirituality is inextricably linked to their relationship with the land, plants, and animals.

"We don't want this project to happen," says Diphetogo Anita Lekgowa, a San activist from Botswana who is attending COP27 in Egypt as a campaigner for indigenous people's rights.

"We are concerned for the environment and the protection of our natural resources, because once [drilling starts] there will be a whole load of change. The animals will migrate, and we fear losing our indigenous plants."

Botswana's government declined several requests for interview, but the Minister of Mineral Resources, Lefoko Moagi, has



previously stated that "the terms of the licence require ReconAfrica to preserve in as far as is possible the natural environment [and] minimise... damage to natural and biological resources."

The government has also underlined that no drilling is currently planned in Botswana - the exploration will be carried out by non-invasive means, but Diphetogo Anita Lekgowa fears that if the presence of oil or gas is confirmed, drilling will eventually take place. Much like Bishop Pato she is worried about what that might bring.

She is from the River San people, who believe the river that feeds the Okavango Delta was given to them by the gods, because it never dries. Growing up in the village of Khwai on the edge of the delta, the reverence her elders had for the river was woven into the fabric of their lives, she says.

"Our parents would go to the river to dance, connecting with the gods, thanking the gods. Our culture, our way of life, our spirit connects with the river."

If the river and Delta were harmed, Anita says, it "would destroy people emotionally".

"Why is our government interested in oil when there are other things that can be done that can bring in revenue?"

On the other side of the delta, in Botswana's north-west, lies another World Heritage Site - a series of large rock formations so holy to the San that they are known as "the mountains of the gods".

The Tsodilo Hills are where the San believe the spirits of the ancestors reside, and it is through them that they connect with the Most High Being. The hills contain more than 4,500 rock paintings, some of which are thought to be more than 20,000 years old, detailing the history of the San people.

San activist Gakemotho Wallican Satau, who lives in the town of Shakawe, to the north of the hills, tells me that for the San the hills are "similar to Mecca for the Muslim people".

Exploration is not allowed within a 20km buffer zone around the hills, but this has done little to allay Gakemotho Wallican Sata's fears. "How could I not worry?" he says.

He particularly fears "tremors or earthquakes" that could lead to the destruction of the paintings.

Across Southern Africa there are San people who argue that their communities have been dispossessed of their land.

"We are already marginalised, we are poor, we have lost land, and now the Canadians are coming," Gakemotho Wallican Sata says.

ReconAfrica's Ms Shapwanale stresses that the project is in its early stages in Botswana, and the company is keen to hear from affected communities.

"We will continuously listen to the San community, we will continuously put in effort and go above and beyond to make sure that they're

consulted. We listen to them, we hear and we get advice on what is the right way to do things."

However, she says other nations have been trusted to explore for oil and gas, and it helped them to develop their economies.

"If the Namibian and the Botswana governments invite us, I think it's only fair that these two nations should also be allowed to explore the natural resources for the benefit of the people, including the San community."

Hidden Emissions in Liquid Gas Imports Threaten Targets

By Matt McGrath, BBC Environment Correspondent

EUROPE'S growing reliance on liquefied natural gas (LNG) is coming at a high environmental cost, new research shows. LNG imports have soared in the wake of the Ukraine war which has limited piped supplies from Russia. Analysis, seen by the BBC, shows that the production and transport of LNG causes up to ten times the carbon emissions compared to pipeline gas.

There are worries that the extra carbon could hamper efforts to rein in warming. World leaders met in Egypt last month for the COP27 climate conference, amid concern that the war in Ukraine has distracted efforts to cut carbon.

In the UK and Europe, worries over energy supplies have seen an unprecedented uptick in imports of LNG, a liquefied version of natural gas. Data shows that LNG cargo import volumes were up 65% in the first nine months of this year compared to 2021, but according to new analysis by Norwegian research firm Rystad Energy, shared with the BBC, the making and shipping of liquid natural gas is extremely energy intensive.

To make it, fossil gas is cooled in giant fridges to -160°C. As the gas liquefies, it shrinks and becomes six hundred times smaller, making it easier to transport. While the emissions from burning the gas are the same whether it's piped or in liquid form, the extra energy involved in making and transporting the liquid is significant.

Patrick King from Rystad said "For piped gas from Norway, we see around 7kg of CO₂ per barrel, but for LNG imports into Europe, we estimate the average is over 70, so around 10 times lower for piped gas versus LNG. "By the end of next year, if Russia fully turns off the gas taps and all that additional gas needs to come from LNG sources, we will see an additional 35 million tonnes of imported upstream CO₂ emissions compared to 2021."

That extra CO₂ is the equivalent of adding around 16 million cars to the UK's roads for two years. For some observers, this rush for LNG is a triumph of short-term thinking.

"The real opportunity, out of a bad situation is to put incentives in place to reduce our gas usage," said Dr Paul Balcombe, from Queen Mary University of London. He wasn't involved in this new study, but has researched LNG emissions previously.

"We need to increase energy efficiency and

CO2 emissions in Europe caused by the manufacturing and transportation of LNG*
(Million tonnes CO₂)



Source: Rystad Energy research and analysis

BBC

our renewables deployment. Rather than just looking at the really, really short-term replacement, which is LNG, we need to look at the slightly longer term, which will have way better cost implications, financial and environmental."

Environmental campaigners are worried that the current embrace of extra LNG may not be a one off. While none are currently planned for the UK, there are plans for the installation of around 20 new LNG terminals on the European continent.

Eilidh Robb, from Friends of the Earth Europe said "It's really scary to be honest. The

challenge is that to make these terminals economically viable, countries have to agree to very long contracts to bring in the gas and the terminals themselves can last up to 40 years, which means a very long lock-in effect for these fossil fuels that we are trying to get out of."

One other problem with these imports is their origin. According to Rystad, around 16% of the liquid is coming from Russia. In buying this gas from Russia, the UK and Europe are not just helping to fund the invasion of Ukraine, but they're also making it more difficult to win the war against climate change.

Climate Change: Dimming Earth, Mustard Shortages and Other Odd Side-Effects

By Victoria Gill and Ella Hambly for BBC News

BIRDSONG, snowdrops, blossom and midge bites are not things you associate with November in the north of England, but these are just some of the milder side effects of a warming world. As well as fuelling deadly floods and drought, rising temperatures are cited as a cause of spontaneous explosions of Siberian permafrost, mustard shortages and the planet becoming dimmer. Many of the impacts of climate change are devastating. Some are weird.

Giant craters in thawing Siberian permafrost have been attributed by some Russian scientists to warmer ground temperatures causing underground pockets of gas to spontaneously explode. Permafrost is defined as land that has been frozen continuously for more than two years.

It's only one hypothesis to explain the formation of giant craters in the Arctic landscape.

As this BBC Future article highlighted, they are a "disquieting sign" that this cold, largely unpopulated landscape at the north of our planet is undergoing some radical changes.

Recent research also showed that the Arctic is warming even faster than previously thought - four times faster than the rest of the world and as well as blasting holes Earth's wilderness, climate change could also be dimming the planet's "shine", according to scientists at Big Bear Solar Observatory in New Jersey.

By measuring the sunlight reflected from Earth to the dark part of the moon at night, scientists measured what they call "earthshine" or albedo - basically Earth's reflectiveness.

The studies suggested that the amount of low cloud cover over the eastern Pacific Ocean is reducing due to warming ocean temperatures. Since these clouds act like a mirror, reflecting light from the Sun back into space, without them

that reflected light diminishes. So, according to these scientists, we might actually be taking the shine off our little blue dot.

While we might be causing global warming, we're not the only species experiencing it. Some creatures are affected in truly surprising ways.

In some reptiles, the sex of offspring is partly determined by the temperature at which the eggs are incubated. Genetically male central bearded dragons - a species of lizard found in Australia - will actually change from male to female when they are incubated over a certain temperature. So scientists are concerned that males could become increasingly rare as the world warms putting the species at risk of extinction.

In the ocean, rising levels of the greenhouse gas carbon dioxide could be causing fish to lose their sense of smell.

Climate change is also measurably screwing up seasonal synchrony. In Wytham Wood this April - the UK's most scientifically studied woodland - great tit hatchlings emerged from their eggs up to three weeks earlier than they would have done in the 1940s.

The entire spring food chain has shifted with warming. The caterpillars the birds eat, the oak tree leaves the caterpillars eat. All reach their peak weeks earlier than they did before we warmed up the world.

While the seasons shift, many birds are adjusting, or just moving. This year, bee-eater chicks hatched in a Norfolk quarry. They are usually found in the southern Mediterranean

and northern Africa.

Even the soundscape is shifting. London's now a hotspot of unseasonal birdsong. One study has even suggested that forest birds were moving higher up in the trees to sing, possibly to avoid their calls being muffled by earlier foliage.

Extreme weather is also making it harder to grow food. Staples like wheat, corn and coffee are already being affected. And this year, there have been some notable condiment shortages.

In April, Huy Fong Foods, a California-based company that produces around 20 million bottles of Sriracha chilli sauce every year sent a letter to customers warning of a "severe shortage" of chillies.

In summer, supermarkets in France started to run out of Dijon mustard - a problem that could be traced to bad weather in the Canadian Prairies, where most of world's mustard seeds are grown.

Furthermore, the reality of climate change is even hampering efforts to go carbon-free. In August, the energy company EDF had to cut output from nuclear power stations situation in France, because there wasn't enough cool water in French rivers.

The answer, discussed by 200 countries at the UN climate summit last month, is a dramatic cut in those planet-heating gases, but we've already transformed our world by warming it up and there are likely to be many more unexpected, and surprising, consequences.

My Mailbox

As you can imagine, I receive a fair amount of mail regarding our Network and Broadsheet. Some is complimentary, some is critical and some is down right unpleasant. That's freedom of speech I guess.

Sometimes I print the chain of correspondence in Broadsheet, but most of the time it would not be right to do so.

Last month, however, I received a mail that was most abrasive and completely unconstructive and made me decide to share it with you ... grammatical and spelling mistakes included.

It came from one of our Tree Wardens and I will not be naming the person, but this is what was written.

"mr high and mighty editor

I have received your broadsheet for loads of months ever since I was a treewarden and want to tell you that its all bull****. You don't write it you just copy it from papers and stuff and most of its rubbish and not interesting to treewardens. I don't want it anymore so stop sending it"

I respect the author's right to an opinion and to show full respect I shall publicly deliver a reply.

TOUGH!

Orders for Trees and Hedging and Requests for Training

I have received our "donation" from Broadland District Council for tree planting and training during December.

Whilst some of you have submitted your requests, I have not received anything from the greater majority of you. Anything we don't spend at the end of the year will be returned to BDC and next year's budget reduced accordingly.

So come on. Planting on publicly owned land and training for relevant subjects. Get your requests in right away. First come first served!!

Failing to See the Woods for the Trees

An article by Richard Negus published on The Critic website

TREES are “our allies in the fight against climate change but we need more of them” The Woodland Trust tells us. The Committee on Climate Change (CCC) echoed this sylvan refrain. Their veteran oak of a chairman Lord Deben (the former Cabinet minister, John Selwyn Gummer) recommended to the government that the UK must increase its woodland coverage from the current 13% of total land, to at least 17%. In its “stretch” scenario, the CCC suggested 19% of UK land cover should become woodland by 2050 if we are to reach net zero carbon.

During the 2019 general election, Boris Johnson grabbed a shiny spade and vowed a Conservative government would provide funding between 2020 and 2025 for 30 million trees to be heeled in annually over 30,000 hectares.

Not to be out done, the Liberal Democrats claimed they would plant 60 million trees per year over 40,000 hectares in the same timescale. Obviously, a Lib Dem forester works on a tighter planting density than a Tory one. Meanwhile, on planet Corbyn, Labour’s back of a seed packet planting proposal arrived at the incredible figure of 300 million trees by 2025 and 1 billion by 2030, which by my woodland creation calculator, is a maple’s shade under 2 million hectares.

In May 2021, erstwhile DEFRA secretary of state George Eustice provided the rationale for Boris’s arboreal promises by stating, “Tree planting will form a central pillar in the efforts to reach net zero emissions by 2050.” Admittedly this central pillar turned out to more of a clothes prop when compared with the manifesto pledge: 7,500 hectares of new woodland would be planted each year until the end of this parliament admitted Eustice with scarcely a blush to his cheeks.

The Forestry Commission’s Annual Report for 2021-22 reveals that even this figure was an optimistic punt rather than a pledge. In 2019-20, 2,360 hectares of trees were planted, the following year 2,052 ha and in 2021-22 a mere 2,255 hectares became woodland. In truth, the sum of three years’ worth of planting had failed to reach the target figure slated for one year.

It is little wonder that these tree planting targets were missed by such a wide margin. In the course of my career I have planted more trees and hedges than most and one piece of advice I will offer free of charge. You can’t plant trees if you don’t have any trees to plant. In brief, we don’t grow anywhere near enough hardwood trees in Britain.

Ross Guyton is a co-director of Oak bank, a company that specialises in providing adroit advice and bespoke seed mixes for regenerative agriculture and farmland conservation schemes.

Ross’s particular area of expertise lies in woodland management and creation. He is a bluff ol’ Norfolk boy, as those of us on the correct side of the Waveney would say. “We haven’t got the trees to fulfil the political aspiration, it’s as simple as that” he told me.

“The clamour to plant new woods to achieve net zero isn’t unique to Britain, all of Europe is doing the same,” he says, “and we are all chasing after saplings to try to fulfil the environmental targets set at COP26.” This does seem a giant redwood sized oversight on the part of the political ranks. There are remarkably few commercial scale tree nurseries in the UK. Most sell their stock in what is known as “bare root” condition.

Saplings are grown from seed in open ground, these young whips are then lifted to order during the dormancy of winter to then be transported and immediately planted in their permanent location. This leads to no little logistical pressures on achieving the planting rates that government has set.

Bare root trees can only be lifted and re-planted from November to March if they are to stand any chance of surviving. Planting up 7,500 hectares-worth in five months is a challenge in any woodsman’s book.

The canny Ross has set up a new nursery in partnership with an entrepreneurial farmer, an expert nurseryman and a seasoned arborist. They seek to alleviate the logistical problems caused by the short five-month planting window. Their nursery, in Breckland, currently has a crop of 250,000 young trees ready to go. Next year they will double this supply.

Grown from seed in cells of non-peat-based compost, the young trees thrive in this medium with remarkable vigour and rather than bearing a dormant root, they boast a fibrous and fully active root ball. This means these saplings, although marginally more expensive to produce than their bare rooted brethren, can be planted in all but the driest of months thereby increasing the planting window.

The sourcing of seed is a challenge in its own right and another logistical challenge that was missed by the Westminster tree fans. Provenance is key. Seed requires a plant passport which proves the bio-security of the product thereby reducing the risks of disease. Think of the skeletal hulks of our native elms brought low by Dutch elm disease or the countless ash that wither and die from *Chalara*.

Ridiculously, the collection of seed in the UK relies almost exclusively upon a small band of semi-amateurs to undertake the sourcing. As Ross ruefully admitted “If we didn’t have a few hippies gamely out their picking up acorns and beech masts, we wouldn’t have anything to plant”.

The Forestry Commission’s annual report shows that the government is aware of these failings. There is now a Tree Production

Innovation Fund in place to financially support new nurseries such as Ross’s and move the onus of seed collection away from the band of selfless hippies.

A new Woodland Creation Offer has been recently introduced in a bid to financially incentivise more landowners to plant more trees. This grant of course is only of any use if you can source trees in the first place and as we have seen that is a challenge, the fact that the grant itself is an administrative minefield hardly helps either.

The true tragedy in all this however is not merely that the policies for creating new woods were created without a moment’s logistical forethought. The fundamental Conservative principle of looking after what you have before you buy new has been ignored. According to the Forestry Commission, 42% of England’s existing woodland is unmanaged.

Recently planted woods are in a similarly parlous state thanks to the 2022 summer drought. If the government is to realise its objectives for net zero, nature recovery and biodiversity then these unloved woods need management.

A “Woodlands into Management Forestry Innovation Fund” was only launched this year. The Fund purports to develop and test ideas to help improve the ecological condition of woodlands, which may strike many as being a bit late in the day for a bit of copse-based R&D.

The chances of these woods coming under management, and thereby improving their environmental potential, is once more threatened by shortages, not of trees this time but of human resource. The Institute of Chartered Foresters sent a paper to DEFRA in October 2021 highlighting their “serious concerns about the skills shortage in our sector, which we believe puts climate targets at risk.”

That skills shortage is so stark that the Institute estimates a 72% increase in forestry workers is required to achieve a workforce capable of fulfilling government woodland management and creation targets. Failure to address this they say will “lead to poorly planted and managed woodlands, urban trees that do more harm than good, and the wrong trees in the wrong places.”

It is a curious state of affairs that politicians of the right and environmentalists of the left both have an avidity to paint themselves green in the dappled light of woods, yet neither are prepared to grasp the thorny branch and do something practical about securing a meaningful tree stock and a workforce that might care for woods. Net Zero for effort.

Call for Clarity Over Tree-Cutting Rules

An article by Paul Faulkner published on the Lancashire Post Website

TREE disputes are taking root between Lancashire neighbours because of confusion and a lack of co-ordination across different local authorities, a senior councillor has warned. Lancashire County Council's Labour opposition group leader Azhar Ali told a cabinet meeting that there needed to be a way of ensuring residents did not fall into the "trap" between the policies and practices of County Hall and the dozen district authorities in the region.

He was speaking as cabinet members adopted a new tree risk management strategy which will see the county council draw up a complete record of every tree for which it is responsible, along with details of how many are cut down each year.

County Cllr Ali said that after a Pendle resident contacted him over a problematic tree on the road outside his home, he was told by county council officers that the householder could arrange to have it removed.

However, the individual's neighbour then approached Pendle Council and "before you knew it, they'd put a TPO on it", County Cllr Ali explained.

The Labour group leader said that he was also aware of a case where a borough authority had advised a resident that a particular tree that was of concern could be removed, but that the individual was then prosecuted by Lancashire County Council for the action they took.

"There needs to be some mechanism where there's an understanding of what's right and what's wrong, because ordinary people...get caught in the trap between Lancashire County Council and what [their] district council might say," County Cllr Ali warned.

County Hall's cabinet member for highways and transport, Charlie Edwards, accepted that trees could often become a bone of contention for residents, estimating that there were "hundreds" of tree-related issues across Lancashire.

However, he said that the new policy agreed by him and his colleagues was an important step that ensured the authority had in place "a clear procedure that people can understand".

"A simpler, more customer-focussed procedure and policy, which we now have, I think [is] really going to move things forward," County Cllr Edwards added.

A key part of the new risk management strategy will be to extend the policy so that it covers all trees on land owned by the county council. Not just those on or near roadsides, as was previously the case.

County Hall is also responsible, as the highway authority, for ensuring that trees growing on private land alongside vehicular sections of highway do not pose a hazard to road users. To that end, it can order the owners of such trees to take any necessary remedial action.

The new policy aims to mitigate to "as low a level as is reasonably practicable" the risk of personal injury as a result of falling trees and branches and trips and falls on footpaths that have been disturbed by tree roots. All tree owners are obliged to take reasonable care to ensure that any foreseeable hazards are identified and made safe and the county council is held to no higher standard than that, meaning



it does not have to be able to guarantee the safety of all of its trees.

There are around 10,000 tree-lined sections of road under County Hall's control and several hundred non-highways sites containing trees.

The authority expects that its in-house team of arboricultural staff will initially be overwhelmed by the additional work generated by the new strategy, both as a result of "legacy" maintenance and work needed because of ash dieback disease.

It predicts that the spike in demand will be temporary, but will require the use of external experts to ensure that all work is completed to the necessary timescales, which can range from one day to one year depending on the assessed risk that a tree poses.

Cabinet member for environment and climate change Shaun Turner said that there were examples elsewhere in the country of councils not having such a comprehensive policy in place and it proving "very costly". He also sought to reassure residents who may be concerned to witness trees being removed following an inspection that there was a "solid reason" for it.

"We do...have a tree-planting strategy as well, so where a tree is removed from a highway verge, for example, it may not be replaced [in the same spot], but [a new one may be planted] somewhere else," County Cllr Turner said.

The new strategy notes that trees have evolved to cope with "losing limbs, breaking apart and being wounded and grow[ing] adaptively in response to the environment around them", but that where trees and people co-exist, "there is a need to ensure that a tree's natural processes do not pose a risk to the

people and property around them".

However, the document stresses the "social and environmental value" of trees, adding: "Where reasonably practical, [trees] should be retained and allowed to complete their life cycle with minimal management interventions."

Owners of trees subject to a TPO must not carry out or allow any prohibited work without the written consent of the local authority concerned. A TPO prevents the cutting down, topping, lopping, uprooting and wilful damage or wilful destruction of protected trees.

According to the government, orders should be used to "protect selected trees and woodlands if their removal would have a significant negative impact on the local environment and its enjoyment by the public".

"Before authorities make or confirm an order, they should be able to show that protection would bring a reasonable degree of public benefit in the present or future", the government's guidance adds.

Trees that are growing on or are within falling distance of all stretches of vehicle-carrying highway in the county council area will be subject to inspections every two years. Those planted on operational County Hall-owned land that is regularly used by the public will be assessed on a three-year cycle, while trees on non-operational land will be checked every five years.

The assessment of each tree against a "risk matrix" will determine what action needs to be taken and how quickly. Inspectors will consider the chance that a tree might fail - ranked low, medium or high - and the damage that could potentially be caused if it did. That impact ranges from "inconsequential" structural

damage, through minor physical injury to loss of life or serious injury and "significant damage to property or obstruction of critical infrastructure".

The proximity of a tree to roads, paths or structures will also be factored in, as will the

likelihood of a "sensitive target" being present at the time of any tree failure. Most of the inspections will be carried out on foot, although some assessments of highway trees in rural areas will be undertaken from a slow-moving

vehicle.

During the winter months, countryside officers, rangers and volunteer groups will be asked to be on the lookout for any storm damage to trees and report it.

Republic of Ireland Turf Sales Ban Renews Peatlands Debate

By Robin Sheeran, BBC News, Northern Ireland

A BAN on turf sales in the Republic of Ireland has raised questions about its future in Northern Ireland. In October the government in Dublin introduced a ban on the sale of turf used as fuel but Friends of the Earth warned this could result in more illegal cutting north of the border. Sinn Féin, which opposed the ban, has called for better alignment of turf-selling laws on both sides of the border.

Peatlands are a major feature of the Irish landscape, both north and south, and perform a valuable environmental role as a carbon sink.

The turf-cutting debate springs from maintaining a balance between preserving the environmental value of peatland versus its traditional use as a domestic fuel.

Peatlands cover approximately 12% of the land area of Northern Ireland according to the Department of Agriculture, Environment and Rural Affairs (Daera) and they took thousands of years to form.

Last year, Daera conducted a public consultation for its Peatlands Strategy 2021-40.

The aim of the strategy is to restore Northern Ireland's peatlands, which are mostly in a damaged or degraded state.

The publication of the strategy will require approval from the Northern Ireland Executive.

An executive has not been in place at Stormont since February when the Democratic Unionist Party withdrew from the first minister's position as part of its ongoing protest against the Northern Ireland Protocol.

A spokesperson for Daera said the department would "continue to support ongoing peatland restoration projects in Northern Ireland, which may complement the Peatland Strategy Implementation Plan when it has received executive approval".

James Orr from Friends of the Earth said most of the peat extraction in Northern Ireland was done using machines. The environmentalist added "This is a complete disgrace because Northern Ireland is one of the most important parts of Europe and the world for peatlands. The answer to a lot of these energy issues, we need to shift away from fossil fuels"

Mr Orr said he was deeply concerned about the extraction of peat for horticultural uses, the kind of peat that is sold in garden centres.

He said "There's so many alternatives. What the legislation in the south may do is to drive even more illegal extraction in the north."

Dr Martin McHugh from the University of Limerick has researched the preservation of bogs but he is also a turf cutter, as an owner of bog land in County Mayo that he shares with his



father.

He said that up until the 1970s turf was largely cut by hand using a tool called a sleán. Machine cutters were then introduced including a "sausage" cutter that Dr McHugh says damages the bog by cutting drains under it and affecting its ability to retain water.

"In a dry summer, bogs can start to dry out naturally and they begin to release their carbon dioxide," he says.

The academic said one way to discourage people from cutting turf was to provide adequate compensation. "If you pay them and you pay them appropriately, they'll stop in the morning. I'll guarantee it," he said.

Under the new legislation in the Republic of Ireland there will be no restriction on people who own their own bog to use turf in their domestic fire or people who share turf with their neighbours. The ban also covers the sale of smoky coal and wet wood.

A spokesperson for the Irish Ministry for Environment, Climate and Communications said: "The primary focus of these regulations is on improving air quality and improving people's health chances."

Sinn Féin opposed the introduction of the sales ban in the Republic of Ireland.

Declan McAleer, a Stormont assembly member for West Tyrone, and former chairman

of the NI Assembly's agriculture committee, said it was important legislation in the Republic of Ireland and Northern Ireland was aligned.

He said "It's important that we are aligned as closely as possible. In many parts of Ireland the border runs through these bogs. There's a lot of rural communities that rely on turf to heat their homes. It's a fuel poverty matter. Turf is one of the few fuels that haven't rocketed in price."

Mr McAleer said in remote areas of his constituency, such as the Sperrin Mountains, homes were not connected to the gas network.

"Peatlands and bogs are of huge environmental and biodiversity value and they are vital for carbon storage but we also need to be mindful that people in those areas use it for heating," he added.

Peatlands are a type of wetland found in almost every country, from blanket bogs in the UK to swamp forests in South-east Asia.

The term peatlands refers to the peat soil and the wetland habitat around it.

Peat forms over the course of millions of years as waterlogged conditions slow the process of plant decomposition.

The percentage cover of peatland on the island of Ireland is only exceeded in global terms by three countries - Finland, Canada and Indonesia, Daera says.

'Serious' Lower Thames Crossing Concerns Raised in Survey

By Ben Lynch, Trainee Reporter for the Romford Recorder

A SURVEY has revealed major public opposition to changes to plans for a new Thames tunnel and a campaign group has slammed the consultation process for the "hugely destructive and harmful" proposed Lower Thames Crossing (LTC), designed to ease traffic around the M25 and Dartford, as "inadequate". The Woodland Trust, Essex Wildlife Trust and the Thames Crossing Action Group (TCAG) are among those to have written to Mark Harper, requesting he "look into" concerns raised about the LTC's environmental impacts.

Under the plans, a three-lane carriageway, connecting the M25 near North Ockendon to the M2 near Rochester, would be constructed, with a tunnel to run under the River Thames.

Its principal aim is to relieve pressure on the Dartford Crossing and it will allegedly have the capability to double road capacity across the Thames east of London.

A Development Consent Order (DCO) was recently submitted by National Highways for the LTC. If approved by the Government, it would enable work to begin on the proposed scheme.

In a joint statement announcing the submission of the letter, the opposing groups claimed the project would "destroy irreplaceable ancient woodland, veteran trees and other habitats, increase nitrogen pollution, damage landscapes and increase carbon emissions".

"These impacts would likely make this England's most damaging road scheme for a generation," they said, "which is in stark contrast to claims by National Highways that it will be the 'greenest road ever built in the UK'."

Jack Taylor, lead campaigner at Woodland Trust, described the potential impact of the project as "unacceptable"

"We're fighting both a nature and climate crisis, and destruction of ancient woodland and veteran trees for a road scheme beggars belief."

He added: "To make matters worse, we're still waiting to find out just how much the scheme will impact our natural environment. National Highways has not disclosed details of which environmental features will be affected. Hiding these impacts from the public until the DCO stage is totally unacceptable."

Laura Blake, chair of TCAG, meanwhile



*A mock-up of the Lower Thames Crossing tunnel, looking south over the River Thames
Image: Highways England)*

questioned whether the LTC would solve the problems associated with the Dartford Crossing.

"We are strong believers that 'together we are stronger' and we are proud to unite with so many others to voice our serious concerns, and to call on government for an immediate review of the project," she said.

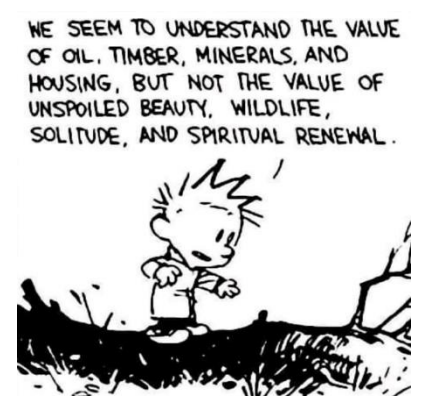
LTC deputy director Mark Bottomley said National Highways is "doing all [it] can to minimise the impact on the environment and local communities".

He added the LTC is being designed "to be the greenest road ever built in the UK, and following a comprehensive programme of consultation and engagement we have

improved the design to reduce the impact on ancient woodland, avoid protected wetlands, and include new parks, woodland, and pathways for local communities".

A spokesperson for the department for transport confirmed it is aware of a letter being sent to the transport secretary, though as this is a live planning application, it deems it "inappropriate" to comment further.

View the feedback to the recent consultation in full here:
<https://nationalhighways.co.uk/media/hzmdo1zd/ltc-local-refinement-consultation-feedback-oct-2022.pdf>



Incredible Prehistoric Forest Re-Emerges on Welsh Beach

By Andrew Forgrave, Countryside and Tourism Editor, and Will Hayward, Welsh Affairs Editor, on www.walesonline.co.uk

THE incredible sight of a prehistoric forest submerged under water thousands of years ago is slowly being revealed on a Welsh beach. Dozens of tree stumps, trunks and root systems become visible at low tide at Trearddur Bay. Beaches along the Welsh coast have remnants of ancient woodlands, a legacy of rising sea levels brought about by the end of the last Ice Age 20,000 years ago. Over thousands of years, coastal forests were drowned and the outline of Wales was altered as melting ice caused sea waters to rise.

North Wales Live reported that evidence of this process can be seen on several beaches on Anglesey, including Lligwy, Lleiniog and Porth Diana, but nowhere are the island's sunken trees more prominent than on Traeth Trearddur. Photos shared online have been labelled "amazing" and "spooky".

Storms can alter coastal equilibriums and, according to Natural Resources Wales, the fierce winter storms of 2013-14 changed the beach's profile to reveal more of Trearddur's long-lost forest, located near the village's RNLI lifeboat station. Its visibility has ebbed and flowed with subsequent storms but holiday-makers are adamant more trees become visible each time they visit.

The submerged forest is reputed to be 6,000-8,000 years-old. Contrary to common belief, the trees are not petrified (fossilised). Instead they have endured by being waterlogged, much as ancient shipwrecks are preserved in the sea's anaerobic conditions.

Only when they are exposed to air do they become vulnerable to rapid decay. Some are thought to have survived for years by rooting in peat deep below the sand.

"You should look at them while you can before they disappear," said Prof John Healy, professor of forest sciences at Bangor University. "Remains like these are a window into our past."

"They are interesting monuments to the recolonisation of Britain by nature after the last Ice Age. They reveal a time when much of Wales was wooded, from the coasts to hillsides below 600 metres; only the tallest peaks remained uncovered."

The great Stone Age forests of Wales in turn fuelled the country's mines, among them the Great Orme's huge copper ore operation, Llandudno. The world's largest Bronze Age mine is estimated to have consumed 400,000-600,000 tonnes of timber over a 1,260-year period.

Coastal trees might have been low-hanging fruit for Bronze Age loggers but the evidence is mixed: at many sites, including Trearddur Bay, trunks can still be found near their stumps, suggesting they succumbed to natural



processes rather than intensive harvesting.

Perhaps the most famous of Wales' prehistoric sunken forest is at Borth, Ceredigion. In the wake of Storm Hannah in 2019, it too re-emerged, so reawakening the legend of the lost kingdom of Cantre'r Gwaelod (the "Sunken Hundred").

Dr Martin Skov, lecturer in marine biology at Bangor University, said Britain's coastlines are constantly evolving. "If you had the ability to fly like a bird, through time, over this landscape, you would have seen the waxing and the waning of the coastline, with cycles of erosion and expansion on decadal to millennial timescales," he said.

Changes in sea level are an obvious driver: the creation of Holy Island, once part of Anglesey's mainland, is one example. Scientists estimate sea levels have risen on Anglesey by around two metres over the last 4,000 years.

Storm surges can remodel coastlines too, as noted by Giraldus Cambrensis in 1171-2. "The wind blew with such unprecedented violence that the shores of South Wales were completely denuded of sand," he wrote.

"The seashore took on the appearance of a forest grove, cut down at the time of the flood. The tempest raged so fiercely that conger eels and many other fish were driven up on the high rocks."

Storm erosion can unpeel coastal layers to

reveal archaeological discoveries. Ancient peat cuttings were revealed near Tywyn, while a Bronze Age wooden walkway was identified at Borth.

The horn from an Auroch – a large wild cow – was found at Dinas Dinlle beach in Gwynedd and in the 1980s, a metal detectorist unearthed a deer antler on Rhyl beach, later dated as being 2,000-5,000 years-old.

So finding sunken forests is not hugely surprising. Prof Healy recalls seeing a long-drowned tree on Traeth Conwy. Further east, some tree stumps can still be seen at Rhyl, depending on the tides.

In 1893, the remains of the town's submerged forest were revealed by the tide for the first time in eight decades. Hundreds of people visited the beach to witness its re-emergence. Some 30 stumps were identified, some oak and elm, most birch, hazel and alder.

Winter storms can occasionally yield more alarming finds. In Trearddur Bay, some residents tell of the time, almost a century ago, when a great tempest disturbed an old cemetery. Years after, it is said, locals would find human bones buried in beachfront dunes.

Editor's Comment

Reports that Peter Croot can remember playing in the sea forests when a child are totally untrue.

Brazil, Indonesia and Congo Join Forces in Push for Rainforest Protection Cash

An article by Shanna Hanbury, published on the Mongabay website

THE world's three forest giants, Brazil, Indonesia and the Democratic Republic of Congo (DRC), have signed a joint statement calling for the negotiation of new payment mechanisms to preserve the tropical rainforests that help regulate the world's climate and house millions of plants and animals.

The announcement marks the beginning of a strategic alliance, nicknamed the OPEC of Rainforests, aiming to lobby richer countries for funding in exchange for protecting the rainforests that help shield our planet against runaway warming and emissions. An Amazon bloc is expected to follow, according to Colombian minister Susana Muhammad.

The document states that the three countries will "work towards the negotiation of a new sustainable funding mechanism" and that "predictable, adequate and easily accessible multilateral funding" is key to conserving and sustainably managing forests.

Last year, the three countries lost 5.7 million acres of primary rainforest, largely led by Brazil, which cleared three times more forest than its runner-up, the DRC, and was responsible for over 40% of global deforestation in 2021, according to data by the Global Forest Watch.

Environment analysts expect to see a sharp U-turn in Brazil's trend of destruction with the election of Luiz Inácio Lula da Silva, who vowed to reverse the record-breaking Amazon deforestation under Jair Bolsonaro, the right-wing firebrand who he beat by a tight margin in the nation's October elections.

The joint statement was partly organized by Bolsonaro's current environment ministry led by Joaquim Leite, who worked with Brazil's most powerful agribusiness lobbying groups for over two decades. However, Brazil's polar-opposite administrations may find some common ground in pushing for international ecosystem service payment schemes.

After declaring that "Brazil was back" on the global stage for climate talks at the COP27 event in Sharm el-Sheikh, Lula echoed the calls for cash to back urgent action.

"We will seek financing mechanisms to stop the advancement of global warming," Lula said at Egypt's climate conference on 16 November. "Rich countries said they'd raise \$100 billion at COP15 in Copenhagen to help the less developed countries to face climate change," he added, but did not follow through.

A Carbon Brief analysis estimated that the USA fell \$32 billion short of its "fair share" of that goal, pledging only \$8 billion from 2009 to 2020. UN Deputy Secretary-General Amina Mohammed estimated that developing countries would need \$300 billion per year for adaptation by 2030.

"The world's three largest tropical forest basins will now have to receive proportional compensation for the services provided to humanity," Eve Bazaiba, the deputy prime

minister of the DRC and one of the three signatories of the statement, wrote in a tweet.

The Central African Forest Initiative (CAFI) is one of the only active funding sources for the Congo basin, for example, offering \$500 million for the 10 years between 2021 to 2031. "This is not enough," Blaise Mudodosi, the coordinator of the DRC-based NGO Actions pour la Promotion et Protection des Peuples et Espèces Menacées (APEM), told Mongabay.

"We have a shared interest in protecting the forests and we are stronger if we negotiate together. When the Amazon basin, the Indonesia basin, and the Congo basin talk in the same voice, that would have more impact than each country negotiating alone."

President-elect Lula da Silva pledged to prioritize the fight against deforestation in his government saying that "destruction will stay in the past," but he may face opposition from Bolsonaro-aligned local governments in the Amazon region.



A study by the Climate Observatory, a climate action watchdog organization, found that Bolsonaro secured massive electoral support in the 256 municipalities responsible for around 75% of the Amazon's deforestation, which adds up to more than a third of global forest loss.

The secret to Lula's success, experts told Mongabay, could be in harnessing economic incentives for conservation in the region, instead of resuming the severe and widespread punishments for environmental offenders that brought down deforestation rates a decade ago.

"If it goes back to the way it was, command-and-control restrictions and throwing people in jail, there will be a revolt in the Amazon," says Daniel Nepstad, the Executive Director of the Earth Innovation Institute which estimated that Brazil's Amazon states could receive \$13 to \$48 billion for carbon credits by 2030 if emissions drop by 90%.

"We are at an inflection point. Finally, we might soon be talking about billions of dollars a year in finance for tropical forests rather than millions," he added.

It is still unclear how Brazil under Lula will

proceed with the new alliance. Tasso Azevedo, one of the architects of the Amazon Fund, largely considered to be one of the world's most successful climate financing models, said the joint statement between Indonesia, DRC and Brazil still needs to be backed by meaningful action. "It could represent a step forward if this was a pact with commitments from the three countries," he told Mongabay. As of now, Azevedo says, "there is no substance."

Deforestation rates increased in both Brazil and the DRC last year, followed closely by other key rainforest nations like Bolivia. "Globally, the deforestation indicator is not on track," stated the 2022 Forest Declaration Assessment published last month. "Each year that passes without sufficient progress makes it increasingly difficult to meet global forests goals by 2030."

According to the 2022 assessment, Indonesia reduced deforestation for the fifth year in a row, with a further 25% drop in 2021 — but still cleared an area larger than the city of London.

Brazil's Association of Indigenous Peoples says that Indigenous communities' lack of resources, despite ambitious promises by global leaders, is leaving them vulnerable. "For another year, Indigenous peoples continue being directly impacted by the climate crisis, but without direct access to financial mechanisms to strengthen their actions to fight it," the group wrote in a statement.

Of the \$1.7 billion promised in COP26 last year, only 7% was allocated to Indigenous organizations, according to a report by the Ford Foundation.

For Marina Silva, Brazil's former environment minister who is advising Lula's transition government, financial support should not be a hard condition for conservation.

"We won't work with Bolsonaro's logic of blackmail, going to rich countries and saying we will only take care of our forests and Indigenous peoples if you pay us to do so," she told Mongabay reporter Jaqueline Sordi earlier this month, adding that Brazil committed to contributing resources to lower-income countries as far back as 2007.

Saatchi Sassan, a senior scientist at NASA's Jet Propulsion Laboratory who also leads California-based NGO CTrees and has led research projects in both Indonesia and Brazil, says the joint statement can also ramp up forest protections through shared research and science.

According to him, Brazil and Indonesia can share their technical know-how on monitoring land use activities across large regions with the DRC, who is still catching up. "The implication is good because they will use similar techniques to monitor their forests, and the DRC is catching up," he told Mongabay. "It will really bring these three major countries closer together."

Beef is Still Coming from Protected Areas in the Amazon

An article by Liz Kimbrough, published on the Mongabay website

SOME of the world's largest beef exporters are still buying cattle that grazed in protected areas of the Amazon rainforest, despite commitments to stop this practice, according to a new study. The report, published last month in the journal *Conservation Letters* found that millions of cattle grazed in protected areas (PAs) in the Brazilian states of Mato Grosso, Pará and Rondônia between 2013 and 2018.

"Protected areas are the cornerstone of Brazil's conservation efforts and are arguably the most effective way that we have to conserve forests and the biodiversity inside of them," Holly Gibbs, a professor at the University of Wisconsin-Madison and the senior author of the study said in a press release. "That meatpackers are continuing to buy from properties in areas that are under strict protection is alarming."

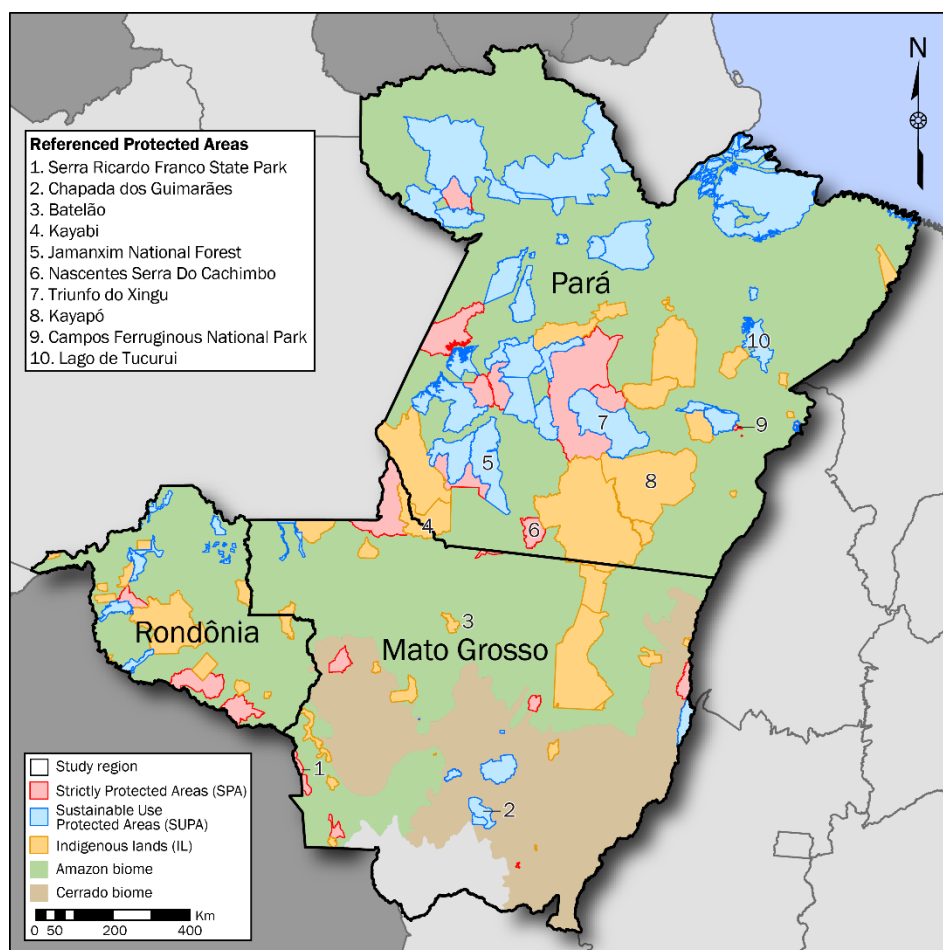
In Brazil, many meatpacking companies have made public commitments to stop sourcing beef from farms with illegal deforestation or that are not following environmental regulations. Those commitments, known as zero-deforestation cattle agreements, were first signed in 2009. The four largest meatpacking companies (JBS, Bertin, Minerva and Marfrig) also signed agreements to limit buying from protected areas.

Despite those pledges, nearly 1.1 million cattle were bought directly from protected areas and another 2.2 million spent at least a portion of their lives grazing in PAs and were then sent to finishing or "fattening" farms before being sold to meatpackers, according to the study.

To follow cattle from PAs to slaughterhouses, Gibbs and colleagues compiled public records on cattle transit, property boundaries and PA boundaries between 2013 and 2018. Most of the cattle were traced to "sustainable-use" areas, where some grazing is permitted, but nearly 925,000 came from strictly protected areas (20%) and Indigenous territories (8%) where commercial grazing is illegal.

The study period ends in 2018, Gibbs said, because, "at the start of 2019, this critical information became less available." Brazil's current President Jair Bolsonaro was elected at the start of 2019. Since his election, the Brazilian Amazon has lost an area of forest larger than Belgium and recorded its highest deforestation rate in 15 years. There has also been a surge in the frequency of fires, which are often set after deforestation to clear the land for cattle ranching and soy farming.

"Protected territories in the Brazilian Amazon have served as shields against advancing deforestation pressures," Clarissa Gandour, head of policy evaluation and conservation at the NGO Climate Policy Initiative, who was not involved in the research told Mongabay in an email. These territories'



effectiveness in protecting forests, "fundamentally hinges on Brazil's capacity to enforce environmental law. This has been severely weakened in recent years, posing an enormous threat to forest protection."

The Bolsonaro administration adopted policies weakening Brazil's various environmental protection and monitoring agencies and made public records harder to obtain. That lack of transparency surrounding cattle movement has made it difficult for slaughterhouses to monitor their supply chain and account for cattle that spend time in PAs. It has also been much easier for meatpackers to break commitments and escape accountability.

"Lack of animal traceability allows ranchers to use legalized farms to conceal sales of cattle raised in illegal areas through false declarations of origin," a practice some call "cattle washing,"

as Reporter Brasil reported.

BS, Marfrig, and Frigol, some of the largest meat producers in the world, were found to have purchased cattle from ranches associated with illegal deforestation and modern-day slave labour, according to a September 2019 investigation by Repórter Brasil. The companies blamed the lack of publicly available records.

"There is an appetite among retailers and investors, the parts of the value chain that slaughterhouses are responsive to, for more information about slaughterhouses' performances, but right now that information is lacking," said Lisa Rausch, a co-author of the paper and scientist at UW-Madison's Nelson Institute for Environmental Studies.

Cattle ranching plays an outsized role in the destruction of the Amazon. Around 70% of deforestation in the Amazon has been linked to

cattle pastures. More than half of that loss occurred in Mato Grosso, Pará and Rondônia, the states examined in the study, which form the Amazon's infamous arc of deforestation. Nearly half of the ranches linked to commercial grazing in protected areas have seen deforestation since 2019, according to the study.

"Many slaughterhouses have gotten the message that being associated with deforestation is bad for their business, but they cannot address this issue without increased availability of information about their suppliers," Rausch said.

"This is further evidence that we need more demand by investment banks, retailers and consumers for improved cattle traceability, transparency and accountability," Gibbs said.

Deforestation monitoring systems currently used by meat companies look at direct suppliers or the finishing ranches, but a lot of

deforestation happens via indirect suppliers, on the grazing ranches that cattle visit before finishing, robust monitoring is lacking.

"The paper's findings stress the importance of advancing transparency mechanisms throughout the cattle ranching production chain," Gandour said. "This is critical both for strengthening law enforcement capacity and for enabling accountability of production."

Some efforts by the public and private sector to monitor indirect suppliers of cattle were underway, the study reported, such as the SeloVerde (Green Seal) tool available in Pará and Boas Práticas (Good Practices) implemented by the monitoring tool Visipéc.

Additionally, the NGO Trase has worked to map the supply chains of commodities such as soy, beef and palm oil from where they are grown to the final buyer, allowing buyers to determine if their goods came from an area with

deforestation.

Satellite data from the University of Maryland show much of Triunfo do Xingu has been cleared since 2001.

Almost half of the cattle sold directly from PAs to slaughterhouses and meatpackers came from just a few protected areas, namely the Triunfo do Xingu and Chapada dos Guimarães environmental protection areas in Pará and Mato Grosso states, according to Gibbs and colleagues.

Zeroing in on those areas "highlights key opportunities for policymakers to craft targeted interventions," the authors wrote, "which can result in quicker and more effective outcomes needed to protect critical biodiversity, reduce carbon emissions, and support regional climate benefits generated by forests."

Ancient Yew in Surrey Ruins Crowned UK tree of the Year

An article by Patrick Barkham published on www.theguardian.com

A GNARLED YEW whose twisted trunk has been growing for more than half a millennium has been crowned tree of the year. The roots of the yew snake around the ruins of Waverley Abbey in Surrey, which was the first monastery founded in Britain by the Cistercian religious order in 1128.

The ancient tree, which won 16% of the total votes in the popular Woodland Trust competition, beat the spectacular "portal tree" in Midlothian (11%), a rowan shaped like an archway.

The Waverley Abbey yew will go on to represent the UK in the European tree of the year contest, with its success highlighting the unique wealth of ancient yews in the country.

The Ancient Yew Group has identified 978 ancient or veteran yews (more than 500 years old) in England and 407 in Wales; France has 77, while Germany and Spain have only four each. Scotland is home to the Fortingall yew, estimated to be about 3,000 years old and the oldest yew in Britain.

Ancient yews and other ancient trees enjoy

far less legal protection than many old buildings, and the Woodland Trust is seeking to change that.

Tom Reed, a citizen science officer at the Ancient Tree Inventory at the Woodland Trust, said: "It is great to see this magnificent tree has been recognised as tree of the year 2022. The way the tree is rooted within the ruins of the abbey is a great symbol of the fact that our ancient trees are intertwined with other aspects of our cultural heritage."

"We're calling for greater protection for these living legends, so they are cared for in the same way as our historic buildings."

Dr Michael Carter, a senior properties historian at English Heritage, which looks after Waverley Abbey, said: "The yew tree at Waverley Abbey has been witness to history for nearly 500 years. While the exact age of the yew is unknown, it is likely that it has watched over

the abbey grounds since shortly after the dissolution of the monasteries in 1536 – and has seen its surroundings transformed from a thriving religious community into a picturesque ruin."

In third place, with 10% of the votes, was the "layering horse chestnut" in Derbyshire, which was likely to have been struck by lightning in the past, causing a hollowed and decaying trunk with new roots regrowing from the fallen branches.

Previous winners of the Woodland Trust's tree of the year competition include a wind-sculpted hawthorn on a Scottish beach, and the Cublington pear, one of the largest trees of its kind in the country, which won in 2015 but was felled in 2020 because it was in the path of the HS2 high-speed railway line.



Farming for the Future: How Agroforestry Can Deliver for Nature and the Climate

A GROFORESTRY – farming with trees – could be pivotal in helping the agricultural sector reach net zero by 2050, according to new research carried out by Cranfield University, which underpins [a report by the Woodland Trust](#). The Cranfield research explains that agriculture is responsible for 10% of UK territorial greenhouse gas emissions with the net effect of “land use, land use change and forestry” responsible for another 1%.

In order to meet net zero targets for 2050, the report says it is essential that farm businesses implement practices to reduce their greenhouse gas emissions, which may typically amount to around two to four tonnes of carbon dioxide equivalent per hectare per year on arable and grassland farms respectively. In comparison, the average per capita emission of a UK citizen is about eight tonnes of CO₂ equivalent per year.

One way to offset greenhouse gas emissions is to increase the area of tree cover on farms using agroforestry. Using models and experimental results, the research shows that growing trees alongside crops (known as silvoarable agroforestry) could lock up eight tonnes of CO₂ equivalent per hectare per year over 30 years. A silvopastoral system, where 400 trees per hectare were planted on grassland, was predicted to lock up 16 tonnes of CO₂ equivalent per year over 40 years.

Assuming no other reduction in agricultural emissions, establishing agroforestry on 20% of arable land and 30% of grassland could enable UK agriculture-related emissions to reach net zero by 2050 whilst maintaining high levels of



food production. Integrating trees into farming systems can also provide benefits for wildlife, enhance soil health, and moderate runoff and water flows. It can also lead to enhancement of other ecosystems services including pest control in organic systems, and pollination.

Paul Burgess, Professor of Sustainable Agriculture and Agroforestry at Cranfield

University, who conducted the research with Dr Anil Graves, Senior Lecturer in Land Use Systems, said: “Consumers and retailers increasingly want their food derived from farms with zero or negative greenhouse gas emissions and increased tree planting (agroforestry) is one of the few ways that farm businesses can maintain food production whilst achieving net zero targets over the next 30 years. Because the carbon sequestration of newly planted trees is initially slow, planting needs to occur now to achieve targets for 2050.”

The report was timely given the Government was anticipated to outline its plans for the future of farming and land management policy in early November.

Abi Bunker, Director of Conservation and External Affairs at the Woodland Trust said: “This new research shows just how much good that having more trees within our farmed landscapes could bring, not just in terms of making important contribution to tackling climate change and helping reverse biodiversity declines, but also in supporting farm businesses to adapt to climate change and become more resilient to the types of financial, social and environmental shocks that are likely to be a part of the future.”

The full Woodland Trust report, with links to the Cranfield report on greenhouse gases and a Woodland Trust report on biodiversity, is available to view on the Woodland Trust's website.

Sandhurst Tree Warnings Ignored by Council, Say Residents

WARNINGS about a tree that toppled into gardens during Storm Claudio were ignored by a council, residents have claimed. The tree crashed into fences in Sandhurst, Berkshire, having previously damaged houses when a branch came off in September. Resident Debbie Smith said Bracknell Forest Council had made an “error of judgement”, but the authority said an application to have it removed was “incomplete”.

The tree, on Hungerford Close, was the subject of a Tree Protection Order (TPO), meaning an application to cut it down must be approved by the council.

A large branch fell in September, prompting renewed calls for it to be felled. It led to the occupants of three homes having to temporarily move out while repair work was carried out.

The tree eventually came crashing down last month during storm Zludio.

Ms Smith said how “incredibly lucky” it was

the tree did not injure anyone during the two incidents and criticised Bracknell Forest Council for being “unhelpful from the beginning”, according to the local democracy reporting service.

She added: “we have had no apology from any of them and feel that if they had worked with us instead of against us, we could have prevented the tree from snapping in half.”

Her neighbours Jodie and Conor, who moved back in on 27 October, now have to repair damage done to their garden and fences. They said: “this could have killed someone both times, the walkway that many families use with

their children was completely hit. Bracknell Forest Council have been completely negligent and have failed in their duty of care.”

Stephen Chown, head of Natural Estates at the council, said the original application to fell the tree contained “incomplete information”. Residents had been told a new report would be required and this was submitted on 31 October.

“Very sadly, as circumstances have now shown, the arrival of the second report was not in time for the tree removal or a crown reduction to be approved and completed, either of which would have likely prevented the further collapse of the tree in recent high winds,” he added.

Nightmare Neighbour Fined £68,000 for Chopping Down Trees Loses Appeal

An article by Tom Hussey published on The Sun website

A NIGHTMARE neighbour fined £68,000 after being reported for felling trees on his land has lost an appeal to overturn the ruling. James Barney, a property developer began felling woodland despite two failed attempts to get planning permission for two holiday lets on a plot he had just snapped up.

However, as work began at the site in Durley, Hampshire, Barney was pounced on by neighbours angry at the racket he was making and councillors later told him the 100-year-old oak trees he was ripping out the ground had Tree Protection Orders on them.

Barney was ordered to pay £68,031 in fines and legal costs back in September. He appealed the fine but it was thrown out. Then, just weeks later the 35-year-old was dragged back to Southampton Magistrates Court and

slapped with a further £1,000 fine for felling trees without a licence.

Barney, from Bursledon, Hampshire, admitted destroying between ten and 20 trees in March 2020.

The felling occurred weeks before he submitted a planning application on land he had bought for £27,500. He told District Judge Peter Greenfield he was unaware of a TPO on the trees in Scoreys Copse, Horton Heath, but the judge accused Barney, who lives in his parents' £2.3million home, attempted the work "clearly for a profit".

In September the 35-year-old was prosecuted under the Town & Country Planning

Act 1990, pleading guilty to breaching tree preservation regulations. He was fined £50,000 and ordered to pay the £17,841 legal costs of Eastleigh Borough Council and a £190 victim surcharge, bringing the total to £68,031.

He was also handed a tree replacement notice by Eastleigh Borough Council, forcing him to plant 650 new trees to replace the ones he tore out.

Following an appeal the payment period for the fine has been extended to six months. If he is unable to pay the fine in that time, he will serve a 12-month prison sentence.

Man Fined More Than £80,000 for Chopping Down Protected Oak Trees

An article by Toby Paine published on www.portsmouth.co.uk/news

FAREHAM Borough Council prosecuted Nick Baker, of Brook Lane, Warsash, for felling 16 oak trees on the corner of Thornton Avenue. He appeared at Portsmouth Magistrates Court this week charged with breaching a tree preservation order. The council said he had orchestrated the felling of the trees and that 'the destruction of these oak trees represents a significant loss to the area and to the ecosystem'.

The magistrates' bench said that while it was impossible to put a price on the trees, a fine of £7,500 for each of the 16 trees was imposed, equalling £120,000, but given the guilty plea submitted by Baker and his prior good standing in the community, the fine was reduced by a third to £81,415.

Councillor Simon Martin, executive member for planning and development at Fareham Borough Council, said: 'This is a significant prosecution for the council and we hope that this will act as a deterrent for others who may be tempted to offend.'

'Breaching tree preservation orders is unacceptable, and we will do everything we can to prosecute offenders in Fareham. This was not just one or two trees but 16 in total and they will take hundreds of years to replace, not to mention the damage to the ecosystem and biodiversity of the area.'

'We understand that this is one of the largest fines imposed for a tree preservation order

breach and I believe it was entirely warranted.'



Scotland's Ancient Trees Catalogued for First Time

An article by Sandra Dick published on www.heraldscotland.com

WITH watertight protection for Scotland's ancient and veteran trees in sight, cataloguing them has become even more important. Amateur tree hunters are on the job. Knotted and gnarly with gaping holes in its massive trunk and branches that twist in every direction, the Fortingall Yew in Perthshire holds the crown as Britain's oldest living thing.

Quite how old, isn't known: the heartwood in the centre of the original tree which could reveal its true age by counting its growth rings has long since decayed.

Still, it's believed its tangled network of roots has drawn nutrients from the Perthshire earth since Stonehenge and the Pyramids of Giza were being built. It's estimated to be at least 2,000 years old, some say it is closer to 5,000. A few even go so far as to suggest it could be 9,000 years old.

While it is by far the oldest and arguably most famous tree in the land, a determined effort by a small army of 'tree hunters' to catalogue Scotland's ancient and veteran trees has now revealed far more aged specimens than once thought and, with new rules being proposed that would protect rare habitats and individual ancient or veteran trees, the challenge is now on to find and record even more.

Details emerged last month of a proposed policy tabled in the Scottish Parliament that would bar developments which might destroy or damage ancient woodlands, individual ancient or veteran trees or have an adverse impact on their ecological condition. Previous drafts of the planning rules stated such woodland "should not" be lost to development. The new wording goes further, and states such developments "will not" be supported.

That small change in wording has sparked hopes that once implemented irreplaceable ancient and veteran trees will be protected.

Woodland Trust Scotland policy advocate Suzie Saunders said: "Precision of language means everything in policy like this. The switch from "should not" to "will not" could be the most important change in ancient woodland protection for years."

Once implemented, it is likely to guide planning procedure at Scottish local authorities for decades to come. Unlike archaeological and historic built sites, the UK's ancient trees such as the Windsor Park specimen which King Charles III was photographed leaning against in his birthday portrait last month have no automatic right of protection and no equivalent to the Scheduled Ancient Monument status.

The famous Fortingall Yew, in the churchyard of Fortingall Church, is said to highlight the disparity: although the wall that surrounds the ancient tree is protected by law, the tree itself, is not.

The change in policy means the race is now on to capture details of as many of Scotland's ancient and veteran trees as possible.

The process of recording Scotland's living heritage began in January 2006, when the Woodland Trust launched its Ancient Tree Inventory as the Heritage Lottery-funded Ancient Tree Hunt, amid concerns that unlike built historic structures, trees have no automatic legal right to protection.

Despite standing as silent witnesses to centuries of history, embedded into their landscape for generations and important havens for wildlife, it was feared some of the country's oldest trees were also among the most vulnerable.

Using 19th century maps to locate old trees and armed with tape measures to record their girth, an estimated 400 individual tree hunters trudged across the country, detailing the location of each tree of note they found, and uploading its details and vital statistics to the charity.

Once confirmed, the tree and its location were uploaded to an online map giving everyone the chance to pay their respects at Scotland's oldest forms of life.

The first tree recorded in Scotland was an ancient sweet chestnut at Roslin Chapel, Midlothian, noted in 2006 to have a girth of 8.04m. By 2015, the intrepid tree spotters had found around 12,000 ancient and veteran trees at locations from the northern tip of Scotland, to the heart of the Borders.

In 2018, another ancient sweet chestnut, a species said to be a favourite of Mary Queen of Scots, was identified at Murthly Castle in Perthshire, making it the 15,000th Scottish tree to be recorded.

Now it's emerged that number has soared again. At last count there were 16,160 ancient and aged trees. They include 1,829 trees classed as 'ancient', 8,132 'veteran' trees and a further 6,200 designated as 'notable'.



The most commonly recorded trees in Scotland are oak, Scots pine and beech.

However, those findings may still just be scratching the surface of Scotland's ancient and veteran trees: a recent study carried out in England revealed there could be more than 2 million ancient and veteran trees there. Far more than had been previously recorded.

The study by University of Nottingham used the Trust's Ancient Tree Inventory to create a number of different mathematical models to predict where notable trees might be.

Taking data such as distance from cities, roads and population density along with environment factors, it highlighted locations where ancient woodland existed but had not

been fully recorded.

Volunteers then visited random locations on the map, and found inaccessible places contained 100% more trees than had been previously recorded, raising the prospect of far more ancient trees than had been thought.

Although the mapping survey did not extend to Scotland, there are hopes that a similar exercise could result in even more discoveries here.

Woodland Trust spokesman George Anderson said "Ancient trees are as much a part of our heritage as stately homes, cathedrals and works of art, but they don't get the same protection. Identifying where ancient trees are takes us one step closer to giving them the care and protection they need.

"The UK's ancient trees have no automatic right of protection. There is no equivalent to Scheduled Ancient Monument status which important archaeological sites have. The famous Fortingall Yew highlights the disparity. The wall around the tree attracts formal legal protection rather than the tree itself."

Tie piece Treepotting: Scotland's top ancient trees The Fortingall Yew, Fortingall, Perthshire: Legend has it that Pontius Pilate played beneath its branches. Its multiple trunks measured 52ft in 1769, now split into several stems, and appears as a number of individual trees.

The King Tree or Hanging Tree in Dunipace near Falkirk: A sweet chestnut said to be a particularly favourite species of Mary Queen of Scots, it is thought to be up to 400 years old. When attacked by fungus, locals treated it and then filled the trunk with concrete to keep it alive. The Last Ent of Affric: An ancient elm in Glen Affric, it is thought to be the last surviving tree of an ancient forest. Its girth of 3.8m suggests it is many centuries old.

The Beaulie Elm, Inverness-shire: An ancient Wych (Scots) Elm found at the entrance to 13th century Beaulie Priory in Inverness-shire. Thought to be at least 800 years old and the oldest elm tree in Europe, it is battling Dutch elm disease, so just 5% of it is left alive.

The Capon Oak, Jedburgh: A hollow English oak that is one of the last remnants of the ancient Borders' Jed Forest. Estimated at around 1,000 years old, it is said to have sheltered Jedburgh Abbey monks under its branches.

The Great Yew of Ormiston, East Lothian: Tucked away in a private estate close to the ruins of Ormiston Hall in East Lothian, it features in an 1824 poem by James Miller, and was first mentioned in texts dating from 1474 Glen Lyon Ash, Perthshire: One of the largest and oldest of its kind in Scotland, found near the village of Fortingall and the famous yew tree. Its girth measures 6.4 metres and it is estimated to be between 300 and 400 years old. Exceptionally old for an ash tree.

Tree Preservation Orders and Conservation Area News

Broadland Tree Preservation Orders Served, Confirmed and Revoked

TPO No	Address	Served	Trees Protected	Status
2022 No 8	87 Cawston Road, Aylsham	31/05/2022	T1 & T2 walnut, T3 lime, T4 Scots pine, T5 Bramley apple, T6 beech, T7, T11 & T12 silver birch, T8 hawthorn, T9 maidenhair, T10 Norway maple.	Confirmed without modification following appeal on 10/11/2022
2022 No 11	Land rear of 14 Norwich Road, Strumpshaw	21/09/2022	A1 various species	Provisional
2022 No 12	250 Fakenham Road, Taverham	02/11/2022	T1 oak	Provisional

Current Works to Trees Subject to a Tree Preservation Order and Section 211 Notifications for Works to Trees Within Conservation Areas

App No	Address	Cat	Species / Requested Works	Decision
20191982	Bircham Centre, Market Place, Reepham	211	T1 & T2 holly – fell.	31/12/2019
20201760	Land West of Abbey Farm Commercial Park, Church St, Horsham St Faith	TPO	G1 5 x ash and sycamore and G19 1 x verge tree - full details provided within the attached cover letter.	21/09/2020
20220220	The Hollies, 43 Waterloo Road, Hainford	TPO	T1 & T2 species unknown - fell. T3 species unknown - remove dead overhanging branches.	Appeal lodged
20220625	The Norwich Golf Club, Drayton High Road, Hellesdon	TPO	T1 spruce - 4m height reduction. from 14m to 10m.	13/04/2022
20221295	Land to rear of 29 Morgans Way, Hevingham	TPO	Oak – reduce	Split decision
20221313	Lakeside, Haveringland Hall Park, Haveringland	TPO	T1-T6 row of large poplars close to high voltage power lines. Reduce overhang back to trunk and reduce height by approx 5m. Start height approx 25m finish 20m. Overhang spread approx 6m finish 0m. Area is being transformed into a picnic site.	12/08/2022
20221446	39 Blenheim Crescent, Sprowston	TPO	T1 copper beech - approx height 11m and width 8m. Reduce height by 3m and width by 2m on all sides.	Approved
20221502	155 Norwich Road, Wroxham	TPO	3 x conifers - crown lift by 3m. Reduce heavy limbs back by 2m. Pine - fell. Pine - Approx 6m. Reduce by 2m.	23/09/2022
20221514	272 Fakenham Road, Taverham	TPO	T1 cherry and T2 cypress - remove.	Split decision
20221519	Spinney Acres, 7 Ringland Road, Taverham	TPO	One oak tree and one walnut tree. Both require complete removal.	Withdrawn
20221528	19 Hautbois Road, Badersfield	TPO	Cherry – fell.	Approved
20221534	Wherry House, 300 Saint Faiths Road, Old Catton	TPO	Beech – remove.	Approved
20221535	75 Mill Lane, Aylsham	TPO	T1 Scots pine – fell.	Refused
20221656	The Old Rectory, The Green, Heydon	211	Crown lift 9 x mature beech trees that overhanging stables. Cut back any secondary branches growing towards or touching tiles. A few scaffold branches resting on ridge tiles either need to be cut off all together or pruned back to a suitable growth point away roof. Ideally anything within 1m of the tiles needs to be reduced back or cut off to prevent further damage or problems in the near future.	Approved
20221559	23 Foundry Close, Foulsham	TPO	Tree needs thinning and reducing in size. Too tall and too wide. Works to be carried out by a qualified tree surgeon.	Withdrawn
20221567	17 Belmore Close, Thorpe St Andrew	TPO	T1 beech - evidence of <i>Meripilus giganteus</i> and entire crown wilted mid-summer 2022. Dismantle to a monolith at 5-6m (just above main breaking union).	Approved
20221581	86 Homelea Crescent, Lingwood	TPO	14400 pear, 14404 lilac and 14412 silver birch – fell. 14408 lime - reduce branches for garden clearance 0.5-1m	Approved

20221592	5 The Meadows, Aylsham	TPO	T1 oak in front boundary hedge (co-dominated stemmed at approx 2-2.5m previously hidden) to be removed and replaced in a more suitable location.	Approved
20221593	Wroxham Cottage, 15 The Avenue, Wroxham	211	T1 beech - 16.4m/9m. Crown raise to 4m and create 4m clearance from garage roof. T2 holly - 4m/3m. Fell. T3 conifers - 4m & 6m. Fell. T4 horse chestnut - 5.2m dead. Fell. T5 holly - 6m. Fell. T6 sycamores x 2 - 10m/4m. Fell. Close to property and shading. T7 sycamore - 10m/5m. Crown raise to clear building by 2.5m.	Approved
20221595	12 Oakdale Road, Brundall	TPO	Oak - approx 15m in height. Reduce branches back by 2.5m to provide clearance from the side elevation.	Approved
20221602	St Margarets House, 1 Staithe Way Road, Wroxham	211	T1 <i>Tilia</i> spp - pollard to a height of 10m.	Approved
20221603	2 Church Close, Coltishall	211	T1 beech - approx 18m in height. Reduce lowest limb over house by 5m, back to a suitable growth point to bring the limb behind the gutter and away from the roof. T2 holly - remove tree completely. T3 sycamore - approx 21m in height. Reduce lowest cluster of branches growing towards house by 2m. T4 beech - approx 21m in height. Lowest 2 limbs are growing heavily and quite prominently over garden. Reduce limbs by 3m back to suitable growth points. T5 beech - approx 18m in height. Lowest 4 limbs growing over the summer house roof to be removed back to boundary.	Approved
20221606	20 Millgate, Aylsham	211	T1 holly – fell.	Withdrawn
20221630	Old Bakery Court, Coltishall	211	T1 sweet chestnut - crown reduce from building to abate nuisance. T2 sycamore - prune back overhang of self-seeded trees. T3 <i>Prunus cerasifera</i> 'Pissardii' - crown reduce by 1-1.5m, crown lift 0.5m and re-shape. T4 lime - crown lift over highway to 2m-2.5m,	14/10/2022
20221639	Copperbeech House, 4 Library Close, Blofield	TPO	T1 sycamore – fell.	Approved
20221640	The Old Unicorn, 56 Station Road, Foulsham	211	Willow – fell.	Approved
20221642	The Beeches, 32 Blofield Road, Brundall	TPO	T1 beech - reduce height by approx 4m from 10m to 6m.	17/10/2022
20221643	Spinney Acres, 7 Ringland Road, Taverham	TPO	01 oak - reduce lower branch growing towards house back to knuckle, approx 2.7m. 02 oak - reduce lower epicormic growth to branch break. 03 oak - end tip reduction. W1 walnut - reduce lower branches x 2 by approx 1.6m.	12/10/2022
20221646	2 Bure Way, Aylsham	211	G1 overgrown conifer hedge and 1 tree - reduce to hedge height.	Approved
20221651	Land at Barnby Road, Badersfield	TPO	T129 cherry - presence of white rot at base and considered unsafe for retention. Fell and replant with 2 x new trees.	Approved
20221656	The Old Rectory, The Green, Heydon	211	Mature beech x 9 - overhang old stables. Crown by approx 6m.	Approved
20221657	Koru House, 16B Harvey Lane, Thorpe St Andrew	TPO	G1 row of lime - trim back some of new growth. While no reduction in current height of the trees is intended at this time, permission is also sought to carry out minor work to level off their height. G2 various trees significantly overhanging property. Cut back overhanging branches close to boundary fence.	19/10/2022
20221666	61 Charles Close, Wroxham	211	T1 sweet chestnut - re-pollard back to previous points. T2 beech – fell.	Approved
20221669	Felthorpe Hall, 81 The Street, Felthorpe	TPO	T1 sycamore - major crown dieback, cavity at 6-7m, Dryads saddle ffb in union at 6m. Reduce crown to main union at 6-7m pollard/ habitat from 20 m. T2 beech - large open cavity, historic damage trackside. Good reaction wood formation and healthy canopy no ffb. Sympathetic height crown reduction to bring crown within protection of woodland tree canopy of no more than 1-3 m from 25 m. T3 oak - historic stem lean towards walled garden. Small cavity in main stem. Reduce canopy (lean side) by 2m from 20m and inspect small cavity at 8m in main stem. T5 oaks x 6 - low canopies along vista to lake. Crown lift to 3.5m. T7 oak - main top scaffold limb loss /storm damage. One sided to west, heavy end loaded branches. Reduce remaining canopy west to prevent further collapse and encourage tree to self-optimize regrowth. Estimated spread reduction of 2-3m from 8-9m spread.	19/10/2022

20221670	The Old Granaries, 17 White Lion Road, Coltishall	211	T1 beech, T2 sweet chestnut, T3, T4 & T5 alder, T6 poplar, T7 willow and T9 ash - crown lift to 2.5m. T10 willow – reduce by 4m.	18/10/2022
20221671	Rolston House, Norwich Road, Horstead with Stanninghall	211	T1 apple and G1 <i>Cupressus</i> x 2 - fell. T2 hazel - reduce back to stem wood to maintain. 3m high. T3 Cherry and T4 purple Norway maple - crown clean and reduce by up to 1.5m. Height 5m. T5 silver birch - 3m reduction, 2.5 crown raise. Height 8m. G2 mixed species shrubs - clear area ready for replanting of more suitable specimens. G3 hawthorn - fell and replace with evergreen hedge.	Approved
20221677	Greenbraec, 132 Lower Street, Salhouse	211	Sycamore - raise by 11.5m to ground level and the stump treated.	Approved
20221680	4 Connells Mews, Saint Andrews Park, Thorpe St Andrew	TPO	G1 10 X Lime - Approx 20m high. Reduce basal growth to a 1.5m hedge and trim sides as previously done. Remove epicormic growth on main stems and crown lift up to approx 5m. This is to allow light into the area. Dead wood situated in crown to be removed to make the area safe.	Approved
20221689	Chestnut Meadow Barn, The Street, Halvergate	211	Field maple growing directly under utility cables.	25/10/2022
20221692	Land at Oakhill, Brundall	TPO	T1 oak - current height and crown spread 20m and current dbh approx 1.8m. Western portion of crown extending over house roof by a significant amount and branches hit roof during wind. Reduce length of the 2 lowest branches on western side of crown by up to 4m, back to growth points, in order to give 3m clearance of roof. In addition, raise the small lower branches of western side of trunk to a height of 3m in order to allow enjoyment of that part of garden.	25/10/2022
20221693	Abbotts Hall Farm House, Drabblegate, Aylsham	211	T1 hornbeam - approx 15m. Raise by 2m and reduce by 2m. T2 & T3 hornbeam – fell.	Approved
20221699	Land adj Rawlinsons Lane, Aylsham	211	Oak – dead. Remove	Approved
20221714	9 Breck Farm Lane, Taverham	TPO	T25, T1637 & T14783 - crown and reduction. See attached photos.	31/10/2022
20221717	39 Drayton High Road, Drayton	TPO	T1 beech - reduce crown from 24m by approx 1.5 to 2m to approx 22 to 23.5m to suitable growth points retaining shape. T2 lime - crown lift to approx 4m. T3 sycamore - reduce crown on south-eastern by approx 2m to suitable growth points from 20m to 18m.	31/10/2022
20221724	14 Lake View Drive, Brundall	TPO	T1 oak - remove major deadwood, reduce lowest branch toward house from 10m to 5m, reduce upper crown growing toward house from 7.5m to 5.5m, reduce weight loading on branches over play area, reduce dominance of northern canopy over garden and increase light levels to house and garden. T2 lime - remove epicormic growth to 5m and major deadwood, routine maintenance to allow more light into garden. T3 oak - remove epicormic growth to 8m, routine maintenance to allow more open views through trees and increase low light levels to woodland floor. T4 oak - remove lowest small branch to west and major deadwood over steps, routine maintenance to allow more open views through trees and increase low light levels to the woodland floor. T5 sweet chestnut - remove the two mature basal growths to west, (poor form and growing horizontally) to allow more open views through the trees and increase low light levels to woodland floor. T6 sweet chestnut - remove low growth to 5m to allow more open views through trees and increase low light levels to woodland floor. T7 sweet chestnut - remove low growth to 4m, to allow more open views through trees and increase low light levels to woodland floor. T8 silver birch - reduce height from 14m to 10m, southern crown spread from 11m to 6m, to clear views to horizon, to help prevent tree failing at the base.	01/11/2022
20221734	Ollands Farm, Ollands Lane, Heydon	211	T1 ash – fell.	Approved
20221737	Lakeside Manor, Lenwade House Drive, Fakenham Road, Lenwade	TPO	Tree A cherry & Tree B oak – fell. Trees C & D oaks - remove branches touching telephone lines. Tree F beech - remove branches overhanging footpath and threatening telephone lines.	26/10/2022

20221738	Little Plumstead Hospital, Hospital Road, Little Plumstead	TPO	T1, T2 & T3 self-set sycamores. Prune back from building by 3m. T4 recently pollarded mature sycamore. Fell. T5 dead pine. Fell. T6, T7 & T8 lime - crown lift over electrical buildings by 3m and prune back from the buildings by 2m. G1 Norway maple x 3 & field maple x 2 - overshadowing car park. Crown lift to 3m. G2 beech x 5 along road and car park. Crown lift to 5m. G3 oaks, sycamores and pines - reduce back from perimeter high security fence by 3m, all overhanging branches on oak to be reduced back by 4m. G4 oaks, sycamores and pines - reduce back from perimeter high security fence by 3m.	02/11/2022
20221739	17 White Hart Street, Aylsham	TPO	T1 silver birch – fell.	28/10/2022
20221740	Little Plumstead Hospital, Hospital Road, Little Plumstead	TPO	T1 sweet chestnut - remove epicormic growth from base and crown lift to 4m.	02/11/2022
20221753	Willow Lea, 35 Wroxham Road, Coltishall	211	T1 cherry – fell.	07/11/2022
20221759	Hill House, 2 Skinners Lane, Wroxham	211	London plane - fell and replace the tree with a weeping willow.	Withdrawn
20221783	6 Binyon Gardens, Taverham	TPO	T2 walnut - crown lift to 3m where canopy extends over garden, footpath and parking area by removal of small tertiary branches or reducing branch endings. Crown lift to 5m where canopy extends above highway by reducing branch tips. Reduce longest lateral branches by up to 1m, reducing canopy radius from 6m to 5m. T18 silver birch & T19 deodar - crown lift to 3m, removing lowest branches back to branch collars.	09/11/2022
20221794	133 Norwich Road, Wroxham	211	T1 lime – fell. Honey fungus	10/11/2022
20221800	Upper Street, Salhouse	211	Removal of a group of dead elm trees.	Approved
20221828	22 Frost Close, Thorpe St Andrew	TPO	1 x Holly and 1 x Prunus - reduce back to appropriate points from block 12-22 Frost Close for 1.5m max clearance from building. Crown raise low branches to 3m for pedestrian clearance.	15/11/2022
20221845	Birchdale, Blickling Road, Aylsham	211	T1 Maple and T4 Acer - fell. T2 conifer hedge - current height 7m. Reduce by 3m. T3 beech - reduce/reshape from 15m to 12.5m to clear roof. T5 cherry - remove branch.	14/11/2022
20221846	Ollands, Cawston Road, Heydon	211	T151 golden Lawson cypress - remove.	Approved
20221847	Ollands, Cawston Road, Heydon	211	T85, T102 & T105 Lawson cypress, T91 Douglas fir, T94 hazel, T92 & T93 Japanese maple, T95 apple, T103 Japanese red cedar and T104 & T106 Laurustinus – remove.	18/11/2022
20221851	18 Hautbois Road, Badersfield	TPO	Crab apple - fell. Silver birch and poplar - reduce by 3m. Current height is 15m.	14/11/2022
20221855	Forge Cottage, The Street, Oulton	211	Curly willow - pollard.	21/11/2022
20221865	Glenmaric, Marsh Road, Halvergate	TPO	Willow??? - current height approx 24m. 30% crown reduction to make tree more manageable size and remove large overhang from house and neighbours' garden. Fruit trees ??? x 5 - 20% crown reduction to stop the trees leaning to one side as branches getting too heavy. One branch has split. Pear ??? - remove rotten branches as some have broken off. Unknown amount as this tree is over 34 years old. Conifer hedge - reduce height by 1m, current height 6m approx. Magnolia ??? – 20% crown reduction and remove lower hanging branches that hit car roof when parking on driveway.	22/11/2022
20221866	197 Ground Floor, Norwich Road, Wroxham	211	T1 and T2 fir - fell and replant.	22/11/2022
20221869	6 Station Road, Foulsham	211	T1 willow - pollarded back to a height of 2m. T2 pussy willow - lowest limb cut back to point of origin. Remaining trees to be sided up to reduce conflict over boundary. Remaining trees/hedge along the same eastern boundary will also be cut back to a vertical line to the full height of the trees.	17/11/2022
20221878	Great Witchingham Church	TPO	???	17/11/2022
20221879	Church of Saint Margaret, Church Lane, Swannington	TPO	T1 horse chestnut - height 19m and spread north 9m, south 10.5m, east 6m, south 13m. Reduce crown by approx 1.5m to suitable growth points. Eastern crown/sides - reduce approx 1.5m. Western main crown/sides - upper crown reduce approx 1.5m. Low crown/side to 0.5m	17/11/2022

20221880	South Lodge, Oak Lane, Old Catton	211	T1 yew - reduce all crown branches max 2m. T2 maple - reduce all crown branches max 3m. T3 & T4 maple - coppice. T5 <i>Thuja</i> - reduce all crown branches max 4m. T6 beech, H2 holly & M1 ash - reduce entire crown max 2m. S1 shrubs - reduce by 2m.	16/11/2022
20221891	Lyndhurst, 10 Oakfield Road, Ayisham ,	211	Fir – fell.	22/11/2022
20221883	The Old Rectory, Norwich Road, Acle	TPO	T1 cedar of Lebanon <i>Cedrus libani</i> – Height approx 20m. Recent loss of two south-west main scaffold branches due to heavy rainfall, strong winds and heavy end weight has unbalanced canopy; target prune north-west, north-east and southern canopy by a max of 2m to reduce end weight loading. Replace dynamic bracing on south-west main scaffold branch that has lost tension due to storm damage at end of branch.	23/11/2022
20221889	Bradgate House, 63A Bishops Close, Thorpe St Andrew	TPO	T1 & T3 fir and T2 cherry – trim back overhang to conforming to BS3998 pruning practices. T4 & T5 sycamore and T6 beech - trim back overhang to conforming to BS3998 pruning practices (allowing for a few feet either side of boundary considering proper pruning techniques). T7 ornamental conifer – remove for future replanting of more appropriate specimen. T8 hornbeam - crown raise outer foliage to 4m. T9 oak - crown raise outer foliage to 4m. Minor reduction on selected parts of upper canopy to bring canopy in line with surrounding foliage. T10 hornbeam - crown raise outer ???	24/11/2022
20221898	6 The Avenue, Wroxham	TPO	T1 oak - approximately 16m high. Remove.	28/11/2022
20221899	Oakwood House, Beech Road, Wroxham	211	T1 poplar – 16m tall. Fell.	28/11/2022
20221902	155 Norwich Road, Wroxham	211	T1 laurel and T2 Leyland cypress - reduce height from 11m to 8m.	28/11/2022
20221909	Greenbraec, 132 Lower Street, Salhouse	211	G1 sycamore, blackthorn and maple - part of a hedge line between 132 and 134. Sycamore are off-shoots of the semi-dead tree for which we have permission to remove. These trees are blocking light from the garden. The neighbour at 134 has requested that we clear out the hedge line.	29/11/2022
20221910	5 Malthouse Yard, Reepham	211	T1 sycamore - current height 18m and crown spread 14m. Crown raise to 5.5m, peripheral crown north, east and south reduced by 2.5m. West crown pruned to shape by no more than 3m. T2 hawthorn & T4 birch x 2 – remove. T3 holly - current height 6m and crown spread. 3m crown reduce by no more than 1m. T5 yew - current height 5m and crown spread 5m. Reduce by no more than 3m around peripheral crown. T6 cherry - current height 6m and crown spread 6m. Selectively prune by no more than 1m.	25/11/2022
20221915	84A Taverham Road, Taverham	TPO	Birch - dead. Remove.	Approved
20221916	Land adjacent to 64 Lloyd Road, Scotch Hill Road, Taverham	TPO	11 dead trees - remove	Approved
20221927	Berry Speciality Closures Ltd, Salhouse Road, Sprowston	TPO	G1 holly and laurel understorey - reduce back 3m from boundary. T1, T2, T3 & T4 beech - reduce toward no 48 by 2.5m max. T5 & T6 beech - current height 21m and crown spread 6m south. Reduce south by no more than 2.5m and crown raise to 5.5m.	29/11/2022

Explanatory Notes:

- 1) App No is the unique Broadland District Council Planning Application number allocated to the application to carry out work and is the number by which progress of the application may be traced. Any comment, objection, support or request for information should quote this number.
- 2) Address is the address to which the application for work relates. In other words, it is the address where the trees for which the application is made are located.
- 3) Cat (ie Category) denotes the type of application. TPO = works to trees subject to a Tree Preservation Order; or
211 = Section 211 Notifications for Works to Trees Within Conservation Areas
- 4) Species / Requested Works is the species of the tree(s) concerned and details of the work proposed. A reference such as T1, T2 or G1 may also appear and that is simply a reference to the tree(s) on the TPO, Conservation Order or simply on the application.
- 5) Decision is either the actual decision or the date on which the application was received by Broadland District Council.
- 6) This list is not intended to be a definitive list of all the relevant details. The reader should always refer to the specific application on the Broadland District Council "Planning Explorer" at <https://secure.broadland.gov.uk/Northgate/PlanningExplorer/GeneralSearch.aspx> to view the application or read the Council's decision.