



THE EBENEZER CHAPEL

A Climate Crisis Mitigation & Visitor Centre, Art Gallery and
Community Facility, Cefn Square, Cefn Mawr,
Pontcysyllte World Heritage Site, Wrexham, NE Wales.

ABSTRACT

The Lord said that the Garden of Heaven
abounds on Earth, but unfortunately man
does not see it.

Dave Metcalfe

Project Manager

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Introduction & Summary:

The Ebenezer Chapel is to be reopened as a Climate Crisis Mitigation Centre supported by an Arts and Visitor Venue and Community Facility. The sum of human knowledge including all relevant theological teachings will be used to combat and mitigate the Climate Crisis and Environmental Emergency in all its forms.

All business activities and initiatives will be run on Circular Economy Practices supporting Sustainable Tourism Development for betterment of our Local Community, the Nation of Wales, and the World as a whole. PKC Group member companies and supporters have already embarked on this quest and are making progress. However, setting The Ebenezer Chapel up and reopening it as a Climate Crisis Mitigation Centre will further our goals for a better world for our Children and Grandchildren.

Three Levels of Working:

We are currently working at three levels which are largely determined by the gross investment value of the project work.

Level 1. Local

This is financially the lowest level and rates in the thousands of pounds bracket. This is working at a local level within our community and respective businesses. This ensures best practice by minimising carbon footprint and trying to maintain the immediate local environment, both economically and environmentally to our respective businesses. It involves the reuse of all material and resources wherever possible and comprehensive waste management programs which is good Circular Economy Practice.

Level 2. Wrexham & NE Wales

The PKC Group, Plas Kynaston Canal Group was set up in 2010 to promote the restoration of the Plas Kynaston Canal. This remains a long-term goal of the PKC Group despite diversifying into other areas, such as becoming an active Environmental Group to combat the Climate Crisis. Fortunately, both avenues work well together (or we would not be following up on such) and can bring about much-needed Economic Regeneration for our community which is currently still locked into post-industrial depression. However, working at this level requires a much larger financial investment and falls into the millions of pounds bracket, hence Level 2.

Level 3. National

During the COVID 19 Pandemic and Lockdowns we worked on our pub, The Holly Bush Inn to complete further restoration work whilst we were closed for almost 50% of the year from March 2020 to March 2021. During closure periods we were made aware of the gross waste in our community. Daily, although we were closed, we had to pick up increased levels of litter in our beer garden and around our pub, at the centre of our community and elsewhere. The most disturbing for us during this period were hundreds of beer cans and bottles we collected. Then to add insult to injury the supermarkets and retail chains announced exceptional profits, whilst we (local businesses) had to manage on whatever government grants were available.

During the same period the world price of aluminium rose sharply.

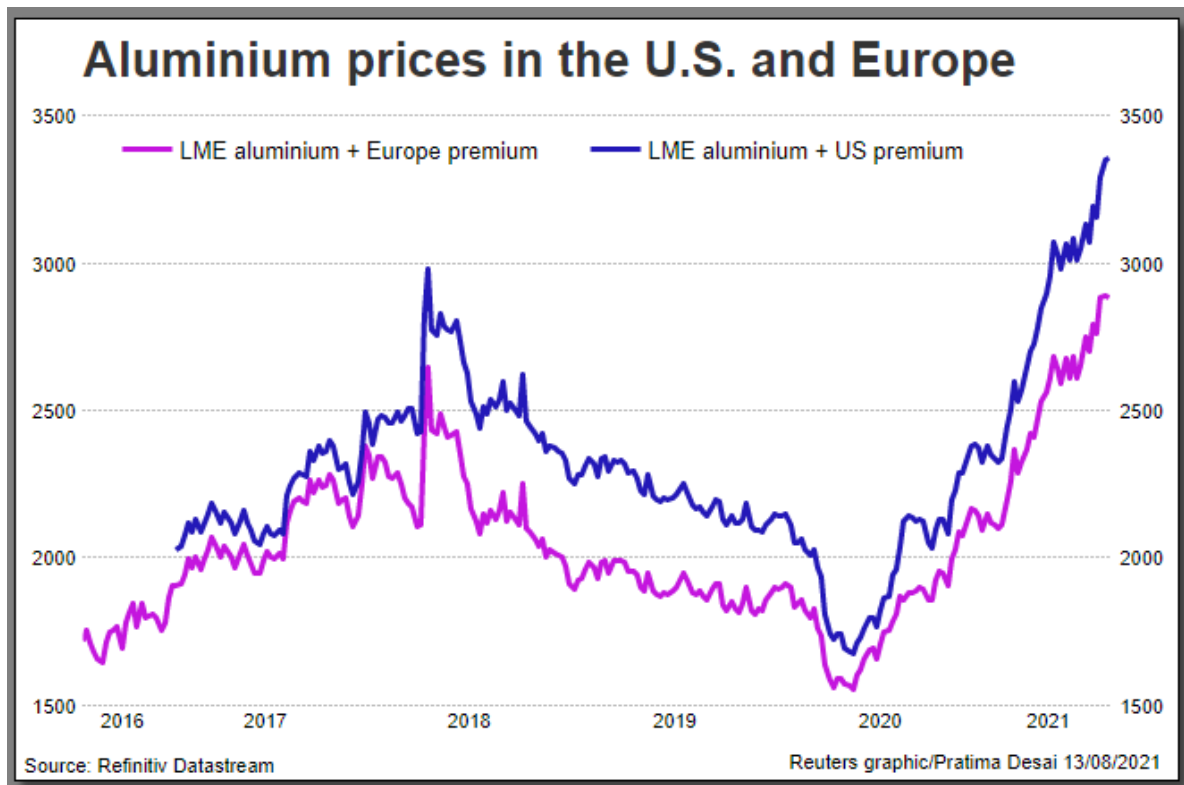


Figure 1 Aluminium Prices US & Europe

The premium price of aluminium was largely brought about by increased beer can production. Supermarkets and retail chains increased the floor space available and began putting out pallet loads of beer for sale.

The world high price of aluminium caused by hundreds the thousands of tons of aluminium used for beers cans was matched by the increased levels of glass (from Beer Bottles) that all Local Authorities throughout the UK reported during the Lockdowns.

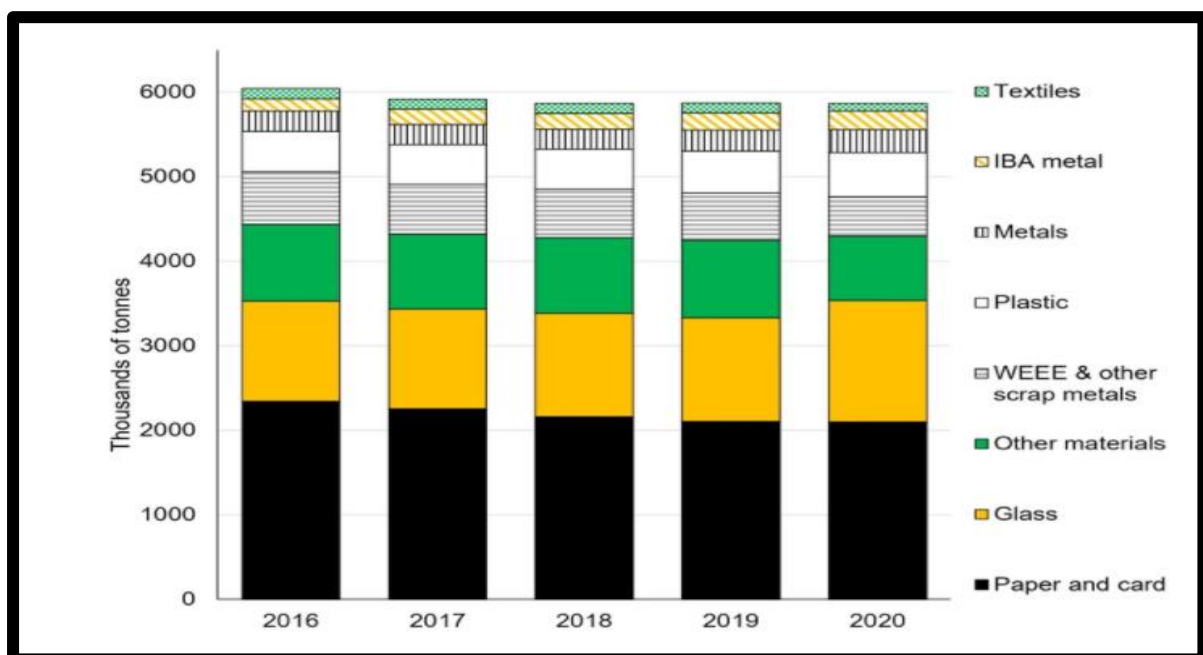


Figure 2 Government Recycling Stats

<https://www.gov.uk/government/publications/progress-report-on-recycling-and-recovery-targets-for-england-2020/progress-report-on-recycling-and-recovery-targets-for-england-2020>

Please note from the bar chart that there was an overall reduction in the tonnage of waste recycled in 2020. However, there was a noticeable increase in glass recycling, largely down to the increased number of beer bottles requiring recycling as reported by Local Authorities.

At best these two materials can be recycled, but this comes at a further cost to the Environment. Melting aluminium and glass to make more beer cans and bottles (after one drink only) is an exceedingly energy intensive process that results in further damage to our environment through large and unnecessary CO2 emissions into the atmosphere, thus further aggravating the Climate Crisis.

Therefore, we decided to do something about this as well and launched our [Duty-Free Keg Beer](#) petition on Change.org.

To make Keg Beer Duty-Free throughout the UK will figure in Billions of Pounds of revenue for the Government, hence this is our Level 3 work, as determined by the gross sums involved.

Unfortunately, as we all know, beer cans and bottles are not always recycled and are adding to the climate crisis in the form of litter in our communities, our countryside, our seas and oceans.



Figure 3 Litter on Beach

<https://www.independent.co.uk/news/health/coronavirus-litter-warning-rubbish-transmission-government-a9617521.html>

Partner Companies:

- Baynon Property Services
<https://www.baynon-property-services.co.uk/>
- Plas Kynaston Canal Group Trust
- Fron House B&B
- Holly Bush Inn
<https://www.facebook.com/groups/1725305554443418/>
- Caffi Florence
<https://caffiflorence.co.uk/>
- Jenny Anne Smith Arts

Associated Interests:

- Pub is the Hub
- Cefn Community Council
- DVT
- Offa's Dyke
- Glyndwr University
- CAT

Other Bodies:

- WCBC
- CRT
- AONB
- CRTG
- IWA
- River Action
- WHS UK
- MCS
- Sustain Wales
- Keep Wales Tidy
- ICE
- National Trust
- CADW
- Woodland Trust
- NRW
- IME
- Carbon Trust

Prospective Interests Sought:

- Cambrian Banc Wales
- WCBC Library
- Cefn Post Office
- FCC
- Veolia

Ground Floor Plan

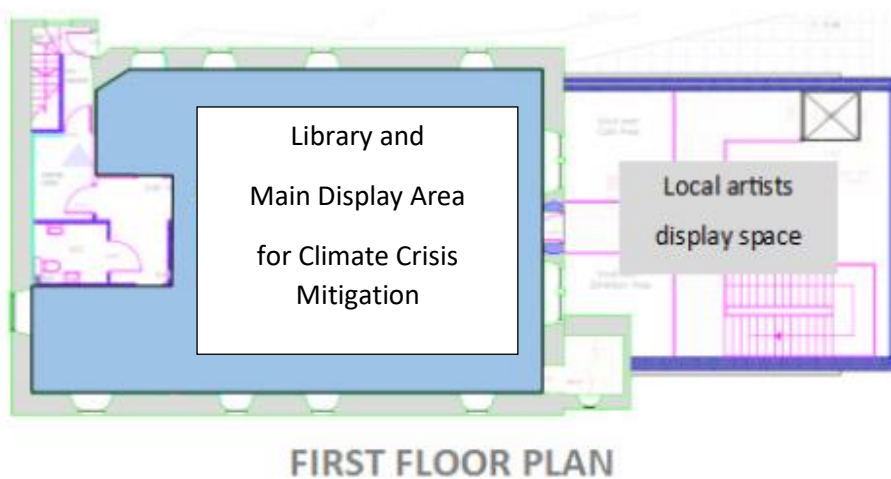
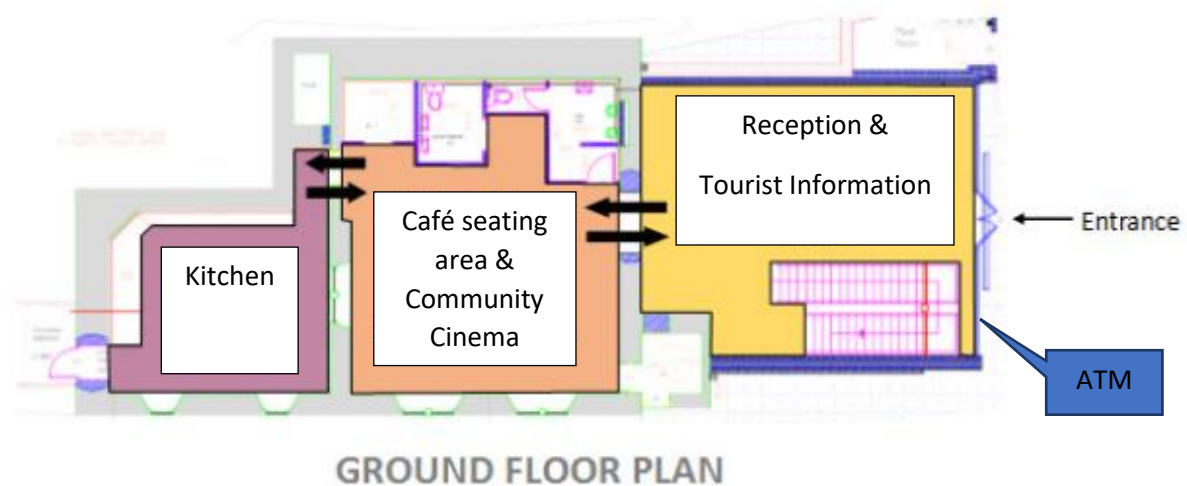


Figure 4 Ebenezer Chapel Floor Plan

Public Consultation:

Following the purchase of the building ([Ebenezer](#)) at auction in May 2021 we held an extensive public consultation. The consultation of our community was held during the months of July and August 2021 following collection of the keys from WCBC in June 2021. The results of which can be seen in Appendix 1. This consultation was important for us and our community which felt that they had been left out of the decision to sell off the Flag Ship for Economic Regeneration of our Community despite the building having been closed since 2013 following a very chequered history since refurbishment in 2007/2008.

A gauge of the Cefn Communities feelings can be taken from the Facebook Page for [Save the Ebenezer for Good](#).

The Leader 10th August 2021

Consultation with Simon Baynes in 2021 regarding The Ebenezer Chapel and what was needed for our area.

<https://www.leaderlive.co.uk/news/19502242.pledge-regenerate-ebenezer-chapel-wider-cefn-mawr-discussed-mp/>

Carbon Reduction

It would be hard to minimise the carbon footprint of our mainstream business activity any further, or the carbon footprint of our waste management program.

However, we need and want to make reduction in our heating and lighting systems. The upshot of this is that we can then employ the same principles and practices that will be demonstrated at the Ebenezer in community wide programs to reduce Carbon Emissions further whilst addressing Fuel Poverty within our community.

Level 1

On a small scale for individual business requirements, we are looking at hybrid systems using a combination of (1) Natural Ventilation (during summer months), (2) Air Source Heat Pumps for heating during Spring and Autumn when air temperatures are more than 8°C and (3) Hydrogen Ready Gas Fired Boilers for winter months when Air Source Heat Pumps lose efficiency. The Hydrogen Ready Gas Fired Boilers will be supplemented with Log Burning Stoves where applicable, thus providing an alternative sustainable energy heating facility.

Lighting requirements will be supplied from roof top solar cell arrays feeding into a central battery energy storage facility for use during the evening. Excess energy, if available will be fed back into the national grid.

We are looking at the possibility of GSHP, Ground Source Heat Pump using a disused mine shaft (adit) that is known to be flooded 12 meters below ground level on the opposite side of the street to the Ebenezer. We know the use of mineshafts for GSHP technology is possible from research already conducted and intend to employ such to mitigate the need for a Gas Fired Boiler during winter months.

We also know our area is an ex-coal mining area with many shafts still accessible that hold potential for community wide heat networks addressing fuel poverty, in a zero-carbon manner. This then offers a wide scope to address the rising costs of energy across the board that our people will find hard to manage.

Carbon Reduction is mentioned first as it brings our house into order so that we are not preaching one thing and practicing something else.

Mine Water Heat

The Coal Authority is working with partners to unlock the heat within our historical coal mine network, to transform the homes and workplaces of the future.

<https://www.gov.uk/government/collections/mine-water-heat>

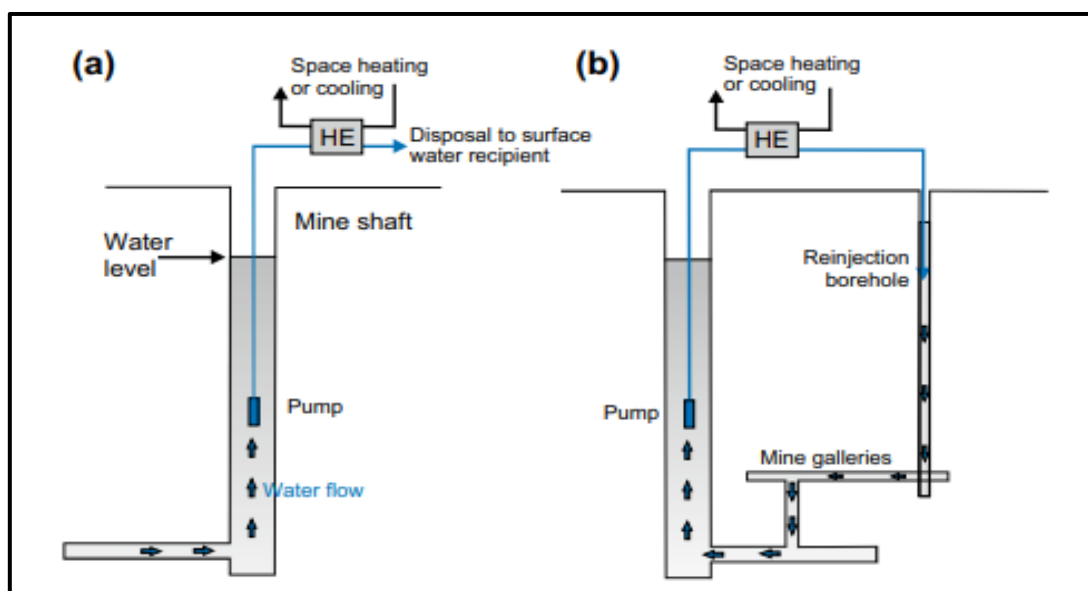


Figure 5 GSHP

GSHP has the potential for energy supply during colder winter months when Air Source Heat Pumps become less efficient, and this concept was suggested during our public consultation.

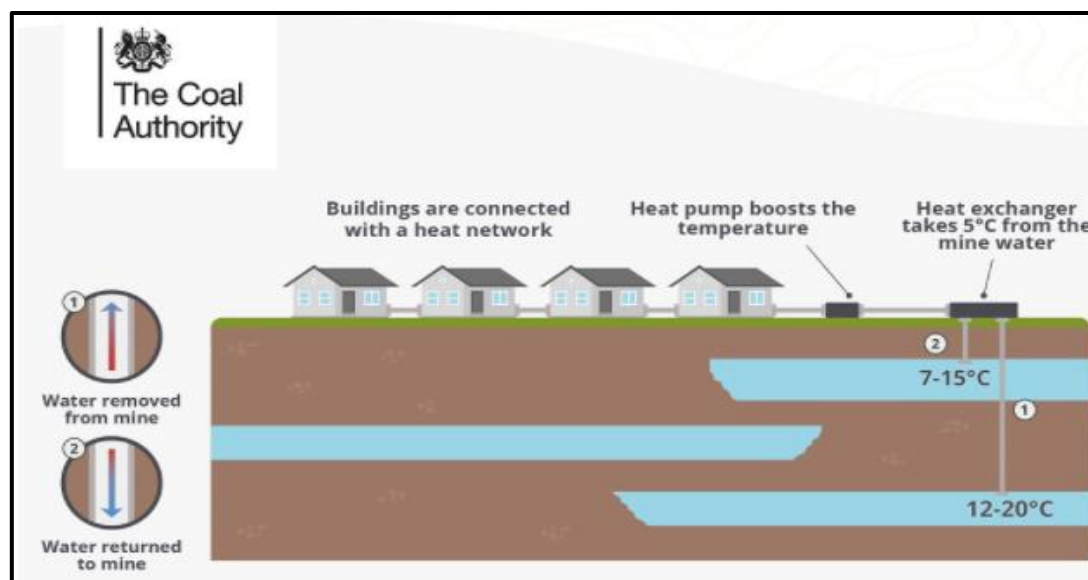


Figure 6 Coal Authority Illustration

<https://www.gov.uk/government/news/new-maps-reveal-heat-stored-in-britains-abandoned-coal-mines>

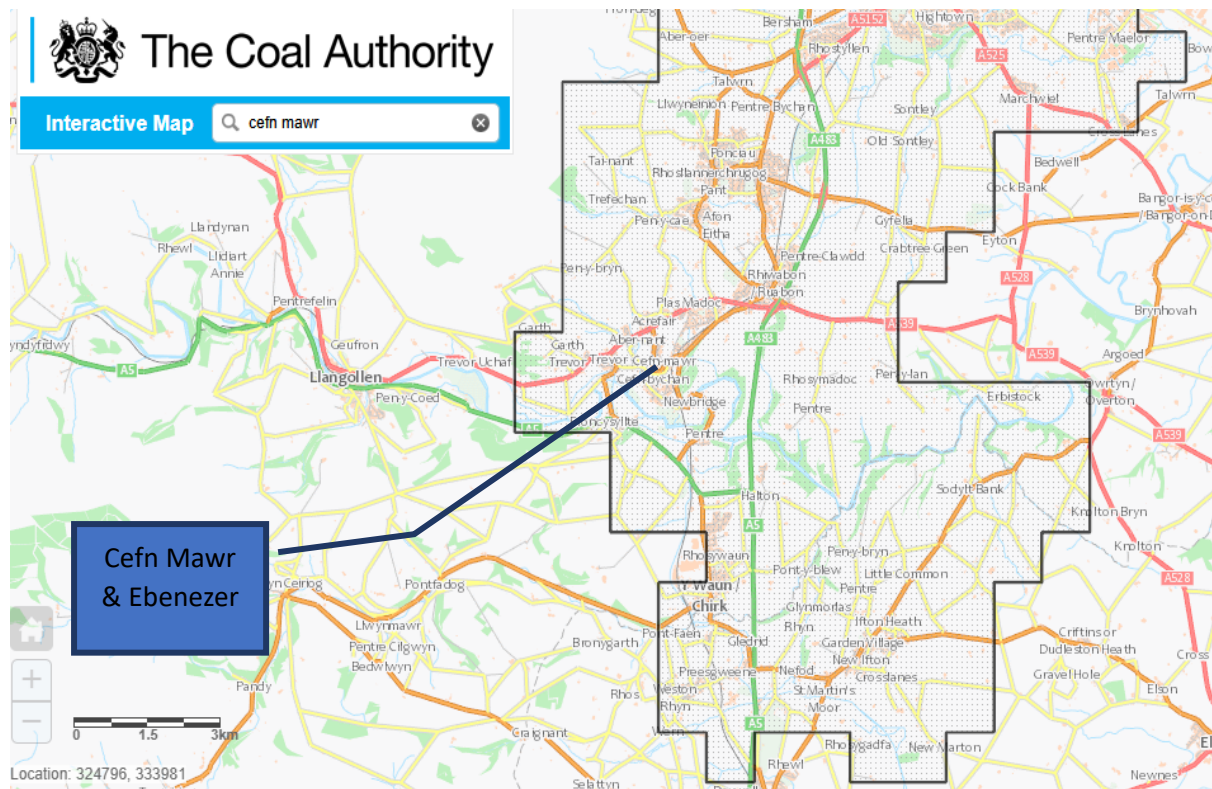


Figure 7 Coal Authority Map

<https://mapapps2.bgs.ac.uk/coalauthority/home.html>

The potential for the flooded abandoned collieries of the UK to provide a source of heating, cooling and energy storage is huge. The UK Coal Authority estimates that abandoned flooded mines contain around 2.2 million GWh of heat, with an even greater potential for heat storage. Furthermore, because coal spawned the development of many of our towns and cities, mine energy resource aligns well with centres of heat demand.

As the UK moves towards a low-carbon, clean growth economy (BEIS 2017), it will need to significantly reduce its greenhouse gas emissions to meet an ambitious target of net zero for all greenhouse gases by 2050 (CCC 2019). Currently, heating in homes, businesses and industrial processes is responsible for a third of the UK's greenhouse gas emissions (BEIS 2018).

There are a few examples of mine energy projects that serve smaller and individual developments in the UK. Bridgend Council in Wales is working to deliver a larger district heating system that will initially supply heat to around 150 homes.

Wales on Line 4th March 2021

Bridgend council takes next steps to invest in carbon-free heat scheme. The heat network forms part of the council's plan to be carbon neutral by 2030.

<https://www.walesonline.co.uk/news/wales-news/bridgend-heat-network-environment-climate-19944682>

At Heerlen in the Netherlands, abandoned mines are used effectively to deliver space heating and cooling to around 200,000 m² of mixed use new and retrofit buildings via a 7-km-long heat network (Verhoeven, Energy Procedia 2014). In addition to delivering low-carbon energy to Heerlen, the money spent on heat by their customers is retained within the region rather than going to a major, national energy supplier, thereby promoting economic regeneration to a formerly deprived mining region.

Mine energy has a much higher technology readiness level than other low-carbon replacements for natural gas, such as hydrogen. Heat-pump technology is proven, we have a long experience of drilling in mining areas and have evidence of success, as demonstrated by projects in the UK and beyond.

Following the closure of the majority of the British underground coal mines during the 1980s–1990s, the requirement to dewater ceased and many collieries were left to progressively flood. The resulting mine water often has undesirable water chemistry and may be aggressive or acidic, with high iron and sulphate arising from oxidation of pyrite and associated precipitation of ochre (Banks and Banks 2001). Most pre-treatment mine water is unusable for potable, industrial or agricultural uses, and can cause significant pollution events if allowed to enter surface waters or aquifers.

Surface breakouts often occur along river valleys, where natural discharge points from mine water systems develop.



Figure 8 River Dee

The River Dee is subject to unchecked mine water discharge indicated by the red ochre. Ochre settling out on beds of watercourses can smother benthic fauna that fish feed on, negatively impacting the ecology of the watercourse. Mine waters, their acidity, salt and metal loadings and the ochre issues that follow are typically regarded as an environmental liability.

The UK Coal Authority expends considerable effort and financial resources in managing this liability, both in terms of regional pumping of interconnected mine workings, to control mine water levels, and in treating pumped and gravity discharges of mine water.

Because of these challenges, mine water has historically been considered as a liability, requiring treatment to prevent environmental damage. In response to rising mine water levels and resulting outbreaks into surface water systems, mine water treatment schemes were constructed across Britain by the Coal Authority (National Rivers Authority 1994; Environment Agency 2008).

Groundwater removed from mines is generally at or somewhat above the annual average soil temperature of the locality in question and increases with depth (1–3 °C per 100 m in most tectonically stable areas).

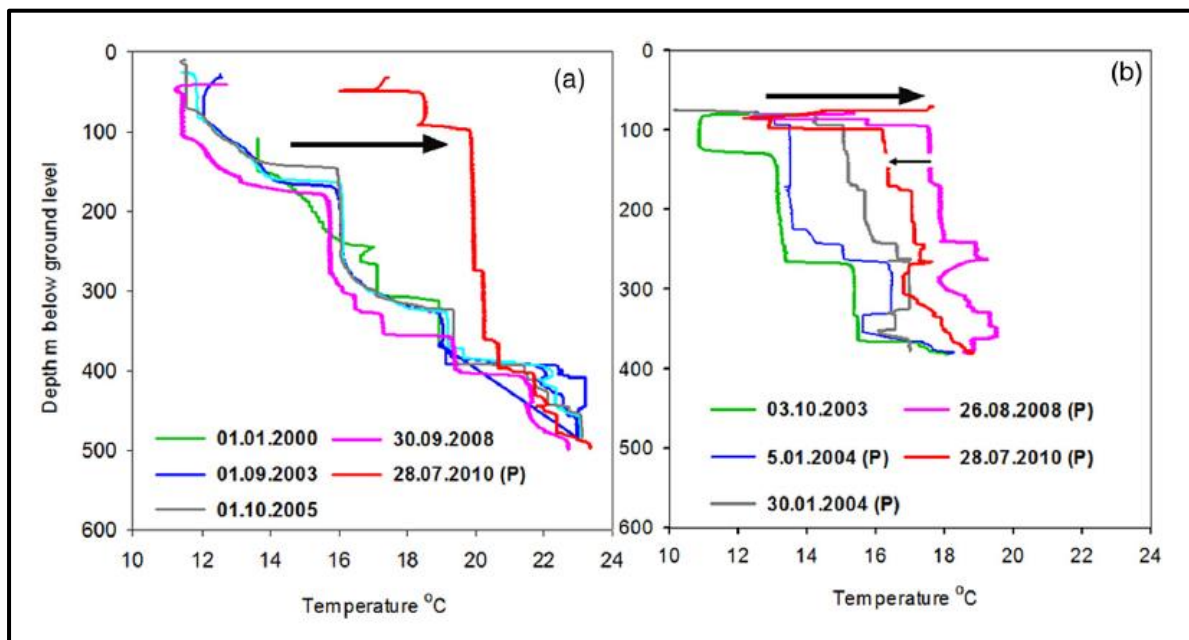


Figure 9 Sub Surface Temperatures

References:

- GEOSCIENTIST – Mining for Heat - Charlotte Adams, Alison Monaghan and Jon Gluyas 2019
- Quarterly Journal of Engineering Geology and Hydrogeology, The temperature of Britain's coalfields, Vol. 54, 2021
- Sustainable Resource Management: Water Practice - Water from abandoned mines as a heat source: practical experiences of open- and closed-loop strategies, United Kingdom. David Banks · Anup Athresh · Amin Al-Habaibeh · Neil Burnside.

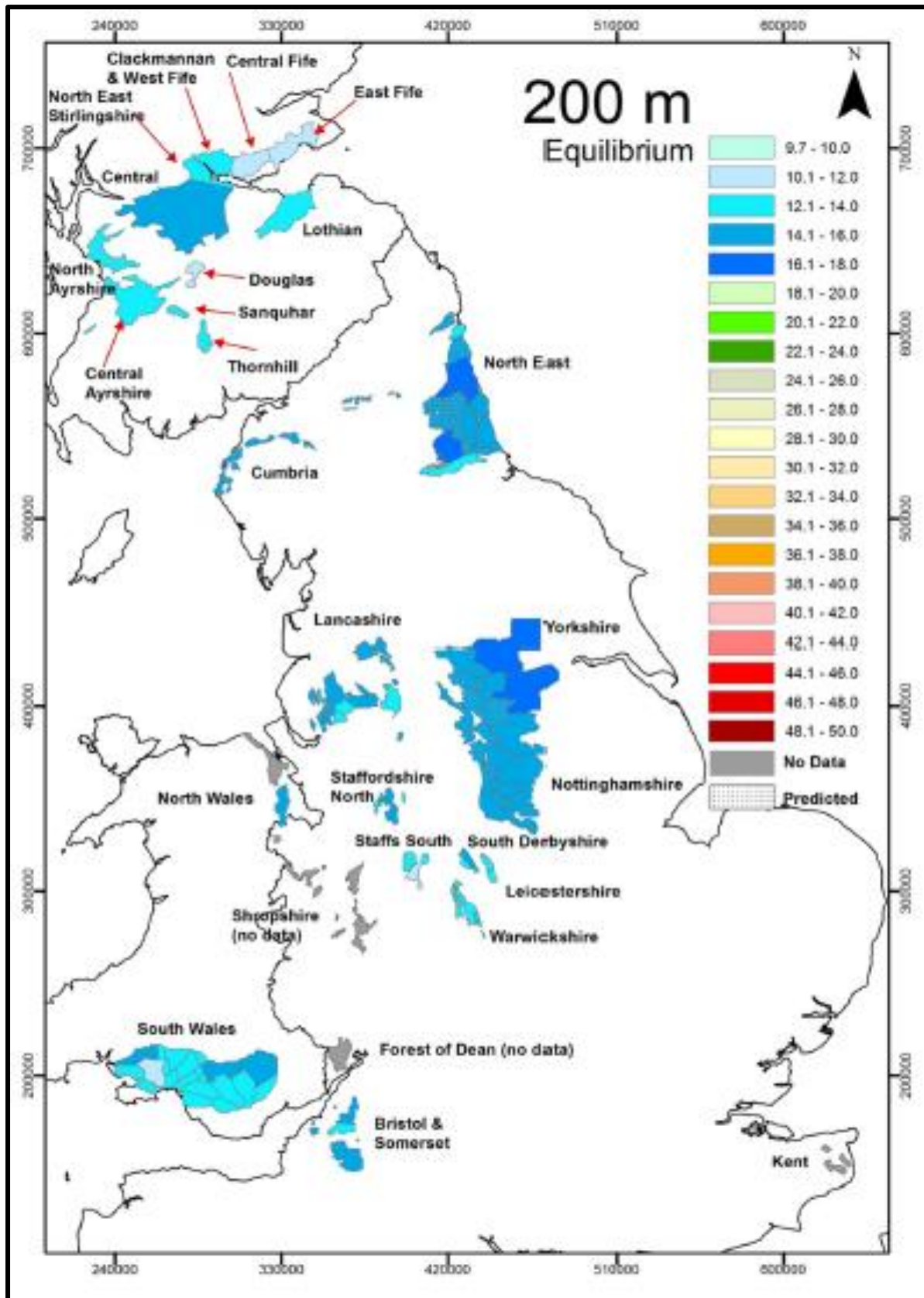


Figure 10 Temperature Map

Mine temperatures around the UK at approximately 200mts or 660 feet.

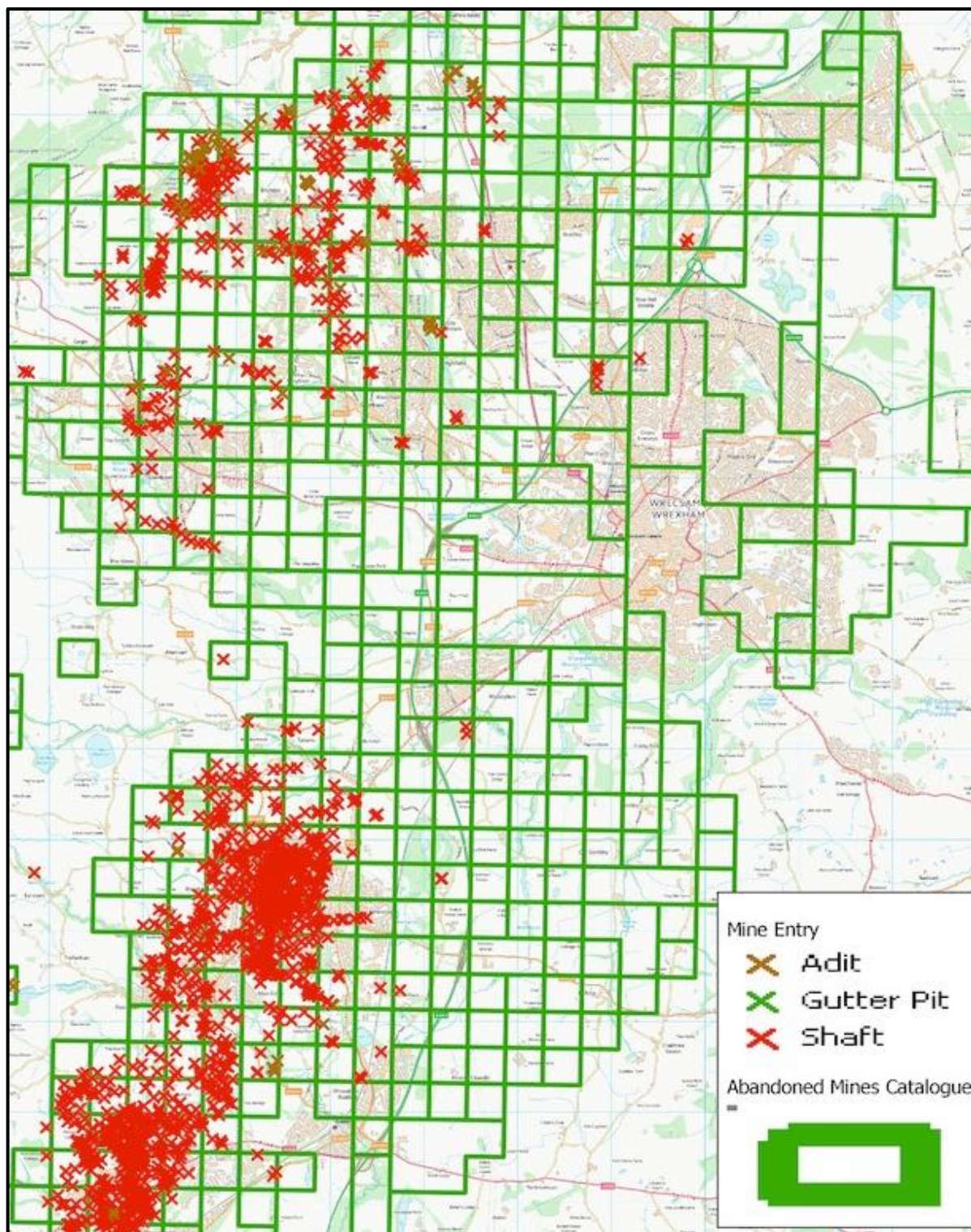


Figure 11 Wrexham Area

Wrexham.com 17th February 2022

Seminar set to explain potential of heat stored in abandoned coal mines

<https://www.wrexham.com/news/seminar-set-to-explain-potential-of-heat-stored-in-abandoned-coal-mines-215395.html>

Climate Crisis Mitigation Centre

It has come to our attention that the World is in a Crisis Situation which has also been quite rightly called an Emergency by WCBC.

However, the situation is at best presented in a very disjointed manner as seen by most people, whom we need to buy into what needs to be done. As the Norwegian girl, Greta Thunberg said, "There has been a lot of clap trap but not much done."

It is our intention to change this and promote coordinated knowledge and presentation that will encourage larger numbers of people to become more aware and responsible for our future.

The grim truth is that unless we do so, there will be no future for our children and grandchildren.

This may sound like a brash statement to make but it is based on the information we have seen and intend to present to all that wish to visit our centre at the heart of the Pontcysyllte World Heritage Site. With a visitor count more than 400K per year, this could be quite significant, and perhaps we could be an instrument for the change that is needed.

So, let's try a simple one here and now.

BUGS ON YOUR WINDSCREEN.



Figure 12 Windscreen Phenomenon

When was the last time you had to clean the bugs off your windscreen, even on a long journey? A thing of the past?

This has been called the Windscreen Phenomenon and there are references to such on the internet and other sources available.

The best of which will be made available at The Ebenezer Chapel.

According to a major scientific review,

global insect populations are hurtling towards extinction, threatening a

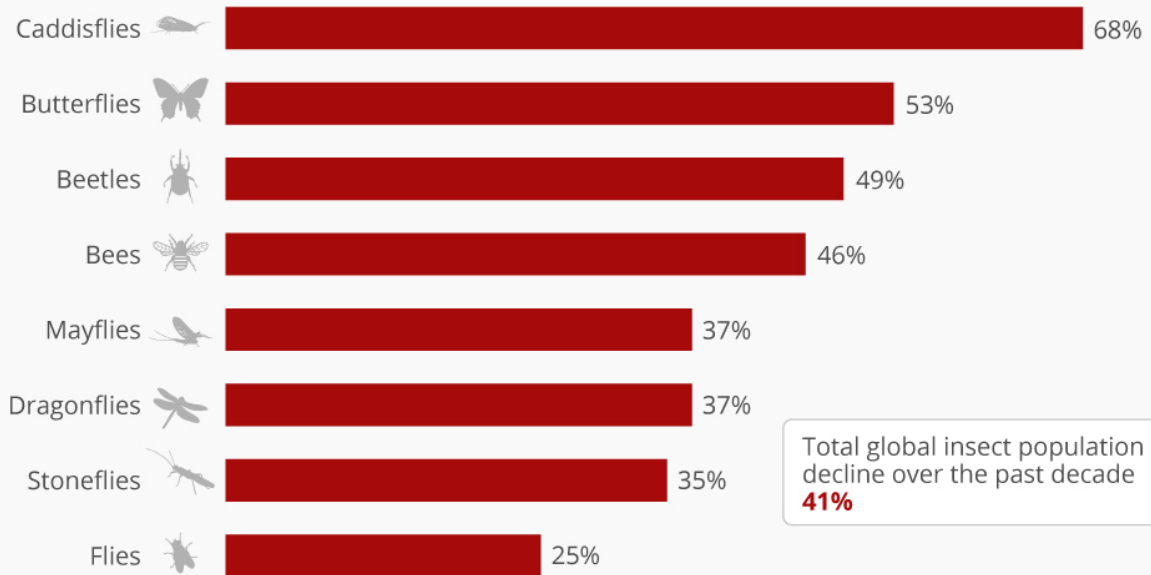
"catastrophic collapse of nature's ecosystems". The research found that 41 percent of the world's insect populations are declining while a third are endangered. The extinction rate of insects is eight times faster than mammals, birds and reptiles and there are suggestions that they could totally vanish within a century.

The impact of fewer insects would be devastating with birds, reptiles, amphibians and fish that rely on them for food starving to death. The knock-on effects could eventually have repercussions for the survival of mankind. The following infographic provides a closer look at some of the species experiencing major declines in population. Over half of the world's butterflies have died over the past decade with nearly half of all beetles and bees also perishing. Dragonflies have seen their ranks fall by 35 percent while a quarter of all flies have also died.

<https://www.statista.com/chart/16960/percentage-decline-in-selected-global-insect-populations/>

Massive Insect Decline Threatens Collapse Of Nature

Percentage decline in selected global insect populations over the past decade



@StatistaCharts Source: Sánchez-Bayo & Wyckhuys, Biological Conservation, 2019

statista

Figure 13 Insect Statistics

The Morning Chorus?

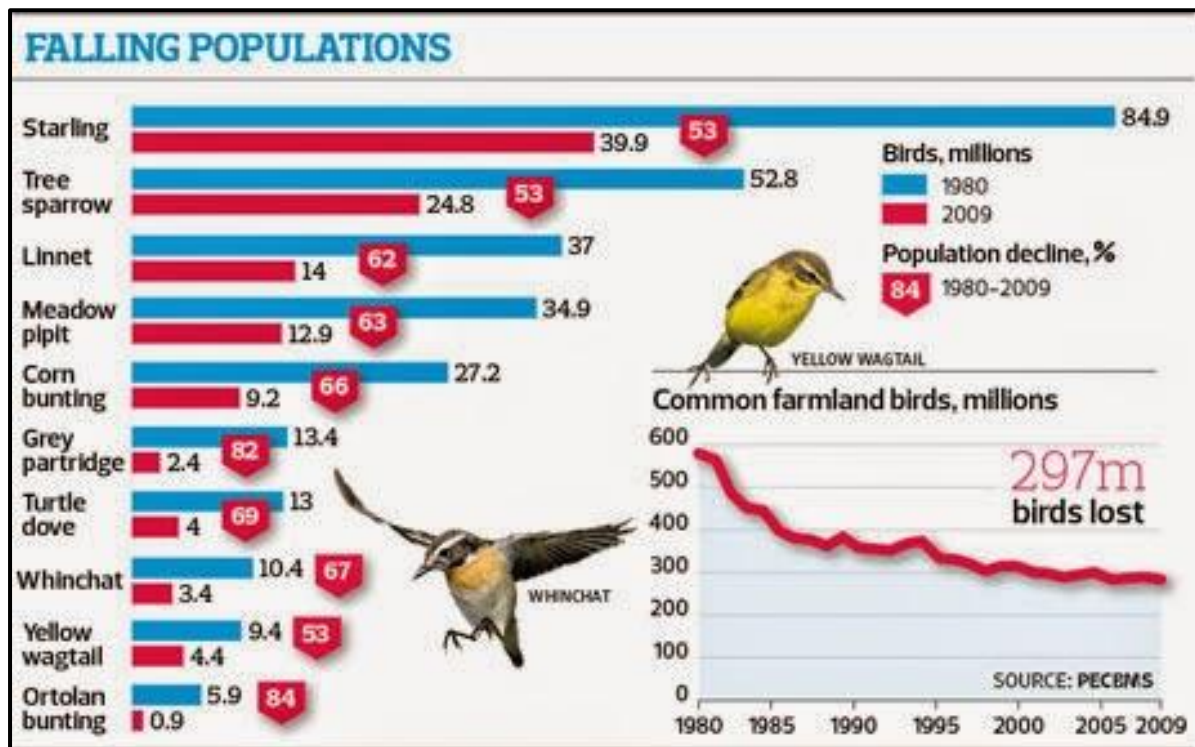


Figure 14 Falling Bird Populations

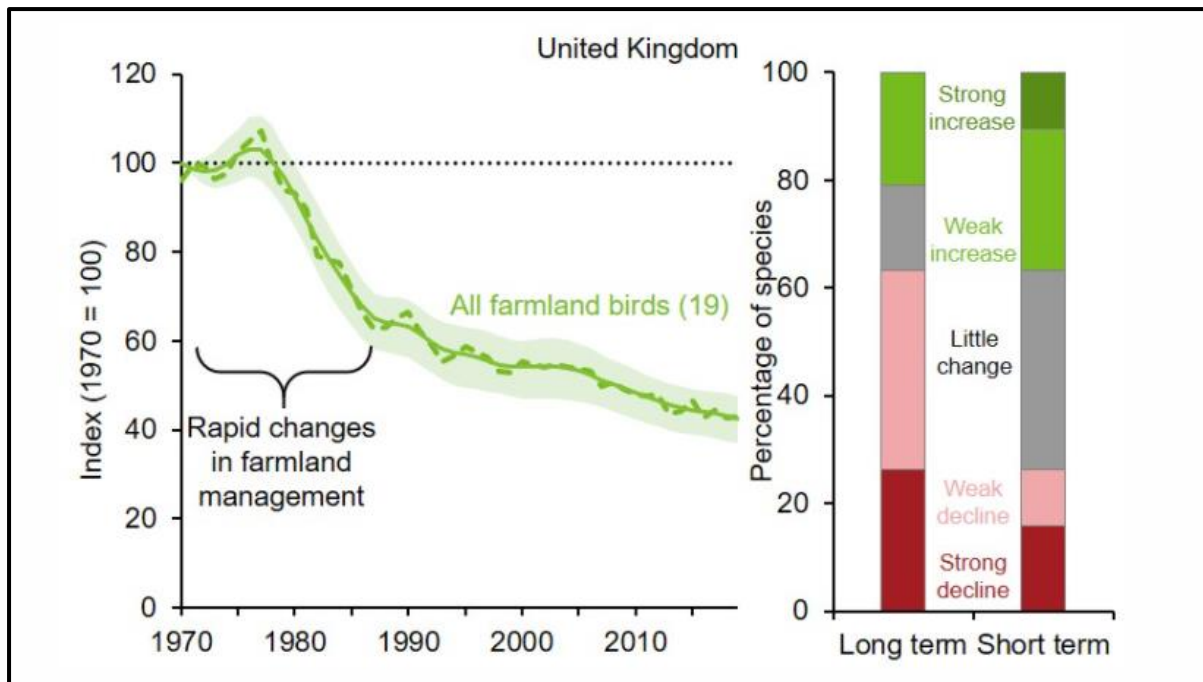


Figure 15 Loss of Farmland Birds

<https://jncc.gov.uk/our-work/ukbi-c5-birds-of-the-wider-countryside-and-at-sea/>

Effort and investment has been made, but has it worked?

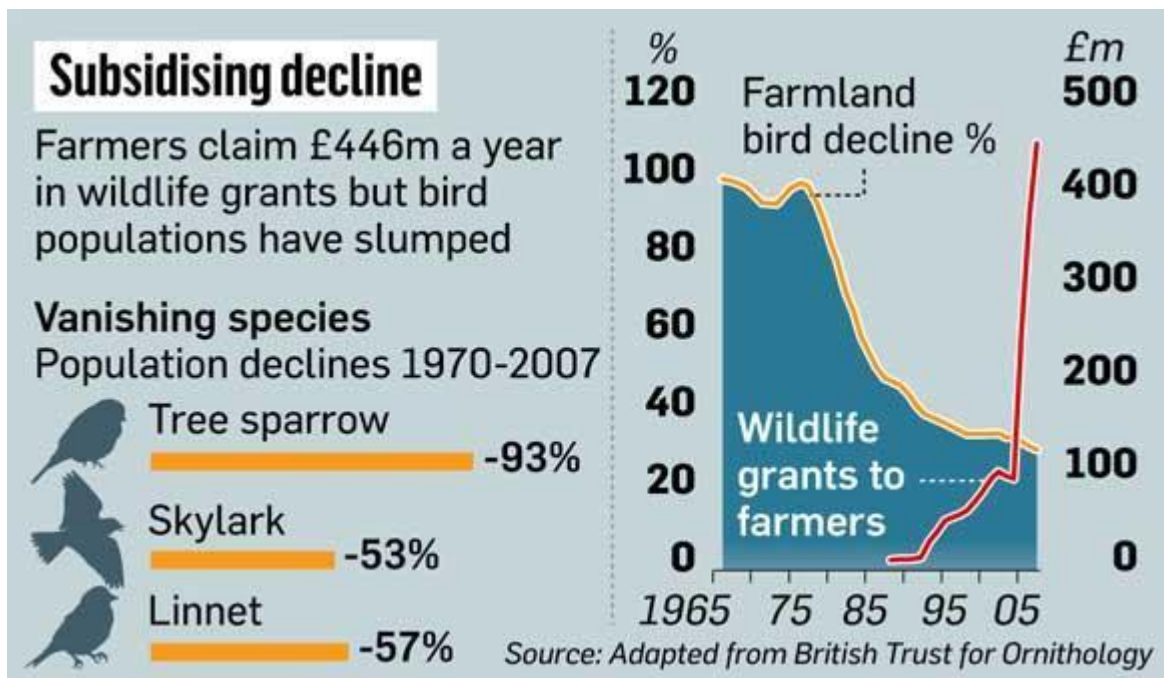


Figure 16 Ineffective Investment?

The exceptional decline in insect life is matched by a parallel reduction in bird life. The morning chorus is far from what it used to be.

How long before we wake up to a silent world?

Hedgehogs



Figure 17 Hedgehog

It's not good news for the hedgehog population either as numbers continue to fall in the UK. A report reveals that the numbers have fallen by around 50% since the start of the century, BBC News reports. The data was collected via surveys, conducted by citizen scientists, for The State of Britain's Hedgehogs 2018 report. The figures suggest that the hedgehog population in England, Wales and Scotland is less than one million, compared with three million in the 1950s.

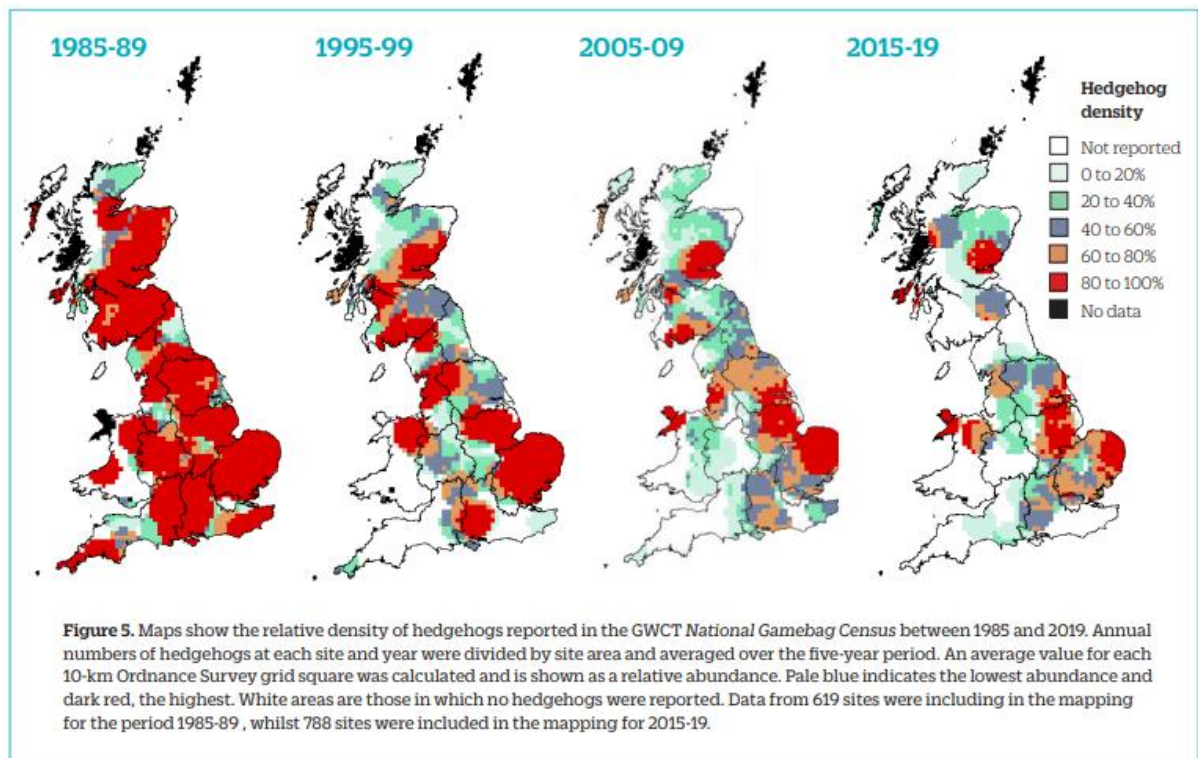


Figure 18 The State of British Hedgehogs 2022

David Attenborough



Figure 19 David Attenborough in 1950's

David Attenborough went around the world in the 1950's & 60's finding animal species seldom if ever seen by western man for BBC documentaries. These rare and little-known species often lived in far-off lands that most would never see other than through the medium of TV. In the picture of David, he is looking for the Orangutan in 1957.



Figure 20 Orangutan fights loggers 2018

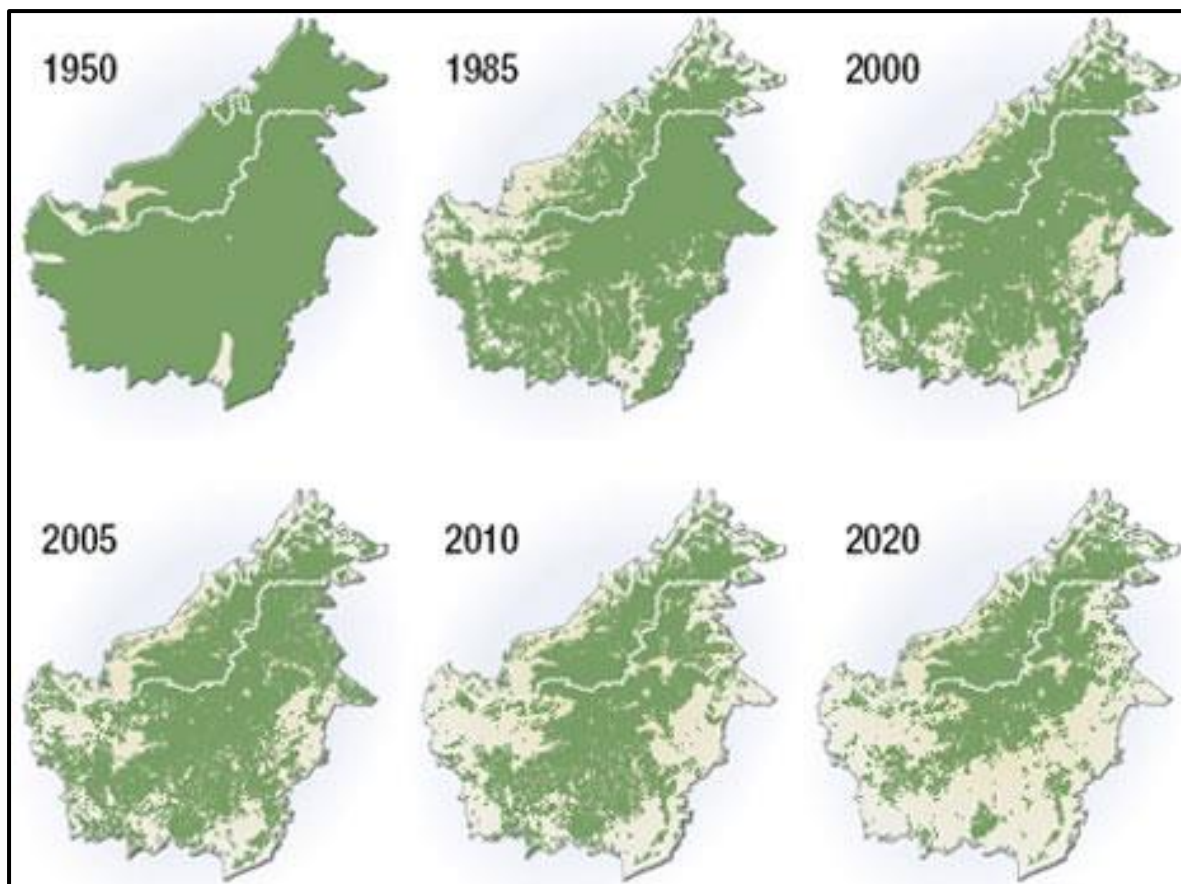


Figure 21 Borneo Deforestation



Figure 22 Amazon Rain Forest

CNBC 19th November 2021

SUSTAINABLE FUTURE? Deforestation in Brazil's Amazon rainforest hits 15-year high, data shows. A report published by Brazil's National Institute for Space Research (INPE) on Thursday estimated that

13,235 square kilometers (8,224 square miles) of forest was lost between August 2020 and July 2021. That's an increase of 22% from the previous year.

<https://www.cnn.com/2021/11/19/deforestation-in-brazils-amazon-rainforest-hits-15-year-high.html>

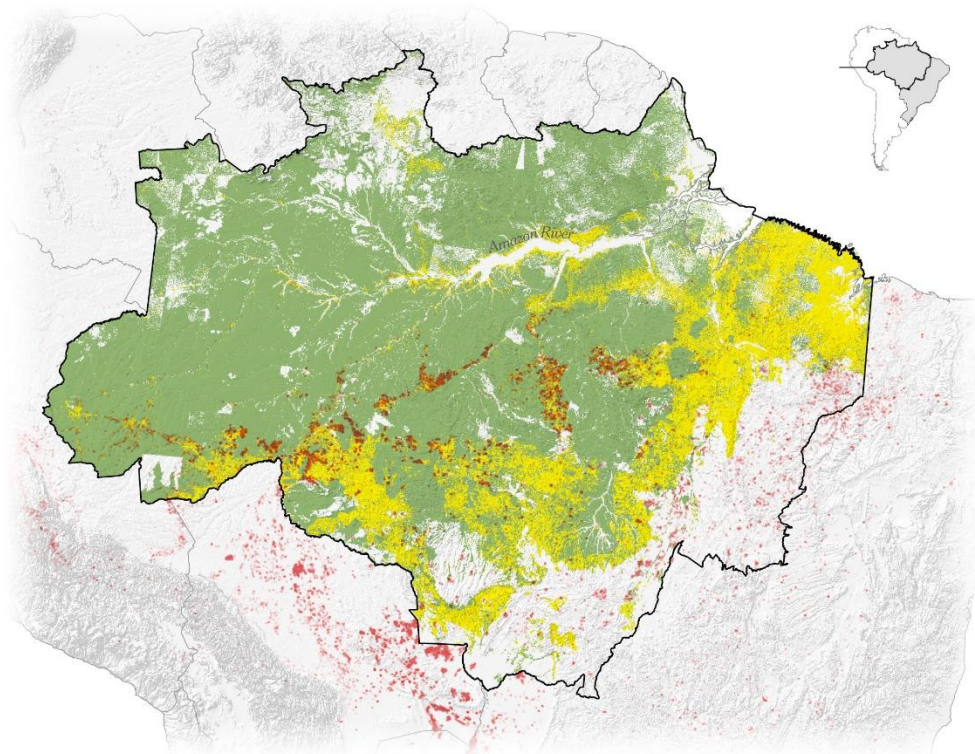


Figure 23 Amazon Rain Forest Depletion

CO2 & Global Warming

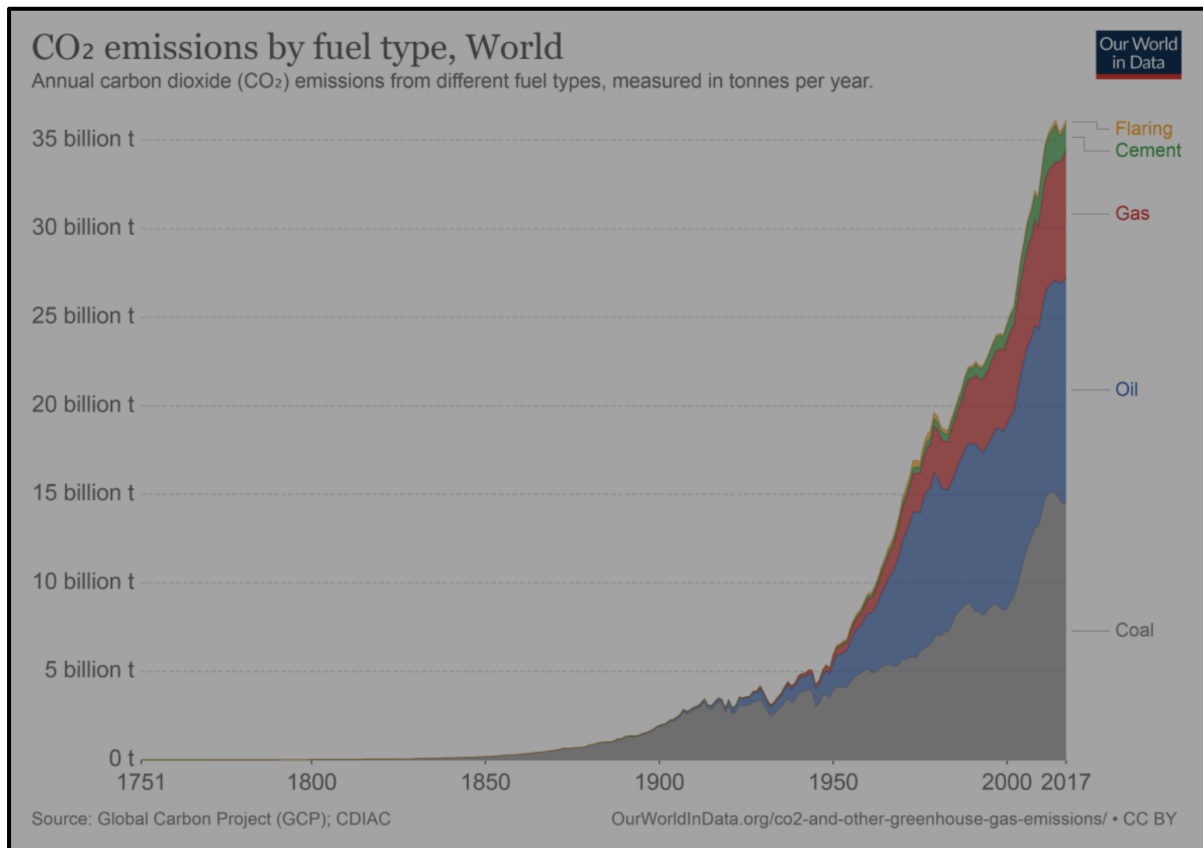
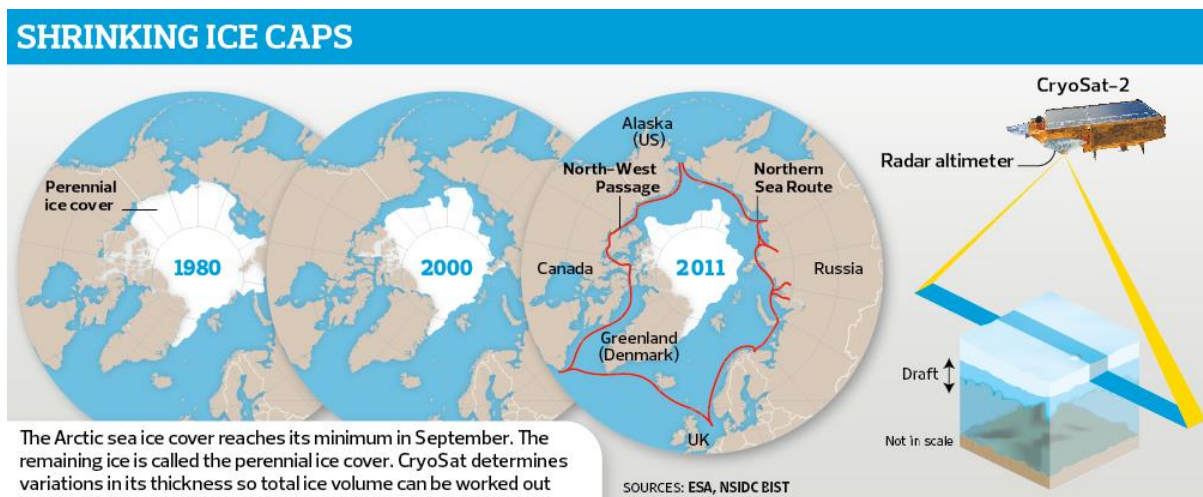
Figure 24 World CO₂ Emissions

Figure 25 Shrinking Ice Caps



Figure 26 Polar Bears looking for new home



Figure 27 Starving Polar Bear

<https://www.youtube.com/watch?v= JhaVNJb3ag>



Figure 28 Making the best of it!

This could be what our children have to resort to unless we change our ways.



Figure 29 A changing world

PLASTICS

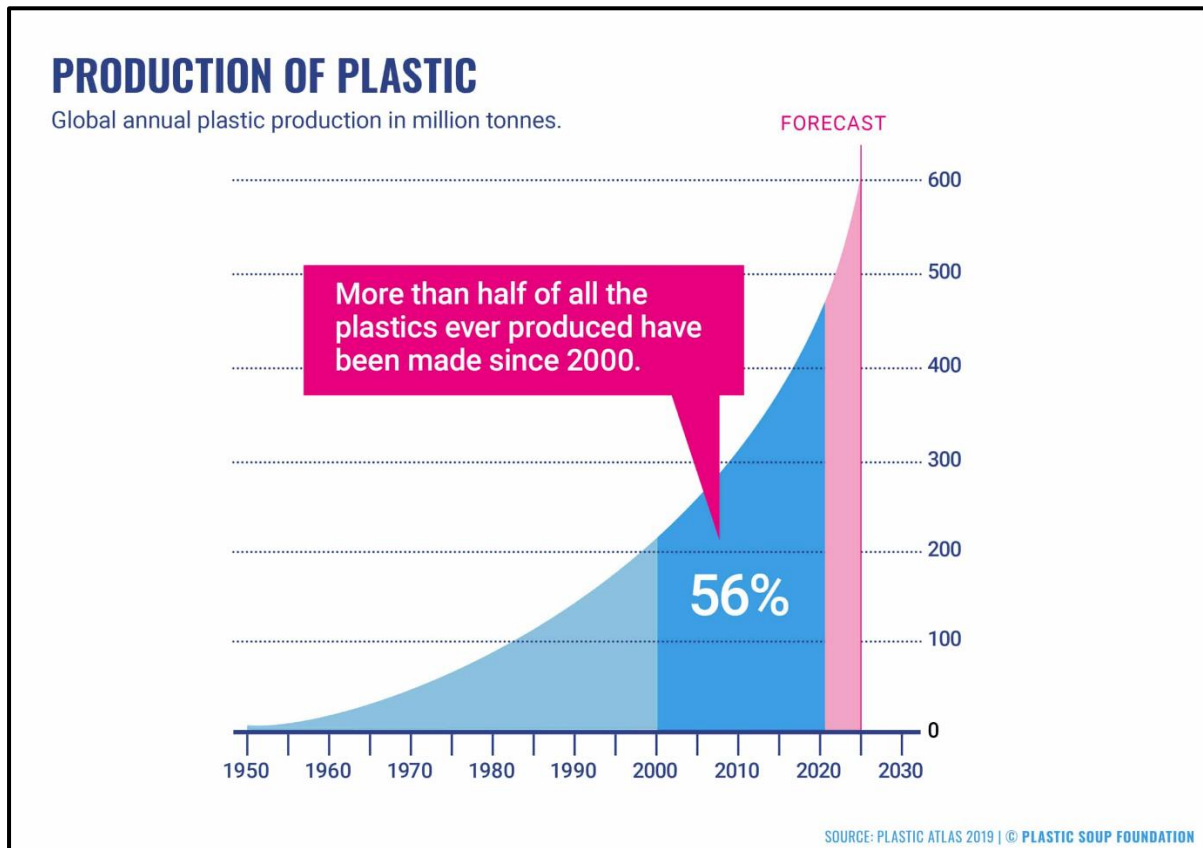


Figure 30 Plastic Production



Figure 31 Plastics in the ocean



Figure 32 Albatross chick stomach contents.

Plastics in the Ocean perhaps represent the greatest threat of all to the future of mankind. The Oceans are the biggest carbon sinks on the face of the Earth and if we continue to turn them into algae swamps as we are doing, this will be the end of life as we know it.

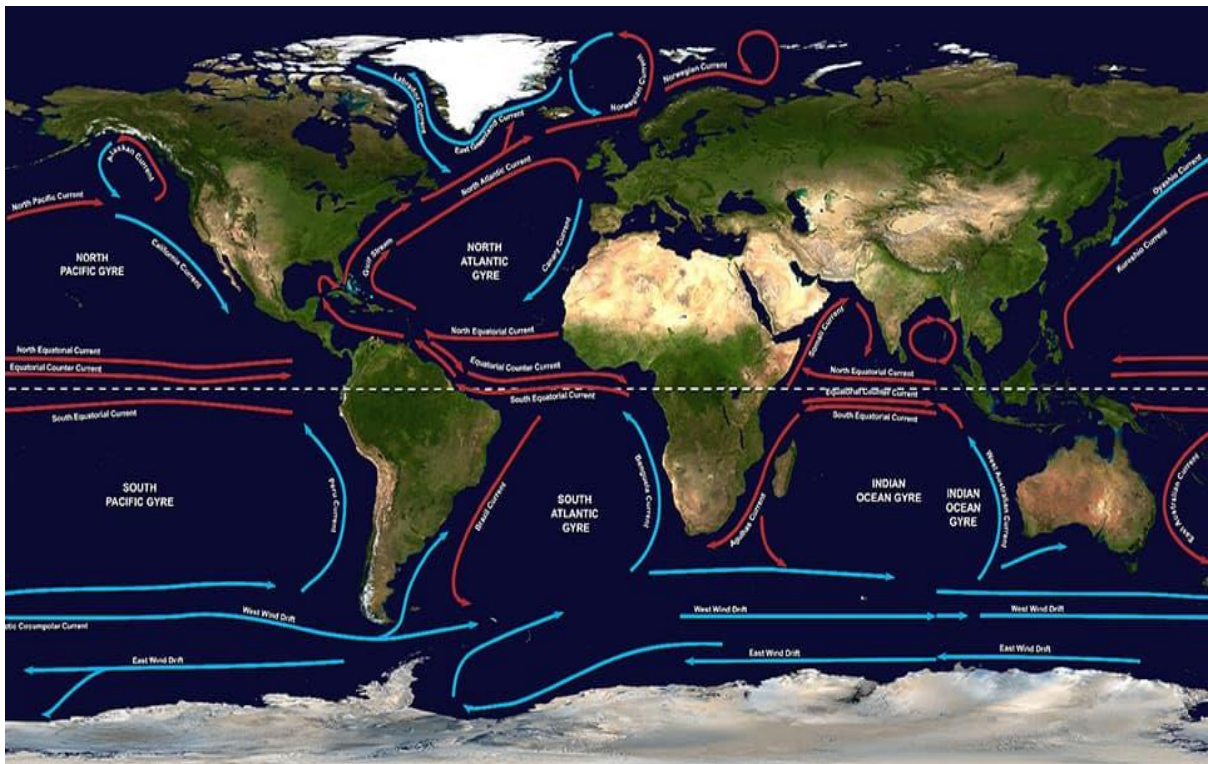


Figure 33 Ocean Currents

How our crap can get around the world.

One item of plastics we have recently been horrified (as responsible publicans) to see reappear on the Supermarket and Retail Chain shelves is this:



Figure 34 Plastic Beer Can Pack

This piece of litter was collected on one of our picks in our local community at the centre of the Pontcysyllte World Heritage Site. Note how “Environmentally Friendly” this item is made out to be:

- It has the recycle logo
- It says recycle me
- It is even made of 50% recycled plastic

This just makes a mockery of the whole system. We thought these had been banned but have since seen them on shelves again.

The reality of these six-pack plastic beer can holders are as follows and please take a good look as it is not pleasant and why we object so much. The following images are horrific and can only be surpassed by the pain the animals must have suffered because of such.



Figure 35 Innocent Turtle



Figure 36 A hedgehog caught up



Figure 37 A seal being strangled



Figure 38 A duck being strangled

And if the this very brief glimpse of the destruction we are causing with plastics is not veil enough, try imagining what a simple plastic shopping back does to a whale if inhaled and most plastics float near the surface. We don't need to hunt whales any more to kill them off, we are poisoning them and starving them by removing all the fish. That is why we see so many dolphin getting caught up in the nets, the trawlers and dolphin etc are chasing the same, what are left of the fish.



Figure 39 Plastics floating near surface



Figure 40 Galton Valley Canal Heritage

And it is not just the Pontcysyllte World Heritage Site that has a litter problem.



Figure 41 More plastic garbage on the way to the sea.



Figure 42 And hiding in the bushes

Local Litter Pick in Pontcysyllte World Heritage Site 2020



Figure 43 Litter sorted for recycling

Responsible Suppliers - Supermarkets and Retail Chains:

- Plastic Drinks Bottles x 41
- Glass Bottles x 31 (non-alcoholic x 2 and alcoholic x 29)
- Broken glass bottles (estimated 10)
- Cans x 99 (non-alcoholic x 65 and alcoholic x 34 (14 of which were Fosters))
- Shopping bags, Nisa x 2, Tesco x 2, CoOp x 1, Lidle x 1, Aldi x 1, Another x 1
- AA Batteries x 2 (please note these are extremely toxic in a marine environment)
- 4 Beer Can plastic holder (please note the pain and suffering these things cause wildlife every year is horrendous and well known. We thought they were banned but now see them back in the supermarkets and retail chains). We have responded to the Welsh Governments call on banning one use plastics in 2020 and support this action as well.

Responsible Suppliers - Supermarkets, Retail Chains AND Fast-Food Outlets:

- Bin bags full of non-recyclable plastics and waste x 2

Please note all food outlets that operate between 2300 and 0500 need to be licenced and these are, in order of volume of litter recovered, MacDonald's, Costa Coffee and KFC all pumping out litter 24 hours a day. This is not in compliance with the Licencing Act 2003.

Responsible Suppliers - Other Sources:

- Dog poo bags complete with dog mess x 4 (in with no recyclables)
- Man, United Jacket
- Streetlamp and cable (Council Street Lighting Contractors)
- Hub Cap
- Motorbike stand
- Golf balls x 2

All of this waste would be problematic if it had entered the water system, i.e. been washed into the River Dee during heavy rain. Fortunately, in this case it was just an eye saw and mess at the centre of our World Heritage Site. Please help us do something about this, and our home, this planet.

We are doing what we can, but a little help would be most welcome.

The River Wye and other Rivers in the UK



Figure 44 The River Wye

<https://www.youtube.com/watch?v=5ID0VAUNANA>

All rivers and canals eventually lead to seas and the seas mix with our oceans.

Plastic Recycling?

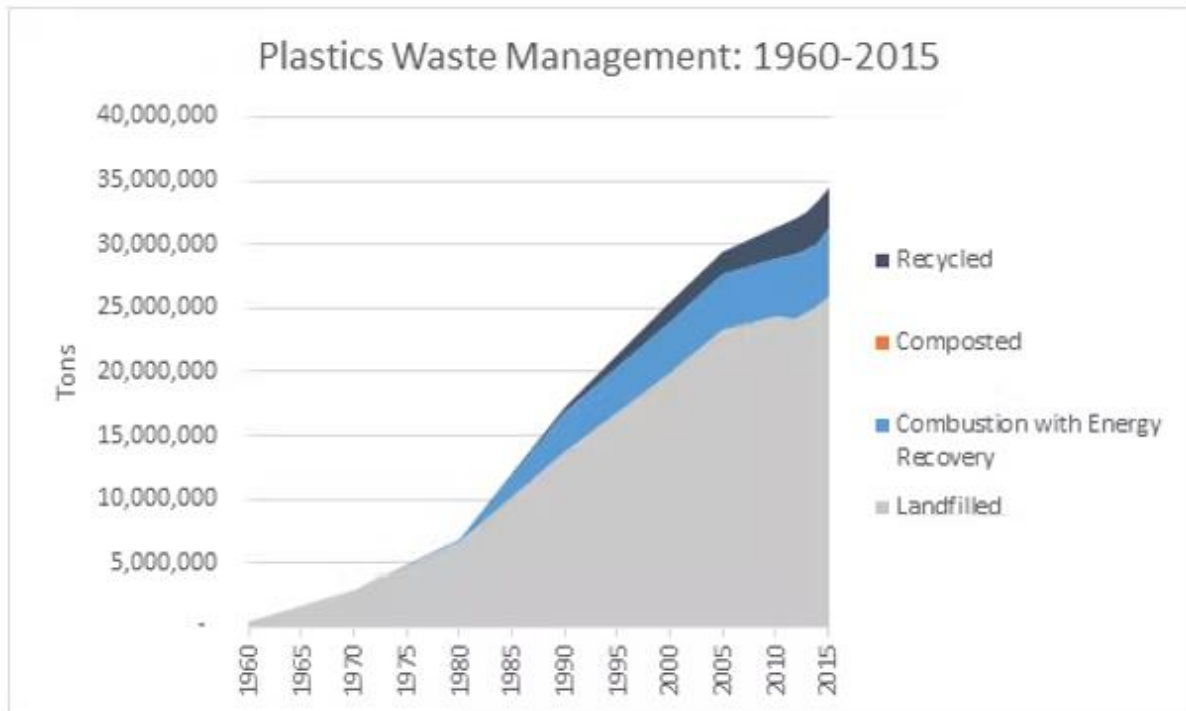


Figure 45 Volumes for the US

The recycling of plastics has been a bit of a con. To date less than 10% of the total volume of plastic since the 1960's has been recycled.

Every plastic container these days makes a statement about recycling and reuse as a sales pitch to be seen as environmentally friendly. However, this is currently a load of rubbish. The stuff is piling up everywhere, in our homes, our towns, on our roadsides, in our countryside, it is entering the waterways, rivers, seas and oceans.

This does not seem to be covered by the above graph unless it is included in the total volume for Landfill, and guess what, after years of burying it here and burying there, we have run out of places to bury it! We have even resorted to shipping the stuff around the world and dumping it in other countries, which has been yet another con.

Plastic is rapidly becoming the main hazard facing mankind and the world as we know it.

Plastic in the Oceans

Sky News 3rd February 2017

Sick whale found to have 30 plastic bags blocking its stomach A distressed whale that was put down after repeatedly becoming stranded off the Norway coast with 30 plastic bags wedged inside its stomach, researchers have said.

<https://news.sky.com/story/sick-whale-found-to-have-30-plastic-bags-blocking-its-stomach-10754077>



Figure 46 Plastic Ocean



Figure 47 Plastic Pollution

Areas of Concern in Our Community



Figure 48 Penybont Landfill Site

Penybont Landfill site is surrounded on three sides by a main water course, the River Dee leading to the sea and feeding the Cheshire Plain. We have seen the B5605 on one side subside down the hill side. We know from local knowledge that the hydrology of the area has been altered following the land fill of the Penybont clay works, and reason that this has made considerable contribution towards the land slide since the ground has become saturated where it was dry before.



Figure 49 Former Monsanto Chemical Works

The former Monsanto Chemical Works site lies dormant within our community. Measuring some 45 acres of questionable land some of which will be highly contaminated, such as Rhosymedre Quarry.

We would like to see a full remediation package implemented and a long-term plan put in place for the site rather than just being told, we have to live with it. The attitude that such a site can continue to be maintained in its current state at the expense of the local community is wrong and needs correction.

We are more than willing to work with the owners of the site, now Eastman Chemicals and have workable proposals and solutions for such which can be implemented through The Ebenezer Chapel as a Climate Crisis Mitigation Centre.

This is what we call our Level 2 work and offers many Climate Crisis Mitigation Measures that would help both our local community and Wrexham as a whole.

Appendix 1 Public Consultation



Suggestions from the Community to Date being:

- Post Office
- Cambria Community Bank
- Cafe
- Library
- Book Shop
- Place of Worship
- Arts & Visitor Centre for the Cefn & Cefn Mawr
- Local Tourist Information Facility & Booking Service
- Welsh Language Classes for adults to improve Local Welsh Literacy
- Hot Desk Facilities for CAB
- Hot Desk Facilities for Employment Agencies
- Ongoing programs of Short Courses in Arts, Crafts and Traditional Building Skills.
- Short Computer Literacy Courses and Personal Tuition for Math, English & Welsh.
- Princes Trust & NEET Programs for youth and young people.
- Central gathering point for guided walking tours explaining the Industrial Heritage of our area and why the aqueduct and viaducts are built where they are.
- National Lottery Sales
- Community Cinema
- Youth Club
- Shop Units
- Snooker Hall
- Wine Bar

- Night Club
- Youth Hostel
- Tai Chi & Yoga Classes
- Debating Club
- Art Group (the Pallet People)
- Tea Shop
- Wedding Venue
- Gymnastics
- Basic Computer Literacy Courses
- Funky Bees
- Rainbow Centre for Care & Support Facilities
- Micro-Brewery
- Distillery
- Wynnstay Venerable Housing Program

Whatever we do end up doing with the building will have to be on a commercially viable basis and will most likely be a combination of the above. We intend to make the building Zero Carbon and will expect all participating businesses to work on Circular Economy Principles and Practices as we do at the Holly Bush Inn. This is part of our Environmental Policy.

All this work will take some time to organise and implement, to reinstate the building as a flag ship for Economic Regeneration under a general theme of Arts and Visitor Centre & Community Facility. Therefore, in the meantime we will be using part of the building to help sponsor our local Snooker Team who are doing very well in both local leagues, Oswestry and Wrexham and our National Champion Matt Roberts is currently No 3 in Wales.

If you have more suggestions and would like to get involved, please come along to our PKC Group meetings on the second Tuesday of each month in the Holly Bush Inn starting at 1900.

Appendix 2 Waste Management

The best and simplest example of our waste management system is that of the Holly Bush Inn. However, when reading this one should bear in mind that the waste stream from the Holly Bush Inn only represents 20% of our total business volume. 80% of our business volume, Beer is sold in beer glasses that are simply rewashed and filled from Kegs which again are refilled. This = Zero Waste for 80% of our business volume, bar the odd broken glass. We will be producing a report on the Environmental Savings our pub, The Holly Bush Inn, a small Free House in NE Wales has made to the world since the end of COVID 19 Lockdowns. This will be published in April 2022.

As for the 20% of our business activity that does produce waste, we score 110% in recycling it all.

We segregate our general waste into:

- Glass bottles and any broken glass etc.
- Cans and all metals.
- Plastic Bottles
- Carboard
- Non-Recyclable, low grade plastics, paper, tissue, fag buts etc.



We consider that the Non-Recyclable Waste is recycled as this is taken away by Veolia and we ensure that only waste suitable for the Shrewsbury ERF is put in this bin. Therefore, our low-grade waste is also recycled into Electricity instead of going to landfill.



And yes, we do score 110% in our recycling program as not only do we recycle all our waste we also recycle all the “Other” waste we collect in our litter picks around our pub and community.

This collection was made in 10 minutes on Gate Road at the very heart of the Pontcysyllte World Heritage Site, nowhere near our pub or any other pub.

The collection is typical of most areas and shows the high volumes of litter our country is being buried in all coming from the same sources,

supermarkets, and retail chains. The number of beer cans and bottles on our roadsides also shows the high levels of drink driving also emanating from the same sources. This needs to be addressed and is seriously undermining the Licencing Act. Please note the shopping bag was user supplied and not litter.

Appendix 3 The Climate Crisis in Cefn



River Dee in Flood following Storm Christoph 2021, highest levels ever recorded.



The B5605 following Storm Christoph.



NRW Data for River Dee Levels



Flood Waters subsiding after Storm Christoph in January 2021, note the river retaining wall.

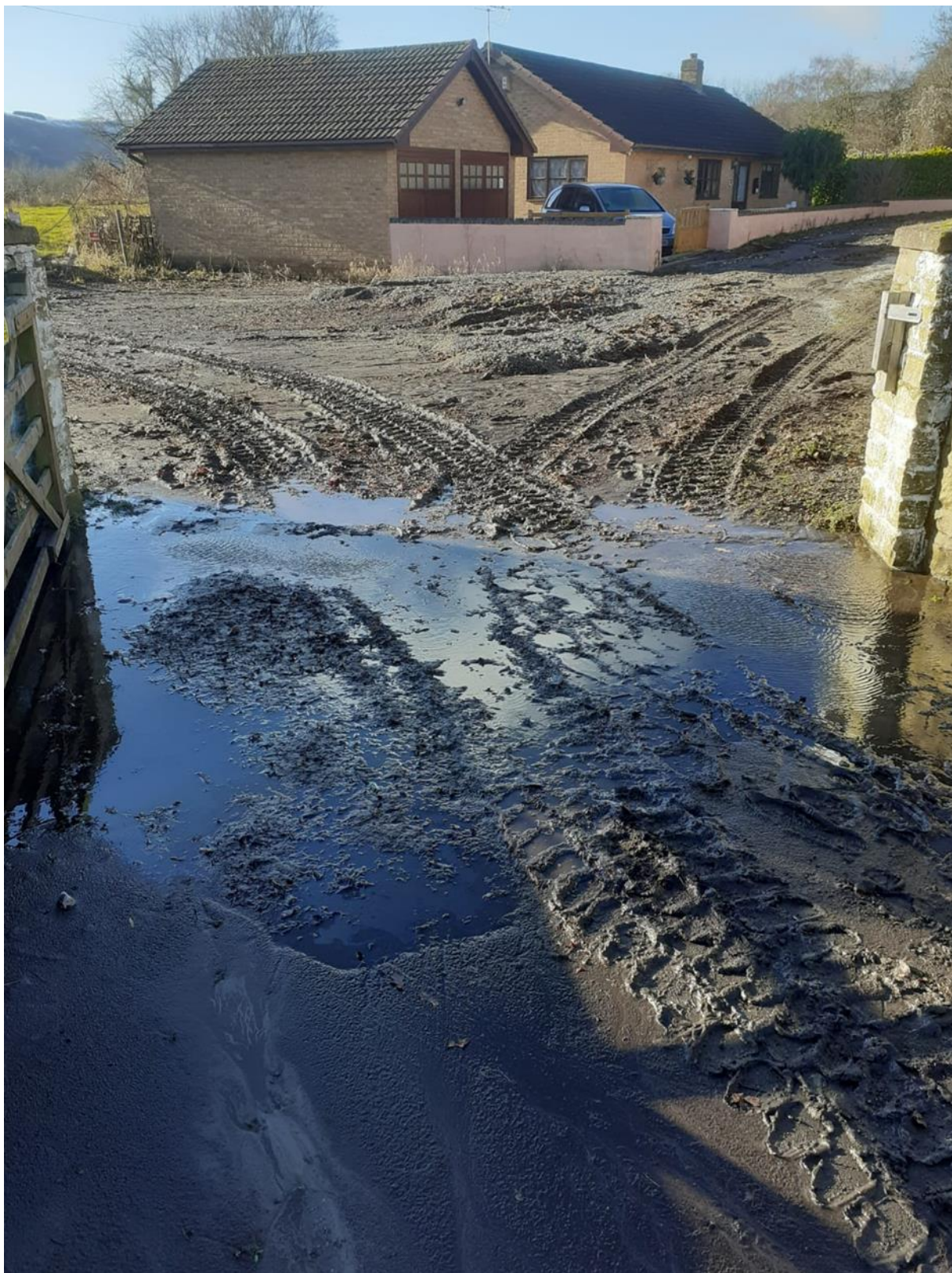


The riverbank below the land slide and retaining wall has been destroyed by the river and remains in ruins as of 2022.

In our limited opinion the retaining wall of the River Dee will need rebuilding before road works are undertaken. The combined costs for which we expect to be in the region of £6-7 million pounds which is higher than anything we have seen quoted to date in the press from the authorities.



Bowers Road flooded during Storm Christoph, well above the River Dee and not in a flood plain risk area. This runoff is caused by poor drainage from the former Delph open cast mine area. Our area has suffered from this every year since the closure of the mine in the 1980's. Usually, until 2021, it has been the housing higher up and the Eagles Pub that have suffered worst.



The day after in a housing estate in Acrefair no where near a flood zone.

North Wales Live 13th January 2016

Flooding causes chaos in Wrexham as emergency responders tackle incidents (including Acrefair)

<https://www.dailypost.co.uk/news/north-wales-news/flooding-causes-chaos-wrexham-emergency-10728314>



The first loads of coal from the new mining site at the Delph, Acrefair were taken away at the beginning of the week. The mine, from which N.S.M. Construction Limited are extracting mineral clay for Rhos Fireclays Limited and coal for the NCB will eventually employ between 50 and 60 men. Machines which are being used on extraction work include an hydraulic excavator, the largest of its kind used in Britain. Mr. Dennis Bateman, technical director of N.S.M. Construction Ltd. told the Leader: "It will be high quality coal we are producing and will be mainly used for power stations for the generating of electricity. "When production reaches a peak in about 18 months between 50 and 60 men should have employment for four and-a-half years." The site covers 240 acres most of which is scrubland dotted with numerous old pit-shafts. It also includes an area used in past years for the dumping of corrosive and toxic wastes. Reclamation is planned when the clay and coal supply is exhausted, and the whole scheme is costing £7 million. Eventually the land will be restored to full agricultural use. Coal on the move at the new mining site at the Delph, Acrefair.



The Delph Open cast mine now filled back in has poor drainage collecting at 2 pools.



The Holly Bush Inn door on Well Street as we try to keep yet another heavy rain fall out of our pub because of blocked storm drains in Well Street. Furthermore, the problem we have with the storm drains is not restricted to the Holly Bush Inn, but occurs at numerous points around our community.

While we battle to save our pub from being flooded during heavy rain fall in an area that should not see flooding, we are also aware of the of tons of litter and waste being washed down stream by the River Dee into the sea. This is why we are so keen on managing and minimising waste from the Holly Bush Inn and all other premisses.

We want to prevent further pollution and help restore the world to what it should be.

We hope you will join us in this quest.

Appendix 4 Community News Back Page January 2021

PKC GROUP UPDATE JANUARY 2021



Dear All, we wanted to bring you a message of hope and good will as a relief from the Coronavirus Pandemic and Lockdowns. We at the Holly Bush Inn, although currently closed (again) as per lockdown, and the PKC Group are doing what we can to help our community, the Welsh Nation, and the World.

Seems like quite a tall thing to say, but not so when you think about it like this. The Albatross is a magnificent bird that lives across the expanse of the Pacific Ocean on the other side of the World. A fully grown adult has a wingspan more than 3mts and can fly thousands of miles in search of food. And this is where the problem lies for this bird and its young.

A problem we are creating as a race, is the Plastic Ocean. This is a popular name given to the vast areas of plastic debris that are collecting in our oceans, all of them, and each one, thousands of miles across.

During the Lockdowns we have learnt many things including the **Plight of the Albatross**. If you want to know more about this, look it up on You Tube.

These birds are eating plastic debris and are also feeding their young. Both of whom eventually die because of such. Furthermore, as the volume of plastic waste increases, so the number of this species falls, along with so many others.

However, this is not a tale of depression even though there is reason, it is about hope and what we can do, to help ourselves and all around us. We at the Holly Bush Inn have implemented our Environmental Policy where we operate on Circular Economy Principles minimising waste. The little waste we do produce is recycled in our 110% system as previously reported. The 10% in addition to our (limited) waste is made up from what we collect around our community on litter picks.

We are simply picking up litter to help reduce plastic and other waste (bottles and cans etc) entering our storm drains and getting washed into the river, or canal and thence down to the sea. Once in the sea, floating plastic rubbish can literally travel around the world in the ocean currents and our waste can even end up in the Pacific Ocean. So, we at the Holly Bush Inn have decided to do what we can to help prevent this and bring about a better future for our Children and Grandchildren. As we have said, we are tackling this at three levels, (1) Locally, around our pub in our Village Centre, (2) Community wide, including the remediation of the Ex-Monsanto Site, and (3) Nationally by joining the Welsh Government in the Circular Economy and the drive towards sustainability and practice of the Future Generations Act 2015.

Here we can all play our part if you want and it will make you feel good, I assure you. Please try to take your rubbish home and dispose of it correctly in the facilities provided by WCBC. WCBC & FCC run a good recycling facility where our waste is dealt with responsibly and I hope to bring you more articles on this in the future so keep reading.

In the meantime, I hope you have had a good Christmas & New Year, and all the best for this one.

Regards, David Metcalfe, Cefn Community Councillor & Dee Valley AONB Champion.

www.pkcgroup.wales

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