

ECY6005

Regaining Paradise:
Sustainability in the
Early Years.

2307253

Part 1

“The Loop”



Discover....

My childhood consisted of growing up on a housing estate in Bromsgrove, England. It meant that I did not have the pleasure of having mountains, streams and rivers on my doorstep. The surrounding area was mainly low-lying fields which were quite uninspiring. Since moving to Machen, Wales, I have discovered what it means to live in the land of the valleys and see what it has to offer with its majestic mountain, fabulous forestry and rushing river!

✗ = Machen

✕ = Bromsgrove



Exploration on our walking route....



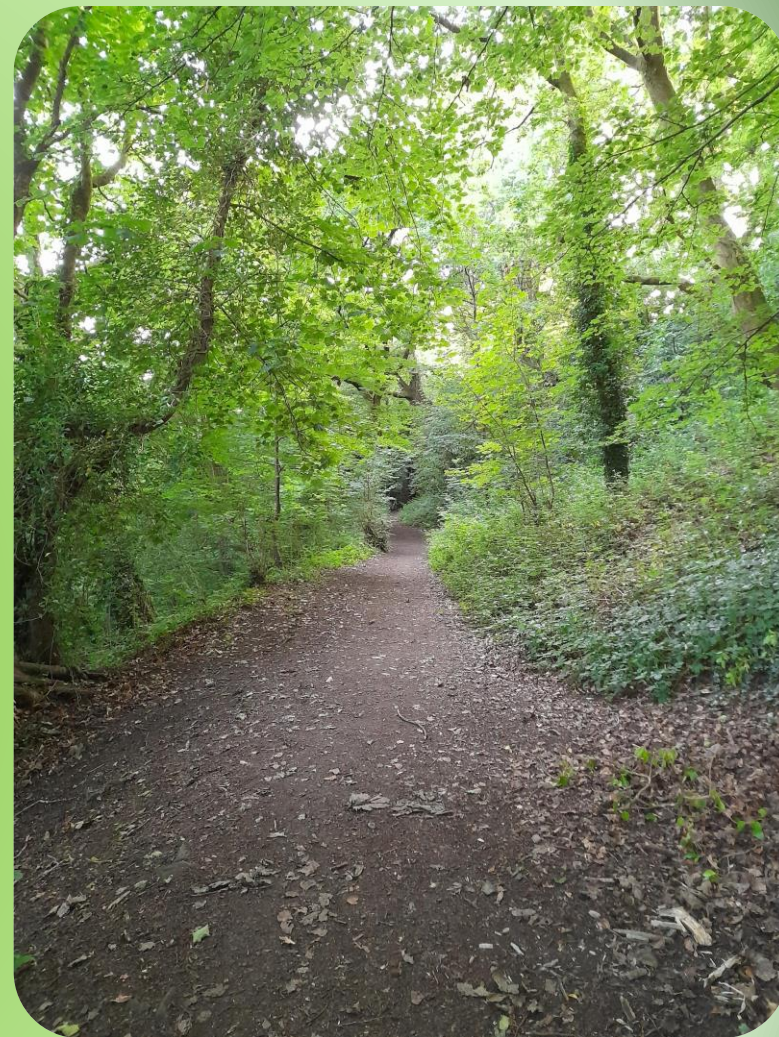
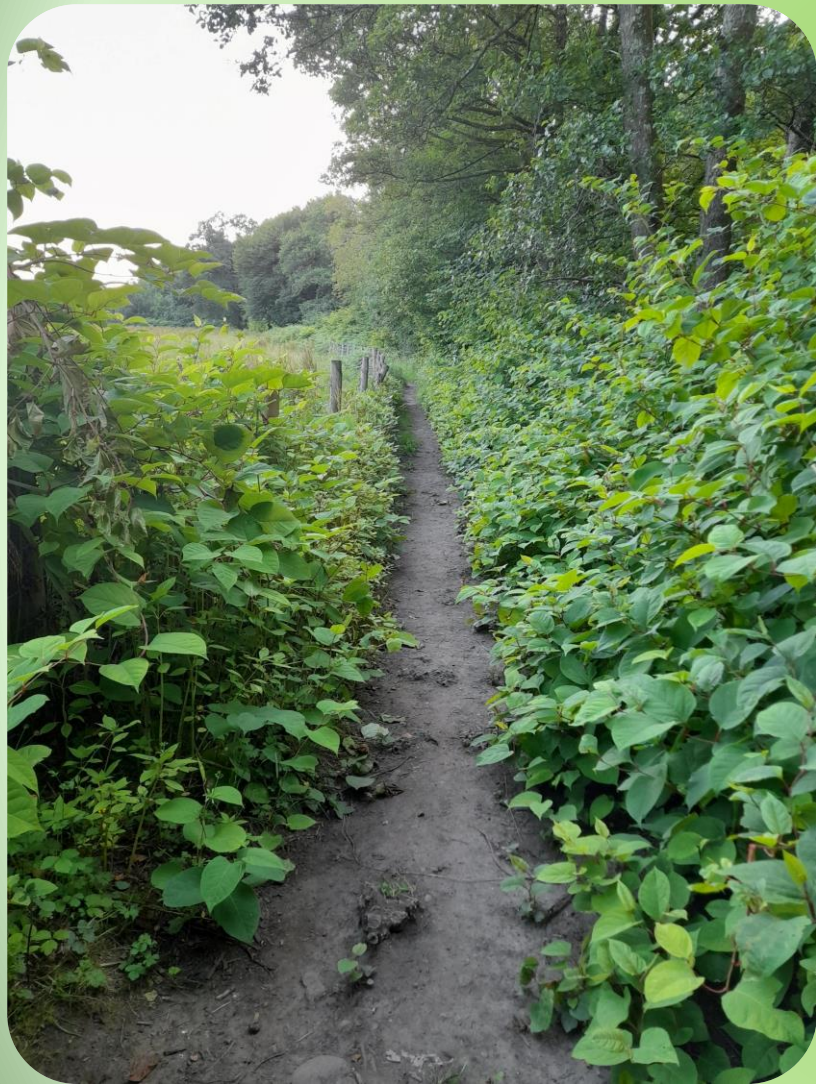
During covid, we were all forced to slow down a little and as a family, we had chance to really explore our diverse, local habitats which led to some surprising discoveries. We walked “the loop” every day to get our daily exercise and some fresh air.

Without the need to rush, we used all of our senses and noticed things we had never before.

We heard woodpeckers, saw kingfishers, smelled the rain, felt the breeze, swam in the river and explored the viaduct all in our own time. What a privilege!

Slowing down meant we had chance to connect with our locality and appreciate what is on our doorstep. It made us feel lucky to live where we do, being able to walk out of our front door and step into nature.

And breathe.....



The loop pathways around the river



*I have heard numerous
woodpeckers in the forestry*



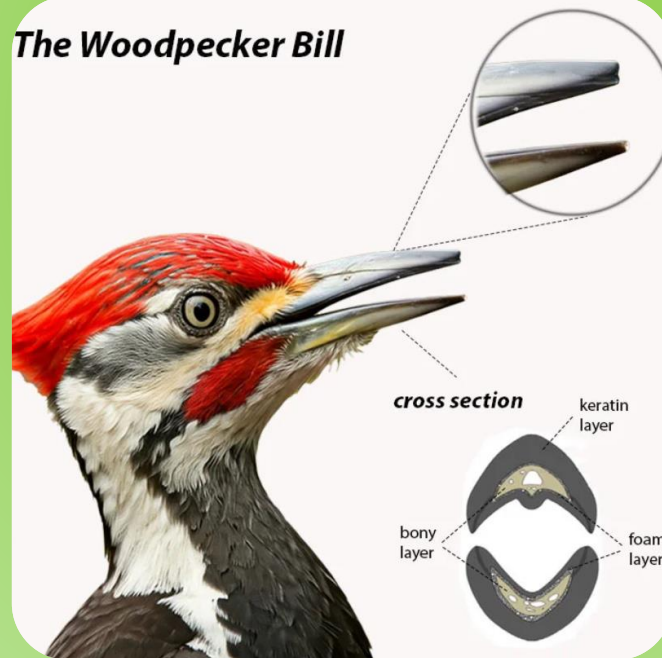
Woodpeckers are so elusive! I have not managed to spot one but have heard them dozens of times whilst walking around the loop. They inhabit the woodland and excavate insects and larvae from the tree bark in spring and summer and berries and nuts in autumn and winter. Their familiar drumming noise is a form of communication and mainly done to mark their territory or used as a display. Click here to hear it:

https://www.youtube.com/watch?v=Qy5Uk_YctX0

The great spotted woodpecker



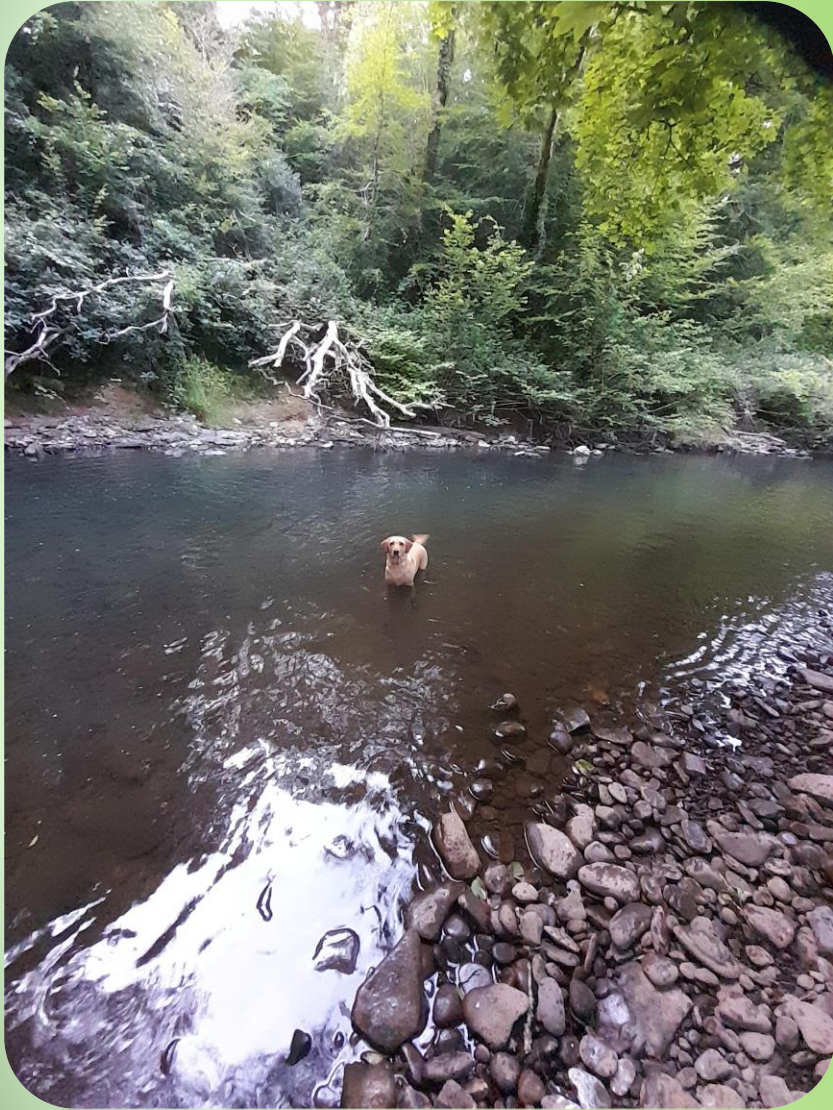
The Woodpecker Bill



The bill of the woodpecker is like nature's precision drilling tool! It is strong and sharp and can reach insects that other birds cannot. Their tongue cushions their brain whilst they are pecking as it wraps around their skull!

"A woodpecker can tap twenty times on a thousand trees and get nowhere, but stay busy. Or he can tap twenty-thousand times on one tree and get dinner."

Rhymney River



Kingfishers live here as well as it being a breeding ground for Mallard ducks.

Kingfishers inhabit the Rhymney River and I have been lucky enough to spot them on walks around the loop. They are instantly recognisable with their vibrant colours and dart along the river at high speed. Blink and you'll miss them! They hunt fish such as minnows as well as dragonflies. They are active all year round and love sitting on perches by slow moving water. Click here to listen to their call: <https://www.youtube.com/watch?v=yLMSQwEFPps>



It always feels special to spot a kingfisher.

Kingfishers make chambers in the riverbank to lay their eggs. They can lay up to 7 eggs, 3 times a year.



Ducks

Every year in spring/early summer we have a family of ducklings appear on the river-bank! The Mallard is the most abundant of the duck species in the UK. The female has speckled brown plumage and the male has a distinctive green head. Mallards are sociable animals and live in flocks. They tend to be residents of the UK but can also be visitors, flying south for winter. It is always joyful to see the fluffy ducklings loyally following their mother along the river. They can have more than one brood each year and lay one egg per day!



Photo taken in April '25



Photo taken in June '25



Photo



Mink

When we first saw a mink swimming in the river, we had no idea what it was! After some research we found that Mink are not native here and originate from America. They were bought here for fur farming in the 1920's and the wild population was established decades later from multiple escapees! They have since reverted back to their natural chocolate brown colour.

They are semi-aquatic and frequent canals and rivers. They hunt relentlessly and are having a devastating impact on our native water vole.

This can affect biodiversity but there is currently no strategy for managing them.



The Viaduct

Walking the loop takes you
along an old tram road
and underneath the viaduct.





*It's a lovely place to sit
and use all your senses
to take in the
surroundings.*





Machen Viaduct was constructed by the Brecon and Merthyr Railway (BMR) in 1864, and carried a branch of the railway towards Caerphilly where it linked end-to-end with the Pontypridd, Caerphilly and Newport Railway, providing an exit for Rhondda coal via the Rhymney valley and Newport in 1878. Masonry arches and two lattice girders (now removed) crossed meadows, the River Rhymney and a tramroad of the Machen Tinplate Works.

The viaduct played a role in the industrial area, facilitating the transportation of coal resources. The 3.75 mile section of railway from Machen to Caerphilly was planned and constructed at a cost of £11199.00!

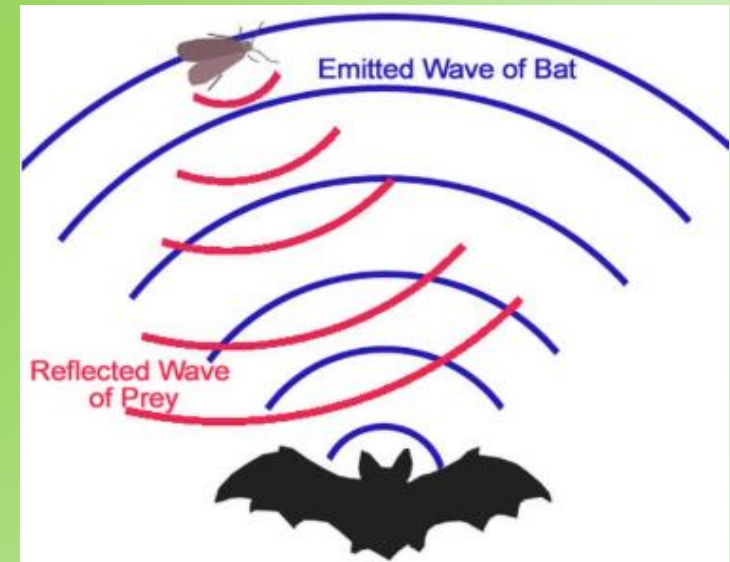
Machen Train Station circa 1940



Bats

You cannot walk around the loop at dusk without encountering bats! They swoop high and low, back and forth, all around you. They are quick and sometimes feel like they are skimming your ears. They are most likely to be the Common Pipistrelle Bat as this species are rapid, displaying lots of twists and turns.

Bat activity is observed between May and September as they hibernate during the rest of the year. These small, nocturnal creatures come out to feed on the midges, moths and other flying creatures. They use echolocation to find them:



More information on
pipistrelle bats: <https://www.youtube.com/watch?v=6F5nHWK157E>

Flora and Fauna around the loop....



This is an invasive, non-native plant called Himalayan Balsam, first introduced to the UK in 1839. It grows in abundance around the loop as it tends to thrive along water courses. It is a favourite of bees, however its rapid growth means that it competes with native plants for light, space, moisture and nutrients. It also causes riverbank degradation due to its shallow roots and annual growth habits.

Taking a moment.....



Conservation

Our stormy Welsh weather can bring huge amounts of rainfall and increase volumes of water in the Rhymney River which has its consequences. Rubbish and debris gets carried downstream and ends up getting stuck on riverbanks and in trees as you can see on the photos. This can cause contamination and disrupt the balance of the riverbank ecosystem. Litter picking supports conservation by helping to reduce pollution, protect wildlife and preserve the balance of the ecosystem. It also helps the area to be more visually appealing and give the community a sense of pride and well-being as well as keep our wildlife safe.





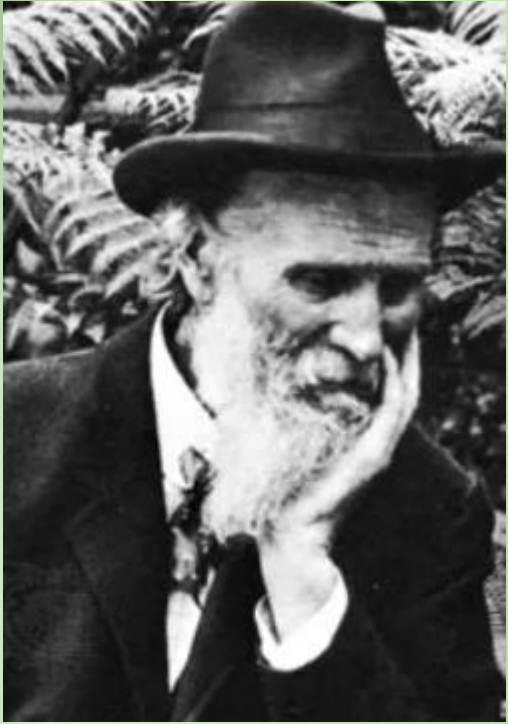
Bat conservation - Bats (and their roosts) are a legally protected species in the UK.

The bats around the loop roost in the trees but there are also many bat boxes to provide artificial roosts. We can enhance and protect their habitats by avoiding fragmentation of woodland, reducing light pollution and controlling the use of pesticides.

Mink conservation - Mink are an invasive species in the UK so it is legal to trap them and humanely dispatch of them. This is to protect and conserve native species such as the water vole whose population has significantly declined due to mink predation. They also target birds and their eggs, amphibians, crustaceans and other small mammals.

Himalayan Balsam - to help conserve our native species of waterside plants, it is necessary to remove Himalayan Balsam wherever possible. However, sometimes it can be difficult to reach! Pulling it out by hand or cutting it low to the ground can prevent regrowth. The main issue with this plant is its seed pod - it contains around 800 seeds, which is how it can quickly dominate surrounding areas. Herbicide can help stop the seeds from germinating but has to be used just at the right time - when the seeds are present but before flowering.

John Muir



"Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and give strength to body and soul alike," John Muir, in 1912

John Muir was born in Scotland in 1838. In 1849, he emigrated to Wisconsin, America, with his family. It was in 1867, when he almost lost an eye (due to an industrial accident at work) that he abandoned his career and devoted himself to nature. He walked from the Midwest to the Gulf of Mexico and took in the Yosemite Valley in California. He attributed the formations of Yosemite to glacial erosion which is now a generally accepted theory.

It was as early as 1876 that Muir urged the government to adopt a forest conservation policy after undertaking many other trips to Utah, Alaska, Nevada, Oregon and Washington. He wanted national parks and forests to be preserved in their entirety and in 1890, Yosemite and Sequoia were established.

Muir's writings, in his Sierra Club publications raised awareness of environmental issues and helped 13 more national forests to be protected from commercial exploitation. His work was also influential in establishing Grand Canyon National Park and Mount Rainier National Park.

His contributions to the conservation and preservation of America's wilderness have been far-reaching.

Nowadays, the John Muir award is an environmental award that encourages people to discover, explore and protect wild places which is what I have documented in this scrap book.