Halkyn Mountain Common Audio Trail

1. Welcome

Hello and welcome! My name is Sioned Edwards, and I'll be your guide, exploring the same paths created by mining and farming communities going about their daily lives. We'll uncover historic hamlets, diverse wildlife, and enjoy panoramic views. Presented by North Wales Wildlife Trust and supported by the Lottery Heritage Fund, on behalf of the Welsh Government.

Halkyn Mountain Common is one of Wales' largest common lands. Once a hive of mining industry and reshaped by human activity over centuries, with lead mining dating back to Roman times. Its unique habitats of grassland, heathland, and scrubland, now provides food and shelter for a wonderful variety of wildlife. The Common is a gem in the landscape that has several designations including; Special Area of Conservation, Site of Special Scientific Interest, and Landscape of Outstanding Historic Interest.

Before we start, a few quick tips: Sturdy walking boots are recommended, as the terrain can be uneven and boggy in places. You are free to explore the open access land of the Common, however please try to stay on well-defined paths, taking care near old mine workings. Please keep dogs under control to protect ground-nesting birds and grazing livestock.

Directions are provided at the end of each track to guide you to where you can listen to the next instalment of the audio trail. Feel free to pause the audio at any time to take in the views, so let's begin...

With the road behind you, take the grassy path bearing left. Follow the grassy path below the power lines, and before reaching the cottages ahead play audio clip 2.

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2. A living landscape

Lowland semi-natural grasslands are essential habitat for plants, insects, reptiles, and birds. The Common is made up of vast calaminarian and scattered calcareous grasslands.

Incredibly, almost 80% of calaminarian grasslands in Wales are found here. Created by old mining spoils, where lead and zinc were once extracted. Only the hardiest, heavy metal tolerant plants such as Sheep's-fescue, can flourish in these areas.

It continues to be managed traditionally, with livestock roaming freely to graze. The people who take care of the land, called graziers, use long-established practices to control the gorse and bracken. Creating a mix of short grass, taller plants and scattered shrubs, perfect for ground-nesting birds like Skylarks.

Natural Resources Wales has been trialling new techniques to re-establish areas of overgrown spoils. Surface vegetation is carefully scraped away to expose the underlying soil, breathing new life into the rare calaminarian habitat. Local residents of The Halkyn Mountain Conservation Group keep a close eye on these efforts.

Whereas calcareous grasslands are found on dry, calcium-rich and nutrient-poor soil, derived from limestone. They are one of the most plant-rich habitats in the UK featuring grasses, sedges, and herbs, along with an array of mosses, liverworts, and lichens. However, they are threatened by an invasive non-native plant species; cotoneaster. It outcompetes and smothers our native species, having a devastating effect on the plants that rely on this scarce habitat.

Spring and summer bring a burst of colour with the bloom of delicate orchids, yellow flowers of common rock-rose, and the aromatic pink-purple flowers of wild thyme, are all essential nectar sources for bumblebees.

The damp, grassy habitats support vital insects and butterflies, including the small pearl-bordered fritillary. Orange in colour with distinctive black markings on their forewing, and white 'pearls' on the underside wing. This butterfly forms distinct colonies, and has a stronghold throughout much of Scotland and Wales. However, their numbers are in decline due to habitat loss. The caterpillar feeds on common dog-violets found within thickets of bracken. As adults they fly low to the ground in search for rich nectar of brambles, heather and thistle flowers. If you see one, be sure to submit your sighting's to Cofnod!

As you reach the cottages turn left onto the single-track tarmac lane to reach the main road. Turn right to pass a bus shelter and post box. Take the second right along the gravel track just before the 40mph road signs.
Where the track forks keep right and then immediately left along the grassy path to reach a grassy cross junction. Take the second right and follow the path, climbing uphill to take in a wonderful panoramic view of the surrounding landscape at the top of Moel-y-Gaer, here you can play audio clip 3.

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3. The formidable fortress

From the top of Moel Y Gaer, Rhosesmor, you can see stunning views. To the west, are the rolling hills of the Clwydian Range and Dee Valley, an Area of Outstanding Natural Beauty, with the Jubilee Tower on Moel Famau its highest summit. To the east lies the Dee Estuary, forming internationally important marine habitat.

Moel Y Gaer, is one of the most studied Iron Age hillforts in North Wales. Before a large reservoir was installed, excavations in the 1970s uncovered many historical treasures. The earliest signs of humans here are from the Neolithic period around 3500BC, when it was used as an occasional hunting base. Archaeologists found flint and chert tools; including knives, scrapers and arrowheads, as well as pottery fragments.

Bronze Age settlements built barrows or burial mounds on the summit. Creating a camp with timber roundhouses defended by a wooden stockade. Later during the Iron Age a 10ft timber framed rampart was built, encircling smaller rectangular buildings. Eventually the fort was finally abandoned around the time of the Roman invasion in the 1st century AD.

In Thomas Pennant's A Tour in Wales (vol.1) printed in 1784, the Welsh naturalist wrote about Moel Y Gaer. Describing its strategic position, defensive design, and a mound possibly used by our ancient heroes, to deliver their rallying speeches. Seemingly this hillfort formed a chain of outposts along the Clwydian hills, by Celtic tribes called Ordovices to defend against Roman invaders. Also writing about the Welsh rebellion against the English led by Owain Glyndwr. In 1406, this spot would prove fatal for Hywel Gwynedd, a valiant partisan of the rebel movement. Within this post he was surprised in a negligent hour, and beheaded by his enemies of Flint.

Amidst the Napoleonic Wars in the early nineteenth century, this formidable fortress would once again be utilised. Two timber fire beacons were constructed within the hillfort. Forming an essential part of a communication network, which extended across the north Wales coast, warning of French threats.

Retrace your steps back to the grassy junction and take the second right downhill. Follow the grassy path through the gate, passing several houses on your right. Before reaching the church take a sharp right and taking care, follow the road through the cattle grid gate. On your right you'll see a stone structure and a bench, here play audio clip 4.

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4. A lime legacy

The Rhosesmor limekiln built in the 1800s, is a well-preserved single flue stone structure. Limekilns are found across the Common and are grade 2 listed, they once played an essential role in daily life processing limestone. Careful restoration work was completed to preserve them for future generations to enjoy, offering a glimpse into the region's industrial past.

The kiln itself is made using local limestone, with harder firebricks used inside to endure the extreme heat. Take a closer look, you might see fossils solidified in the stone. Situated close to the quarry and set into the slopes, workers would load the kiln from the top, with layers of coal and limestone. Then kindling was ignited from the bottom to heat the kiln to temperatures of 1000°C. The resulting powdery lime was carefully scraped out from the bottom and loaded onto wagons for producing quicklime. This vital material was used in agriculture and construction as fertiliser, mortar, and to whitewash cottages. Giving that distinctive bright, clean look, so characteristic of rural Wales.

Some limestone quarries and kilns produced hydraulic lime. This has a unique characteristic of setting underwater, making it ideal for dock construction. And was used to build Liverpool and Birkenhead docks in the late 19th century. Lime burning ultimately came to an end around 1914. Today, this quiet ruin stands as a testament to the hard work and ingenuity of past generations.

The late Victorian church of St Paul's in Rhosesmor with its shimmering stained-glass windows, was also built using local limestone, for the villagers that worked in the rapidly growing lead mining industry. Now it's home to the village outreach shop and tearoom.

Continue past the lime kiln and take the 1st right after the farm building. Your next stop is beside the first layby on your right along this gravel track. Taking care of the road. Here, play audio clip 5.

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5. Sculpted by geology

Can you spot the layers of exposed rock left over from disused quarry workings? Which display a fragment of the geological history of the region, a story that stretches back millions of years.

Halkyn Mountain Common is formed by its underlying sedimentary geology, the elongated plateau of Carboniferous limestone, with outcrops of chert beds overlain by millstone grit and shale. Above ground has been shaped by processes of erosion and weathering, mining and by livestock grazing.

The rocks are mostly limestone, formed during the Carboniferous period around 340 million years ago, in the shallow tropical sea south of the equator. Over time, the remains of marine organisms, like corals and shellfish accumulated on the sea floor, eventually compacting and cementing into limestone. Ancient fossils solidified in the rocks; those of Brachiopods, an early marine shellfish. And Crinoids, related to starfish they are commonly known as sea lilies, resembling a plant or flower when fossilised.

Over time, geological forces, including tectonic movements, shaped and uplifted this region, exposing the limestone to the elements. Erosion by wind, rain, and ice has since sculpted the landscape into what you see today, with its rolling hills and rocky outcrops.

Continue straight along the gravel track, passing several houses on the left. As the track ends beside Bryn-Tirion. Join the grass path ahead between the two telegraph poles. Here, play your next audio clip number 6, where storyteller Andy Harrop-Smith shares the tale of the 'Coblynau' or the fairy miners.

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6. 'Coblynau' or the fairy miners

A miner of old job was fraught with danger, health and safety was seldom considered. So, they looked to anything that might keep them safe underground, whether it be religion, superstition or a belief in the supernatural.

One belief was that the mines were inhabited by spirits or fairies that had their dwellings underground in the deepest, darkest parts of the mine's tunnels. These dwarf-like folk were widely believed to exist in mines the world over, especially in northern Europe. In Germany they were called 'Kobolds' (from where we get the name Goblin). In England they were known as 'Knockers,' and in Wales as the 'Coblynau', it was their job to guard the natural resources and treasures held below the Earth's surface.

These underground elves all looked very much the same. They were between 18 inches and 3 feet tall, and usually rather ugly with big noses and wrinkles. Of course, each one had a long beard that they would tie to rocks in case they fell down a deep shaft. Often, they wore clothes resembling those of human miners, sturdy boots, and a red coat to keep out the chill of winter. They usually worked their own lodes and veins underground and would have little picks and shovels with which to dig.

It was said that when working underground, you could often sense the presence of the Coblynau, and they could be heard working or 'knocking' in distant tunnels. These little folk could be helpful or troublesome to human miners if they became upset, and there were strict rules of how to treat them:
When entering the mine, a miner should lift his hat and greet them respectfully. You should never swear or whistle underground. That would be sure to offend them.

And always leave a gift for the Coblynau, perhaps a little food or a bit of candle. If a miner earned their favour, they might lead him to where the best seam or lode could be found. And if they liked you, they'd warn of dangers and accidents such as tunnel collapses or underground gases by knocking loudly three times. But most of the time they were just naughty. They stole candles, hid clothes and tools, and played tricks.

Halkyn Mountain is dotted with many capped-off mineshafts, and you are advised to tread carefully when exploring the area. Take time to listen, you never know, you might just hear the Coblynau tapping away in tunnels deep underground.

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Continue ahead on the grassy path towards the cream detached house. This section can be boggy, if so, take a diversion path on your right. Turn left at the grassy junction downhill. Then take the first right towards the road you can see rising over the brow of the hill.

Don't join the tarmac road. Instead take a right in front of the chevron road sign and along the gravel track. When the gravel track bears right, continue ahead onto the grassy path to reach the next stop with the large pond on your left. Play audio clip 7.

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7. Underground labyrinth

Looking out over the common, it's hard to imagine the bustling world underground. Below lies a labyrinth of tunnels and shafts spanning over 60 miles, once teeming with activity. Testament to Halkyn Mountain's industrial heritage, and one of Britain's most significant lead mines.

The Romans are known to be the first to exploit this mineral-rich region, extracting lead from surface veins using hand tools. They formed the ore into ingots and shipped them off the coast at Flint. From the 13th century local farmers continued small scale operations, until the 17th century when surface deposits were depleted.

As demand for lead grew and ore prices increased, improved technology enabled the construction of deeper shafts, and so efforts expanded to exploit lead found in deeper veins. Skilled miners and engineers from Devon, Cornwall, and Derbyshire were attracted to the area. However, as miners ventured deeper, they faced flooding. The introduction of steam engines in the 1800s were used to pump water to the surface, but they had limitations.

The proximity to the sea saved the mines, allowing for the construction of deep drainage tunnels. The Halkyn Tunnel, driven from Flint in 1875, was a game-changer, draining mines quicker and enabling many to reopen.

Ambitious mining companies later came together to find a definitive solution to drain the mines. And so began an engineering marvel; The Milwr Tunnel, built in 1897, spanning 10 miles from sea-level at Bagillt to Loggerheads west of Mold. It successfully drained the deep network of veins, allowing mining to persist even through the slump in lead prices.

Production reached its peak in the 1930s, breaking tunnelling records, processing 21,000 tonnes of lead ore. Making Halkyn Mountain Britain's largest lead producer. However, cheap lead imports eventually took its toll, and the last mine closed in 1987, ending nearly 2000 years of mining on Halkyn Mountain. Special explorations revealed remnants within these tunnels, including a naphtha flare lamp, water barrels and wooden wheel-barrow. Even machinery and equipment of water pumps, hand winches and loco tracks, a true time capsule of the miners' toils.

The Halkyn lead mines stand as a poignant reminder of a bygone era, a testament to human perseverance and the enduring legacy of mining in north Wales

Continue along the grassy path gently downhill. Before you reach two ponds either side of the path with the lumps and bumps of old mining spoil ahead. Play audio clip 8.

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8. Echoes of industrial heritage

After the last mines closed in the late 80s, equipment was dismantled including winding sheds, shaft mills and headframes. Can you see in the distance to your left, the mound of an old capped mine shaft? The landscape remains scattered with shaft craters and mounds of old mining spoil, created when excavating the mine. Many shafts were sealed with stone and concrete 'bee-hive' shaped caps, which you may also notice while exploring the common.

Miners manipulated surface water flow, by creating leats and channels to direct water to mill wheels, small reservoirs, and holding pools for washing lead. These lead washing areas left behind contaminated rough patches of sparse vegetation. Little can grow other than heavy metal-tolerant plants, resilient lichens and mosses. These short open plains support scarce plant species such as Spring sandwort, known locally as Leadwort.

Some areas still retain water, forming large ponds, newly restored they provide essential habitat for rare newt species and invertebrates, like dragonflies and damselflies. They became under threat from New Zealand pygmy weed, an invasive non-native species that outcompetes native pond flora, and obstructs newt breeding activity. Natural Resources Wales continues to remove this invasive plant, creating more favourable habitat.

The quarries and mines of Halkyn Mountain not only provided employment, but they also supported various industries that relied on extracted minerals, contributing to the economic development of Flintshire. Once a prospering hub of major industry in the nineteenth and twentieth centuries, including; coal mining, brickmaking, potteries, textiles, shipbuilding, copper works and steel manufacturing. Today, three quarries remain in operation on the common, producing limestone aggregate for construction and asphalt across North Wales

At the cross junction, take the uphill meandering path to the right. The wide grass path will take you back to the beginning of the trail.

Thank you for joining us on the Halkyn Mountain Common audio trail, we hope you've enjoyed exploring the rich heritage, diverse wildlife, and unique landscape. From the ancient rock layers beneath your feet to the vibrant habitats that flourish above, Halkyn Mountain Common is a true treasure of North Wales.

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