Timewalk of Chat Moss

Close your eyes and imagine the story under your feet. The Timewalk of the 35 square kilometres of Chat Moss is incredible and starts 4 and a half billion years ago, when the earth formed.

2.7 billion years ago algae-like cells formed. They started producing oxygen, and it took 350 million years for them to make enough oxygen to turn the sky blue for the first time.

More than a billion years later the first recognisable animals appeared jelly-fish and sponges in the sea.

360 million years ago the rainforest of the Carboniferous period grew which were later to form the Lancashire Coalfields.

Coal formed and was buried, taking huge quantities of carbon dioxide out of the atmosphere. This cooled the planet. Coal seams were formed under Chat Moss.

Continents shifted.

The dinosaurs ruled the earth from 245 million years until 66 million years ago, possibly wiped out by a major asteroid that hit the earth.

The Timewalk now moves forward rapidly.

Our early ancestors started using stone tools 2 and a half million years ago. The earliest fossil record of modern humans is 190,000 years old.

As the glaciers retreated from the Mersey Upper Terrace about 10,000 years ago, they left giant clay-lined hollows. This created nutrient-rich pools which gave way to fen carr woodland.

By 3500 BCE birch trees dominated the landscape. People were beginning to settle nearby with flints found within the Woolston mosses.

By 2500 BCE acid mires, within the hollows, became nutrient poor and very wet. This allowed small groups of rain-fed sphagnum mosses to spread out and join together.

Bog oaks became buried to begin their early stages of fossilisation. Forgotten trees hidden for millennia by the march of the sphagnum mosses.

The noble sphagnum moss is immortal, growing constantly from its tip. Its ability to store water gives the bog its “spongy surface” and keeps the mossland wet in summer.

Mosslands are a living surface of sphagnum mosses, cotton grasses, heather and some small shrubs interspersed with pools of water. They are so nutrient poor it is the realm of small carnivorous plants like sundews and bladderworts. Year upon year vegetation compressed on Chat Moss to create peat as deep as seven metres but possibly up to ten metres, in places. Each vegetation layer represents an important carbon sink and archaeological record. Peat cores map the changes in the environment over millennia.

In ancient times the mosses were regarded as dangerous wildernesses; with deep dark pools of acidic water; treacherous areas of boggy ground; mists and fogs; and the haunt of wild animals.

The spiritual dread with which these wildernesses were regarded may readily be guessed at with the discovery of a skull in 1958. “Worsley Man” lived around 100AD when the Romans occupied Britain. The fact that he met a violent death, as a probable ritual sacrifice, gives some indication of how Iron Age man may have regarded the mosses. His skull is kept at Manchester Museum and is still providing evidence as to how the first settlers lived on the mosses. There is evidence of Iron Age Roundhouses at Great Woolden Hall.

The name Little Woolden is derived from Viking Vuluedene meaning “Wolf Valley”, suggesting the wildlife that would have been present. As such, these areas were good for hunting on foot but were to be avoided at other times.

Sphagnum mosses over millennia create domes and Chat Moss grew higher and higher and more and more saturated. In 1526 the bog burst after heavy rain. It was written “Chateley More destroied much grounde with mosse and destroied much fresch wat ficsh, corrupting with stinking wat. Glasebrook carried stinking wat and mosse into Mersey water and carried mosse part to the shores of Wales, Ile of Man and sum in to Ireland.” We can only imagine the slow motion mud avalanche engulfing nearby farmsteads and villages all the way to the River Mersey.

Daniel Defoe wrote in 1726 “From hence, on the road to Manchester, we passed the great bog or waste called Chatmos... The surface, at a distance, looks black and dirty, and is indeed frightful to think of, for it will bear neither horse or man, unless in an extremely dry season... What nature meant by such a useless production, tis hard to imagine; but the land is entirely waste, except for the poor cottager’s fuel, and the quantity used for that is very small.’

Further mystique was added to Chat Moss with the strange lights of Will’O’the wisp formed from escaping methane from the deep coal measures and bog pools. Foolish travellers were said to try to follow the light and were then led astray into the mossland.

in 1745, the Jacobite army of Bonnie Prince Charlie marched south through Carlisle and Preston towards Warrington, but at Wigan the army turned east towards Manchester as the bridge at Warrington had been demolished. They were unable to pass through Chat Moss.

Chat Moss became an area that man wished to tame, drain and conquer. From medieval times farmers tried to drain the fringes but Chat Moss held its core.

Chat Moss was held as common land and people gained turbary rights to cut the peat for fuel. From the eighteenth century the Enclosure Acts led to large parcels of land becoming assigned to different land owners. Dominance of Chat Moss began through large scale drainage.

Enter the era of the Industrial Revolution, when the coal and peat of Chat Moss started to be mined and extracted at scale.

The Bridgewater Canal to the North of Chat Moss is sometimes described as England’s first canal. Named after its owner, Francis Egerton the third Duke of Bridgewater who built the Canal to transport coal from his mines at Worsley. Affectionately known as the “Dukes Cut” the Bridgewater Canal revolutionised transport in this country and marked the beginning of the golden canal era which followed from 1760 to 1830.

Then came the era of the Railways. In 1830 the first inter-city railway in the world was opened between Liverpool and Manchester. The five miles of Chat Moss posed an engineering challenge

with it being impossible to drain the bog. Engineer Robert Stannard solved the engineering conundrum by using wrought iron rails supported by timber in a herring bone layout. The work was carried out by “navvies” using hand tools.

Stephenson's Rocket was an early steam locomotive that became the template for locomotives for the next 150 years. It travelled over Chat Moss carrying 40 passengers and travelled at 17 miles an hour.

Landowners requested sidings off the railway to move materials across Chat Moss. Stations like Flow Moss and Lambs Cottage became stops for the narrow gauge trams running at right angles to the main railway. The respective tramways started at the River Mersey and River Irwell and were part of an early scheme to bring in first clay marl, then later manure and human night soil to "improve" the Moss to make it fertile. Before municipal sewage systems, the mosses received the household wastes from the City.

As the mosses were drained, they lost their signature sphagnums mosses over to purple moor grass and scrub. The rare bog flora and fauna seemed lost forever.

In the early twentieth century the peat was extracted by hand with the mound for the narrow gauge railway still visible at Cadishead Moss.

Chat Moss also began to be cultivated. Initially for grain for bread and beer then onto intensive market gardening of salads and vegetables for a rapidly expanding Manchester population. Within the period of 100 years most of the original landscape was gone.

Belonging to Manchester Collieries Limited, in 1908 work started to sink Astley Green Colliery with shafts under Chat Moss and to build a line southwards using the method of floating ballast and tracks on wood and brush. The line was completed by 1914, making a triangular junction on Lamb's Cottage's and remained in use until the 1970s.

On the 7th June 1939 there was an explosion at Astley Green Colliery where five men lost their lives in a fire caused by the damp gases principally methane. A chalked notice at the pit entrance stated “No Afternoon Shift.” After consultation with HM. Inspector of Mines it was decided, in order to avoid further loss of life to seal the affected shaft but work on others.

Coal Mining under Chat Moss continued until the 1970s when it was abandoned since it was deemed too wet and gassy compared to the Yorkshire pits. The headgear still remains as part of Lancashire Mining Museum and can be visited alongside the narrow gauge railway and the miner’s cottage.

In the Second World War Chat Moss became a 'Permanent Starfish' site to deflect enemy bombing from the city of Manchester. The decoy operated by lighting a series of controlled fires during an air raid to replicate an urban area targeted by bombs.

After the second world war, peat was no longer cut by hand as we entered an era a heavy machinery extraction, largely to satisfy the British demand for garden plants. This only ended at in 2018 at Little Woolden Moss. The industrial revolution led to the decimation of the mosses. Today Chat Moss land uses include turf growing, horse livery and hobby farming. Just 2% of the lowland raised bogs across the North west remains in some form of salvageable condition.

However, after the destruction of the industrial revolution came a story of hope. It starts with re-wetting of mosses for nature conservation.

Nearby to Chat Moss, Risley Moss became recognised as a Site for Special Scientific Interest in 1986 followed by Astley Moss in 1989 and Holcroft Moss in 1991. The Wildlife and Countryside Act in 1981 meant that nature conservation became more important in the nation's priorities.

In 1998 the Woodland Trust purchased a former market garden and turned it into New Moss Wood. Thanks to support from Salford City Council this is set to become the Carbon Landscape gateway to Chat Moss with some rewetting works happening in 2020.

Lancashire Wildlife Trust acquired Astley Moss in 1982, Cadishead Moss in 2009 and Little Woolden Moss in 2012 and so began the mammoth task of restoration with advice from Natural England. These sites are supported by the Friends of Chat Moss.

In 2007 strategic partners came together to create a Vision for the Mossland. It then led to the Great Manchester Wetlands Partnership Nature Improvement Area in 2011 which has enabled the flagship Carbon Landscape programme funded by Heritage Fund starting as a five-year delivery programme in 2017.

During the time of the Carbon Landscape 165,000 plants have been planted on Chat Moss including sphagnum mosses, cotton grass and cross-leaved heath with another 180,000 to go. Some of the plants are raised at Princes Park Garden Centre, Irlam by adults with additional needs contributing towards a local and circular economy.

Dave Steel has been bird watching on the mosses since he was a lad and has enjoyed the restoration of Chat Moss with records of up to 80 species a month. Oystercatchers, lapwings, little ringed plovers and other assorted waders love the moss. Curlews nested here in recent years and there have had rarities like the stone curlew, which is only, usually, seen in East Anglia. Other species include common lizard, the rare Bog Bush Cricket and a wide range of dragonflies and damselflies.

The quality of the bog at Astley Moss has improved so much that it has been possible to reintroduce the rare carnivorous lesser bladderwort plant into bog pools. This was organised by the North West Rare Plants Initiative, led by 24 year-old botanist Josh Styles. Lesser Bladderwort was formerly widespread on the mosses and can consume up to 200,000 small crustaceans in a single year. It has flourished since its reintroduction.

The ultimate goal is to reintroduce the Manchester Argus Butterfly, also known as Large Heath Butterfly, after its extinction 150 years ago. The reintroduction project is being run by the Great Manchester Wetlands partnership, who are working with Chester Zoo to rear new populations of this rare butterfly. Both Risley Moss and Astley Moss have been planted with various species that the butterfly needs, such as hare's-tail cotton grass which is the main food source of the caterpillars and cross-leaved heath which is the main nectar source of the butterfly.

Little Woolden Moss is also trialling a form of paludiculture with Micropropagation Limited and Manchester Metropolitan University. This form of wet agriculture, if scaled up, could be a way of growing sustainable moss for horticulture whilst enabling farmers to re-wet their land and gain a livelihood.

A fabulous celebration of the area's industrial heritage is prominent at Irlam Station, which has been lovingly restored by Hamilton Davies Trust and partners. Opened to the public on 26th March 2015, after being closed for 122 years, the station now offers a Heritage Hub that brings to life remnants of the past. Each room tells the history of the area with a range of heritage artefacts, images and artworks. Visitors can have a drink or a bite to eat in beautiful surroundings, including a mock carriage fashioned on the Soap Works Special train.

The surrounding grounds include an 1884 Signal Box; a 'Wheels of Local Industry' Peckett loco and wagon display and large scale art pieces. Station Art Park, features unique and fun 3D sculptures depicting several local industries such as the Steelworks.

The Irlam and Cadishead Cycleway, was opened by Chris Boardman MBE in April 2018, and was initiated by Hamilton Davies Trust in partnership with Salford City Council. This supports the Greater Manchester Combined Authority's 'Made to Move' strategy encouraging people to walk or cycle short journeys to reduce greenhouse gases and improve health and wellbeing.

Based on a Dutch cycling model, the new cycle network includes waypoints and directional signage, enabling cyclists to make up their own tailor-made routes. The Irlam and Cadishead Cycleway is the start of ambitious plans to expand around 50km of cycle ways across Chat Moss.

Society is now saying we need our mosslands again. An active bog is the most effective carbon sink on the planet. Government advisors, the Committee on Climate Change in 2020 have recommended that between 25 to 50% of lowland bogs are restored by 2050.

Support mosslands by supporting your local Wildlife Trust. The Wildlife Trust for Lancashire, Manchester and North Merseyside, known as Lancashire Wildlife Trust, not only owns mossland nature reserves within Chat Moss but also promotes peat-free gardening. Follow the Friends of Chat Moss on facebook.

Learn to survey wildlife with the Greater Manchester Ecology Unit as knowing where it lives helps you to project it.

Keep your greenspaces and waterways clean – litter pick, reduce, reuse and recycle.

Think what you can do to reduce greenhouse gasses – such as leaving the car at home and exploring by foot, bicycle and train. Follow Hamilton Davies Trust and Salford and Leisure and Culture Trust.

Without nature reserves and wildlife corridors species will be lost for ever.

It's our wetland landscape where we live, work and play. Get involved with volunteering and exploring. Together we can create a new green revolution, helping wildlife, people and future generations to thrive.

For more information visit www.carbonlandscape.org.uk

The Timewalk is based on the work of Dr Joanne Tippett from the University or Manchester and Fraser How who both developed the RoundView Programme. It is funded by the National Lottery Heritage Fund and we are grateful to the many contributions from people living, volunteering and working in the Chat Moss area.