Cromford Moor Geocross V62

Text & photos for Facebook

Cromford is at the east end of the High Peak Trail, a walking and cycling path on 53km of the former Cromford and High Peak Railway.

Cromford Moor overlooks the Derwent Valley, which was added to the list of World Heritage Sites in 2001 for it's significance as a birthplace of the Industrial Revolution. A new type of workplace, the 'Factory', began here.

By the time the River Derwent reaches Cromford it has already fulfilled its most important task by providing the Derwent Valley Water Board with 27,800,000 cubic metres (6.1 billion gallons) of water to meet the growing needs of the cities of Sheffield, Derby, Nottingham and Leicester. The building of the Howden and Derwent Reservoirs (1901 - 1916) and Ladybower (1935 - 1943) Reservoirs was the single largest water engineering

But the River Derwent had already carried out its second most important task at Cromford 250 years earlier.

Between 1771 - 1790 the River Derwent provided the Industrial Revolution with water power. Not just a little water power, as needed by the many corn-mills between Bamford and Matlock. The special circumstances at Cromford allowed the River Derwent to deliver fast flowing water in high quantities.

Joseph Wright's historic painting of 'Arkwrights Cotton Mill by Moonlight' was made in 1782 when the idea of the factory was revolutionary.

This was the first mill at Cromford. It was built in 1771 by Sir Richard Arkwright and became the world's first successful water-powered cotton spinning mill. From 1771 to 1790, Arkwright further developed the mills, warehouses, and workshops. In doing so he established the 'factory' system where large numbers of skilled workers came from the country to work together in towns in a new work environment. This transformed the cotton industry and also changed the world's manufacturing processes.

At Matlock the River Derwent enters a narrow 4km ravine, causing the river to accelerate as it falls 15 vertical metres between Matlock Bridge and Cromford. That meant a lot of fast moving water power was available to mill engineers.

This was only possible by a lucky geological intervention.

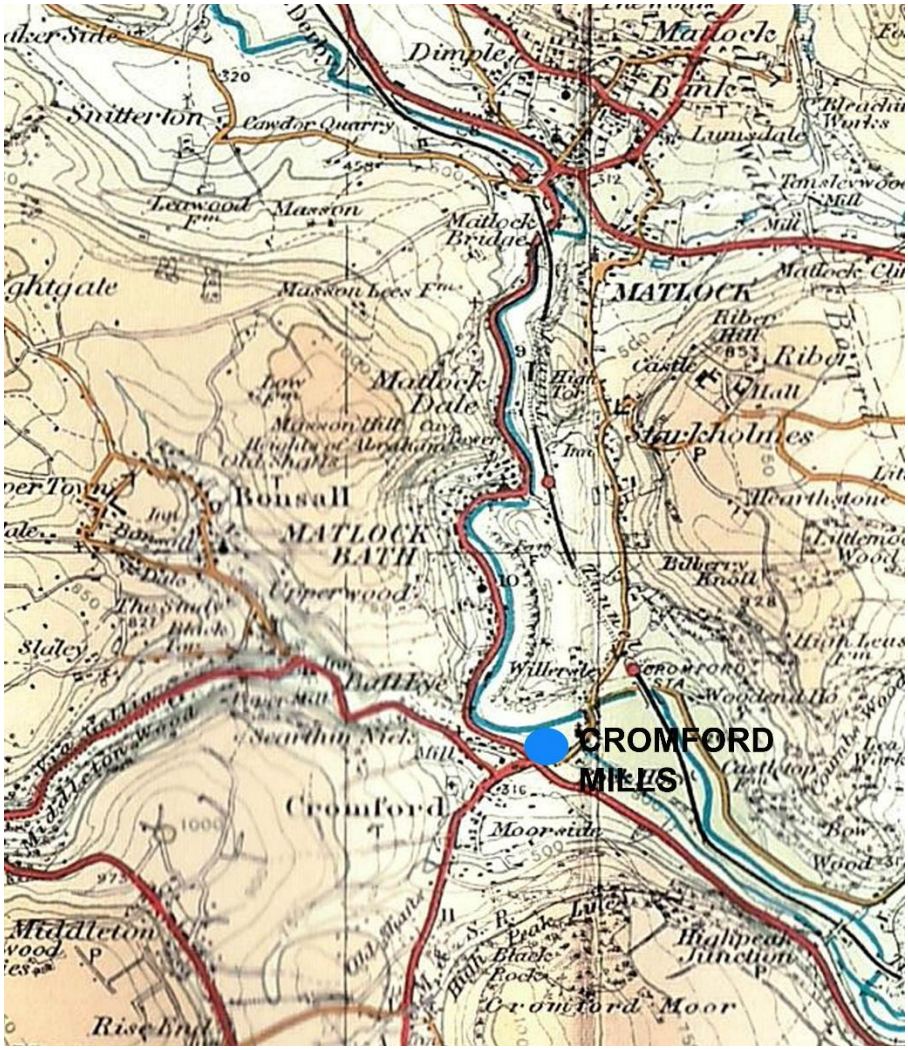
The Derbyshire Dome is a central anticline (upward-folding rock structure) of Carboniferous limestone in the Peak District National Park. Laid down under a tropical sea, it was formed by tectonic uplift around 300 million years ago. T

This ancient dome was later eroded, creating the White Peak limestone plateau, which is now surrounded by the younger gritstone and shale of the eroded outer edges of the dome, forming the Dark Peak.

The change of bedrock for the River Derwent from gritstone to limestone takes place at Matlock and allowed the fast flowing River Derwent to cut a deep and narrow channel, ideal for millwheels to capture the rivers power.

The River Derwent narrows at Matlock primarily because the riverbed changes from gritstone to limestone between the foot of High Tor and Cromford Bridge. Additionally, the formation of riverside embankments and obstructions, such as a wall and a mill race built in the 1800s, contributed to the narrowing of the channel by Arkwrights second huge mill, the Masson Mills.

To understand the power of this river you could take a look at kayakers tackling the canoe slalom course below the cliffs of High Tor. I’ve taken a few duckings there….



Factories which used the water power and mass production ideas which began at Cromford were copied throughout Britain and the world.

Arkwright's Mill at Cromford was the first water-powered cotton mill in the world, importing cotton from India and exporting finished cotton goods. His methods of organising his workforce and mass production caused Arkwright to become known as the Father of the Factory system. Just upstream is Masson Mill, an example of one of his later mills.

Transport infrastructure was needed to serve these industrial activities, and canals and later railways came to Cromford. Cromford Moor was transformed by the transport infrastructure.

This Geocross covers historic features on Cromford Moor. Each of the locations can be found on the route below. The locations are listed in order.

Start from Black Rock car park.

Location 1 OS ref SK 29108 55705

Cromfordmoor Mine

W3W harps.balancing.inspector

Most visitors to the Black Rock car park come here to walk or cycle along the High Peak Trail, which follows the route of the 53km Cromford and High Peak Railway which opened in 1831. The railway connected canals at Cromford and the Peak Forest Canal at Whaley Bridge and carried minerals and freight. It took two days to complete the journey.

Each incline needed a stationary steam engine to haul and lower wagons.

The Cromford and High Peak Railway had 6 inclined planes, each with stationary engines. The railway had to climb 330 metres (1000 feet) from the canals to reach the limestone plateau. Once on the plateau the wagons were horse drawn on the flats for the first 30 years of operation.

The Cromford and High Peak Railway operated for 61 years. It was closed in 1892 when an easier rail route was opened.

Many visitors think that these old structures near the Visitor Centre are something to do with the railway but in fact they go back much longer, to lead-mining in Elizabethan times. Cromford Moor was a major lead mine between 1600 and 1950. The lead mining industry in Derbyshire goes back to Roman times, and reached its most productive period in the 300 years between 1600 – 1900.

The chimney structure is the remains of a winding house built in 1818. Nearby is a metal grill over a very deep shaft, possibly the 420 feet (126 metres) that miners had to

descend to reach the lead workings of Gang Vein. When lead supplies ran out the mines produced calcite.

London and North Western Railway Company operated the Cromford and High Peak Railway from 1846 to 1892. This company took over the operations of most of the smaller railway companies and eventually became the West Coast Main Line. It was at one time the largest railway company in Britain. It was closed in 1922.

Location 2 OS ref SK 29150 55748

Boundary marker LNWRYCo

W3W appraised.rectangular.morphing

L&NWRC (London and North Western Railway Company) operated the railway from 1846 to 1892. This company took over the operations of most of the smaller railway companies and eventually became the West Coast Main Line. This is one of their boundary posts, made from cast iron well over 100 years ago and made to last.

Location 3 OS ref SK 29818 56121

Cromford Moor sign

W3W corkscrew.widen.invisible

Cromford Moor is within an 84 hectare Forestry Commision woodland. It is designated an open access area under the Countryside and Rights of Way Act 2000. There is public access to a network of paths; but beware; some are rough and rocky. There is a fixed course orienteering trail. Parts of the woodland have ‘No Access’ signs.

Under the current Woodland Management Plan there is an intention to reduce invasive conifers and create natural heather moorland and grasslands habitats.

Location 4 OS ref SK 29965 56155

Top Engine House Reservoir

W3W pose.jousting.gratuity

The gradient from the Cromford Canal at High Peak Junction to Cromford Moor via the Sheep Pasture Incline is steep. The initial climb varies between 1 in 9 and 1 in 14 gradient, then becoming even steeper at 1 in 8 up towards Black Rocks and the plateau of the Peak District.

It is much too steep for a moving engine to climb. So a static engine at the top of Sheep Pasture Incline in the Top Engine House was used to haul and lower railway wagons.

This small reservoir was needed to provide water to the Top Engine House. The top static steam engine sat at the head of the incline. It needed a continuous supply of water for it's boilers.

The elevation gain is approximately 159 meters.

This incline is on a long distance cycleway, the Pennine Bridleway and High Peak Trail.

Cycling up the incline is One Big Problem. I prefer to use the road through Cromford.

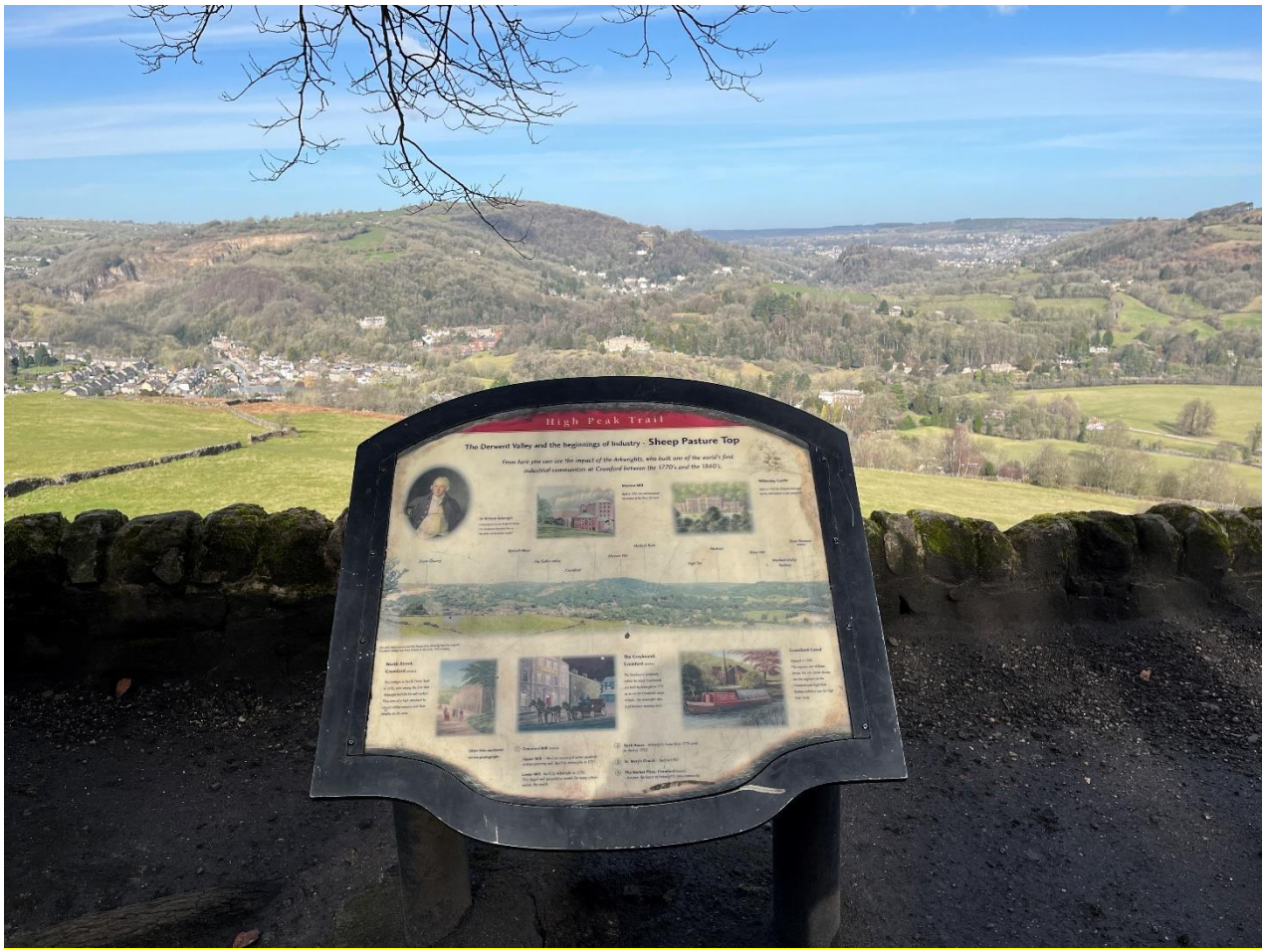
Cycling down the incline is not without problems. A few years ago,on the day of the Peak District Eroica bike race, a local bike shop set up its stall at the foot of the incline. It did a roaring trade in selling spare inner tubes, in fact it filled several large bins with ruined inner tubes.

The haul ropes used for years to lift and lower wagons left tiny fragments of sharp wire buried in the rocky gravel. As bike riders used their brakes while descending, the sliding tyres picked up these wires with unfortunate consequences. On one occasion both my tyres were punctured.

Location 5 OS ref SK 30019 56197

Sheep Pasture Top viewpoint sign

W3W advice.isolating.preheated



Cromford is at the east end of the High Peak Trail, a walking and cycling path at the end of a 28km section of the former Cromford and High Peak Railway. This viewpoint overlooks the Derwent Valley, which was added to the list of World Heritage Sites in 2001 ‘for it’s significance as a birthplace of the Industrial Revolution’. A new type of workplace, the ‘Factory’, began here.

Factories used the water power of the River Derwent. The mass production ideas which began here were copied throughout Britain and the world.

Arkwright’s Mill at Cromford was the first water-powered cotton mill in the world, importing cotton from India and exporting finished cotton goods. His methods of organising his workforce and mass production caused Arkwright to be known as the father of the factory system. Masson Mill is an example of one of his later mills.

Transport infrastructure was needed to serve the industrial activities of these ‘factories’, and canals and later railways came to Cromford.

Location 6 OS ref SK 30061 56206

Sheep Pasture Incline

W3W atlas.dragons.restores

Cyclists are advised to dismount. However, a descent on an inclined gravel track at 1 in 8 gradient would probably not cause any concern to mountain bikers.

The Sheep Pasture Incline is the first of four inclines needed to haul wagons up a total 330 metres (1000 feet) onto the limestone plateau of the Derbyshire Peak District. It has a maximum gradient of 1 in 8. The Cromford and High Peak Railway opened in 1831 and carried goods between Cromford Canal and Peak Forest Canal at Whaley Bridge. It often took two days to complete the journey. After the inclined planes, the wagons were horse drawn on the flats until they were replaced by the arrival of steam locomotives in the 1860s.

A stationary beam steam engine powered a pulley system to haul or lower the wagons. They were attached by rope, and later chains. In 1888 a broken chain near the top released a brake van which picked up speed to 140 mph as it neared the bottom. It left the lines at the curve into High Peak Junction and jumped over the canal and a double railway line before landing in a field. A catch pit was subsequently installed and served its purpose on more than one occasion.

The Cromford and High Peak Railway operated for 61 years. It was closed in 1892 when an easier rail route was opened.

Location 7 OS ref SK 30079 56200

Sheep Pasture Top Engine House

W3W imagined.disbelief.staples

A static steam engine operated here from 1830 to 1967. Long after the Cromford and High Peak Railway closed the inclines were still being used for limestone quarry freight.

Wagons were attached to a rope and later chains, before being hauled up or lowered down the incline on tracks.

Location 8 OS ref SK 29772 55890

Cremation Memorial Wall

W3W outbound.cone.rezoning

A short lived Cremation Memorial Wall built in partnership with the Forestry Commision in 2018. This was an initiative to use Forestry Commission land to bring permanent personal memorials to the public.

The gap in the wall was once filled with slate panels to which stainless steel plaques for named individuals were fixed. It was popular and well used for a short time.

However, It is in a fairly remote location high up on Cromford Moor and sadly only survived a few years. The memorial plaques were ripped out, possibly by vandals, or stolen for scrap value.

It might still be there if it had been sensibly located in a more visible location.

Location 9 OS ref SK 29770 55734

Five Ways pedestrian gate

W3W legroom.gurgled.dairy

This is Five Ways Junction.

The high point of Cromford Moor was known as Big Plantation, and until recently a Forestry Commission conifer plantation, part of an 84 hectare woodland. A substantial part of the conifer plantations have been felled. The recovering land is is now grazed by cattle and becoming colonisaed by native vegetation. This meets the current Woodland Management Plan which sets out to reduce invasive conifers and create natural heather moorland and grassland habitats.

Wind the clock back 250 years and that is how Cromford Moor then appeared; a wild moorland heath.

Location 10 OS ref SK 29386 55355

Cromford Moor trig point

W3W corrosive.lighters.replaying

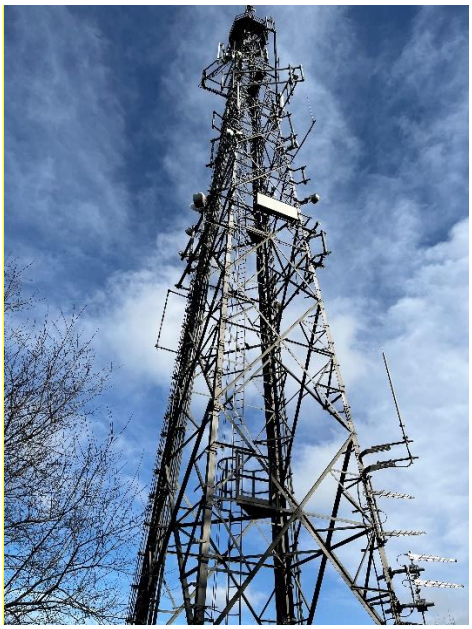
The high point of Cromford Moor is at 323 metres height. Sadly the traditional trig point is dwarfed by the neighbouring Television Tower.

There aren't many trig points which don't have a view. Very sad!

Location 11 OS ref SK 29453 55330

Television Mast south corner

W3W surfed.topic.prank



A cluster of telecommunications buildings and towers. The Television Tower is a relay transmitter. A smaller tower nearby is a DAB transmitter. This is for Digital Audio Broadcasting which is taking over from Analogue FM Radio. DAB is a more efficient use of bandwidth so can carry many more radio channels than analogue.

Location 12 OS ref SK 29443 55618

Millstone

W3W homes.cubic.noble

The quarried edge of Ashover Gritstone known as Barreledge Quarry is just below the edge of Cromford Moor, more recently the former woodland of Big Plantation.

An abandoned millstone with symbolic carvings in a small quarry.

Location 13 OS ref SK 29287 55750

Black Rock north west foot

W3W recliner.hurls.latitudes

Black Rock is a spectacular gritstone tor, sadly very hard to see through a dense mass of trees. The west face is visually the most prominent, yet has an enigmatic setting. Something isnt quite right….

Black Rock is important in the history of British rock climbing. It was a birthplace for the sport of rock climbing and Sheffield cragsman JW Puttrell climbed here in 1890. It was climbed on by gritstone pioneers from the nearby cities of Derby & Nottingham because it was easily accessed by public transport.

In recent years the large boulder on the left in this picture has attraced some of the best climbers in the world to try to climb the hardest climb on the crag, Gaia. Including Alex Honnold of Free Solo film fame. He suceeded!

Although there are many rocks, the correct name is singular, Black Rock. No s. But you will find it often named Black Rocks, even on local signs (see Location 14 below).

The rock is an Ashover Gritstone. Most people see the rock tor of Black Rock and think it an amazing jumble of massive boulders, but in fact is a single lump of weathered gritstone.

Few bother to consider the puzzling (enigmatic) massive slope of limestone scree on the west side.

The gritstone crag is ancient but the limestone scree is comparatively recent. It is waste limestone from centuries of lead and calcite mining.

Location 14 OS ref SK 29205 55712

Cromford Moor Mine sign

W3W woven.dried.unearthly

The scree slope has been formed by centuries of Cromford Moor mine waste. The lead mining became an industrial operation in Elizabethan times, around 1600. Over the next 350 years the mines extended 1500 metres distance under Bolehill. Lead miners followed mineral veins in the underlying limestone. Gritstone always lies above the limestone in Derbyshire, but the Bolehill anticline behind Black Rock meant the lead veins ran uphill, and waste was brought to the surface and tipped down the slope, giving the appearance of a ‘scree’ slope.

Location 15 OS ref SK 29135 55703

Horse trough

W3W critic.dimension.proceeds

From 1831 stationary steam engines hauled and lowered wagons on the six inclines of the Cromford and High Peak Railway. The rest of the 53km railway used horses to haul the wagons along level sections. Train locomotives came later, gradually replacing the horses by 1862. Horses needed drinking water, not so easy to provide on a free draining limestone plateau.

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