CLEVELAND IRONSTONE MINING

Please click on the doors to enter.
Brief History

What Was Iron Used For?

Types of Mining Tools.

Cleveland Ironstone Mining Museum.
THE IRON MEN
The Ironmasters, click on each image to view information.

Henry William Ferdinand Bolckow
John Vaughan
Joseph Pease
Sir Thomas Hugh Bell
Sir Arthur John Dorman
Iron has been used for making things such as, steam engines, railway tracks, ships and bridges. Iron is also an important part of steel making. During both World Wars in the 20th century iron and steel was used to make weapons, vehicles and warships. Iron was also used for engineering equipment, seaside piers and street architecture for example street lights, raillings etc.
Types of Mining Tools

Click on each image to view objects & information from the collection.

- Ratchet Drill
- Starter Drill Bit
- Stone Splitter
- Hard Hat
- Pricker
- Stemmer
- Scraper
- Filling Shovel
- Sylvester
- Jumper Drill
- Axe
- Deputies Stick
- Deputies Axe
- Deputies Pick Axe
- Drill Support
On the site of the old Loftus mine, this nationally important museum offers visitors an exciting and authentic underground experience. Discover the special skills and customs of the miners who helped make Cleveland the most important mining district in Victorian and Edwardian England.

- Hear how ironstone was first discovered in the Cleveland area.
- See how the stone was drilled and charged with explosives.
- Hear the Trappy Lad’s tales of his first day underground and the friends he made.
- Enter the North Drift of the old mine.

A visit to the museum includes a guided tour which lasts approximately 75 minutes.

Opening Times:

Monday - Friday 10.30 - 3.30 last tour
Saturdays: 1 - 3.30 last tour
Sundays, Easter & School Summer Holidays- 1- 3.30 last tour

Organised group or school visits all year by arrangement. Induction loop and limited disabled access.

Admission:
Adults £4
Children £2
Family Ticket (2 adults, 2 children) £10

Pre-booked parties throughout the year, the party rate is £3 per adult and £1.50 per child. Please contact the museum by phone or email to make your booking. Teachers packs and worksheets are available for Key Stages 1 & 2. The museum phone number is (01287) 6 42877 or visit the museum website.
The increase of population in the area.

When the ironstone mines were built, people from outside the area came to find employment and to start a new life for their families. In the early days not many workers in Middlesbrough were skilled in both ironwork and mining.

Immigrants to the area, came from the iron-making and mining districts of South Wales. The West Midlands (mainly from South Staffordshire who were very skilled at ironwork) also skilled tin miners came from Cornwall and many more came from Ireland, Norfolk, Lincolnshire and Durham.

Before houses were built the workers had to build and live in wooden huts which were close to the mines they worked. In 1871 a few miners in Brotton lived in railway huts.

Later housing, known as terraced cottages were built in all the villages and new hamlets next to the surrounding mines. There were different types of cottages, the most common type was the two storey cottage, one up and one down which had an outhouse in the back yard. It had a bedroom at the back of the house and a small kitchen on the ground floor, and a bedroom on the first floor. The other type of cottage was a single storey building and only a few built in the area.
How Mining Started

How Ironstone Mining Started.

Map of Cleveland Ironstone Mine Sites

In 1847 ironstone was found at Skinningrove and the first superior quality ironstone mine was built. The mine was owned by industrialists Henry Bolckow and John Vaughan. The iron ore was transported from Skinningrove to the blast furnaces on the River Tyne for smelting.

In 1850 John Vaughan and a geologist from Darlington called John Marley discovered a main seam of ironstone in the Eston Hills after a day surveying. In 1851 the railway network was extended to serve the mine at Skinningrove, three blast furnaces were also built at Skinningrove. The mined ironstone could be smelted in Cleveland, reducing the transporting distance to Tyneside. Later more railways were built for the transportation of local iron ore and more ironworks were built locally.

By 1872 Teesside produced over 444,000 tons of iron per annum. In 1881 the production of steel started with the discovery of the Thomas-Gilchrist process which turned iron into steel which was a much better and stronger metal.

By the 1880’s there were nearly one hundred ironstone mines throughout the Cleveland and Esk Valley area.
Life Down The Mine
What it was like working in an Ironstone Mine.

Working down the mine was always dark and damp. Mines were only lit by candlelight workers used candles to light their working area. The mining companies made workers pay for their candles, the costs were taken from their wages. Mine workers also had to pay for their own tools. Each wage was different depending on their position, in 1921 an average wage for a miner was 11s 7d per shift.

A team of two workers extracted the ironstone from the mine; one was called a Miner, the other a Filler. The Miner would drill a small hole in the rock face using a Ratchet Drill or Jumper Drill. After this job was done a tool called a Stemmer would be inserted to pack down gunpowder or black powder with clay. A tool called a Pricker would then be employed to make a hole in the clay for the placing of a 'squib' (fuse). The ignition of the fuse caused an explosion that would free the stone from the rock face.

Both workers would break the rocks into smaller pieces, using a hammer, Stone Splitter or an Axe and load up into the Metal Tubs. The stone was then weighed by the weighman, each miner handed a token with their number on which helped to calculate the amount of wages they earned with the amount of stone they mined each day.

Original tubs were pulled along by horses, known as Cleveland Bays and Shire Horses up until the 1950’s when the horse was replaced by diesel locomotives.

The mine roof was supported by wooden props, which were always checked by the deputies before the work started in case of an unstable roof.

Life was always hard working down the mine.
Farewell to the Cleveland Miners

The closure of the ironstone mines an end of an industrial era.

Between the 1940’s and 1960’s many small mines closed down because the stone had been worked out. One of the largest mines Eston, closed in 1949 after 99 years producing over 63,000,000 tons of ironstone.

After World War Two closure of the Cleveland ironstone mines became more regular because of cheaper iron ore was imported. Lindale in 1962, Kilton in 1963 and North Skelton in 1964 were the last Cleveland Ironstone mines to close.

After closure, most mines were demolished and sites cleared, some were just left abandoned. Today a few derelict mines remain, monuments to the area’s industrial heritage.

During the 1980’s Loftus Mine at Skinningrove became The Cleveland Ironstone Mining Museum (formally Tom Leonard Mining Museum) which is well worth a visit.
Henry Bolckow was born in Sulten, Mickleberg in Germany. He worked as an accountant and foreign correspondent with a corn merchant in Newcastle-on-Tyne in 1825. In Newcastle he met John Vaughan and in 1839 they decided to form a business partnership and purchased six acres of land in Middlesbrough in 1840 for £1,800.

On 1st May 1841 they started operating as Brass and Iron Founders. In 1846 they built blast furnaces at Witton Park, County Durham for smelting iron ore. Later in 1852 they built 3 blast furnaces in Middlesbrough to process local ironstone, some years later they owned a dozen blast furnaces in the area.

In 1853 Henry Bolckow was elected the 1st Mayor of Middlesbrough and in 1868 he bought 71 acres of land for the people of Middlesbrough and called it Albert Park. He also built churches, schools and hospitals.

Henry Bolckow died in 1878, in 1881 Lord Cavendish unveiled a statue of Henry in Middlesbrough as a memorial to the industrialist who had changed the economy of Middlesbrough and the Cleveland area.
John Vaughan was born in Worcester, he worked as a foreman at Dowlais Ironworks in South Wales. Later he moved to Walker-on-Tyne near Newcastle and became a manager for Losh, Wilson and Bell Ironworks.

In Newcastle he met Henry Bolckow and in 1839 they decided to form a business partnership and started an Ironworks in Middlesbrough. In 1846 they built blast furnaces at Witton Park, County Durham for smelting iron ore.

Later John Vaughan met John Marley a geologist from Darlington, on the 8th June 1850 they found ironstone in the Eston Hills later they built mines and ironworks at Eston.

In 1855 he became Mayor of Middlesbrough, he died in London on the 16th September 1868.
Joseph Pease was born on the 22nd June 1799, he joined his father to form the Stockton and Darlington Railway Company. In 1829 he took over the family business which included several coal mines in County Durham.

Later in 1840 he joined a group of friends including industrialists Henry Bolckow and John Vaughan to buy 521 acres of land at Middlesbrough. He developed the area as a seaport for the export of coal and later iron and steel.

In 1832 he became Britain’s first Quaker MP and represented South Durham, later he became a minister for the Society of Friends. In 1860 became President of the Peace Society until his death in 1872.

Before he developed Middlesbrough the population was only 40 people in a small fishing village and by 1881 the population grew to 56,000. The Pease family later owned several ironstone mines.
Thomas Bell was born in Walker-on-Tyne near Newcastle in February 1844, after studying chemistry in 1862 he worked in his father's office in Newcastle and moved to Port Clarence near Middlesbrough in 1863.

In 1880 he took control of the family company Bell Brothers who were owners of several local mines and ironworks. He also built a new basic open-hearth steel making shop in 1901 for local iron ore. He became a Director of several steelmaking companies.

Sir Thomas became a Mayor of Middlesbrough in 1874 and the President of the Iron and Steel Insitute from 1907-1910. The company Bells Brothers merged into one company with Dorman Long in 1923.
Arthur Dorman was born in Ashford, Kent he worked as an apprentice for the North Yorkshire Ironworks in Thornaby. In 1876 he went into partnership with Albert De Lande Long and bought West Marsh Ironworks in Middlesbrough.

He became a member of North Riding County Council and also the President of the National Federation of Iron and Steel Manufacturers between 1923-1924. In 1904 he gave the Dorman Museum to Middlesbrough in honour of his youngest son George Lockwood Dorman who was killed in World War I.

His company merged with Bells Brothers in 1902 and took over the North Eastern Steel Company and by 1914 became the largest steel producers in Britain. He also built steelworks at Redcar and built Dormanstown to house workers, Arthur died in 1931.

The company Dorman Long built both the Transporter and Newport bridges in Middlesbrough, after Sir Arthur's death the company still built bridges which included the construction of the Sydney Harbour bridge in Australia in 1932.
Types of Mining Tools

Ratchet Drill

![Ratchet Drill Image]

1 2 3 4 See How this tool was used

This was used to drill holes ready for blasting.

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Types of Mining Tools

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Starter Drill Bit

This drill bit was attached to the Ratchet Drill, they were made in different sizes. Each miner had to buy their own equipment from their wages. These drill bits in the collection date from the 1950’s.
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Types of Mining Tools

Stone Splitter

The stone splitter was used to break large lumps of ore.
Types of Mining Tools

Hard Hat

This hat helped protect the head from falling stone; it was made from Bakelite, an early form of plastic dating from after 1935 until the early 1950s.
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Pricker

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Stemmer

Stemmer used for packing down the black powder and clay in the blast hole.
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Scraper

The scraper was used to clear out holes after drilling.
Types of Mining Tools

Scaper

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Types of Mining Tools

Filling Shovel

See How this tool was used

This shovel was used to lift stone into tubs and removing debris.
The sylvester was used to pull and lift heavy objects such as stone and wooden props.
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Types of Mining Tools

Axe

This axe was used to break large pieces of stone before loading into tubs.
Types of Mining Tools

Deputies Stick

This tool was used to check and measure the distance between the track and the sleeper on the incline. The stick is 1 yard long and every 12 is a notch to help measure the width.
Types of Mining Tools

Jumper Drill

This drill was used to make holes ready for blasting.
Types of Mining Tools

Jumper Drill

This drill was used to make holes ready for blasting.
Types of Mining Tools

Deputies Pick Axe

See How this tool was used

The deputy used this axe to make sure the mine was safe from lose stone inside the roof of the mine.
Types of Mining Tools

Drill Support

This tool was used to support the Ratchet Drill while making a hole.
Types of Mining Tools

Drill Support

This tool was used to support the Ratchet Drill while making a hole.

See How this tool was used

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Deputies Axe

One side is a hammer and the other an axe used by the deputy to check unstable roofs.
Credits

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