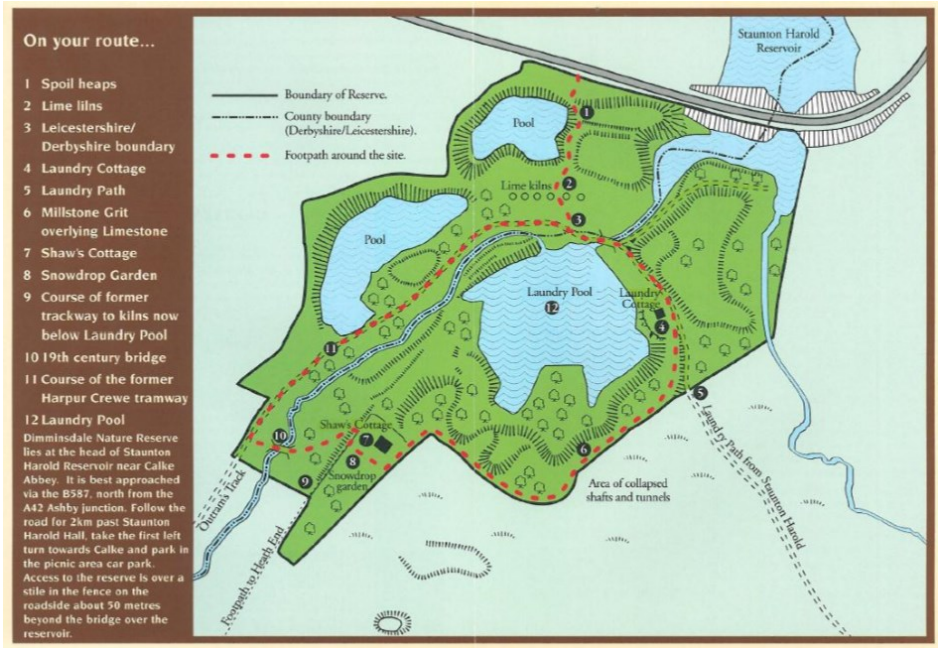
Dimminsdale Nature Reserve
Industrial heritage

Leicestershire & Rutland Wildlife Trust

Dimminsdale Nature Reserve is a Site of Special Scientific Interest and lies partly in Leicestershire and partly in Derbyshire. It extends over some 16 very rugged acres (6.5ha) and it takes little imagination to realise that here is a man-made landscape.

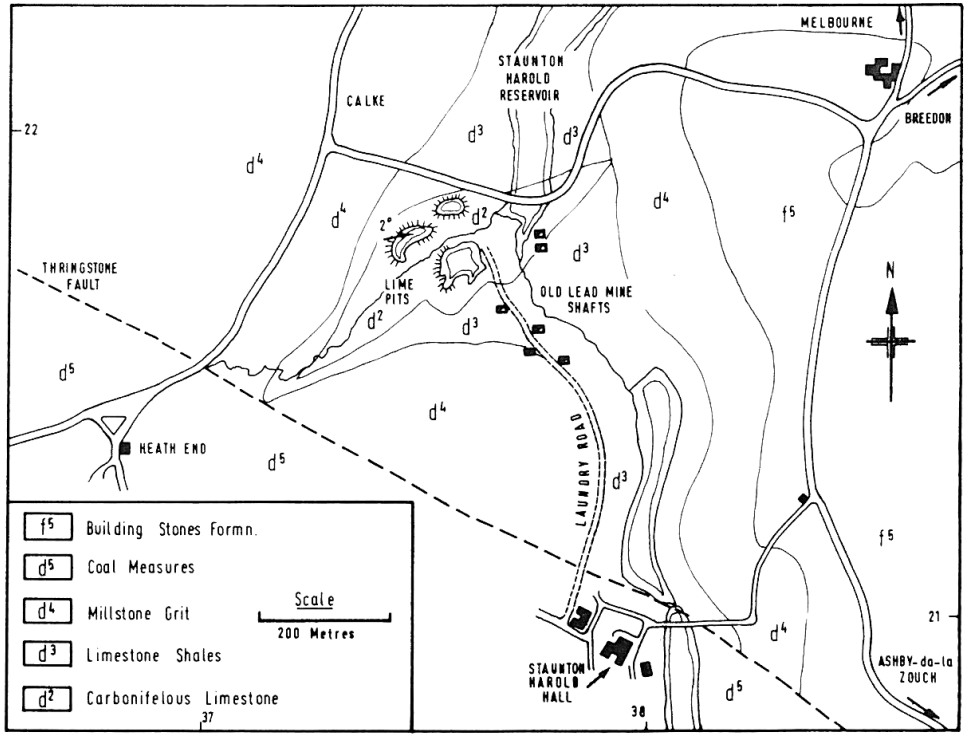
Dimminsdale was once a secluded valley where a small stream cut a course though rolling heath or grass covered hills. Then mining of the underlying limestone began and later lead was discovered. The toil of generations of miners has produced a wild landscape of pits, pools, cliffs banks and tips. When mining and industry ceased a little over a century ago the site was all but abandoned to nature. Today it is in the care of the Leicestershire and Rutland Wildlife Trust who manages it on behalf of Severn Trent Water for its wildlife, geological and archaeological interests.

The numbers below refer to maker posts found along the paths.



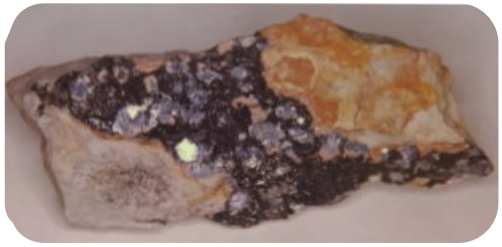
LIMESTONE & MILLSTONE GRIT

It is the limestone at Dimminsdale that has given rise to its special nature. Deposits of the Carboniferous variety in the district are unusual and are better known from the larger quarries at Ticknall and Breedon-on-the-Hill. At Dimminsdale the limestone outcrops form beneath overlying Millstone Grit, a rock familiar to those who know the wild open landscape of the Peak District further north in Derbyshire. The two rocks produce contrasting soils and conditions for wildlife. Whereas the gritstone provides a sandy or loamy soil of a neutral or acid nature, the limestone gives rise to lighter, free draining soils which are strongly alkaline.



Geological map, date and author unknown

In the 18th century miners unexpectedly came across deposits of lead ore. This was the familiar Galena or lead sulphide running in veins through the deeper levels of the limestone beds. The lead was mixed with small amounts of zinc



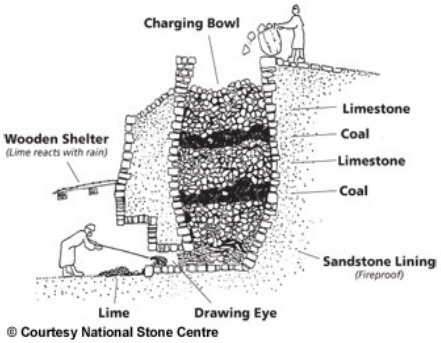
Black bitumen and lustrous galena on baryte from Earl Ferrers' Mine; Photograph: Bob King. Journal of Russell Society (2013)

and copper and was sought after by Victorian collectors on account of its decorative appearance. They worked and polished it and used it in all manner of ornaments. The discovery of lead gave added impetus to quarrying, although extraction of the metal was never a very profitable business.

LEAD & LIME PRODUCTION

Limestone at Dimminsdale was originally mined for building stone but later to produce lime which was used as a fertiliser. Its greatest importance, however, was in the manufacture of mortar. This involved burning the quarried stone in order to drive off the carbon dioxide. The resulting material, calcium oxide was better known as quicklime. When this was mixed with water a violent reaction took place and the powder which resulted was called slaked lime. This was then mixed with sand to produce mortar. The addition of water produced a mixture for binding bricks and stones.

Originally the limestone was processed in open hearths on the quarry floor, but the use of kilns allowed higher temperatures to be reached which resulted in a better product. The kilns were lined with stone, a job often done by women. The fuel was originally charcoal but this was replaced by coal from local pits. Much of the better quality coal was in the form of lumps which was reserved for the domestic market. The smaller 'slack' coal was used in the kilns, mixed with alternate layers of limestone.



An example of a lime kiln

The burning process lasted about four days. The kilns were left to cool and the lime raked out. The firing drove off not only the carbon dioxide in the limestone but also the sulphur and other contaminants in the coal. It is not difficult to appreciate the high levels of atmospheric and water pollution in the low lying areas of the kilns and the hellish conditions this produced for both workers and wildlife. Smelting took place in a cupola furnace far away from Dimminsdale at a place far distant from Staunton Harold Hall. The Ferrers at least were spared the worst of the environmental problems.

A cupola furnace contained two separate compartments, one for lead and the other for coal. The heat from the burning fuel was reflected onto the ore by the arched cupola. The waste gases were conducted by a flue to a tall chimney which discharged them into the surrounding countryside. The output of lead from Dimminsdale was never very great and it is doubtful if Lord Ferrers made much profit from this venture.

EARLY MINING

Laundry Pool

The county boundary follows the stream now re-routed through Laundry Pool as it flows to the reservoir. The Leicestershire portion lies in the Parish of Staunton Harold which for centuries was the property of the Ferrers family. That part which is in Derbyshire belonged for many generations to the Harpur-Crewes of Calke Abbey. The exploitation of the minerals at Dimminsdale is the story of two separate but parallel industries.

Mining of limestone began in the very distant past. The first record is from the 13th century when Dimminsdale was the property of the Priory of Breedon. After the Dissolution of the Monasteries in the 1530's the property on the

south side of the stream eventually came into the hands of the Ferrers who were also mining coal on their other Leicestershire estates.

The land north of the stream was also devolved from confiscated monastic property. In 1646 John Leighton leased 'a paddock and a limestone quarry' for £23 a year. Eight years later Sir John Harpur granted land in 'Lead Ore Close in Calke' which was to be 'digged and worked' for lead ore. The conditions of the lead specified that Sir John was to receive one sixth of all the ore mined.

The constraints on mining of the simple technology of the early centuries meant that production by modern standards was miniscule. At the end of the 18th century limestone and lead ore, like coal, were still won by the use of pick, shovels and wheelbarrows, with horse drawn gins for winding. Later, steam power was used. The scene shown in the painting below which was executed at about 1820 is thought to show the main area of activity at Dimminsdale. It is not difficult to appreciate that the work was dirty, difficult, dangerous and poorly paid. In 1812 a total of 13 men worked for 12 days and between them earned little more than £19. At this time the Harpur-Crewes employed no more than about a dozen men in the their quarry at any one time.

Leicestershire County Council

THE NINETEENTH CENTURY

Evidently the mines on both sides of the stream were doing well by the early 1800s and two important route ways were built to facilitate transport of materials to and from the sites. To the south Lord Ferrers built a roadway high along the side of the Valley from Heath End to the workings in what is now Laundry Pool. This allowed him to bring in coal from his Heath End Pits and take out lime and limestone.

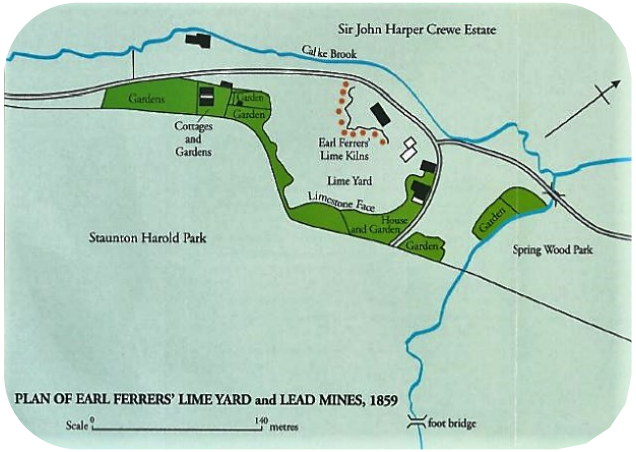
Example of a tramway

The Harpur-Crewe works were served by an altogether more ambitious scheme. This took the form of a tramway designed by the celebrated local engineer Benjamin Outram. It ran from the kilns at Dimminsdale westward to join the Ticknall-Ashby tramway near Southwood. It was opened in 1830 and gave the Derbyshire kilns at least a temporary boost in production. The tramway closed in 1915.

In 1833 Lord Ferrers leased his quarries to William Matthews an 'architect' from Ashby-de-la-Zouch. The terms of the agreement and procedures for mining were carefully defined. Tunnelling was to be carried out with precision, water levels were to be carefully regulated, a new road was to be built, furnaces or smelting houses were to be erected, all 'according to the most approved and skilful methods'.

Unfortunately, Matthews turned out to be a greedy and incompetent tenant. In his search for lead he mined the limestone which supported the roofs of the galleries with the result that some of the workings collapsed. In 1853 Lord Ferrers sued him for compensation of £879 but lost the case on a technicality.

In spite of this setback, production of limestone on the Ferrers sites prospered and an estate map of 1859 marks ten kilns together with workshops, houses



and gardens. However a later and more serious problem was the massive expansion of production from the larger local quarries, especially that at Breedon-on-the-Hill. The result was that smaller producers were slowly driven out of business.

By 1870 all production at Dimminsdale seems to have ceased. Over the following three decades or so, rails and other items of machinery were dismantled and sold. Devoid of pumping and proper drainage, the quarries gradually filled with water submerging the kilns and other buildings.

DIMMINSDALE IN THE TWENTIETH CENTURY

In 1939 the Laundry Pool, the largest of the abandoned workings, was drained by Lord Ferrers, primarily to see whether or not it might be re-opened for lead mining, although some local people believed the Government was really looking for a quiet place to stockpile explosives.

With the end of mining, buildings such as workshops and stores which were not under water were either demolished of converted to dwellings. Some of the cottages were retained and improved for workers on the Staunton Estate. None of these dwellings had electricity, mains water or indeed any other modern conveniences.

Remains of one of the cottages

One of the remaining houses was the cottage known as Laundry Cottage which served the needs of the Ferrers at Staunton Harold Hall. It had a large cistern in the basement and on the first floor a mechanism with a system of large rollers which ran horizontally and which squeezed water from the clothes. Mrs Joan Jackson who used to visit her grandparent's who lived and worked there remembers those visits fondly. *"My grandma used to do the laundry for Staunton Hall. There were zinc baths and dolly tubs, and two big coppers which had to have fires lit underneath them to heat the water. The laundry room was upstairs. It was a massive room with a large table which was used for ironing. The irons had to be heated by standing them on end on a grill round a big hot iron 'stone' so that the faces heated up. The drying ground was just inside the park and was fenced off to keep the animals out. Visiting the reserve brought back the magic of being a young girl playing games and exploring the grounds and woods, and of paddling in the lovely clear brooks."*

Mrs Jackson's grandfather stands at the gate of the laundry house

The laundresses of Dimminsdale

Between 1948 and 1955 Ray and Joan Williams occupied the cottage and describe their life there:

"It was a very quiet spot but there were compensations such as the birdsong in the morning, the calling of the green woodpecker and the red squirrels playing in the hazel bushes. We had a copper for a bath but sometimes went to Laundry Pool with soap and towel. We were often snowed in which made it difficult to collect the bread which was left for us at Heath End and make the weekly walk to the shops at Melbourne. We built our own road which followed the route of the old Harpur's tramway. It crossed the stream by a bridge of logs which we tethered. Using this we could eventually get a car up to the cottage,

that was when the bridge was not floating in the flash floods".

The laundry was last used in 1942. The cottage was demolished along with the remaining buildings when plans for the new reservoir were drawn up. It was feared by the water board that pollution from a continued human presence might contaminate what was planned as a source of drinking water. Staunton Harold Reservoir was completed in 1965. Only that small part of Dimminsdale where the Calke and Staunton Brooks unite was flooded. The owners the Dove Water Company (now Severn Trent Water) granted a licence to the then Leicestershire and Rutland Trust for Nature Conservation (now the Leicestershire and Rutland Wildlife Trust) for Dimminsdale to be managed as a nature reserve.

ARCHAEOLOGY

Dimminsdale was effectively abandoned 60 or so years ago and the site has become overgrown with natural vegetation. In midsummer this reaches almost jungle like proportions and the brambles in particular make observation of archaeological features difficult.

However there are some living remnants from former times. Along the stream side there is a number of very old alder coppice stools together with some standard oaks which were young trees in the 19th century. Even the spoil heaps to the east of Laundry Pool show one very ancient coppiced stool which might suggest a minimum age for the presence of the bank. The site is a rich source for industrial archaeology since, apart from the course of the stream the whole area owes its nature to human activity in the pursuit of profit.

In places earth slips in the 20th century have probably concealed signs of early workings. A few feet beneath the present surface of Laundry Pool lie the tops of kilns and their associated buildings. These are the group of ten known to have been operating in 1859 (see plan of Earl Ferrers' Lime Yard and Lead Mines 1859). Also hidden are the remains of the adits (entrances to underground mines which is horizontal or nearly horizontal), galleries and caverns of the sort shown in the painting. It has proved impossible to discover if the entrances to higher level galleries remain beneath the vegetation growing above the water surface.

Remains of a kiln pit

To the south of the stream the remains of a row of six kilns are clearly visible and form a prominent feature of the slope into which they are built. Their stone walls are remarkably well preserved in places although their other features are hidden beneath soil, debris and vegetation.

The layout of the major spoil banks defies all understanding by a modern observer. Their positions were probably determined by workers many centuries ago. Once decided they could hardly be changed and only added to.

19th century stone-built bridge

The courses of two separate track ways are mostly still discernible if a little overgrown in places. The Ferrers' road which served their quarry is still visible. There is a modest but splendid stone-built bridge spanning the stream in the extreme south west part of the reserve. This seems to have been built during the 19th century to link the road to and from the (Laundry Pool) quarry to the tramway built by Benjamin Outram for the Harpur-Crewes. There is no documentary evidence for this idea however.

Another track way which is clearly visible is the one from Staunton Harold Hall. It runs northwards across the Park and enters the reserve to serve Laundry Cottage. Along this track the laundry from and to the Hall was moved in carts.

The route across the Park can readily be traced by the slight linear earthwork and the accompanying change in vegetation. In the same general area is a large area of disturbance marked by surface irregularities and changes in vegetation. Some of these indicate the sites of abandoned mine shafts and disasters of the 1830s.

Wall of the engine house

The remains of a number of buildings which are marked on the map of 1859 survive. By Laundry Pool the stone walls of what may have been an engine house can be seen even in mid-summer.

Possible privy or dynamite store

Close by are the last remains of Laundry Pool Cottage with its cave-like privy opposite.

To the west of Quarry Pool are the foundations of Shaw's Cottage which was last inhabited by Oriel Webster. The accompanying garden is the site of the amazing display of Snowdrops for which Dimminsdale is now famous, but in the late summer there is nothing to see of either house or garden.

Snowdrops at Dimminsdale © David Oaks

At times, you can still see items giving clues to the fact that people once lived and worked here.

Glass bottles and remnants of porcelain cups and saucers

This leaflet is dedicated to the memory of Tom Gilfoyle, a Leicestershire and Rutland Wildlife Trust member and North West Group Committee Member. Tom spent many hours on recording flora and practical management work at the Trust's nature reserves in North West Leicestershire.

Visitors to Dimminsdale Nature Reserve are reminded that this site is potentially very dangerous, especially around the margins of the pools. You are urged to remain on the footpaths marked on the accompanying map.

LRWT would like to thank the hard work of the North West Friday Group who carry out practical work on this nature reserve for the benefit of wildlife and visitors and to Volunteer Reserve Officer Bas Forgham.

Some of the North West Friday Group volunteers

Further information about the nature reserve or to volunteer with the North West Group:

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