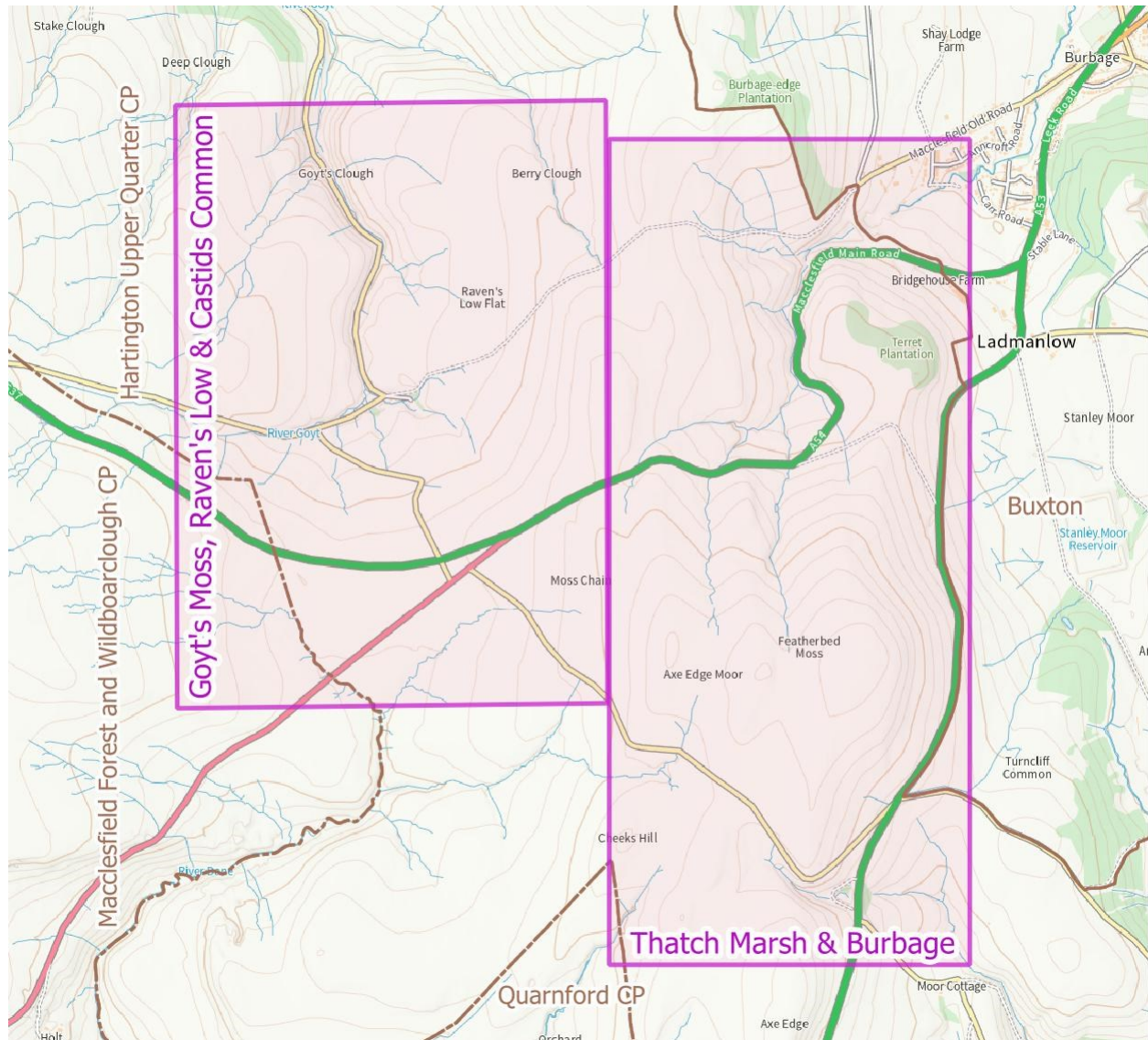


West Buxton Coal Mining Guide



This is a field guide not a walking guide. Users are expected to be competent at planning and executing their own route, taking account of hazards, legal matters, and ethical conduct.

The mention of a site in this guide does not indicate right of access.

The maps provided are not a substitute for use of OS 1:25,000 mapping.

Preface

What Kind of Guide is This?

This is a field guide not a walking guide; it will generally refer only to locations, with a suggested order of visiting, and avoids route-finding information except where additional information to that found on the OS map will be helpful.

It is a guide which focusses on surface features; it avoids referring to locations where nothing can be seen today, even when these are historically significant, and generally restricts comment on underground features to information which helps in understanding the surface.

It is a field guide not a history; the history of the mining industry is brief, with published sources given where historical detail may be found.

It has been written as part of the author's personal exploratory wanderings, which has involved the collation of information from many sources. Many of these contain vague or incorrect location information and the author has attempted, so far as is reasonable, to ensure that all locations given are correct and accurate (subject to the limitations of consumer GPS). It represents the kind of guide which the author would like to have found and unashamedly embeds some of his idiosyncrasies.

It is not an academic source; information drawn from many sources is synthesised with personal observation and inference without formal citation. The principal sources used are, however, given. It has been written by an amateur; if rigour is important to you, refer to these sources! That said, I welcome communication of errors and omissions, and will incorporate those which fit with my view of what these guides should be.

It is designed to be used "in the field"; it is distributed electronically for home printing, with separate large maps, and easily used in one or more transparent A4 sleeves. Users of GPS devices can download the location data, and digital maps are provided for use on PCs, tablets, and smartphones. See the section "Maps and Digital Location Data" towards the end of this guide.

Guides, Itineraries/Trips, Locations

Several guides have been prepared, and others are in preparation. These are published as single documents with supporting geospatial data for GPS enabled devices. They generally contain several individual itineraries (also called "trips" with no distinction of meaning) which are geographically close.

Each itinerary comprises some background information, historical notes, and a set of locations, which are one of features (things to see), viewpoints (places to see features from, and their wider context), and waypoints (significant access/egress places or suggestions of good places to leave a more obvious path). The historical notes are usually separated from the location descriptions, as "boxed-out" text, especially when several locations are part of the same historical entity.

Itineraries usually have a core route suggested, and one or more detours. The route is primarily a suggested sequence of visiting the locations, does not always indicate the path to be taken, and has not been designed to be an attractive walking route. Readers are left to plan where they put their feet, and incorporate whichever locations they see fit within longer walks/hikes...

Note on Location Identifier Convention

Location identifiers comprise first a single character A-Z which indicates the trip/itinerary. Different guides may use the same letter.

There are three kinds of location given in the guide, which are indicated by the second character with the following meaning: F = a feature, V = a viewpoint, W = a waypoint.

Location identifiers are completed with two digits which follow the order of the suggested route. These increase independently for features, viewpoints, and waypoints.

Background Notes

This section contains information which applies to the area in general, rather than being associated with a single itinerary.

Surface Remains at Shaft Tops

This is a good time to reflect on the various forms of surface remains at the tops of shafts/pits, which will be seen throughout. The typical case will involve a mound of material removed during the excavation of the shaft down to the coal ("sinking dirt") and a roughly circular hollow where material surrounding the shaft has collapsed into it.

Where the surrounding ground is quite level the sinking dirt will generally be a ring surrounding the collapse hollow. When the shaft is on sloping ground, the sinking dirt will be a single lobe on the down-hill side. Although there is no example at Thatch Marsh, large spoil heaps can become quite long fingers, or several lobes be seen.

Not all the material extracted during the excavation of the shaft would be discarded onto a spoil heap; stronger sandstone would be useful for building the tops of the many causeways and, although the shales are soft, these could provide causeway height under a sandstone top.

The diameter and depth of the collapse hollows varies according to the diameter of the shaft but is also affected by factors such as whether it was partially or fully blocked and back-filled by the miners on abandonment.

Sometimes stone ginging (a dry stone wall lining) can be seen. Ginging was built where the shaft top is in soft and collapsible material such as shale rock. Stone ginging would be worth the effort where a shaft would remain in use for some time. Where these remain intact, they resist the formation of the more typical collapse hollow. Where the miners used timber to hold back the shale, on a shaft which would not be required for long enough to justify building ginging, this will have rotted long ago and the sides run in.

Some collapse hollows contain ponds. This may seem odd, given the existence of the shaft below, albeit in a state of collapse. Shale rock weathers to make a pasty clay-like material which could act like a pond liner. It may also be the case that the miners deliberately built a barrier to help to keep water out of the workings.

In modern times, the Coal Authority has capped some shafts, leaving obvious concrete sheets and maybe levelling the sinking dirt.

Additionally, several shafts have the remains of gin circles associated with them. These are the circles around which a horse trod to drive

haulage using simple wooden engines ("gin" being short for "engine"). They were introduced into this area from the middle of the 18th century. Two forms are found: whim gins, and cog and run gins. The earlier examples are generally cog and rung gins.

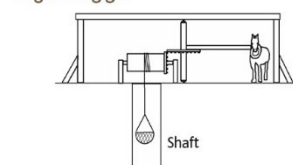
The most common form of horse gin in the Peak District, and used for mining of all kinds is, the whim gin. An example has been reconstructed at Magpie Mine. The horse walk (gin circle) is to one side of the shaft and the horse drives a vertically-pivoted wheel with the haulage utilising a pulley over the shaft top.

The cog and rung gin used a simple gear-wheel arrangement to drive a drum with a horizontal pivot. In these engines, the horse walked around the shaft-top, which was slightly off-centre.

The form of the whim gin, in particular, means they are best located slightly above, or at least on the level of, the shaft top; this avoids the need to build tall structures and makes for easier shaft-top unloading. On very steep ground, however, the best site would be close to the contour line of the shaft top, to avoid much hillside excavation, and the initial spoil would be used to build the horse walk platform. On level ground, the miners sometimes used the sinking dirt to make a raised gin platform. There are some quite high platforms on Goyt's Moss and Castids Common.

The same logic – i.e. positioning above the shaft head - does not apply to cog and rung gins, which are sometimes found with slight hollows around the shaft top, where the horses walked.

Cog & rung gin



Whim gin

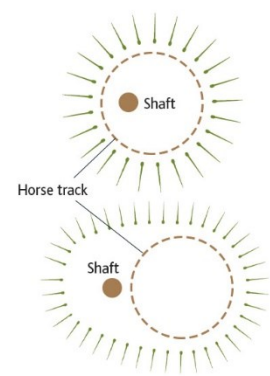
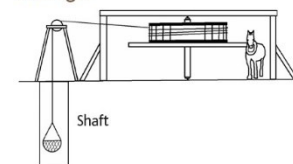


Image from goyt-valley.org.uk, with permission.

Some surface features may initially appear to be shafts, but if these have no evidence of sinking dirt or a connecting causeway, they may be collapses into shallow workings, known as "crown holes". More extended hollows near outcrop may be the result of open-casting. There are also quarries of various sizes in this area,

but a careful viewing of the form and surroundings usually gives the game away.

The actual form of each shaft top area is, therefore, the result of a range of factors and the interpretation a good focus for speculation and debate.

Causeways, Holloways, Turnpikes, the C&HPR, and Inclines

Although the coal was burnt locally, whether domestically or for industrial lime burning, it still had to be transported there. Very small scale extraction left no surface evidence of the routes taken, but as extraction scaled up, evidence was left behind on the moorland.

The term “**holloway**” is used of historical routes where the tread of hooves or roll of cart wheels has eroded the ground into grooves where the underlying geology is soft. They can be several metres deep and appear to have a similar shape to upland streams but lack such water and follow lines which would make no sense for drainage. They typically form where pack horses have been habitually taken for many years and many are known in this part of the peak district, commonly being west-east routes taking salt out of Cheshire.

Since the moorland surrounding the shaft tops is soft and peaty, many **causeways** were built. Most are easily seen on the ground, either as clear mounds or by differences in vegetation, and continue to be used as paths. Both itineraries have causeways, with their differing structures reflecting the different historical development. They sometimes provide evidence for a relative dating of shaft sinking (see the Castids Common description).

Turnpike roads crossed by, or close to, the sites in this guide are numerous and were built over quite a period of time: 1759¹, 1765, 1773, 1789, and 1821 in the current area. While many of these became modern roads, some did not, although the routes are still easily seen on the ground and often function as modern footpaths, bridleways, or tracks. Turnpike roads across moorland would generally not have walls around them; such would, however, have been built when land was enclosed (early 19th century in this area). A few mileposts can also be seen: at SK026721 on the 1759 turnpike; at SK027713 on the 1789 turnpike.

Turnpike building may have obliterated earlier routes. For example. The 1759 turnpike between the Cat and Fiddle Inn and Burbage follows

broadly the same line as an earlier pack horse route known as “Jaggers Gate”.

The Cromford and High Peak Railway (C&HPR) was not completed until 1831 and the sidings towards the Upper Burbage Level portal were not shown on the 1842 1st series OS map, probably being built as part of the works around 1859 which used the Upper Level to access the Yard Coal under Goyt’s Moss.

Although the C&HPR might initially have been an advantage, the later expansion of the railway network enabled higher quality coal from more productive pits elsewhere to be a serious competitor.

See later for a map showing these historical communications routes.

Coal Seams & Geological Environment

The coal seams in this area were created in the Carboniferous period at a later date than the limestones were laid down. Rivers had been progressively depositing sediment into the sea from the North. Fine silts were carried into deeper water, while coarse sands settled out more quickly. The overall form was of a river delta moving Southwards. The delta top grew above sea level and became covered by vegetation but changes in sea level (either due to local subsidence of land or “eustatic”, i.e. world-wide, sea level rise) sometimes occurred. The rivers might also change their routes, giving rise to banks of sandy material with channels and siltier material in between; some of the sandstone beds do not extend over large areas.

If vegetation grew on the delta top for a protracted period but was then submerged by rising sea levels and covered with sediment, it could become a coal seam. The general pattern that can be seen is: coal seams form over thick beds of sandstones but are then covered by alternating thin beds of shales and sandstone.

The specific cases in this area are:

- The Ringinglow Coal (the oldest in this area) rests of Chatsworth Grit, followed by an un-named mixed sandstone/shale bed.
- The Yard Coal rests on the Woodhead Hill Rock, again being followed by an un-named mixed bed. Contemporary records state that the Yard Coal was capped by a strong stratum requiring little wood for support.

Another bed of sandstone, the Rough Rock, lies between the Ringinglow and Yard seams. It is followed by a mixed bed but there is no

¹ The Macclesfield-Buxton Turnpike is usually called the 1759 turnpike, although the Act of Parliament for the section in this guide was passed in 1758.

workable coal seam in between; presumably sea levels rose without leaving enough time for sufficient vegetation to accumulate on the delta top.

A section diagram on the Goyt's Colliery abandonment plan shows the geological sequence from the tunnel entrance (i.e. oldest to youngest rocks):

- Rock
- Dark Shale
- Grey Stone Bind [mixed sandstone and shale]
- Strong Brown Rock
- Grey Stone Bind
- Millstone Sandstone [Chatsworth Grit]
- House Coal [Ringinglow Coal]
- Black shale
- Stone Bind [mixed sandstone and shale]
- Cank [hard ferruginous sandstone]
- Stone Bind
- Light Gritstone [Rough Rock]
- Grey Gritstone
- Coal – inferior
- Clunch [soft lime-rich rock?]
- Strong Dark Shale
- Light Gritstone [Woodhead Hill Rock]
- Goyts Coal [Yard Coal]

Neither the Ringinglow nor Yard seams were high quality and the majority of output seems to have gone to local lime burning. Both seams were generally from 1.2m to 1.4m thick and both included a thin layer of unsaleable “bat”. The abandonment plan sections for Yard Coal has 3’7” Bottom Bed Coal, 3” Bat, and 1’0” Top Bed Coal, and for the Ringinglow Coal, equivalent thicknesses of 2’11”, 6”, and 1’1”.

The Goyt Syncline

A syncline is a geological down-fold. The Goyt Syncline is named because it broadly follows the line of the upper Goyt valley. A valley will not always form where there is a syncline; it depends on the various layers of rock and the local geographic history.

The down-fold of the geology is slightly steeper than the local topology in the vicinity of Derbyshire bridge, such that the Yard Coal can be up to 30m below the surface. One important consequence of the syncline is that, away from its centre, the coal seams dip quite steeply, making them harder to work.

At a larger scale, given that the local geology has bands of more resistant rock interspersed between less resistant layers, the Goyt Syncline causes a prominent series of crags and hills distributed over many miles on both sides of the syncline. Two of the stronger bands are known as Chatsworth Grit and Roaches Grit. It is also not symmetrical; the Eastern side dips more steeply than the Western side.

The Goyt Syncline is a “northward plunging syncline”, meaning that if you follow a geological layer – such as the Ringinglow Coal – along the centre of the fold in a northerly direction, you

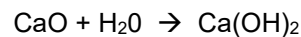
would be going deeper (relative to a fixed altitude). The angle of the plunge is quite gentle but its effect can be seen in the V-shape of outcrops on the “several miles” scale. This is well illustrated by The Roaches and Ramshaw Rocks, which are on the western and eastern sides of the syncline, with Hen Cloud being close to the centre. All are Roaches Grit.

Chemistry of Lime Burning

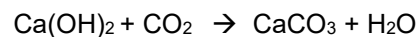
Lime burning is a thermal decomposition reaction, following a pattern common to many metal carbonates, where carbon dioxide is lost and a metal oxide remains. There is no “burning” of the limestone in the proper sense of the word.



Calcium oxide reacts easily with water, producing a lot of heat, to produce slaked lime, which is the hydroxide. You wouldn't want to get unslaked lime in your eyes!



Calcium hydroxide is fairly harmless, dissolving slightly in water to make a mild alkaline solution. This is the solution which seeps through fissures in the limestone to enter Poole's Cavern. In the presence of carbon dioxide, a reaction occurs to re-create calcium carbonate in the form of stalactites and stalagmites. This is the same reaction as you might remember from chemistry lessons: the test for carbon dioxide using “lime water”.



The concentration of calcium in the water is much higher than would occur from rainwater dissolving limestone, the usual input to stalactite formation. The presence of lime burning waste on Grin Hill causes stalactites in Poole's Cavern, below that hill, to grow very much faster in than normal caves.

Adjacent Collieries

Several other areas of mining lie to the south, in the areas of Danebower, Blackclough, Knotbury, and Orchard Common. Smaller collieries were worked near Errwood House and isolated areas near Errwood Reservoir, to the north, before the larger mining areas towards Whaley Bridge and at Sponds Hill near Pot Shrigley.

Thatch Marsh and Burbage Collieries

The sites are best visited when the bracken is not high. The best time is probably in the spring or up to late May, when visitors will be serenaded by lapwing and curlew (and the occasional snipe may be seen).

Overview

The names Thatch Marsh Colliery and Burbage Colliery (or Collieries) are but two of the names applied over time. I will generally use "Thatch Marsh" as the general term as this seems to have been a particularly long-lived name which continued to be used as the centre of mining migrated southwards.

The surface remains of Thatch Marsh and Burbage collieries, which are well-preserved and illustrative of several phases of working; the limited extent of the accessible reserves and agriculturally-marginal moorland has spared the area from 20th century heavily-mechanised mining and the archaeological trauma of land improvement.

They form a continuous north-south trending narrow band just west of Buxton. They exploited the Ringinglow Coal, known locally as "House Coal" (and by other names) - which is, geologically, the oldest significant seam in the Peak District - close to where it outcrops (Ringinglow may be found a little West from Sheffield). The band of surface remains, and underground exploitation is narrow because the coal seam dips quite steeply to the West due to the Goyt Syncline (see Background section). The dip means that the seam gets deep quite quickly, and this severely constrained exploitation.

The constraints on exploitation are, however, a function of the geology and the application of technology; as technology developed, new phases of exploitation became viable.

Phases of Mining

The strip within which these phases are evident is generally only around 200m east-to-west.

Older working occurred near to where the coal outcropped. The seam was generally about 1m to 1.5m thick, although with thin layers of shale within that thickness, and it would have been easily found in the stream beds which cut across it. This probably occurred before the earliest historical record indicates, and would have supplied domestic coal for heating and small-scale lime burning for mortar and land improvement. The coal at outcrop is generally of poor quality due to weathering and the excavations would quickly become water-logged by run-off, so it is likely that shallow pits would be dug. Once easily won coal had been

removed, a new pit would be dug; closely-spaced pits result because this would be easier than arranging extensive propping, ventilation, and underground haulage. The pits are thought to have been independent and not connected underground. This kind of working may have begun in medieval times but the earliest record dates to the late 16th century and the pits would have been shallow enough that a stowe would be the only item of surface equipment.

Early working would have involved removal of coal using pack horses, and holloways would develop along the routes taken (see Background). Turnpike roads were constructed during both the Lower and Upper Burbage phases, although there were none when the Upper Burbage Level was made.

Industrial scale working began when the opportunity to supply coal for large scale lime burning was appreciated; much of the coal which was extracted from the middle of the 18th century went to the lime burning complex at Grin Hill (SK0472 and SK0572). Some continued to be used for domestic purposes, for which it was of an acceptable quality.

The big opportunity which had been perceived justified the investment required to mine coal deeper underground and at a larger scale than had been possible before. This investment was manifested in the driving of the Burbage Level to intersect the steeply dipping Ringinglow Coal at depth. The level was started in 1754/5 and intersected the coal around 1760 after about 400m, where it turned to follow the coal seam. In the text, I will refer to this as the Upper Burbage Level, although I do not suppose "Upper" was ever used by the miners as there was only one Burbage Level when it was in use. I will also refer to the phase of mining which is associated with it as the Upper Burbage phase.

In contrast to earlier working, we see a more systematic approach being taken, as mining proceeded along the seam at the altitude where the Level intersected it, with extraction taking place up-dip as well as along. Although the shafts are still quite closely spaced, they are now to be seen as successive manifestations of underground working, serving as ventilation and haulage points.

For the better part of 50 years, work continued in this way but eventually the cost of a new level at a lower altitude became justified, in order to mine deeper coal. This level, the Lower Burbage Level had to be substantially longer since the lower altitude meant the start point was further down slope towards Buxton and the intersection with the Ringinglow Coal was further west. From the point of intersection, a horse level followed

the horizon of extraction in a broadly southwards direction.

This second industrial-age phase of working, which I will refer to as the Lower Burbage phase, left evidence of technological change. The shafts are now more widely spaced and have become centres of extraction or ventilation for longer periods, rather than being signs of progression. By the second half of the 19th century, steam engine haulage was being used. In addition to more developed approaches to underground ventilation enabling a more strategic approach to ventilation shaft placement, the more substantial surface plant and greater cost of shaft sinking to greater depths would be a clear driver to increase shaft separation.

The structure of the causeways reveals the stages of development in the way they separately join up the shaft tops from the Upper and Lower Burbage phases, with less frequent cross-causeways. They are less associated with the shallower workings near to the outcrop of the Ringinglow Coal; these might indicate places where shallow coal remained into the second half of the 18th century.

Over time, the maintenance of long haulage levels, as from the 1803 Lower Burbage portal, would become uneconomical. At Thatch Marsh, this is in evidence as the latest working, which was from the southern end, around 3km from the portal, used steam haulage up an inclined drift at that end and the coal taken down Cisterns Clough on an inclined plane. This was known as Burbage Colliery at the time - although some distance from Burbage - and work here finally ceased in 1919. I will refer to this phase of working as the Cisterns Clough phase.

The Upper Burbage Level got a second lease of life as a means of accessing the Goyt's Moss Colliery via its extension – Goyt's Tunnel or New Tunnel – in 1859. This colliery, known as Goyt Colliery, mined from the Yard Coal, which forms an inlier centred on Derbyshire Bridge (SK017715). There are several interesting remains from this working, which are included in this guide, although it could be argued that they should be included with an account of Goyt's Moss Colliery.

This is a gross simplification of a complex evolution; refer to John Barnatt's Mining History paper for a thorough account.

Key Dates

~1662 – Earl of Devonshire acquired Thatch Marsh; coal used for lime burning at Grin Hill.

1754/5 – [Upper] Burbage Level commenced, reaching the Ringinglow coal by around 1760.

~1780 to ~1790 – Canal constructed and used in the Upper Burbage Level.

1788/9 to 1824 – Mines managed directly by the Duke of Devonshire's agent, having been leased to the Brock family for over 100 years previous.

1803 – Lower Burbage Level, later known as the Duke's Level

1824 to 1859 – Mines leased to Thomas Boothman, taking over the lime kilns from 1826/7, and later his son.

1857 – Buxton Lime Company takes over the Grin Hill lime works.

1859 – Upper Burbage Level extended to the Yard Coal and Goyt's Moss Colliery and became known as Goyt Tunnel (also New Tunnel). This is also the year in which Buxton Lime Company took over the Thatch Marsh mining lease.

1879 – Building of the inclined drift above Cisterns Clough (Burbage Colliery).

1893 – Goyt Colliery (Yard Coal via Goyt Tunnel) ceases operation.

1919 – Closure of the inclined drift above Cisterns Clough and end of mining at the Thatch Marsh Colliery. Lime burning continued on Grin Hill with exclusively imported coal (C&HPR).

Places of Interest

TW01 – Parking

There is usually ample space available where the tarmac runs out on the Macclesfield Old Road (the former 1759 turnpike). If sections of the given route are being visited, there is parking near to where the route crosses roads and at Cisterns Clough (TW06).

TV01– Grin Hill, the Cromford & High Peak Railway (C&HPR), and the Burbage Reservoir

The low tree-covered hill about 1 mile due west of here is usually known as Grin Hill and was the site of a great deal of lime burning, at a substantial scale even from the 17th century, using coal from Thatch Marsh, Burbage, and Goyt Collieries. It is common to find that coal was transported to where limestone was quarried, and lime production undertaken close to the quarry. See the Background section for notes on lime burning.

While Grin Hill was a substantial enterprise, consuming a great deal of the coal produced from the present area, it was not the only lime burning facility nearby. For example, new kilns were built around 1790 at Thirkelow, near to the Buxton Raceway, where mounds of waste lime/ash are easily seen from the road.

Aside: the Name “Grin Hill”

The name Grin Hill tends to be used although modern maps mark Grin Woods and Grin Low instead, and Grin Low seems to have been the historical name. “Grin” being a shortening of an older “grene”, from Old English, meaning “green”; the road to its north side is currently known as Green Lane.

Within the woodland the mounds of early cottage-industry works are easily found stretching round to near Solomon’s Temple on Grin Low. The area may be conveniently explored from the Poole’s Cavern car park. Underground trips may also be had for a fee; the cave is well known for its rapid-growing stalactites and stalagmites, which occurs here due to leaching of calcium hydroxide as rain water passes through the remnants of lime burning.

Larger scale working took place to the south side, where there is also the abandoned quarry, but remains have been lost to landscaping. The quarry floor is now a caravan site. See below for a late 19th century map of the Grin Works.

To the right of Grin Hill, a limestone cliff can be seen on the horizon. This is part of the old Harpur Hill Quarry and the site of another major centre of lime burning.

Immediately below is the bed of the Cromford and High Peak Railway, which was completed in 1831 to connect Whaley Bridge to High Peak Junction near Cromford. The railway utilised several inclines with haulage of wagons and carriages by stationary engines in addition to locomotive haulage between. The short branch which breaks off the curve and runs between the main road and the stream was a later construction and led to sidings for loading coal and coke from the Goyt Colliery.

To the left of the railway bed, a level area with a substantial gritstone wall behind it is the site of Burbage Reservoir. This was constructed by the Buxton district council between 1878 and 1897 (based on OS maps with these dates).

Looking NE, the modern right of way beneath the stand of trees follows the line of the old packhorse route known as Jagers Gate (a Jagger was a pack horse driver). This can be followed as an intermittent holloway, semi-parallel to the turnpike, for about 800m Westwards, to where the turnpike road appears to have taken the same route.

TF01 – Working Area and Coking Ovens

This is just over the stile from the turnpike road and on the same side of the fence as the following features.

The footpath passes through an obvious, if fairly narrow, flat area which is supported by a gritstone revetment at the stile end. This was a work area, with coal brought here on a short tramway.

A little further along the edge of the working area from the revetment are the remains of two coking ovens, although there may have originally been three. These can be a little hard to see until you get close to the steepening of the slope. These are quite striking domed structures, with one having a broken-open roof and the other is easily entered through a collapse on the down-hill side, which is visible from the A54 Macclesfield Road.

These are believed to be 19th century constructions, post-dating the driving of Goyt’s Tunnel, so would have used Yard Coal.

Looking down the hillside gives a good view of the siding to the C&HPR. This originally split into a pair of tracks crossed the stream although the crossing point has eroded away and the short stretch below TF01 has been largely obscured by debris from quarrying and the construction of a small weir. Chutes ran down the steep bank to carry coke and coal into wagons in the siding, while an incline came down from the opposite side (see TF04).

See the 1878 map, below.

TF02 – Evidence of Tramway

Where the footpath crosses a stream by a recent wooden foot-bridge we can see evidence of the former tramway, which line the footpath has followed. At either side of the bridge some stone setts are visible. These presumably stretched further but most are now lost to erosion or hidden beneath grass. These setts reinforced the surface where the horses pulling tubs would tread. Erosion has revealed layers in the ground which are further evidence that this was a made way to the level working area at TF01.

Looking across from this point, an incline can be seen (TF04).

TF03 – Upper Burbage Level Portal

The site of the Upper Burbage Level entrance is evident from low walls and an area of collapse heading WSW. Note that there is a stream and marshy area only a few metres to the north which is arose from the diversion of the stream and is not the site of the portal. In front of the portal is a useful level working area which is the top of the rather large spoil heap created by tunnelling debris.

The (1755) Upper Burbage Level was extended in 1859 to intersect the Yard Coal. Although the Yard Coal came later, so is above the Ringinglow Coal in terms of geological beds, the Goyt Syncline means that the level extension headed into progressively younger rocks as it was driven from the portal.

After the 1859 extension of the Upper Burbage Level to the Yard Coal, this area became known as Goyt Colliery; the additional spoil created at this time contributed to the size of the level area at the portal and was sufficient to substantially obstruct the adjacent stream and cause/require its diversion northwards. The leat created for this has now largely silted up to make the marshy area noted above.

Later on, the level was used to carry water out to the Buxton Urban District Council Water Works [“Buxton UDC” later].

TF04 – Top of Incline

A short and fairly steep section of incline can be made out heading in the direction of the C&HPR from the southern end of the working area. At the time this area was working the Yard Coal, tram lines came across from the portal and ran down the incline to carry coal to the siding below. See the 1878 map, below, noting that the quarry (TF26) was not yet begun and its making and spoil has caused the loss of the lower section of incline.

Detour –Quarry

In late summer the visit to the quarry will require combat with bracken.

TF26 – Quarry

This quarry is in Roaches Grit. It is strong and thickly-bedded and so makes good building stone; it was probably used in the construction of the Burbage Reservoir. The quarry is a good place to see the tilt of the rocks due to the Goyt Syncline. You should be able to see the dip is at least 30 degrees in a roughly westerly direction.

TF05 – Lower Level Air/Raising Shaft & Spoil Heap

Proceeding from the Upper Level portal into the eroded ground above (which is not due to tunnel collapse with the possible exception of the initial part), a large mound of gritstone with some shale is seen.

This is sinking dirt from driving the Lower Level. At its top is a Coal Authority concrete cap. It is on the line of the Lower Burbage Level, about 80-90m below, and would have served as a ventilation shaft for its construction. The portal is about 250m beyond the C&HPR, close to the stream (TF27).

There is evidence of a horse gin just south of the shaft top, the essential tool to remove all that spoil from such a depth.

The quality of spoil seems to be larger than would arise from just sinking a ventilation shaft, so presumably this also came from driving the level. This is sensible, as it would not have been possible to dump spoil near to the level portal, which is close to Wash Brook, in quite a tight space.

On the opposite side of the gully, a run-in shaft is over the line of the Upper Burbage Level. This is 15m above the portal and only about 50m from it, which seems rather close to be for ventilation.

TF06 – Possible Open Casting

TF06 is approximately on the line of outcrop of the Ringinglow Coal. Numerous hummocks and shallow pits just up-bank (west) are likely to be the remnants of early open-cast working.

TF07 – Upper Burbage Level Intercept

Refer to the box, “Surface Remains at Shaft Tops”.

This site, comprising a mound of sinking dirt around the former shaft top and a gin circle to its north side, marks the point above where the

Upper Burbage Level intercepted the Ringinglow Coal, about 60m below.

The line from TF06 to here is a low causeway by which a link to the turnpike road was made. A clear straight causeway heads southwards visiting four shafts with an interval of around 100m until things get a bit more complicated near the A54. These mark out the path of the Upper Burbage Level below as it heads southwards, but the level also followed the coal northwards and there are causeway-connected shafts up to around 250m north of the 1759 turnpike.

The level was used for both drainage (as a sough) and for haulage.

Follow the causeway to the next shaft top before turning to TV02.

TV02 – Capped Shaft

This capped shaft lies above the line of the Lower Burbage Level and is close to where it intercepted the Ringinglow Coal, where it turned southwards. It is about 120m deep (compare to the depth of TF07).

It is worth spending a moment to look back and to consider how quickly you have passed from some of the earliest working to early 19th century working, with each forming narrow strips parallel to the outcrop.

From this point you can see the causeway continue northwards to the 1759 turnpike and southwards to the abandoned 1773 causeway. In both directions, the causeway is now the public footpath.

TF08 – Site of Steam Engine & Horse Walk

This site is associated with Lower Burbage phase working.

Within the fenced-off shaft ginging may be seen. The visible section is straight, suggesting a rectangular shaft top. There is a horse walk around the shaft, which suggests that this shaft originally had a horse gin for haulage, specifically a cog-and-rung gin.

A little way north of the shaft, some stone slabs and the foundation of a wall may be found, slanting away from the causeway towards the shaft. These appear to be aligned with the shaft and are presumed to be remains of the steam winding engine which replaced horse-driven haulage. A nearby hollow might be the damaged remains of a reservoir but the form is not particularly convincing.

TF09 – Possible Water Capture

An intriguing (peculiar!) feature here consists of wide trenches forming three sides of a rectangle, with feeder channels from the south side. These might have been to intercept and store water for the steam engine. There may be a better alternative suggestion, but all steam engines need water, so it must have been collected and stored some-how.

TV03 – Survey the Landscape & Track

Looking back, TF09 becomes a little clearer. It is also clear that there is a track (you probably followed this as the easiest route). This ends at a small quarry not much further along, which may have been used for stone used in the steam engine at TF08. The track gets lost/confused around TF09, indicating that it was constructed after the track had served its purpose.

The quarry is in Woodhead Hill Rock, a good strong material, whereas most of the outcropping rock between here and TF08 is less resistant mudstone; the transition explains the change of slope. The Yard Coal outcrops only about 60m west from here.

TF10 – Remains of Boothman's Cottages

This is the site of a semi-detached pair of buildings, now little more than remnant stone walls with a small chunk of brick-work, which were probably associated with the colliery in the time of Thomas Boothman, who held the lease from 1824 to 1858, although they did not appear on the 1st edition OS map of 1842.

The right of way over the stile follows the line of the 1773 turnpike.

TF11 – Site of Bucket Engine & Fault

A WSW-ENE trending fault cuts through under this location. The north side was displaced slightly downwards with respect to the south side, meaning that the miners could not simply follow the coal. This also means that there is a gap of about 50m between the lines of outcrop and that the parallel bands of working (and main causeways) are dislocated.

This site is on the line of the Upper Burbage Level, which is about 60m below.

This site has two closely-spaced shafts with a level area between. The form which the bucket engine took is not known but John Barnatt (Mining History 19-2) discusses options based on documented technology used at other mines. It seems likely that both shafts were used together but the absence of a leat leading to the area or of a channel to take raised water away

leaves question marks over several *a priori* plausible ideas. The position of the site at the crossing of a fault is doubtless a relevant factor, but was the bucket engine required to cope with, or did it take advantage of, the consequences of the fault?

Whatever form the engine took, this was an important centre of activity in the late 18th century, with costs and risings being accounted for against Bucket Engine Colliery.

This also seems to have been the northern end of an underground canal built from 1780 to 1790 (or thereabouts).

You can speculate! Were the buckets for coal only, or were water-filled buckets being used as a motive force for hauling? Why were there two shafts?

TW02 – Access Point

The intended route uses the public footpath passing over this stile.

TV04 – Shallow Workings Near Outcrop

The outcrop here is just the other side of the stream and there is quite a pronounced and long hollow on its eastern bank. The slope of the surface there means that the Ringinglow Coal will be quite close to the surface, so the visible evidence of working may be from an early stage.

On the western side of the stream, there are several shaft mounds and causeways, branching off from the main causeway and which you are using as a footpath. These indicate working during the Upper Burbage phase, although it is hard to explain why coal remained unexploited here. Maybe early miners failed to follow the coal past the fault? If that is the case, then the workings on the eastern side cannot be early. Speculate!

TW03 – Leave the Public Footpath

The route takes the left fork here.

TF12 – Quarry in Rough Rock

The Rough Rock is another bed of resistant sandstone. A short detour from the public footpath into this small quarry will allow you to view the dip of the rocks caused by the Goyt Syncline, which is here around 20 degrees in a broadly westerly direction. A phone with a “plumb bob” or similar inclinometer app and compass is handy here!

TV05 – Burbage Colliery Spoil Heap

The obvious grey spoil heap on the other side of the road is TF14.

TW04/05 – Access Points & Car Parking

The outward route should bring you to TW04 and the intended return will be picked up from the public footpath over stile TW05.

There is ample road-side parking in this general area, especially east of TW04.

TF13 – Stone Causeway Bed

Just south of the modern road a narrow promontory between two peat gullies has a small shaft at its head. Erosion has revealed both shale and sandstone having been cast on top of peat. The sandstone makes a stronger path so it was placed where people and ponies would come and go.

TF14 – Site of Engine House and Spoil Heaps

Walk along the road until an obvious wide track/causeway takes the most direct route to TF14.

The foundations of buildings were once to be found here but are now lost under grass and only a solitary brick remains in addition to a small over-grown reservoir near-by. Some good pictures of the buildings can be seen in Mining History 19-2.

This is the site of the steam engine (and other mine buildings) used to haul coal and excavation spoil up TF15.

The engine is sited on a low ridge of high ground to allow extracted coal to be transferred to the self-acting incline down into Cisterns Clough and the transfer point to the 1765 turnpike (A53) southwest from this point.

See the 1897 map extract, below.

TF15 – Entrance to Inclined Drift

Inside a fenced-off area, the remains of the inclined drift can be seen as an elongated run-in. This was used for the final – Cisterns Clough – phase of working and was closed in 1919.

The slope of the drift was around 1 in 6, with tubs hauled up iron rails using a horizontal steam engine at TF15.

TF16 & TF17– Raised Incline Bed and Retaining Wall

An inclined plane was created for the Cisterns Clough phase of working, taking coal down to the 1765 turnpike.

Proceeding into Cisterns Clough by the line of the incline, after some difficult-to-follow grassy sections, the line becomes quite clear, with sections of raised bed and retaining wall being easily found.

The incline would have been “self-acting”, with the weight of full tubs going down used to raise empties, with a brake drum in the level transfer area.

The incline appears to be mostly quite narrow, presumably accommodating a single pair of rails. One area is wider and may have been where upwards- and downwards-heading trucks passed.

TF18 – Bottom of Incline

The turnpike took a short zig-zag to navigate the sharp contours but the modern A53 was modified some years ago to take a more direct line over an impressive earth-work, bypassing the former incline-turnpike transshipment point.

The marshalling area and mine buildings have largely been lost to erosion in Cisterns Clough but a bit of rummaging in this area will reveal stonework, a coal ash tip, and part-buried woodwork and metal parts which presumably date from the mining. 10-15m southwest from these remains it is possible to view the dip of the bedrock again.

A good photograph appears in Mining History 19-2, showing buildings close to the clough and two sidings, but the erosion makes it quite hard to visualise where things were.

TV06 – View of Incline

Use the public footpath to gain the tarmac road.

The line of the incline is nicely laid out; depending on the season, pale grass helps to reveal parts which are otherwise difficult to make out.

TW06 – Car Parking and Access Point

Cars may be parked at both ends of the truncated zig-zag formerly taken by the turnpike and A53. This is convenient for a short circuit around TF14-18.

TF19 – Site of Fire House

This shaft lies above the Upper Burbage Level, as does the smaller feature close to the road.

This site is worthy of time to unpick the surface remains and to picture the former structures. There is evidence of a horse walk around the shaft, indicating a likely cog and rung gin site.

There is map and photographic evidence to suggest this was a “fire house”, i.e. a ventilation shaft where a fire was burned to draw air up a shaft. To be efficient, the fire would burn inside a stone structure over or connected to the shaft. While an air supply from ground level might be required to get the fire going, or access from the side required to add fuel, these would remain closed to maximise draw.

Looking from the footpath side, beyond a small subsidence, presumed to be close to the shaft centre, a narrow gully can be seen leading to a filled-in stone arch. On the ground above this arch is a circular structure which is likely to have been the base of the substantial chimney seen from near to TF14 on an old photograph. From this evidence, it seems reasonable to imagine there was formerly a building over the shaft, with a flue to a chimney. Placing a heavy chimney away from the shaft head would make sense, given the lack of resilience of shale. The building may have been a domed structure since the place is labelled “Cupola Pit” in contemporary mine plans.

TF20 – Centre of Working to TF22 Gin Circle

The large spoil heaps here signal this was an important and long-running centre of activity, which dates from the Lower Burbage phase, when a steam engine stood at the head of a shaft here (evidence for the shaft is currently rather indistinct). This area is, however over the line of the Upper Burbage Level and at least one of the shafts was driven during that phase of working. The reasons why lower-level workings continued to use earlier access points, in contrast to the nicely separated lines of shafts north of the A54, is not clear.

Lower Burbage phase working is believed to have taken place here between the late 1850s to late 1870s, some time after the level first met the Ringinglow Coal (1813). Maybe the Level had collapsed and become blocked, causing water to back up. Maybe mining techniques or local expertise had developed so that a different pattern of extraction became preferred. Speculate!

Some rummaging about in eroded areas at the top of the northern heaps will reveal fragments of coal, coke, and ashy/sooty deposits which probably came from the steam engine boiler, although the coal may be just spillage. Please

leave finds for others. Looking down from the spoil heaps, a nearby small reservoir and water capture channels can be seen. It is thought likely that this served the steam engine.

TF21 and TF22 are best considered detours.

As the main line of causeway swings slightly eastwards a branch comes in from TF21 while above is TF22. Both have substantial inverted cone run-ins and must have been quite wide shafts. The gin circles, both on the south side, have been substantially lost to the run-in.

Look at the configuration here; was this a whim gin or could it have been of the cog and rung type? This is one place where shaft collapse makes it harder to decide.

Underground Canal

Sometime around 1780, the Upper Burbage Level was converted to be a canal and there are records of boats being used at the Bucket Engine in 1790 and this may have been the northern end of the canal. The southern end of the canal had got as far as the TF20 area by this date, which seems to have been its furthest extent. Water was taken down-dip from the base of TF22.

TF23 – Shaft and Gin Circle

A further example of a Lower Burbage phase shaft. Traces of the ginging (sandstone shaft lining) can be seen here. The remains of a Whim Gin circle are on the south side, although this seems to have been excavated away on the shaft side, maybe to provide material to block the shaft.

The shaft was 120m deep and is thought to have been sunk slightly up-dip from the Lower Burbage Level (why?) and to have served as a ventilation shaft. This is the furthest shaft from the Lower Burbage portal which is on, or close to, the line of that level.

Continue to the A54.

TW07 – Upper Burbage Causeway

Make your way to where the public footpath intersects the causeway which joints the principal shafts of the Upper Burbage phase, following the line of the horse level.

Head due west for about 150m and then pick up the line of the holloway as it sweeps southwest then curves down to cross the stream.

TF24 – Holloway

Refer to the Background section.

The holloway “disappears” at W end due to strong Chatsworth Grit, whereas soft shales have been eroded into a deep “Vee” as the route heads down to the stream, where stronger grits are again crossed, making for a good fording point.

This was presumably used for coal transport to Grin Hill but may have been a pre-existing route over from Cheshire and had mixed use.

The causeways do not appear to connect to the holloway so must post-date its useful period.

TF25 – Buxton Water Works and C&HPR Siding

Follow the stream down from the holloway ford.

Cross to the left of the stream at the very Victorian weir and proceed a short way around to view the sidings beneath the coking ovens, TF01, which are visible from here, and the incline (TF04). With a little imagination, it is possible to reconstruct what the old OS map shows.

The two small weirs and large metal pipes in this area are associated with Burbage Reservoir (see TV01). From near to where the pipes cross the stream the revetment at TF01 is visible and a possible intermediate stone structure which might have supported a chute can be seen beneath it, suggesting the revetment was not simply made to create the level area, but to create a tipping platform.

The split levels of the branch line don't seem quite right; I have a suspicion there may have been some modification when the Buxton UDC Water Works pipe was laid, and the route presumably used to transport quarried stone.

Return to the 1759 turnpike is possible by backtracking to cross the stream near the first-seen weir and heading up to near the footbridge (TF02) or by walking up the branch line to the C&HPR then following the wall left. The latter is good for the detour to the Lower Burbage Level; you can climb a solid fence to join the right of way and this route gives sight (just South of TW08) of two collapsed shafts and a fairly large spoil heap associated with driving that level. Bringing spoil out here was preferable due to a lack of suitable disposal space near to the portal.

The branch/siding and south bank up to the C&HPR is in Open Access land, as is most of the north bank.

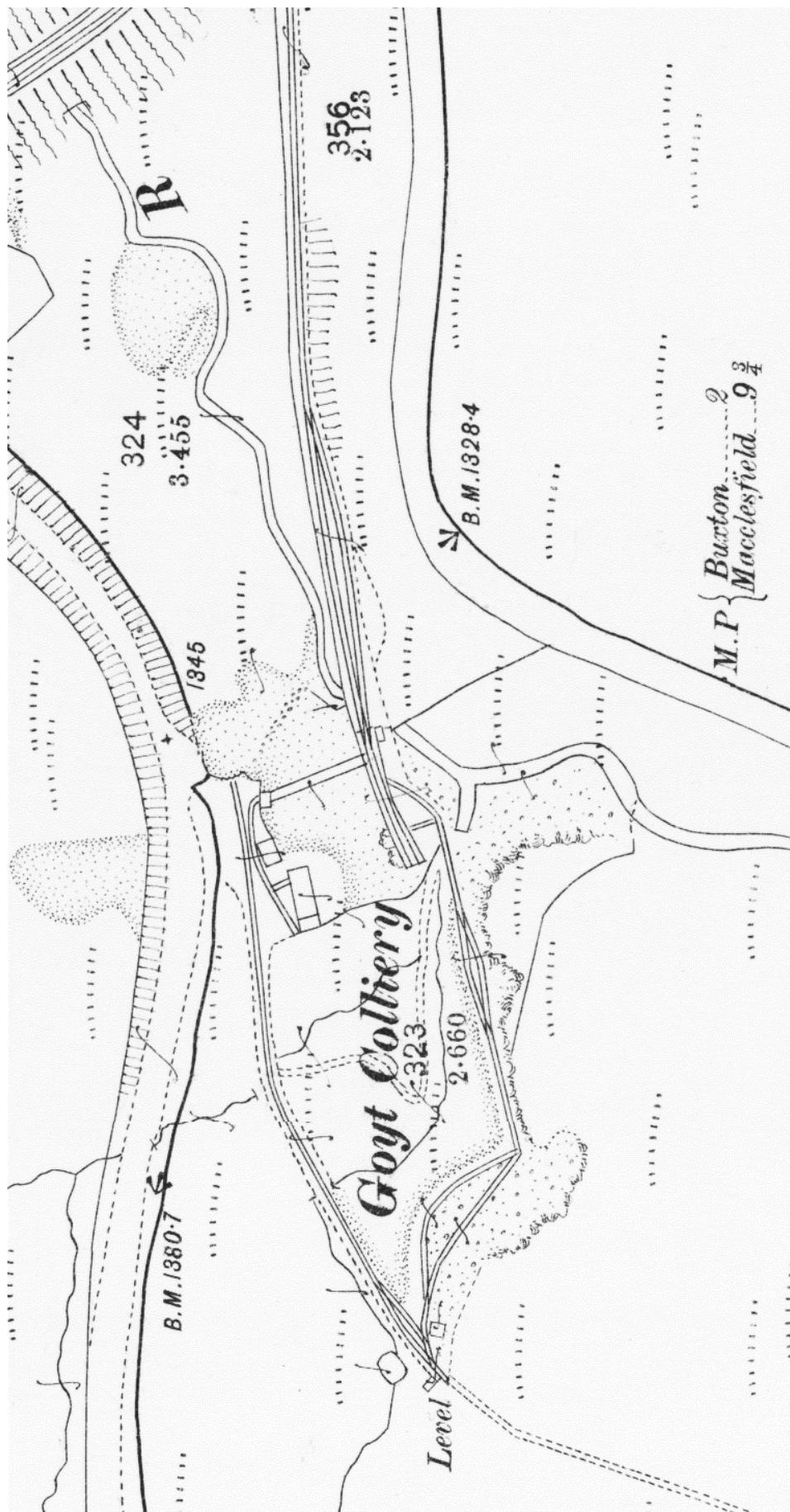
Detour – Around the Lower Burbage Level Portal

Start at TW08, where a footpath branches off to cross the C&HPR before dropping down to stream level. Down-slope from this point, and slightly to the right a shaft top with a gin circle (above) and substantial spoil heap which goes right down to the stream may be seen. There is another shaft a little further right. There is more space to dispose of excavation material here than there is near to the level portal, which would be a valuable work area in addition to being quite constrained by the stream, so this is not simply a ventilation feature. Why two shafts were made is a subject for speculation!

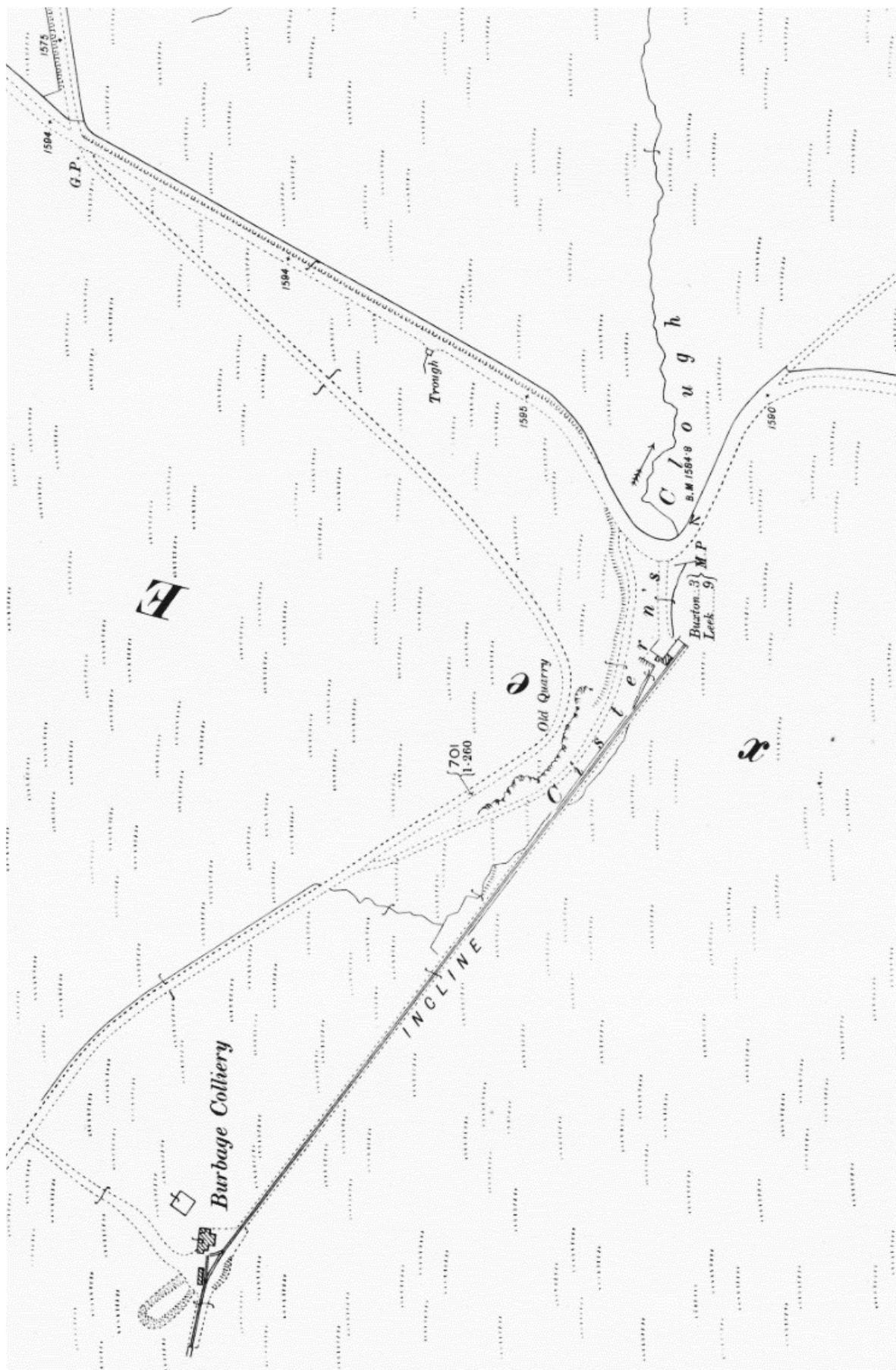
The buildings and level portal are now lost but used to stand around TF27. The stream here is known as Wash Brook, but also has the local name of Ochre Brook (and was previously also called Car Brook). Bright orange ochre deposits are typical of water leaching from old coal mines, arising from oxidation of iron sulphide exposed by the working. In some places, for example Gradbach, the quantities were large enough to warrant the building of collection tanks and the creation of a saleable product. Can you see any?

About 100m downstream from TF27, if you saw the ochre, leave the stream by a short path north across the nose of a spoil heap to make your way back to the Macclesfield Old Road via the aptly named Level Lane (TF28). If you didn't see the ochre, go back and look for a rectangular stone structure jutting into the path and a concrete pipe bringing water under the path.

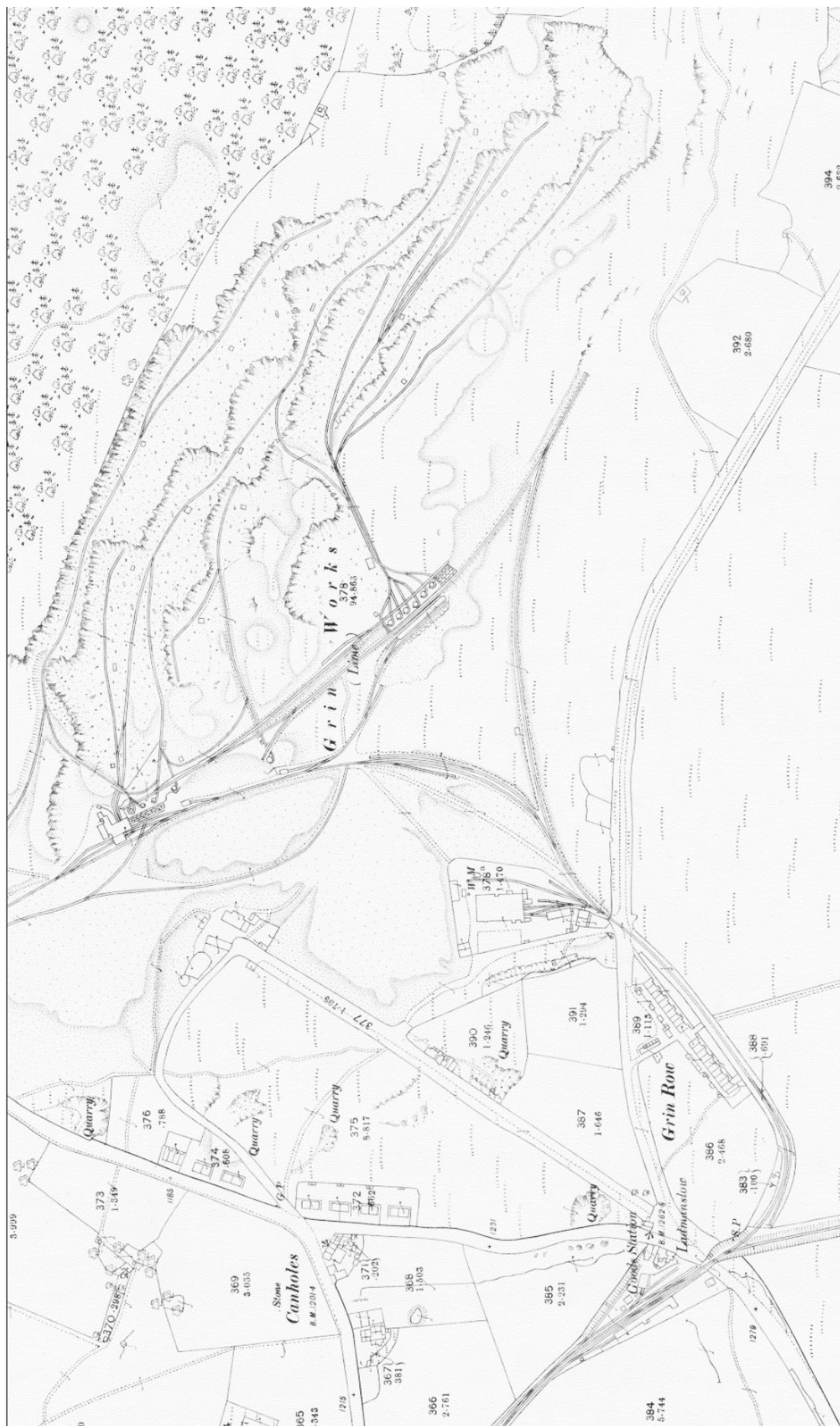
Extract from the 1878 25" OS Map Showing the Tramways, Incline, and Chutes Used to Transfer Coal and Coke to the Cromford & High Peak Railway Siding



Extract from the 1897 25" OS Map Showing the Incline and Site of the Drift Above Cisterns Clough



Extract from the 1878 25" OS Map Showing the Grin Works on the South Side of Grin Hill



Goyt's Moss, Raven's Low, and Castids Common

This itinerary is somewhat looser than most others, generally providing a set of key points around which features may be seen, rather than listing specific features. It is also broken into two short loops which can stand alone.

Binoculars will be useful.

Overview

The area where the River Goyt rises is the site of numerous accessible and identifiable coal mining remains. Derbyshire Bridge is towards the top of the one-way (south-bound only) road up from Errwood Reservoir and marks the place where, until 20th century boundary changes, you would cross between Cheshire and Derbyshire; until then, the county boundary was the River Goyt.

It was the Yard Coal which was won in this area, a bed of relatively poor quality coal which lies above the Ringinglow seam which was exploited at Thatch Marsh (see the other itinerary). Yard Coal, also known locally as Goyt Coal, leaves an undesirable quantity of ash, was sulphurous, and has less thermal capacity than good quality coals. These factors limited how it could be used and meant that it was not economically viable to transport it far. Most would have been used for lime burning, on Grin Hill and nearby (see the Thatch Marsh itinerary), with some doubtless used in the field kilns and hearths of local farms. In contrast, the Ringinglow seam was known locally as "House", a sign of its superior quality for most domestic use. Coal prices from 1790 show the difference in quality between the two coal seams; Ringinglow coal fetched 4s 2d per ton and Yard coal only 2s.

The presence of the Goyt Syncline (see Background), combined with the local topography means that the Yard seam outcrops both to the East and West of the Goyt, dipping down approximately towards the course of the river, where the beds are close to level (neglecting the Northward plunge). The seam is deepest either side of where the Goyt has eroded its valley and the deepest pits were made there. Deep pits mean "gins" would need to be built to raise the coal (see Background), whereas nearer to the outcrop, shallow pits or adit mines (known locally as a "day eye") could be built. This geological imperative is evident in the form of the surface evidence across the syncline. As a rule of thumb, we can assume that shafts with gin circles are later developments, while some (but not all!) of the workings nearer to outcrop may be much earlier.

While there are some places where open casting may have taken place, this is not widespread because: a) the fairly steep dip of the beds means relatively little coal would be

accessible to open-casting; b) if there is higher ground adjacent opening up the surface at outcrop would risk channelling water underground; and c) coal near outcrop is liable to weathering and degradation in quality (it was known locally as "tender coal", and is marked as such on colliery plans from the last phase of working). Issue (b) is, of course, a risk for pits and adits if they are badly located.

The surface remains from the mid 18th to mid 19th centuries in this area contrast with those of a similar period at Thatch Marsh and Burbage. Whereas the workings there benefitted from the driving of the two levels in the 18th century, it was not until 1860 that the Yard Coal was worked with the benefit of a level-oriented approach. Hence, at Goyt's Moss, Ravenslow, and Castids, we see the more "old school" approach of sinking a pit, working from its bottom as far as practicable (ventilation was an issue), then moving on to sink a new pit.

- o -

Although the itineraries concentrate on ground North of the 1759 turnpike, numerous shafts and associated tracks and causeways have been recorded by archaeological surveying on the South side. South of the 1759 turnpike, however, the cover of ground vegetation does a good job of concealing the archaeological features, as well as making a short walk over the moor into an arduous exercise. That said, the two rights-of-way between the 1759 and 1773 turnpikes, and near to the car park, largely follow mine tracks/causeways and comprise a reasonable short extension for enthusiasts! Several more surface features are located just South of where the 1773 turnpike has been used as the modern road, but southwards progress appears to have been hampered by geological faulting* before the area was approached via a branch of the Goyt Tunnel in the latter half of the 19th century.

Because working from the Goyt Tunnel relied on underground levels and removal of coal via the tunnel, this period of working has scant surface evidence in the form of causeways, run-in shafts, and gin platforms. There are largely only more subtle remains: crown holes around Tinkers Pit and East of Raven's Low, a few air shafts, and the site of a pumping engine.

[* The two semi-parallel faults shown on the map between the 1759/1773 and 1821 turnpikes is a gross simplification. Colliery maps show the area between them was a complex are of branching faults.]

Historical Outline

Although it is quite likely, given historical records of mining activity in adjacent areas, that some mining may have taken place here in the 15th century, or even earlier, documentary evidence only goes back to 1685. The opening of the turnpike roads, from 1759 would have made a huge difference to the ease with which coal could be removed to market and at the same time the demand for coal for lime burning was accelerating due to the practice of applying lime as a soil improver following Enclosure.

Key Dates

1685/6 – rent records are the first documentary evidence, although this area is not explicitly named (it was in 1698).

Early 18th century – first shafts sunk.

1733 – Dickinson family (lords of Taxal) took over mines on Castids Common.

1759 – Buxton to Macclesfield turnpike made larger scale extraction viable.

1773 – Buxton to Leek Turnpike Trust builds a new turnpike to attempt to divert a share of the coal-carrying tolls from the Buxton to Macclesfield.

1778 – Duke of Devonshire rents mineral rights to Castids Common from the lords of the manor of Taxal, unifying control of the coal field here.

1780 – Goyt's Moss coal mine leased by the Duke of Devonshire. The area leased was South of the 1758 turnpike. Interestingly, the payment was to be made in well-burned lime, suggesting the lessees were also lime burners. The annual payment was 14,000 horse loads of lime.

1790s - 1810s – period of good profitability.

1820s - 1850s – local lime burning and associated coal mining in economic doldrums.

1859 – Upper Burbage Level extended to the Yard Coal and became known as Goyt Tunnel (also New Tunnel). See Goyt Colliery notes in the Thatch Marsh & Burbage itinerary.

1860's (early) – levels off Goyt Tunnel made to North end East of its extension.

1868 – branch off the Goyt Tunnel made to reach Southern part of the Yard Coal.

1870s (late) – levels extended towards Tinkers Pit area.

1893 – Goyt Colliery (Yard Coal via Goyt Tunnel) ceases operation.

Places of Interest

GW01 – Parking

There is usually plenty of parking space at this PDNP car park. The location used for GW01 is the site of Goyt's Moss Farm. The farm, and several other buildings flanking the 1759 turnpike were demolished in the 1930s, as was Errwood Hall, to avoid human habitation in the catchment for the new Fernilee reservoir.

Sub-itinerary A: Raven's Low & Adjacent

Ravens Low is the low hill in the North-east quarter between the River Goyt and the 1759 turnpike (Macclesfield Old Road). Ravens are often seen and heard here.

The name Ravenslow Mine appeared in a document of 1757.

GV01 – View of Causeway & Nearby Mounds

Looking to the North side of the turnpike, a causeway can be seen leading off from this point. This does not necessarily mean that the causeway post-dated the turnpike road, since an earlier pack horse route known as Jaggars Gate is thought to have been used as the turnpike route just here. In this case, however, evidence from historical maps indicates that mine development here was between 1820 and the 1840s.

Off to each side of the causeway and about 50m and 100m away are two prominent mounds. These are usually seen to be markedly different in the colour of vegetation growing on them compared to the surrounding moorland. They are the platforms for whim gins at two shafts, constructed using excavated shales. Refer to the Background section for notes on whim vs cog-and-rung gins.

A pattern of working has been deduced throughout the area in which new pits were opened progressively, with the causeway being extended and gins moved, as the working underground in previously-opened pits reached its reasonable extent.

If short on time or inclination, skip to GW03, and view GF02 from a distance. You should also be able to spot a dead-straight causeway heading SSW across the moor not far below GF02 and coming from the turnpike at GW02 (depending on the season, ground vegetation makes it difficult to see). This served a cluster of 9 (or so) shafts with gin circles, which also had an access route from the 1773 turnpike.

GF01 – Run-in Shaft and Gin Platform

Best viewed from the turnpike.

This one is right next the turnpike, so easily seen without stumbling over tussocks. It is believed to have been used as part of the 1860's onwards working associated with the creation of the Goyt Tunnel, and had a depth of 28 ½ yards.

GW02 – Access Gate

A gate provides access to GF02.

GF02 – Goyt's Colliery Air Shaft & Spoil

This substantial spoil heap and obvious run-in shaft behind were sunk to the line of the Goyt Tunnel extension of the Upper Burbage Level. The shaft was 49 yards deep and it would have been sunk for ventilation of the level and mine workings. The tunnel is well below the Yard seam at this point (the portal is at about 415m AOD, which is almost exactly the same as the Yard seam at the trough of the Goyt Syncline at GF14). Although the shaft cut through the Yard Coal, the miners did not work that part of the seam until 1869, several years after the tunnel was completed and coal removed from nearer to its terminus.

Notice that the spoil contains both robust blocks of sandstone and smaller bits of fragile shale/mud rocks. The mine abandonment plan shows that the shaft was cut in "light gritstone" all the way from the base of the Yard Coal down to the tunnel, slightly over half the shaft depth. See notes in the Background section concerning the geological setting at the time the rock-forming sediments were deposited.

Good viewpoint over area N of the 1759 turnpike. Spoil heaps E of the Goyt are often marked out by vegetation differences.

There is a slight causeway from the North, to where the hollow track to the quarry leaves the turnpike road.

Return the way you came.

GW03 – Access to Ravens Low Flat

A path to some shooting butts may be followed from here, as the most direct route to GF04. Alternatively, a detour to GF03 may be made (it can also be approached via GW04). About 40m along the path, you might be able to make out a mine causeway which branches off the turnpike road between GF01 and GW03 and heads NE towards three shaft locations with whim gin platforms. These are of a similar vintage to those noted in GV01.

GW04 – Alternative Access Point

This does require striding over a fairly-low barbed wire fence. If you can do this safely and without causing damage to the fence, it makes for an easier approach to GF03.

The gin and pit here are probably contemporary with others nearby, to the North of the turnpike, on the basis of similarity in form. The shaft hollow takes drainage from the turnpike and is distinctly choked with sand and debris.

Detour – The Green Mound

GF03 – Green Mound

The green mounds are rather inviting when viewed from the turnpike, and this one is conveniently visited on the way to Ravens Low. It can be approached from GW03 or GW04.

Close to, we can see that the green mound is likely to be the remains of a gin platform; some of the mound has been lost into the run-in shaft. This is quite a high mound; presumably, given the almost level ground here, this made it easier to construct the winding engine in such a way that off-loading was easy. If that was not the case, then it would seem inconvenient, and more work, to make it this way.

A few pieces of sandstone across from the mound are probably the remains of ginging (i.e. dry stone walling lining the shaft and intended to stop the fragile clay rocks in which the shaft was dug subsiding into it. It may, however, be limited to where the off-loading of coal occurred, rather than being continuous around the shaft: i.e. a revetment rather than ginging.

This feature probably dates to later than 1820, but prior to the working undertaken via the Goyt Tunnel from ca 1860.

The onward route involves heading towards a wire fence then following it round on its Eastern side. Once the fence is reached, the under-foot going is quite good. Continue along the fence, noting several run-in shafts without gin circles (see GF04 for comment), to the stile GW05 (don't cross) before heading to GF04.

GF04 -Track and Old Holloway

This point is on the line of a pack horse way by which coal was taken East. It starts just over 100m to the NW amid a group of pits which do not have associated gin circles; since the pits are only shallow a stowe (i.e. a hand-cranked windlass) would suffice. These probably date from early to middle 18th century.

The outbound track takes a slightly sinuous route almost due East to cross the ridge at around the same point as used by the 1759 turnpike (the Macclesfield Old Road).

In places, the pack horse traffic caused sufficient erosion for a hollow in the ground to develop, hence “holloway”. This is quite clear from where the route crosses Berry Clough up to the skyline and may also be made out from around 200m West of that clough. The route is also clearly visible on satellite and Lidar imagery. The route was legally closed in 1780.

The earlier Jaggars Gate is visible from where the mine traffic holloway crosses the ridge. East of the ridge it takes a slightly higher line to the North of the turnpike, to judge from the presence of a holloway which can be traced as far as the C&HPR, whereas to the West the turnpike seems to have followed the same line as Jaggars Gate.

GF05 & GF06 – Crown Holes and Possible Open-casting

A crown hole is the name given to the depression formed when subsidence into an underground excavation occurs.

Two bands of surface depressions, running parallel to the Yard Coal outcrop, may be found around GF05 and GF06.

Those at GF05 are smaller than those at GF06 and have been interpreted as crown holes over where the 1860’s working (from the Goyt Tunnel) reached out to its northern limit. The abandonment plans show coal was worked under GF05 and up to about 100m SE-wards in 1864/5.

The larger holes around GF06 are thought to be earlier (possibly 17th century); the Goyt’s Colliery abandonment plans show this area was not worked. They could be crown holes of lateral working from the foot of shallow shafts but may be open-casting features. This is not a good place for open-casting, however, as the level ground and poor drainage would cause water-logging of open pits. Some sources suggest they could be natural.

The features around GF06 probably represent the earliest phase of mining on Goyt’s Moss and Raven’s Low – along with GF07/8 and GF11 – due to the relative ease of working.

Note that the position marked on the geological map as being the outcrop of the Yard Coal should be taken with a pinch of salt around here; the peat cover is likely to have meant that the British Geological Survey geologists used conjecture.

GF07 & GF08 – Possible Day-Eye Mines

Two fenced collapses (GF07) are the crown holes noted in PDMHS Newsletter 165. These opened in 2017 and showed that the seam here is only around 2m below the ground surface.

Narrow pillar and stall workings were observed; the narrowness may reflect avoidance of roof collapse in such shallow workings, or the early date (possibly 17th century).

Linear trenches (GF07 and GF08) may be evidence for a shallow adit entrance (a “day eye” mine). The lay of the land makes these feasible here, in contrast to GF06 where a vertical approach would be required.

GV02 – Stile & View Over Holloway

This is an atmospheric spot affording a good view over a holloway making its way up towards you from a crossing of the River Goyt (GF09). Across the clough, GF09 is easily seen, with a curve of holloway below. This holloway is part of South-trending track which serves 7 (or so) shafts around SK017718. The pattern of the access routes shows that the shafts were first sunk at the northern end, then the track extended to the next, further south, etc.

These shafts would arguably have been more easily accessible from the 1759 turnpike, or former Jaggars Gate, so maybe the coal was destined for use down the Goyt Valley, or maybe the miners were simply extending operations from an area which they knew was productive. The form of the pits around SK017718 is also quite different to the clear inverted cone around an obvious run-in shaft with a gin platform adjacent which we have already seen on Ravens Low Flat; here, the hollows are flat-bottomed and quite shallow, yet some 8m or more in diameter. John Barnatt paper in Mining History 19-2 notes sinking dirt has been placed on the down-slope side of some pits and he conjectures that these shafts might have had cog-and-rung gins, which would need level ground around the shaft. He assigns a working period between 1750s to 1780. GF10 would have helped de-water these pits.

In contrast, three more shafts close by to the East do have platforms for whim gins. These more-easterly examples do appear to have been approached from the turnpike (see GV01) and are dated as later than 1820 (see Mining History 19-2).

In a small area, then, we have evidence of working at two periods, with different mining styles/technologies, and showing the influence of the improved communications that the turnpike afforded.

GF09 – Possible Early Day-Eye Mine

GF09 is better observed from the holloway down from GV02, rather than by visiting it.

A prominent linear gouge may be seen below a clear shaft and associated sinking dirt mound.

This may be a collapsed adit (maybe the shaft was for later access), but it has also been suggested that it might have been dug as a trial to locate the seam.

GW06 – River Crossing

This is a frequently-used crossing point, but if you are not agile, crossing the Goyt can be tricky when water levels are up. Be prepared to make a circuit over Raven's Low Flat.

GF10 – Sough

This was started in around 1750 to dewater the area immediately Southwards. It was still being extended in 1776 but its extent at that time, and ultimate length, is not known. It may have been driven as far as the area between the 1759 and 1773 turnpikes. There are no surface features to indicate coal was removed via the sough.

Notice that the bedrock here, and further down-valley, is a fairly robust sandstone. The Yard seam sits on top of it and is followed by a rather more mixed ensemble comprising thin beds of alternating silt/mud rocks and sandstones. Not far above, and making up the top of Castids Common, massive sandstone returns.

GF11 – Possible Outcrop Working

Looking across the Goyt from the road, there is a series of intriguing hollows in the hillside just behind the wall. These follow the line of outcrop of the Yard coal. Several linear hollows can be made out, which may be the sites of collapse into "day-eye" (adit) mines. There is evidence of a track behind the wall.

GF12 – Derbyshire Bridge Coal

Crossing the bridge and following the bank Northwards gives access to a steep eroded gully. This is the point to which modern moorland drainage ditches converge. At the bottom it is usually possible to find small samples of coal, evident from its typical shiny surface, crisp cleavage, and lower density. Please leave for others to enjoy!

GF13 – Thin Shale/Grit Beds

The thin bands of sandstone interspersed with shale are cleanly exposed here. This is the material in which most of the shaft excavation on Ravens Low (Flat) would have occurred. It would make for relatively easy excavation but is evidently quite unstable, limiting the expected lifetime of an un-ginged shaft and the extent of unsupported coal extraction. Contemporary records do, however, remark that there was

quite a strong bed of rock above the coal seam, such that the roof did not need a great number of timber supports.

The coal seam is recorded as outcropping between the road and stream in mine abandonment plans, but this is lost.

GF14 – Syncline Core

View from the road.

The strata here are clearly close to horizontal (at least in the exposed face; recall that the syncline gently plunges North).

Seeing this gives an impression of the extent of the syncline; this point is close to the level of the Yard Coal seam also found to outcrop above GF02, some 65m higher in altitude, slightly less than 1km away.

We can also see how easily the shales are eroded.

On the opposite (S) side of the road, the site of Moss Hall is visible as the relic of its footings and between there and the stream, a collapse into old workings occurred in 2009. This showed the approach which the miners took, which was to cut a grid-like pattern of tunnels about 2m wide, leaving pillars roughly 2m across (but widening upwards) to support the roof. This is known as "pillar and stall".

GF15 – Site of Pumping Engine

This is really not worth the struggle over moorland.

This was the site of a pumping engine on colliery plans and was probably used from the late 1860s. It was approached by a track from the NE and is recorded as having been sunk 30 yards deep along the line of a fault. It was probably needed because the fault displaced the seam down by around 10m on the Southern side. The 1896 OS map marks it as "Old Coal Mine" but a few years earlier it was still marked as "Coal Pit" (see map excerpt below).

A platform here indicates the probable site of the pumping engine, but no foundations have been noted, and no documentary detail about it has been reported.

A few other surface features from the same period of working are not very far away in the vicinity of Tinkers Pit. There are crown holes between the 1789 and 1821 turnpikes, at the Southern limit of working. There are also shaft remains immediately North of where the Congleton road branches off, and some probable crown holes near the termination of the nearby level. Further shaft remains may be seen at the side of the minor road towards Derbyshire Bridge. It has been suggested that these might

have been trials to prove the extension of the Yard Coal beyond the faulting prior to the expense of driving the Goyt Tunnel and/or its Southern branch. They are shown as “Air Shaft” on the OS map published in 1883 (see below). It is interesting to consider these features in relation to dates given on the colliery plan which is reproduced in Mining History 19-2, plate 24.

Extras – A Walk Along the Wall

These don't fit nicely as a detour but there is a frequented path along the wall which affords good views over the head of the Goyt Valley and passes some features associated with the Goyt Colliery.

GW09 – Access Gate

GF18 – Wharmby's Trial Pit?

Just over the wall is a hollow which may be the feature marked on the colliery abandonment plan as “Wharmby's Trial Pit filled up”. It isn't known why or when this was dug, and it isn't easily explained since a search for the outcrop would surely involve digging a trench.

The 1861 census reports colliers called Wharmby lived at Level Cottage in Burbage: William (age 58), William (18), George (16), and Peter (13). William senior had come from New Mills. Baptism records for St John's church show that he was described as “collier”, “overlooker at coal works”, and “colliery agent” in 1847, 1850, and 1857. They also show his wife was called Mary, and that he had a daughter of the same name. Level Cottage was presumably the cottage at the portal of the Lower Burbage Level.

GF19 – Possible Crown Hole

Mine abandonment plans show the coal under here was worked in 1879, being at the limit of working towards outcrop (worthless “tender coal” is to be found close to outcrop). The depression in the ground may be a crown hole or the site of quarrying for wall-building.

Several more depressions are to be found between 50m and 75m further along the wall, with the same possibilities for interpretation.

GF20 – Air Shaft

The shaft was 8 yards deep and marks the limit of extraction of Yard Coal. The abandonment plan shows that they worked up the sloping seam, reaching here in 1880. They then appear to have removed coal either side of the incline which ran up to the air shaft, proceeding down-dip between 1882 and 1885. The miners had presumably left this to make a safe route for removing coal and removed it while retreating from the worked-out area.

Sub-itinerary B: Castids Common

This is an excellent area to explore the network of causeways and shaft tops. Going underfoot is much easier than on Raven's Low and the causeways are easily made out. It is a Scheduled Monument.

The OS 1st Series map (ca 1840) names this area, between Deep Clough and the River Goyt as "Coopers Nose".

GF16 – Holloways – Original Access Points

View from the road.

Immediately opposite where the 1773 joins the 1759 turnpike, at the modern-day "T" junction, was the principal point at which coal was removed from Castids Common. Notice the hollow cut into the hillside by the pack horse traffic and that this is the "trunk" from which the tree-like pattern of causeways branch. The shafts connected via causeways to this exit point have been dated from around 1790 to some time after 1820 (abandoned by ca 1840).

A smaller hollow about 50m East only has a short section of causeway and may have been associated with an earlier phase (early 18th century) of mining on the lower ground at the far SE corner of Castids Common.

GW07 – Parking, Access Point, and Site of Marchington Farm

Marchington Farm was built in the late 18th century, and may have subsequently become the Coach and Horses Inn, but was demolished when the Fernilee Reservoir was built.

The Southern part of Castids Common is enclosed (so "Common" is a misnomer) by well-built and substantial walls, and there are several good quality gate posts. It seems likely this was constructed at the same time as Marchington Farm.

GF17 etc – Causeways, Pits, and Platforms

This is given as a suggested route with a few points to notice, but it is a sufficiently compact area to explore quite thoroughly.

Points to note:

Many of the shafts here have adjacent gin platforms (see Background), usually on the up-hill side. In some cases, quite substantial (high) mounds have been built.

The walls cut across the causeways without gateways (mostly!), showing that mining had ceased by the time of enclosure.

The pattern of causeways shows that shafts were progressively developed from South to North; notice how the routes to more northerly shafts seem to either go via more Southerly shafts or to branch off from the causeways leading to them.

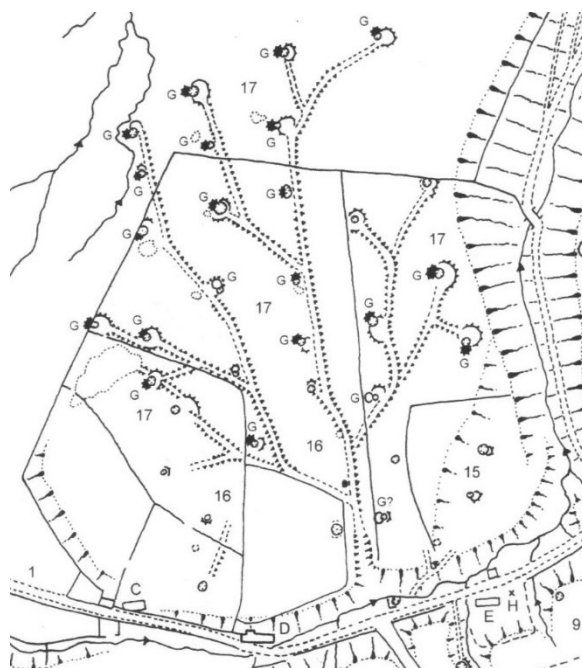
Suggested Route

Follow the track from the access point to GW08, then trace the route of the causeway heading NNE, before taking the branch heading ENE (parallel to the wall). Admire the shaft and gin platform at GF17. This is also a good vantage point to survey the ground to the East, imagining the approximate line of the outcrop of the Yard coal on the hillside from just above GF02, roughly along the line of the fence just West of the ridge, to just behind GF05.

An area of disturbed ground just over the wall (S) from here looks like a quarry. The top stratum of Castids Common is sandstone, in contrast to the shales seen in the adjacent valley. This might have been a good place for walling stones, for the construction of Marchington Farm, or maybe was used for causeway material.

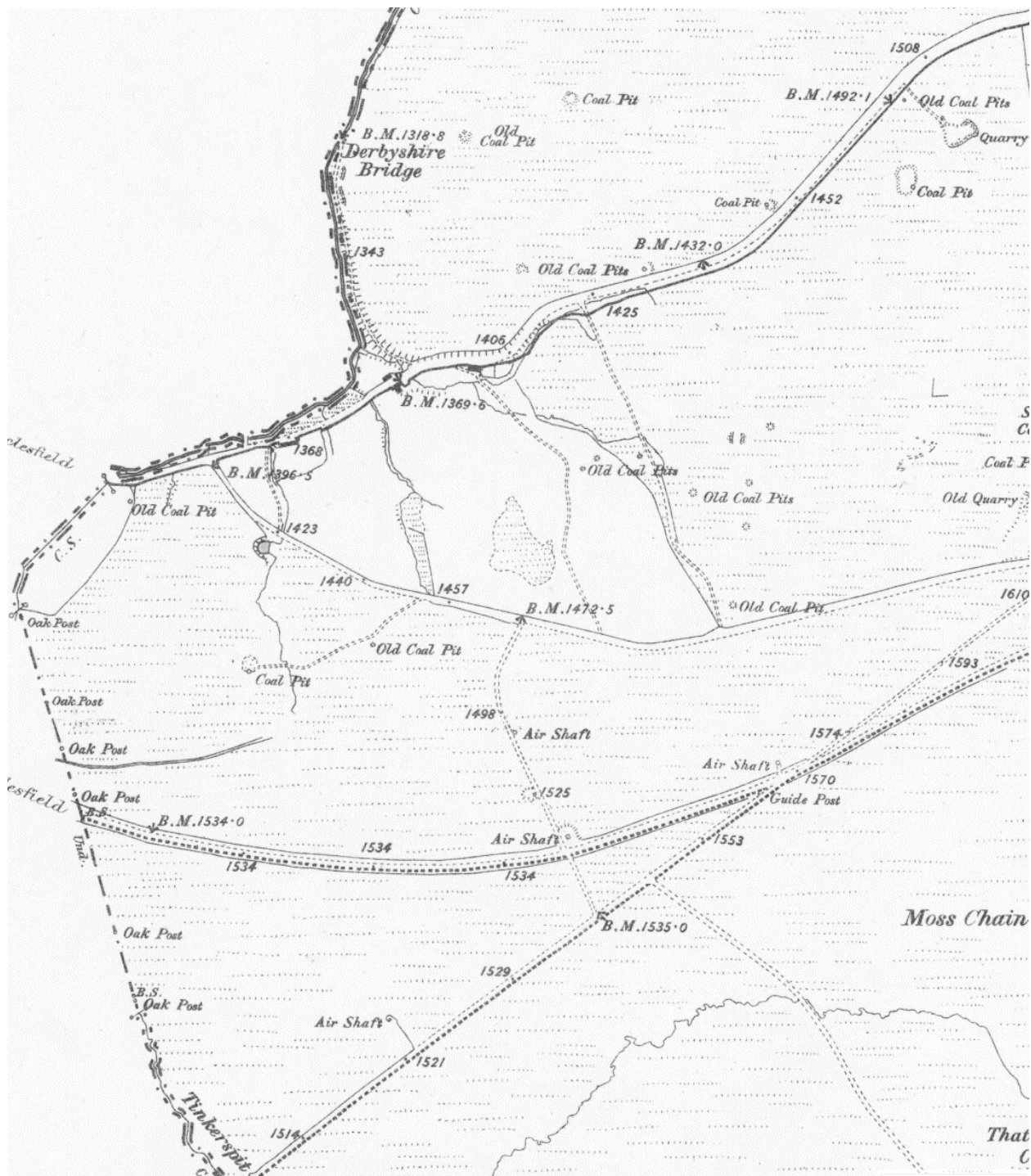
Continue up to the Eastern wall, noting how it cuts between a shaft and its gin platform before following the wall past another small quarry feature, and shaft, up to the point where the wall cuts another causeway.

Strike out to the gate, optionally going through it to explore to the North, before returning to the access point via the causeway and track by which you entered.



*Mining Features for Sub-itinerary B. "G" denotes a gin platform. Building C is Marchington Farm.
(c) John Barnatt, from Mining History 19-2.*

Excerpt from the 6" OS map published in 1883 (surveyed 1878/9) showing features associated with the late working of this area via the Goyt Tunnel



Note the cluster of air shafts in the South, the pumping engine, GF15, and GF01/2 are marked "Coal Pit", rather than "Old Coal Pit". Curiously, the North-most pit in this excerpt is not marked "Old", although it is outside the area understood to have been worked via the Goyt Tunnel. Maybe it was re-opened to provide ventilation for nearby workings in the 1860s. It does have a particularly steep and narrow run-in.

Maps and Digital Location Data

Several different maps and location data are provided with this guide, within the “zip” file which contains this document:

- There are three kinds of PDF files covering the itineraries which may be printed, viewed on-screen, or used in location-aware mobile device apps.
 - One contains the route and points of interest.
 - One contains geological information, including the lead veins (black lines with circular dots overlain) and geological faults (plain black lines).
 - One is based on Lidar data and shows the ground surface (without trees, buildings, walls etc).
- For this guide, there is an additional PDF file which shows an overview of the historical communications routes.
- The GPX file can be used in many GPS devices as well as mobile device mapping apps.
- The Microsoft Excel file contains grid references for all the features, viewpoints, and waypoints. The same information is included below, in the Supplement.

Caveat concerning the bedrock geology and faults/veins shown on the maps

As is often the case, the BGS mapping of mineral veins does not precisely match what is inferred from observed workings. This is thought to arise from the unavailability of GPS locations when the BGS surveys were recorded.

The principal upshot in this area is that caution is needed when interpreting mining features in relation to coal seam outcrop and likely depth. It is also worth noting that the geological faults shown are often gross simplifications from the point of view of the miners, for whom displacements which would be insignificant at a regional geology scale presented serious obstacles.

A few of the faults and some of the coal seam outcrops shown on the maps have been adjusted from those shown on BGS maps to better correspond with mining history evidence. The bedrock colouration on the maps has not been changed, however, leading to incongruities in places.

Using Maps and Data on Mobile Devices

There are too many options to give a comprehensive picture, so this section is meant only to give some hints and a basis for some “desk research”.

The GPX file is probably the best starting point if you already have a digital mapping app installed, especially if you have OS maps in that app as this file only contains the location data.

An alternative which includes a map is to use one the “mbtiles” files. These are not included in the zip file as they are rather large but can be downloaded separately. My preferred app for using these is SWMaps but a better app people with less digital mapping experience is MapTiler Mobile. It allows for relatively easy loading of MBTiles maps but it will be necessary to register and get the Free (rather than Anonymous) plan. MBTiles can be put on Google Drive and then accessed on Android phones as “local” storage. MBTiles maps can also be used on a desktop/laptop PC using the Maptiler Desktop software.

The MBTiles maps have a slightly different coverage and map content than the PDF maps, which are really designed for printing to-scale.

Finally: the PDF files are “georeferenced” so can be used with suitable software on a mobile phone or tablet, combined with its GPS, to show your location in relation to the itinerary or geology. Software which can work with these “geopdf” maps includes Avenza and GeoPDF.

Summary of Grid References

| | | | |
|------|--------------------------------------|-----------|------------|
| GF01 | Run-in Shaft and Gin Platform | feature | SK02227179 |
| GF02 | Goyt's Colliery Air Shaft and Spoil | feature | SK02387182 |
| GF03 | Green Mound | feature | SK01947178 |
| GF04 | Track and Old Holloway | feature | SK02027220 |
| GF05 | Crown Holes | feature | SK02097217 |
| GF06 | Crown Holes or Possible Open-casting | feature | SK02037228 |
| GF07 | Possible Day-eye Mine | feature | SK01867239 |
| GF08 | Possible Day-eye Mine | feature | SK01827238 |
| GF09 | Possible Early Day-Eye Mine | feature | SK01817202 |
| GF10 | Sough | feature | SK01777207 |
| GF11 | Possible Outcrop Working | feature | SK01747197 |
| GF12 | Derbyshire Bridge Coal | feature | SK01717189 |
| GF13 | Thin Shale/Grit Beds | feature | SK01717167 |
| GF14 | Syncline Core | feature | SK01657154 |
| GF15 | Site of Pumping Engine | feature | SK01597120 |
| GF16 | Holloways - Original Access Points | feature | SK01527149 |
| GF17 | Causeways, Pits, and Platforms | feature | SK01317175 |
| GF18 | Wharmby's Trial Pit? | feature | SK02547188 |
| GF19 | Possible Crown Hole | feature | SK02567167 |
| GF20 | Air Shaft | feature | SK02567149 |
| GV01 | Causeway and Mounds | viewpoint | SK01987167 |
| GV02 | Stile and View Over Holloway | viewpoint | SK01847218 |
| GW01 | Parking | waypoint | SK01857158 |
| GW02 | Access Gate | waypoint | SK02327188 |
| GW03 | Access to Raven's Low Flat | waypoint | SK02177174 |
| GW04 | Alternative Access Point | waypoint | SK02077171 |
| GW05 | Stile | waypoint | SK01917208 |
| GW06 | River Crossing | waypoint | SK01787208 |
| GW07 | Parking and Access | waypoint | SK01267149 |
| GW08 | Causeway | waypoint | SK01437163 |
| GW09 | Access Gate | waypoint | SK02517202 |
| GWX1 | Stile | waypoint | SK01707246 |
| TF01 | Working Area and Coking Ovens | feature | SK03297214 |
| TF02 | Evidence of Tramway | feature | SK03237213 |
| TF03 | Upper Burbage Level Portal | feature | SK03157209 |
| TF04 | Top of Incline | feature | SK03217207 |
| TF05 | Lower Level Air/Rising Shaft | feature | SK03097202 |
| TF06 | Possible Open Casting | feature | SK02927216 |
| TF07 | Upper Burbage Level Intercept | feature | SK02847201 |
| TF08 | Site of Steam Engine and Horse Walk | feature | SK02807169 |
| TF09 | Possible Water Capture | feature | SK02767167 |
| TF10 | Remains of Boothman's Cottage | feature | SK02667140 |
| TF11 | Site of Bucket Engine and Fault | feature | SK02837139 |
| TF12 | Quarry in Rough Rock | feature | SK02837079 |
| TF13 | Stone Causeway Bed | feature | SK02847028 |
| TF14 | Site of Engine House and Spoil Heaps | feature | SK02947006 |
| TF15 | Entrance to Inclined Drift | feature | SK02897005 |
| TF16 | Raised Incline Bed | feature | SK03116994 |
| TF17 | Retaining Wall | feature | SK03286981 |
| TF18 | Bottom of Incline | feature | SK03386977 |
| TF19 | Fire House | feature | SK02737044 |
| TF20 | Centre of Working | feature | SK02727068 |
| TF21 | Deep Run-in | feature | SK02767054 |
| TF22 | Gin Circle | feature | SK02777067 |

| | | | |
|------|---|-----------|------------|
| TF23 | Shaft and Gin Circle | feature | SK02697093 |
| TF24 | Holloway | feature | SK03117170 |
| TF25 | Buxton Water Works and C&HPR Siding | feature | SK03327209 |
| TF26 | Quarry | feature | SK03277206 |
| TF27 | Lower Burbage Level (site) | feature | SK03727231 |
| TF28 | Level Lane | feature | SK03777241 |
| TV01 | Grin Hill, C&HPR, and Burbage Reservoir | viewpoint | SK03467231 |
| TV02 | Capped Shaft | viewpoint | SK02787188 |
| TV03 | Survey the Landscape | viewpoint | SK02677150 |
| TV04 | Shallow Workings Near Outcrop | viewpoint | SK02857095 |
| TV05 | Burbage Colliery Spoil Heap | viewpoint | SK02837063 |
| TV06 | View Over Incline | viewpoint | SK03177002 |
| TW01 | Parking | waypoint | SK03547237 |
| TW02 | Access Point | waypoint | SK02897132 |
| TW03 | Leave the Public Footpath | waypoint | SK02837091 |
| TW04 | Car Parking and Access Point | waypoint | SK02867031 |
| TW05 | Access Point | waypoint | SK02717032 |
| TW06 | Car Parking | waypoint | SK03506985 |
| TW07 | Upper Burbage Causeway | waypoint | SK02877175 |
| TW08 | Route to Lower Burbage Level | waypoint | SK03417223 |

Information Sources and Further Reading

Historical information and geological details have been obtained from the following sources. My thanks go to the authors of these articles.

Mining History back issues are available from the PDMHS website (see below).

The trip(s) which each relates to are indicated by the content of brackets following a source, using the same letter as begins each location code. e.g. [T]

Mining History:

This is the primary source used and is the recommended resource for further information, being a comprehensive and up-to-date account of the surface remains and documented history

Coal Mining near Buxton: Thatch Marsh, Orchard Common and Goyt's Moss

J Barnatt, volume: 19, number: 2, pp: 17-107 [T, G]

Other Sources:

Crown Holes, Goyt's Moss Colliery, Hartington Upper Quarter

Observations and Discoveries, PDMHS Newsletter 165

Note that the interpretation of some features offered in Mining History 19-2 differs from the next two sources, as noted by John Barnatt on p33.

Coal Mining Near Buxton

J Leach, Derbyshire Miscellany volume 11, number 1, pp: 3-8 [G]

The Goyt's Moss Colliery, Buxton

J Barnatt & J Leach, Derbyshire Archaeological Journal, volume 117, pp. 56-80 [G]

Scheduled Monument Listings, Historic England (some of these contain comprehensive detail and good background information, accessible from <https://historicengland.org.uk/listing/the-list/>):

- 1014868 - Part of Goyt's Moss colliery, centred 220m south west of Derbyshire Bridge

Other Acknowledgements

Maps were created using QGIS open source GIS software. Field observations were recorded using the SWMaps Android app.

Mapping Source and Copyright

The maps with this guide have been created with the aid of data and images from a variety of sources.

Base Mapping

Most of the base maps have been created using vector data from Open Street Map. Overview maps have been produced from the OSM raster map tile service. This is © OpenStreetMap contributors and used under the terms of the Open Database Licence.

The data was acquired using the “QuickOSM” QGIS plugin.

Source: <https://www.openstreetmap.org/export>

Licence: <https://opendatacommons.org/licenses/odbl/>

The overview map on the title page is created using the OS Open Data Road layer from the OS Maps API, “© Crown copyright and database right 2024” and used under the Open Government Licence.

Place Names, Boundaries, and Contour Lines

Most of the place names are drawn from OS Open Names, contour lines use the OS Terrain 50 dataset, and parish boundaries are drawn from OS Boundary-Line which are “© Crown copyright and database right 2024”. They are licenced under the Open Government Licence.

Source: <https://www.ordnancesurvey.co.uk/opendatadownload/products.html>

Licence: <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Geological Information

Maps with bedrock colouring contains British Geological Survey materials © UKRI 2020. Bedrock data was obtained from the British Geological Survey 1:50,000 scale WMS service. This data is licenced under the Open Government Licence.

Source: <https://www.bgs.ac.uk/data/services/digmap50wms.html>

Licence: <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

LIDAR DTM and Composite Data from the Department for Environment Food & Rural Affairs

Digital terrain models used for creating profiles and composite map visualisations are from Defra, used under the Open Government Licence v3.0.

Source: <https://environment.data.gov.uk/DefraDataDownload/>

Licence: <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Old OS Maps

Old OS maps are generally six-inch maps from the later part of the 19th century and are reproduced with the permission of the National Library of Scotland. These maps are licenced under the terms of the Creative Commons Attribution (CC-BY) licence.

Source: <https://maps.nls.uk/os/6inch-england-and-wales/>

Licence: <https://maps.nls.uk/copyright.html>

This Work

This is version 1.0, 20 January, 2024.

An electronic copy and all map and data downloads may be obtained from:
<https://adam.hilltop-cottage.info/field-guides>.

New guides and new versions will be published there. Errors and omissions may be sent to arc@hilltop-cottage.info (please indicate “Field Guide” and the name of the excursion) or via the website.

This work (the text and maps) is © Adam Cooper, 2024 unless attributed otherwise. Use is permitted under the Creative Commons Attribution (CC-BY 4.0) licence. You are encouraged to distribute the guide in its entirety.

