

## Part 2: Early coal mining to 1840

### 1. Introduction

**1.1** The first known record of coal mining on Clee Hill appears in a record of 1235 when Wigmore Abbey received five shillings from the sale of coal from Titterstone Clee, (Jenkins, 1983 quoting Murchison writing in the 19<sup>th</sup> century). Other early records for the commercial production of coal include a mention of the carting of coal in a grant of a right of way in 1250 to the Abbot of Buildwas and a licence for the digging of coal in the Clee Hills of 1260. In this early period coal was used as a fuel for lime-burning, brewing, smelting and black-smith work as well as in other small manufacturing processes such as dyeing etc. It was not generally favoured as a domestic fuel as the only habitations with chimneys were large stone buildings such as monasteries and the castles and manor houses of the aristocracy. The majority of the population still employed open hearth wood or peat fires. However the coal industry continued to grow alongside the lime-burning and smithing which flourished alongside the many castles, churches and abbeys built during the fourteenth century. On Clee hill its extraction seems to have developed alongside the iron-ore extraction which was an important resource at this early phase of mineral exploitation. As the Wigmore Abbey record suggests its domestic market was in this upper level of society. Its more commercial use is likely to have been in the lime-burning industry which has a long history upon the hill.

**1.2** Writing in 1850 Samuel Dobson, ‘a respected mining surveyor’, categorised the ironstone deposits of Titterstone Clee as ‘occurring in the shale underlying the *Great Coal*, overlying the *Three Quarter Coal*’ and in the black shale between the *Three Quarter* and *Smiths Coals*, overlying the *Four Foot Seam* and on the roof of the *Gutter Coal* is found a *Black Band Ironstone* from 6in to 20in thick’.

**1.3** It follows therefore that there are four principal coal seams: The Great Coal 6ft thick, Three quarter coal 2ft 9in thick, Smith Coal 4ft 6in thick and Four Foot Coal 4ft thick. Extraction of the iron stone would have clearly involved miners also encountering the coal reserves.

**1.4** The earliest form of coal extraction is likely to have been carried out alongside the working of the ironstone as ‘trench mining’ a term used locally a similar technique to that referred to in the Forest of Dean area as ‘scowls’ working. Both of these local terms relate to a form of small-scale open-cast mining following the mineral seams where they are close to the surface. Such workings often commenced in a stream valley where deposits could be seen, exposed by the erosion of the stream valley. The seam was then chased back into the hillside as a series of linear hollows with the surface overburden removed to expose the mineral deposits.

### 2. The Mine Owners

**2.1** From 1713 onwards this early mining both of iron stone and coal was controlled in a large part by Knights of Downton Hall and their successor partnerships who in this early 18<sup>th</sup>-century period also operated the furnace at Charlecotte, a structure which still survives largely intact today. By this period in other areas, shallow open-cast and bell pit style mines were in general being replaced by deeper shaft mines. However the Clee coal field continued with this more archaic method of extraction so

that in 1732 the Knights partnership was still working the Gutter Coal at Cornbrook, by a drift mine known as the Footrail Pit and two 'bassett pits'. These were subcontracted to so-called *charter masters* Richard and John Hatton and Thomas Glazebrook. Downton Hall was also working coal on Catherton Common at Heath Colliery under the subcontract to Samuel Haycox, who in 1734 leased it from the Knights Partnership for a royalty rent of £40 per year (Hewitt 1991). It is to this period that majority of the bell pits that are so characteristic of Clee Hill belongs.

**2.2** These early methods of extraction were pioneered in the iron stone mining and as proven methods continued into the later period when coal became a more valuable fuel as furnaces switched from charcoal to coal. As a result of this, the industry can be characterised into two early phases of mineral exploitation up to *c.* 1750 having an emphasis on the primary extraction of ironstone with a secondary element of coal production. However, with the success of the iron production, coppice woodland began to become exhausted locally and the cost of charcoal rose. Alongside this, in 1709 Abraham Darby working at Coalbrookdale developed a coke furnace and from 1755 on charcoal furnaces declined so that by 1788, of 24 blast furnaces operating in Shropshire only three were still charcoal fired (Hewitt 1991). The fortunes of the Knight family seem to have declined as the Charlecotte furnace became more costly to maintain. As a result, by 1752 the Knights were extending their coal mining activities and contracting iron production so that at the end of the partnership in 1779 only their Bringewood furnace remained in operation.

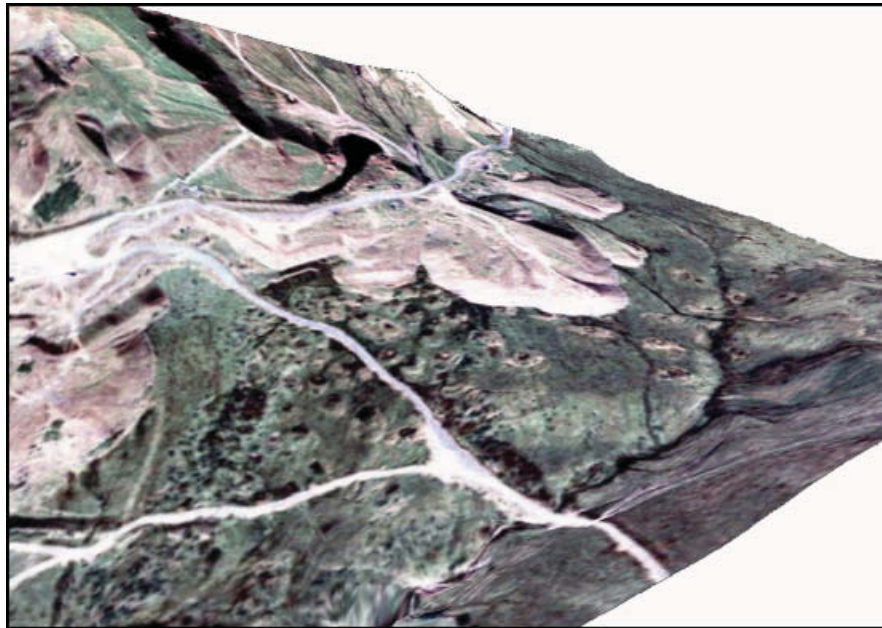
**2.3** As noted above, in the case of the Downton Estate mining appears to have been organised on a minerals lease basis, an example of such an arrangement being the Pardoe family of Cleeton who were operating the Treen Pits amongst others, on Hoare Edge under lease from Lord Craven. The Pardoes operated from 1733, mining both iron and coal up until a conflict over the terms of the lease erupted. This centred on the potential difference between a fixed rent basis and operators raising more coal than anticipated. This disagreement ran from 1766 and ended in 1768 when, unable to reach a satisfactory solution to the conflict, Craven gave short term leases at minimal rents to small companies to work coal adjacent to Pardoe's works. With the death of George Pardoe senior his son, also George Pardoe, of Nash Court attempted to renew the mining leases but the ability of small mining operations to work more cheaply and sell coal at a lower rate forced him ultimately to abandon his mine workings.

### **3. Mining methods**

**3.1** By the middle of the 18<sup>th</sup> century iron and coal extraction on Titterstone Clee was still using shallow-based mining techniques following the outcrops as they ran in an arc around the east, south and west flanks of the hill. It is the nature of the techniques employed that has created the concentration of mining remains that characterise this part of the hill and it is estimated that well over 2000 such pits survive in this arc. The distribution of these workings can be seen on Map 1.

**3.2** It is the multiple nature of these workings that makes it so difficult to confidently identify the workings of particular mines. However, it is perhaps possible to go some way in identifying phases of mine workings from the characteristics of the surviving mine remains. All the mines of this period were in general shallow workings of short duration which employed few men and used very basic pit head equipment which could be easily moved. However several varying styles of mine can be identified.

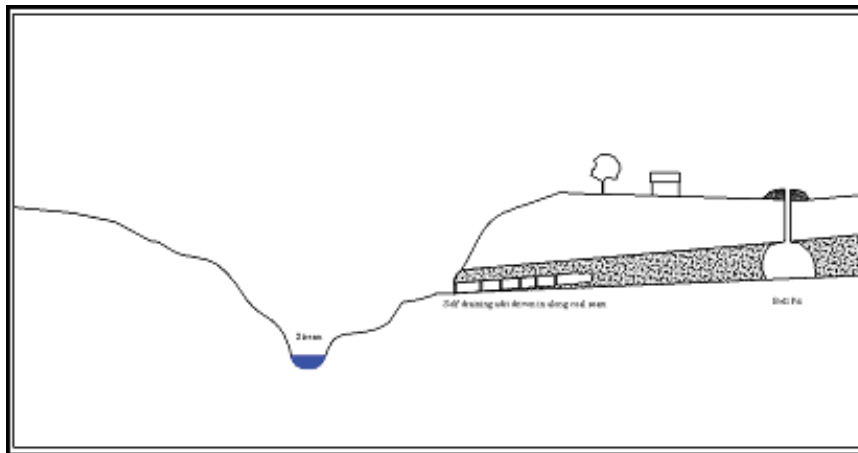
- **Open-cast**, as described above, the simplest and earliest method of extraction is the open-cast trench mining of close to surface deposits, overburden being removed where the coal occurs close to the surface and the seams followed by open trenches. Few examples of this style of mining remain extant as they tend to be over-worked by later, deeper pits. However, it is possible to recognise some evidence of this type of working as at Horseditch in proximity to Benson's Brook and possibly on parts of Catherton Common.



*Fig. 1: Opencast and bell pits at Benson's Brook*

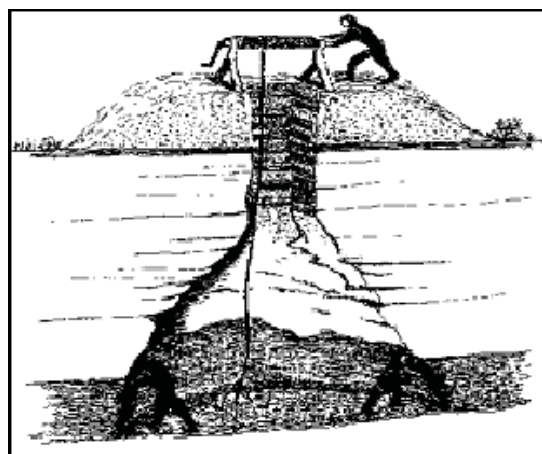
- **Drift mines** were a natural progression from trench working where roads were driven into the hillside following the coal or iron seams. This type of working is known by a variety of regional names throughout the country - in the Forest of Dean as 'gales', in the tin workings of Cornwall as 'wheals and in South Wales as 'futerrails'. A version of this latter form appears to have been adopted on Clee as 'footrail'. As noted above the Knights' Cornbrook drift mine was referred to as the 'Footrail Pit'. In the Cornbrook area, this pit was driven upwards at an angle of between 15 and 20 degrees following the dip of the Gutter Coal. This had the advantages of allowing drainage by channels cut into the sides of the drift floor. The angle of the drift at the Footrail Pit also allowed loaded tubs to be moved from the face by gravity. Characteristically, such drifts had a problem with both drainage and ventilation. On Clee Hill the high rainfall in winter months and the spring line made these simple drifts notoriously wet. As a result many were abandoned or later converted into drainage adits. A modification of the technique designed to alleviate the problem was the drainage sough. Here the drift itself is driven from the hillside sloping downwards. A smaller adit or sough is driven from a lower position on the hillside in a slightly rising plane to intersect with the drift itself as far into the seam as possible. Water would drain from the work area into the sough and flow out beneath the drift itself. On Titterstone Clee, the upward angle of the seams would have made this system impractical. Where drift mines were worked successfully over a length of time, ventilation also became a problem and it was necessary to drive a ventilation shaft vertically from the

surface to create a circulation of air within the mine. The remains of several such drifts can be identified around the hill. The Footrail Pit itself was still accessible up to comparatively recently but its entrance can no longer be located.



*Fig.2: Section through simple self-draining drift mine*

- **Bell pits** were small pits where a shaft averaging 3-5ft in diameter was sunk vertically through the overburden into the coal seam. The coal was then worked out around the shaft creating a bell-shaped profile until the point that the roof of the pit became unsafe. Spoil and coal were raised from the pit by a simple bucket system. By this time, another shaft would have been cut adjacent to the first down to the coal, ready for opening. In this way it was a continuous process, the spoil from the excavation of the new shaft being used to fill up the adjacent exhausted pit. Characteristically, the coal extracted formed a shallow hollow of a rough circle in plan with an average diameter of 6m and a distance between pits of 5 to 10m usually with a crescent of circular spoil mound surrounding the central shaft. These were small gang work operations, not without some danger and considerable skill would have been required to know how far the bell could be extended before collapse occurred. It can be seen from the description of the process employed how rapidly this type of pit can proliferate over an extensive area.

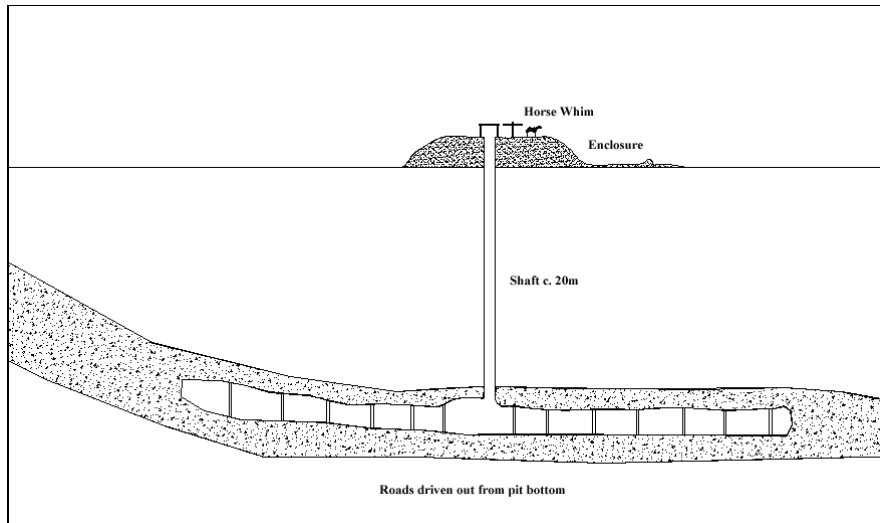


*Fig. 3: Section through bell pit*

- **Bassett Pit** A third method of working was the so-called 'bassett pit' which seems to have been an adaptation of the bell pit technique. Here again, short vertical shafts were driven to the coal seam and the coal extracted to the base of the seam.



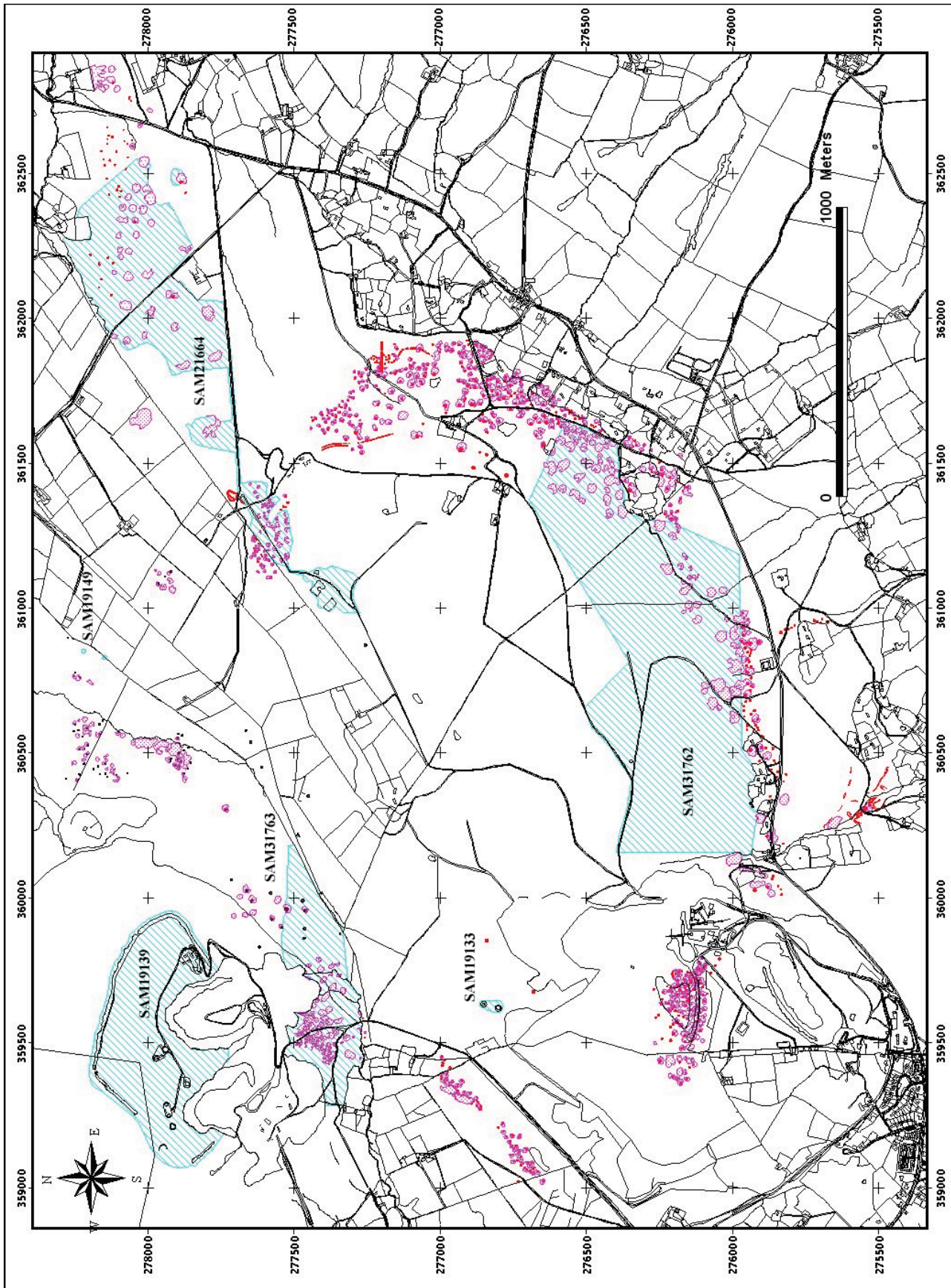
Roads were then driven out from the pit bottom along the seam as working faces. These mines required the use of wooden pit props to support the roadways as the face was driven back along the coal seam. Here again ventilation was by natural air flow from the shaft and the farther from the shaft the roads progressed, the more stale and ultimately foul the air at the work face became. These pits produced considerably more spoil than the smaller bell pits and were spaced at wider intervals. The pits on the saddle in the area of Willmore Pool centred SO 5988 7763 and below Magpie Hill, centred SO 6233 7805, appear from their spacing and size to belong to this class of mine.



*Fig. 4: Section through a bassett pit*



*Plate 1: Bassett pits on the lower slopes of Magpie Hill*



*Map 1: Shallow-mining following mineral seams*



#### 4. TCR walkover survey: individual site details

**TCR (C201)**  
**MSA 3735**

**NGR:** centred at SO 5911 7672

A group of 32 bell pits lying along a west-facing slope to the west of Dhustone Lane below Hoare Edge, running from SO 59014 76643 in the south to SO 59221 76792 in the north on a SW-NE orientation (252m by 84m) to give an overall area of some 1.7ha. The pits lie across the slope at a height of 409m AOD in the south, 429m in the north. The shafts vary in diameter from the largest at 9.0m to the smallest at 3.5m with an overall average of 5.0m. The content of the waste mound indicates that they were coal workings. This complex appears to be working the same coal seam as the Horseditch pit complex which lies to the north-east and these pits may be an extension of this mining operation.

#### **Management Statement**

The pits lie in marginal but enclosed hill pasture which shows evidence of having been improved by herring bone drainage at some time in the past. Today the vegetation is a mixture of grass, sedge and some gorse.

#### **Action**

RCHM(E) 1983 survey digitised and georeferenced with O.S. Landline and aerial photography.



*Fig.5: Location and distribution of bell pits centred at SO 5911 7672*

## Recommendations

This group of bell pits lies in enclosed hill pasture to the north-west of Dhustone Lane and is not visible from the Lane. There is a footpath from the lane to Nine Springs Farm which passes close by the SW corner of the group. However, these pits do not readily lend themselves to any enhanced presentation.

No further action required.

## Statement of importance

CRITERIA	HIGH	MEDIUM	LOW
SITE ID: TCR (C201)			
Rarity		*	
Documentation		*	
Group value	*		
Survival/condition	*		
Fragility/vulnerability		*	
Diversity		*	
Potential		*	
Amenity value			*



**TCR (C202)**  
**MSA 3735**

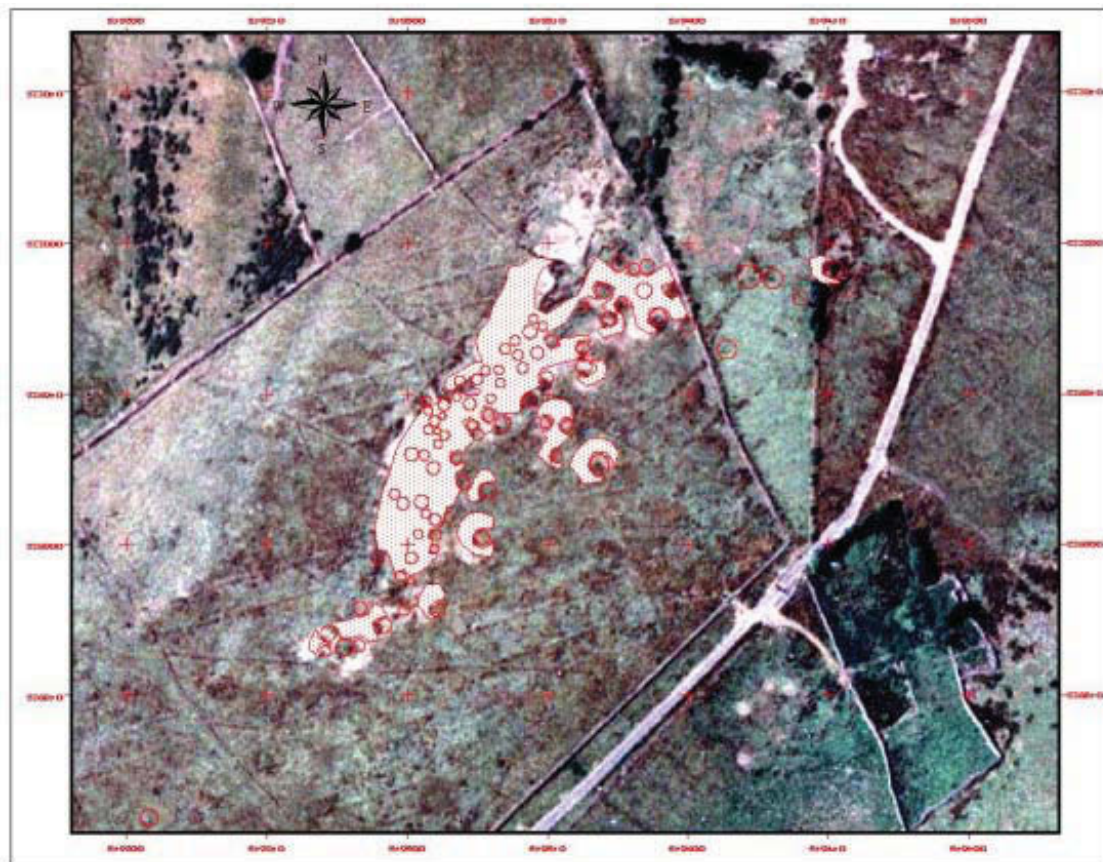
**NGR:** centred at SO 5933 7695

A group of some 75 bell pits lying along a west facing slope to the west of Dhustone Lane below Hoare Edge, running from SO 59265 76857 in the south to SO 59453 77000 in the north on a SW-NE orientation (240m by 75m) to give an overall area of some 1.4ha. The pits lie across the slope at a height of 431m AOD in the south, 439m in the north. The shafts vary in diameter from the largest at 7.0m to the smallest at 3.5m with an overall average of 5.0m. The content of the waste mound indicates that they were coal workings. This complex appears to be working the same coal seam as the Horseditch pit complex which lies to the north-east and these pits may be an extension of this mining operation.

The pits lie in enclosed hill pasture which shows evidence of having been improved by herring bone drainage at some time in the past. Today the grass is a mixture of grass, sedge and some gorse.

**Action:**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography.



*Fig.6: Location and distribution of bell pits centred at SO 5933 7695*

### Management Statement

The pits lie in marginal but enclosed hill pasture which shows evidence of having been improved by herring bone drainage at some time in the past. Today the vegetation is a mixture of grass, sedge and some gorse.

### Recommendations

This group of bell pits lies in enclosed hill pasture to the north-west of Dhustone Lane and is not visible from the Lane. There is a footpath from the lane to Nine Springs Farm which passes close by the SW corner of the group. However, these pits do not readily lend themselves to any enhanced presentation.

### Statement of importance

CRITERIA	HIGH	MEDIUM	LOW
SITE ID: TCR (C202)			
Rarity		*	
Documentation		*	
Group value	*		
Survival/condition	*		
Fragility/vulnerability		*	
Diversity		*	
Potential		*	
Amenity value			*

**TCR (C203)**  
**MSA 3735**  
**SM 31763**

**NGR:** centred at SO 59567 77395

Situated adjacent to and on the north side of Benson's Brook is a collection of early mining remains scheduled as SM 31763. The remains extend over the hillside for 380m east to west by 250m north to south, giving a total area some 6.2ha and lie between the 430m and 452m contours. The workings are exploiting the so-called 'Gutter Coal' seam which is here close to the surface. The complexity and variation of earthwork remains, suggest that this is an important survival which provides evidence of the development of the early coal mining techniques employed in the coalfield.

The form and distribution of the earthworks suggest that work was commenced along the flanks of the Benson's Brook. The brook issues as a spring in the area named by the Ordnance Survey as Willmore Pool, some 360m to the north-east. A series of springs emerges from beneath the quarry spoil in this area, but there is today no extant pool or pond. The stream flows south west to SO 5966 7728 as a typical hill stream changing here to a westerly flow direction. The character of the stream valley begins to change from this point westwards becoming wider and the stream bed more deeply incised. West of the road culvert at SO 5957 7727 it is flowing through a valley that has widened to some 28m and some 10m deep. Exposures of coal dust, particularly on the southern bank indicate that the coal is in close proximity to the surface (Plate 5) and it may be in these valley slopes that prospectors first recognised and began to exploit the resource. The rapid widening of the stream valley here and a series of rather amorphous shallow scoops cut along its flanks, particularly in the area centred SO 5952 7726, may represent an early phase of coal workings ('A' Fig. 7) (Plate 6) .

A series of shallow linear hollows running north-east up slope from the stream suggests that mining was continued as open 'trench workings' following the coal seams into the upper slope of the hill. Today these workings appear in the proximity of the brook, principally as two shallow depressions which run roughly parallel to each other. The more southerly runs from a point in the south close by the stream bank at SO 5953 7728 to SO 5955 7731 in the north to create a trench some 40m long by 11m wide (Plate 7). The second, 80m long by 12m wide, lies some 60m to the west and runs from SO 5945 7729 to SO 5951 7735. The nature of the vegetation cover in these locations indicates that they are of a wetter nature than the surrounding land. Such trench workings cut into a rising slope would be naturally free draining and would continue to be drainage channels after their abandonment. At their northern extremities these linears are crossed by the course of a later quarry tramway which is today used as a trackway. To the north of this, the mining remains continue as a complex of bell pits and associated spoil.

The 1983 RCHM(E) survey of these pits indicates that these are secondary workings to an earlier phase of open working and that within the earthworks evidence exists for the earlier 'trench workings' (area 'B' Fig. 7). A modified version of this survey is reproduced as (Fig 7), the open workings highlighted by hatching. These workings are centred at SO 5946 7739 and extend over an area some 84m north to south by 45m transversely. From their northern end a narrow trench some 4m wide and averaging

1.2m deep runs between SO 5946 7743 in the south and SO 5947 7749 in the north. To the west a similarly proportioned trench runs from SO 5941 7737 to SO 5945 7748; these well-defined linear features may also relate to this first phase of open mining. Two interpretations are possible for these open workings; that they were extracting coal measures within 2 of 3m of the land surface or that they were removing an overburden possibly as a prospection method to facilitate the positioning of bell pits. What is clear is that the area of trench working was subjected to concentrated bell-pit mining immediately subsequent to the open-casting.

It is perhaps interesting to note that in the area immediately north of the stream, although there are bell pits they are far less concentrated. There is a series of shallow depressions with little or no spoil which may be aborted pits and two separate larger pit concentrations, with considerable spoil. This may indicate that the open trenching was effective in this area, exhausting the coal deposits.

In the area north of the track-way bell pits proliferate; here, the pits are generally small and closely spaced, extending northwards through the trenching and on up slope between SO 5942 7737 and SO 5955 7738. Later quarry spoil tipping has buried any remains which may exist to the north and west. However, the course of the main quarry road, Dhustone Lane, which overlies the bell-pit field, has preserved them to the east. It is apparent that as the pits progress eastwards, presumably following the coal, so they have progressively larger spoil heaps and become increasingly more widely spaced. This suggests that the strata are dipping down towards the north and east and that more depth and effort is required to access the coal.

Two further features are worthy of note - in the north of the complex at SO 5953 7751, is a short length of embankment up to 1m high and overall 4m wide, including a ditch on its north side ('C' Fig. 7). The bank forms a right angle with arms of 20m, the east arm being overlain by quarry spoil. A group of bellpits lies south of the bank within the right-angle at its apex. Its most likely purpose is that of a drainage hood designed to shed water around these bell pits. Some 120m to the south-east is a linear ditch which runs between SO 5962 7743 and SO 5962 7739, ('D' Fig. 7); it may similarly be associated with the management of drainage. The wet conditions, which predominate in this area today, suggest that drainage would have also been a problem when the mine was in operation.

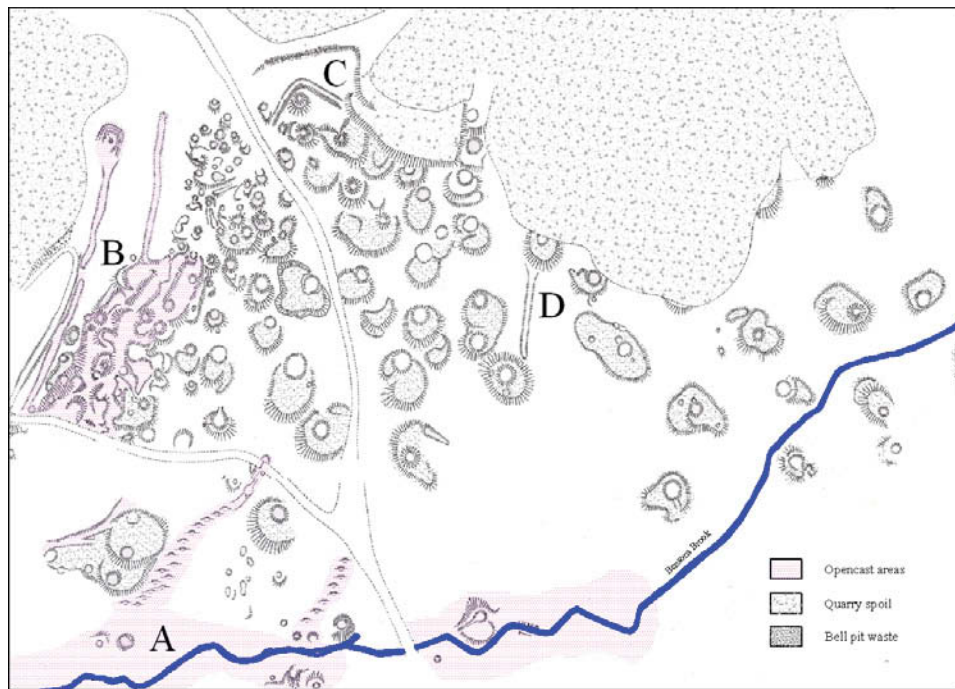
**Action:**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography. Survey drawing modified to clarify phasing. Site visited to confirm condition.





*Fig. 7: Location and distribution of bell pits centred at SO 59567 77395*



*Fig. 8: Modified 1983 RCHM(E) drawing*

**Management Statement:**

The monument is well preserved and lies in open moor land, under coarse grass and sedge type vegetation with some gorse encroachment and in close proximity to the Dhustone Lane, the main access road to Titterstone Summit.

**Recommendations:**

The good state of preservation, variety of surviving works and ready accessibility make this site of high potential value for possible presentation. There is easy parking and good pedestrian access. A prime site for some form of interpretative display, the existing documentation could be used as a part of such a panel.

**Statement of importance**

CRITERIA	HIGH	MEDIUM	LOW
<b>SITE ID: TCR (C203)</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		



*Plate 2: Showing coal staining in the south bank of Benson's Brook*





*Plate 3: Surface scoop workings, south side of Benson's Brook*



*Plate 4: Open trench working*

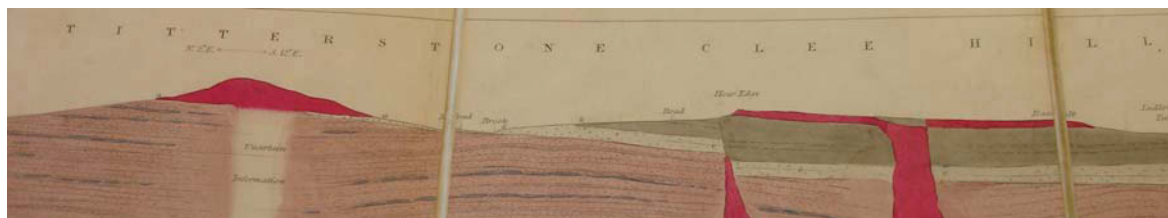
## TCR (C204)

**NGR:** centred at SO 61268 77607

Situated on the north-east facing slope of Magpie Hill, on the eastern face of Titterstone Clee is a collection of earthworks which represents several episodes and techniques of coal extraction within the Titterstone Clee coalfield. The remains are scheduled as a component part of SM 21664, the constraint area of which is more extensive than this group of monuments, taking in several other mining complexes.

The group centred SO 61268 77607 is described here as a coherent group of closely inter-related monuments. They extend over the hillside for 335m west to east and 215m north to south, giving a total area some 5.4ha and lie between the 420m and 365m contours. The complexity and variation of earthwork remains make these sites of high archaeological importance providing evidence for the development of the early coal mining techniques employed in the Titterstone Clee coalfield. Three distinct episodes of coal mining activity can be recognised embedded within the visible earthworks.

Phase one appears to be an episode of bell pit mining exploiting the Gutter Coal seam which runs close to the surface around the east, south and west flanks of the hill. A concentration of some 85 bell pits lies between 370m OD and 420m OD. The coal here occurs lower down slope than in the north where it lies between 430m and 450m OD and south where it lies between 420m and 440m a result of the west to east dipping of the strata and the Hoare Edge fault line.



**Fig. 9: Section of 1854 BGS cross section through hill (Source: Ludlow Museum)**

The bell pits themselves have an average diameter of 6m and depth of between 1 and 2m with spoil from the shaft typically deposited down slope. The spoil tips vary in diameter between 8.5m and 16m and between 1 and 3m high (Plates 8 and 9). Pits are smaller with less spoil lower down slope and larger with bigger spoil mounds up slope. The comparatively small size of the lower mounds suggests that these are the earlier workings and that the coal deposits are here at a shallow depth. As pits progress up slope so the coal is at a greater depth and larger shafts are required. Examination of the distribution of the pits suggests that they occur in groups of between 3 and 6 which may be concentrations on richer coal deposits or possibly an indication of some form of work gang organisation (see Fig.9).

A second distinct phase of working is evidenced in the drift mine which lies immediately north-east from the bell-pit concentration, extending down-slope from SO 61355 77666 to SO 61402 77736 between 380m and 368m OD. This adit is possibly the most accessible and best preserved example of this type of working



currently known upon the hill. The mine itself is cut into the hill from SO 61378 77691 at a height of 375m OD driven south-westwards as a steep sided open cutting some 35m long, 9m wide and 2.5m deep, flat at its base (plate 10). This cutting ends today at SO 61354 77666 where it is overlain by a later incline and track-way (Plate 11) (A Fig 9). However, from the slope of the land it would have been roughly at this point that the drift tunnel would have entered the hill. Driven from this point the adit would have potentially been able to access the coal deposits at a lower level than the bell pits. The spoil from the working is deposited as a large lobe of waste material lying down-slope from the cutting (B Fig 9). This is a substantial mound of mine waste with dimensions of 45m north to south by 39m east to west, standing up to 5m above the surrounding land surface (Plate 12). The size of this spoil mound suggests that the drift ran for some considerable distance into the hill before coal was encountered. The proximity of the adit to the more recent deep pit, Catherton Colliery, which lies on the top of the hill some 450m to the south-west, also offers the possibility that the adit could have had a secondary function as a drainage sough for this mine.

It is the deep shaft Catherton Mine which marks the third phase of coal extraction. Scheduled with the constraint area of SM 21664 it lies on the hill top above the complex described above. This mine is described in detail in the section on deep mining. However one element of this phase of mining forms a component part of the monument here described, and as such is described below.

Running between SO 61123 77502 at a height of 423m OD and SO 61391 77682, 375m OD, is a gravity incline designed to link the Catherton Pit tub-ways on top of the hill with the tram-way at the base of the hill, linking into the coal distribution rail system. This incline is a very visible and extremely well preserved feature of the landscape running for some 315m on a south-west to north-east orientation across the NE-facing hillslope. The incline commences at the edge of the escarpment rising to the edge as an access ramp which leaves the edge to run at a steep gradient down slope for some 23m before assuming a more shallow gradient. This then remains reasonably constant for the rest of the run (Plate 13). This change in gradient is today crossed by an overlying track-way, possibly associated with later quarry activity at SO 61148 77532 (C Fig. 9) (Plate 14). From this point, the incline runs down the slope as a raised, stony causeway some 6m wide and up to 1m high (Plate 15). It clearly overlies several bell-pits demonstrating the stratigraphic relationship of the two features and clearly post-dating the bell pits. It runs in this fashion for some 161m to SO 61285 77619 at which point it becomes a cutting 4.9m wide and up to 1.5m deep. From this point the incline runs as a cutting for some 120m to join with the tram-way. As noted above it is broken at SO 61354 77666 by a later trackway, (A Fig. 9) and for the last 35m of its length the incline runs south of and alongside the drift mine trench described above.

To the south of the site quarry spoil spilling downslope from the quarry above may overlie some bell-pits and it seems likely that the lobe of quarry spoil extending as a broad finger of overlying flat topped spoil running between SO 61398 77538 in the east to SO 61294 77588 in the west (D Fig. 9), (Plates 16 & 17) may also overlie earlier coal workings.

### **Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography. Survey drawing modified to clarify phasing. Site visited to confirm condition.

### **Management Statement**

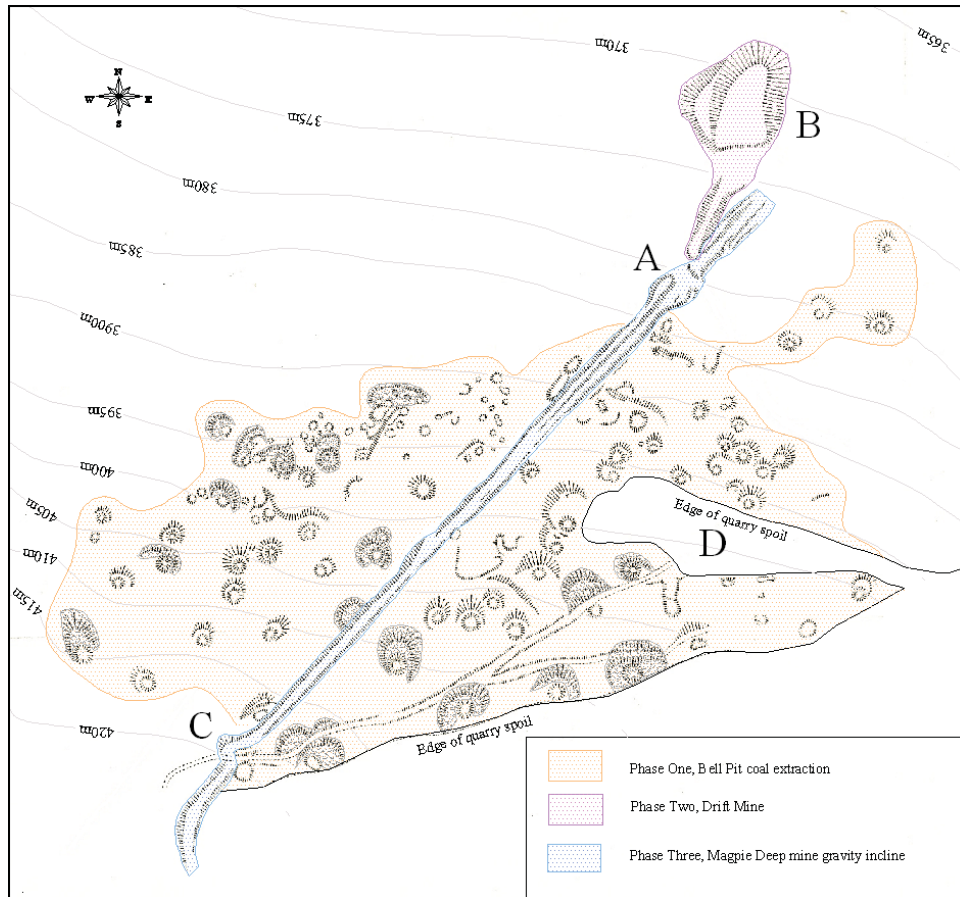
The monument is well preserved and lies in open moor land on the east side of Magpie Hill, a named landmark. It lies under a cover of sheep-cropped pasture, coarse grass and sedge type vegetation with some gorse encroachment. The site can be approached from the east along a metalled trackway from the Hoptonbank to Cleeton St Mary Road, past Craven Cottage, or from the open hill above along a well defined trackway, formerly a mine tramway. Its present management as sheep hill pasture is good and requires no change.

### **Recommendations**

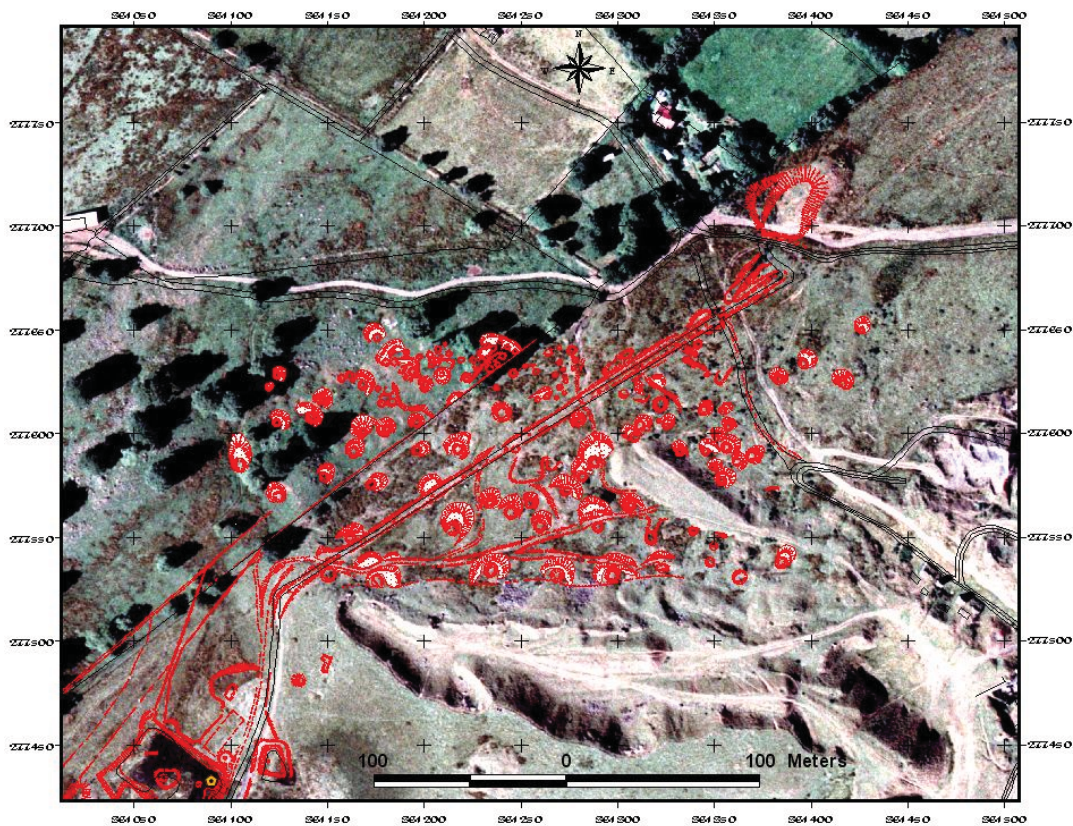
The good state of preservation, variety of surviving works and ready accessibility make this site of high potential value for possible presentation. Although it is possible to approach the site by car from below along the trackway to Aerial Cottage, this is a very rough trackway with limited parking. Preferred access should be pedestrian and the site would lend itself well to inclusion in a heritage footpath scheme. It offers considerable visual impact from both below and above, though particularly so from the hill top looking down the incline. A prime site for some form of interpretative display, the existing documentation could be used as a part of such a panel.

### **Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C203)</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		



*Fig.10: Modified 1983 RCHM(E) drawing*



*Fig.11: Location and distribution of bell pits centred at SO 5933 7695*





*Plate 5: Bell pits on Magpie Hill*



*Plate 6: Bell pits Magpie Hill*





*Plate 7: Entrance to Drift Mine foot of Magpie Incline*



*Plate 8: Drift Mine, Incline, crossing trackway relationship*



*Plate 9: Drift Mine Spoil Mound*



*Plate 10: Looking down Incline from top of Magpie Hill*





*Plate 11: Quarry track crossing Incline, Magpie Hill*



*Plate 12: Looking up Incline, Magpie Hill*





*Plate 13: Edge of quarry spoil overlying bell-pits*



*Plate 14: Top surface of lobe of quarry spoil*

**TCR (C205)**  
**MSA 3752**

**NGR:** centred at SO 6031 7555

Situated on the south facing slope of Clee Hill in the valley of the Corn Brook, in an area known locally as Cornbrook Dingle is a collection of earthworks which probably represents the remains of The Footrail Colliery. In 1732, the Knights' partnership was known to be working the Gutter Coal at Cornbrook by a drift mine which was known as the Footrail Pit. This drift mine is reported to have been driven upwards at an angle of between 15 and 20 degrees following the dip of the Gutter Coal into the hill from the valley side. It seems highly probable that the complex of earthworks that survives at this location is the remains of this colliery.

The Corn Brook itself rises to the north at SO 6012 7624 at a height of 397m OD flowing south to pass beneath the main A4117 road via a substantial stone built culvert. From this point it flows in a SSE direction, the stream becoming increasingly incised into the hillside to create a deep V-shaped valley. Where the watercourse crosses harder strata the stream-bed is stepped, creating a series of small cascades and waterfalls. The main belt of bell-pits in this part of the hill runs just north of the road around the south side of the hill in a roughly east-west curve at a height of c. 370m OD, roughly at right angles to the line of the Corn Brook. It is a combination of these physical characteristics, the direction of flow, deep nature of the valley, varying strata and proximity of the 'Gutter Coal' that makes the eastern bank of the stream an advantageous site for extraction by drift mining. The valley sides and southern slope of the hill show evidence of extensive workings and associated structures of considerable area and complexity.

There are a series of linear surface cuttings which run from the valley side into the eastern flank of the hill, possibly the remains of early open trench working, following seams into the hillside. Several such trenches can be seen over an area of hillside between SO 6024 7568 in the north-west and SO 6039 7546 in the south-east (Plate 18). Typically, they are broad-based cuttings some 30 to 40m long by 12 to 15m wide with depths between 3 to 6m. The uphill ends are broad and rounded while the down-slope ends are open to the hillside allowing access. Examples exist in the areas centred SO 6034 7558 and SO 6038 7547. One characteristic example of these features lies at SO 6028 7559 (A on Fig 12). It is cut into the east bank of the valley, lying along a south-west to north-east alignment between SO 6027 7559 and SO 6030 7560, 32m long, up to 13m wide and 4m deep. Open at its south end, adjacent to the stream. A similar trench lies opposite on the west bank of the stream.

Two deep fissures centred at SO 6035 7553 immediately south of Furnace Lane itself may also be of a similar origin. These however have vertical stone faces, which fall from the roadside to the stream and present a considerable potential hazard. A wooden protection fence bounds their northern, uphill extent (Plate 19).

Two main centres of drift mine coal extraction can be recognised, one at SO 60300 75548 and a second, higher up-stream, at SO 6024 7568. The lower site survives as a complex of earthworks which lie either side of Furnace Lane, where it

crosses the Corn Brook. The earthworks are comprised of several distinct elements which suggest that the site was worked over a considerable period of time. The fact that contiguous elements of earthworks appear to the north and south of the present position of the track-way suggests that some are of an earlier date than the existing roadway. Local enquiry indicates that the current course of this track was formalised in the late 1970s when it was graded and metalled and that previous to this it was itself no more than a worn footpath. This possibility is strengthened by the existence of a well-defined, but long deserted, terraced way which curves around the south-western flank of the hillside.

This routeway can be followed from SO 60366 75514 where it ends abruptly on the east side of the rock fissures, described above (B Fig 12). From this point it runs as a well made and well preserved terrace with an average width of 2m, in a south east direction running between the 290m and 300m contour (Plate 18). Although now washed out in the area of SO 6052 7543, it continues beyond as a recognisable track-way which links with an existing track at SO 6055 7543, an area that is locally associated with a possible former brickworks (MSA 3719). From here the track complex links into the road network to the west. It seems probable that this terraced way is the original access road to the Footrail mine. Although now broken by collapse from the limestone exposures at SO 6035 7553 (area B on Fig. 12), a short length of terrace immediately north of the existing roadway, running between SO 6031 7555 and SO 6028 7558 lies on the same alignment as the terrace to the east and may be a continuation of this routeway. The north end of this feature ends at what is thought to be the position of the mouth of the adit, now infilled.

The exact position of the drift entrance is uncertain as it has been capped and covered over and today is heavily overgrown with bracken. However two positions at a height of 320m OD suggest themselves as possible locations (area C Fig. 12). The first at SO 60282 75580 is shallow stony cutting from which a steady stream of iron stained water issues (Plate 20). It is notable that even in the extreme dry conditions of the summer of 2006, water continued to flow from this position, suggesting that the adit was still functioning as a sough for the pits to the north. The second position lies 7.5m to the north-west; this position is a shallow bracken covered scoop in the hillside. Sounding and probing in this area revealed a hollow 'feel' to the ground with several bricks below the surface. Neither position is certain but it seems very probable that the adit entrance did lie in this vicinity and was served by the terraced way from the south-east.

South of this area and running parallel with the stream course, is a linear causeway like deposit of spoil running between SO 60277 75567 and SO 60298 75548 with dimensions of 30m long by 8m wide and up to 0.8m high ending on the same level as the current trackway. The western scarp curves around to the south, the current trackway running along its upper edge. The triangular area of ground between these two arms of spoil and the natural hillslope which rises steeply to the west, is on average 0.8m lower than both the trackway and the linear spoil, probably representing the original ground surface. To the south of the trackway an amorphous lobe of spoil fills the original stream valley to create a flat platform some 38m north-west to south-east by 30m transversely with a kidney-shaped hollow 15m north to south by 7m east to west and up to 0.6m deep roughly at its centre. Close to the edge of this hollow in



its south-east quarter at SO 60310 75530, is a rectangular, concrete-lined pit 1.5m by 1.3m and 1m deep; its purpose is unknown.

To the east of this platform, adjacent to the current stream course, the spoil has been mounded to create a levee, diverting the stream course and pinning it along the edge of the rising ground to the east, the original course having been central to the spoil platform running and at a more gentle gradient. The stream now falls steeply some 10m as a pronounced waterfall at SO 60350 75503, the south end of the embankment. At the northern end of the levee the stream has been canalised by the construction of a concrete retaining wall between SO 60322 75534 and SO 60313 75541 (Plate 21). Clearly, there was a need in the operations carried out at this location for control and diversion of the brook course. The hollow at the centre of the spoil platform could represent the site of a shaft, which would necessitate such a scheme of water management, though it seems an unlikely position for a shaft mine, well off and apparently below, the coal measures. Equally the hollow could represent perhaps the site of a structure or building. There are local traditions of both brick and glass wasters in this vicinity which may be significant, though no examples of such material were noted in the area.

Below the spoil platform to the south the ground is hollowed, flanked along its western edge by a terraced trackway and its eastern edge by the scarp slope of a causeway-like linear platform, running between SO 60323 75512 and SO 36338 75490; this probably represents an earlier episode of spoil dumping.

The second drift mine lies at SO 60236 75681, some 144m up-stream from the stream crossing and at a height of 328m OD. The adit itself is largely buried but can be recognised as a shallow fissure in the exposed limestone with iron stained water issuing from its base, similar to the lower mine site. This mine was quite clearly not served by the current line of Furnace Lane, as to access the site from the lane necessitates a scramble over a steep slope to climb the stream valley to a point above a small water-fall. The area of hillside above this mine is densely covered with bracken. However it is possible to identify a terraced trackway which climbs the valley side from the proximity of the adit to the valley lip at around SO 6026 7567. From this point, a well defined terraced track-way can be followed curving across the hillside in a south-easterly to easterly direction for some 250m to end at SO 6050 7558 on the current Furnace Lane. From this point it may have continued to the east skirting to the north of a group of squatters' settlements to link into the same track and road network as the previously described, more southern terraced way, at SO 6078 7551. It seems certain that this is the original access route-way to the mine. Although the dense bracken makes full interpretation difficult the first 40m of so of the track-way runs along a stone walled revetment. This lies immediately above an extensive flat area centred at SO 6026 7564 (A Fig. 11 ) with dimensions of 60m NW to SE by 25m transversely, and at least some of this platform appears to be made up of spoil. This is probably the work and storage area associated with the working of the mine.

### **Summary:**

It seems certain that this location was the centre of industrial activity over a considerable period of time. It is the likely location of the Footrail Pit which commenced mining activity in the early part of the 18<sup>th</sup> century and is reasonably well documented. It seems probable that at this period the communications system was not

as it is today but that the mine was served by the contoured terrace ways from the east, the current route of Furnace Lane being a later construction, possibly as suggested by the name, not constructed in association with the coal extraction but to serve a later industry. The circular hollow and canalisation of the stream course may relate to this later episode.

### **Action**

Level 2 Instrumental survey of southern mine main elements. AP transcription and incorporation of RCHM 83 survey of northern mine

### **Management Statement**

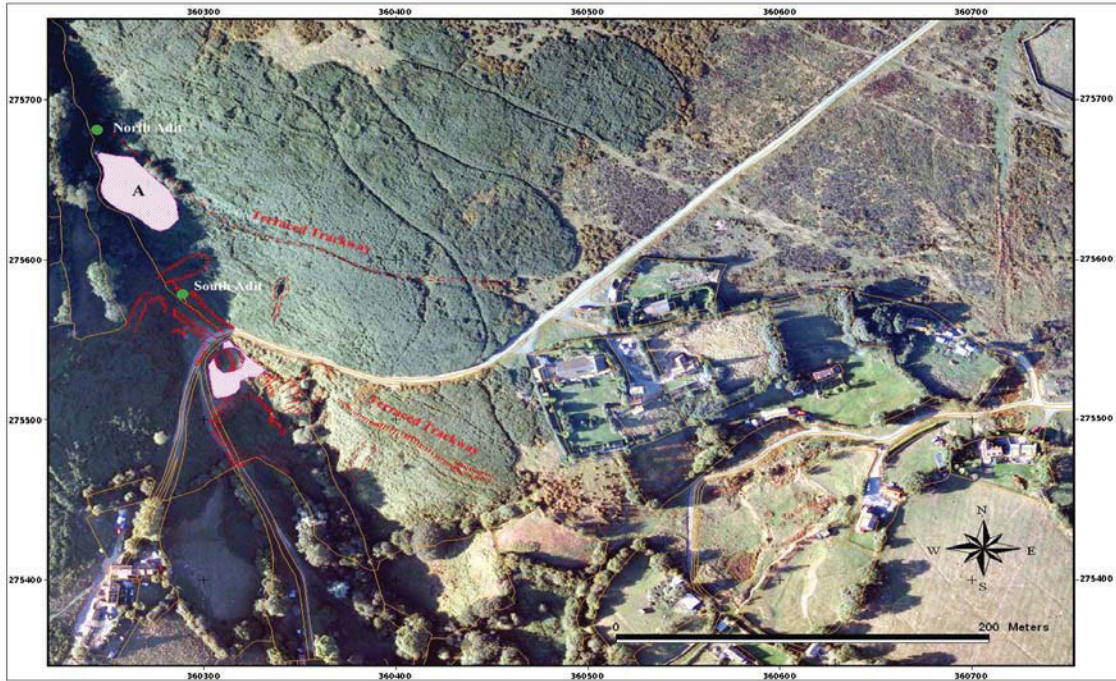
The monument is reasonably well preserved and lies adjacent to a metalled trackway which serves several cottages before continuing across the hill towards Clee Hill village in the west and Studley and Knowle in the south-west. The main elements lie under a cover of sheep-cropped pasture. Other elements are under coarse grass and scrub with dense bracken and some gorse encroachment. The Cornbrook valley itself is steep-sided and quite difficult walking and there is some danger presented by the areas of steep outcropping and the waterfall plunges. The site can be approached from the east along a metalled trackway known locally as Furnace Lane which links to the A4117. Its present management as sheep hill pasture is good and requires no change. A long term programme of bracken management and a more varied grazing regime perhaps including bovines and more upland grazing sheep species would both improve grazing and expose more of the northern mine workings.

### **Recommendations**

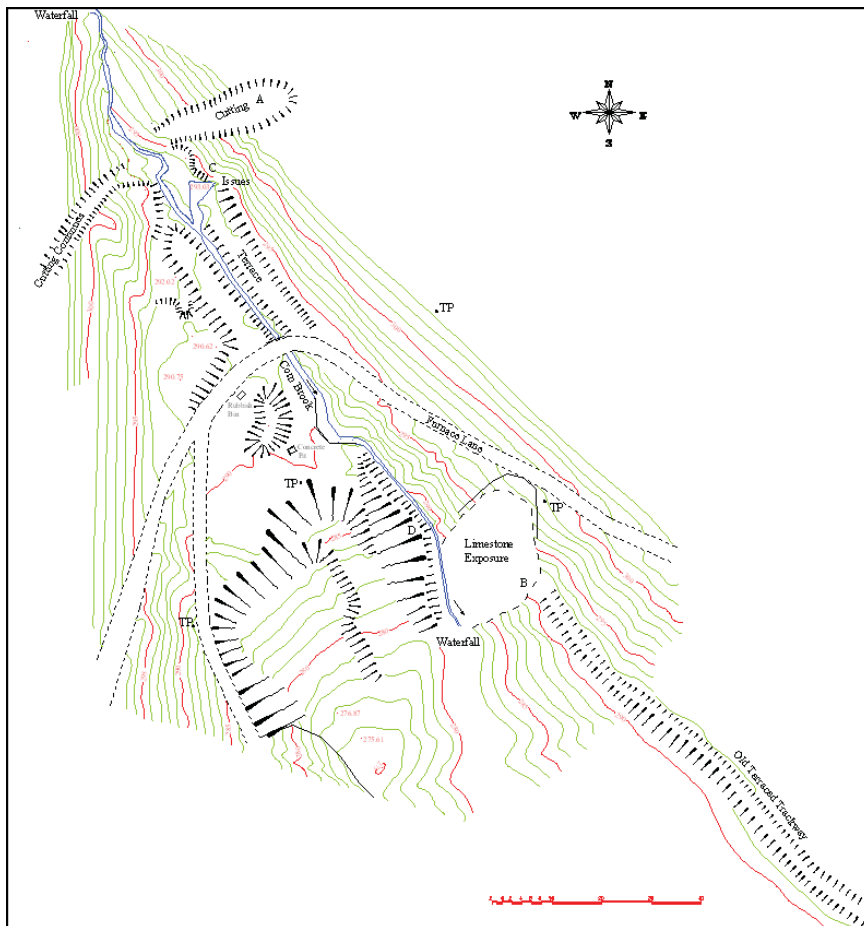
The good state of preservation, variety of surviving works and ready accessibility of the more southern mine make this site of high potential value for possible presentation. However, consideration should be given to the proximity of several cottages and the potential danger to unwary walkers from the sometimes dangerous terrain. Preferred access should be pedestrian and the site would lend itself well to inclusion in a heritage footpath scheme; it is already included in a way-point on a geological walk currently in production. Its inclusion in this and the relationship between geology and cultural remains, together with the historical references to the site do make it worthy of some form of low level presentation. The higher mine site should be the subject of detailed ground survey at low vegetation.

### **Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C204)</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>		*	
<b>Amenity value</b>	*		



**Fig. 12: Area of Footrail Mine Complex**



**Fig. 13: Survey of lower adit area**





*Plate 15: Open trench working and terraced trackway*



*Plate 16: Deep ravine with protection fence, upper left*





*Plate 17: Iron-stained water issuing from adit site*



*Plate 18: canalised stream*

**TCR (C206)**  
**MSA 16770**  
**SM 31762**

**NGR:** SO 5999 7590 to SO 6161 7745

This contiguous belt of bell pits runs between SO 5999 7590, adjacent to the Corn Brook valley in the west and SO 6161 7745 in the north-east. Here, later quarry activity truncates the belt some 250m short of the Magpie Hill complex, described separately as (TCR C204), although part of the same episode of activity. The grouping described here represents the largest and most intensive area of bell-pits surviving upon the hill. The concentration is following the 'Gutter Coal' seam, available close to the surface around this east and south part of the hill. The flank of the hill here, below the basalt capping of the eastern plateau, has been eroded to create a relatively steep scarp slope, making the coal measures readily available to shallow mining. The very distinct cessation of the workings at their upper extent almost certainly represents the start of the basalt. Individual bell pits are so prolific in this area that it is difficult to arrive at a definitive number of surviving pits, however an estimate based on a counted sample suggests that some 400 plus survive in this belt which lies roughly between the 330 and 390m contours.

The pits themselves are smallest down slope, averaging between 5 and 7m in diameter with roughly circular or crescentic spoil mounds between 15 and 20m in diameter and are up to 3m high. These smaller pits group between the 320 and 350m contours, the small size of spoil indicating the proximity of the coal to the surface at this height and suggesting that this belt of working is probably the earlier.

Higher up hillside, between 350m and 390m, the shaft hollows become larger with an average diameter of 10m. Spoil mounds become considerably more extensive indicating that here there was a necessity to sink shafts through an increasing depth of overburden. Mounds are typically between 40 and 50m in diameter and up to 6m high. Typically craters and spoil from individual workings lie each close to its neighbour. The complete complex is too extensive to describe each pit or group of pits individually, however, a representative sample of pits centred at SO 60767 76000 is reproduced as Figure 13.

This group of pits lies on the north side of the A4117 immediately opposite Furnace Lane and up-slope from a modern reservoir, a readily identifiable landmark. It comprises some 24 individual pits distributed in two concentrations. The lower group lies centred at SO 60814 75953 at a height of 354m OD. with an average shaft crater diameter of 2m, spoil diameter of 5m and height on average of 2.5m. However, one pit at the SE extent of the group is more substantial with spoil covering an area of some 13m by 13m suggesting this particular pit was worked for a longer period. The higher group centred at SO 60717 76058 at a height of 380m OD comprises on average more substantial pits with shaft craters up to 3.2m in diameter and spoil mounds up to 15m across and 5m high. The group in general conforms to the model of relatively smaller size lower down the slope and larger up-slope, corresponding to an increase in the depth of coal deposits.

To the immediate east of the upper group are the vestigial remains of three small rectangular building platforms. One at SO 60765 76052, lies on a NE-SW alignment



at roughly right angles to the slope measuring 9m by 6m and up to 0.3m high. A second, further east at SO 60789 76053 is 7.5m long by 5m wide lying on a roughly north to south alignment with the slope. A third lies some 67m to the SE at SO 60832 76038. This is the largest, measuring some 12m long by 7.5m wide and up to 0.4m high lying again with its long axis with the slope.

To the immediate north-west of the upper group is a substantial linear trench cut into the upper part of the escarpment. It lies on a SE to NW alignment running between SO 60636 76038 and SO 60579 76093, to give an overall length of some 80m. The feature falls into two distinct sections. The lower, up to SO 60598 76071, is a substantial cutting averaging 8.6m wide and 2.4m deep. Above this point it becomes a much slighter feature in the form of a V-shaped ditch up to 4.5m wide and 1m deep. The lower cutting has the appearance of having been deliberately cut into the face of the escarpment, with the superficial appearance of the typical approach cutting to an adit. However, its height at the top of the escarpment around 380m OD, makes it unlikely that this is the case. It seems more likely that it represents linear quarrying, possibly for building stone. The upper, slighter, portion may be the result of water run-off from the hill channelling into the lower cutting and eroding the slope back towards grade.

A well-made trackway climbs diagonally across the hillside from the main road at SO 60509 75834 to the SW passing close by a squatter settlement at SO 60548 75916 and climbs to pass through the upper pit complex and continues out onto the plateau top above. This track and others to the south and east appear to respect the spoil heaps of the pits suggesting that these are later than the bell pits and are probably associated with the deep pits on the plateau above.

At SO 60769 75991, a small water-course issues and flows south down the slope. It seems probable that the source of this spring is water collecting in the lower levels of the pits up slope from this position.

### **Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography. Survey drawing modified to clarify phasing. Site visited to confirm condition.

### **Management Statement**

The monument is well preserved and represents the largest belt of surviving bell pits on the hill open hillside. Part is scheduled as SM 31762. The pits lie under a cover of coarse moorland vegetation, bracken and gorse and in places marsh vegetation. In general the moorland would benefit from a long term programme of gorse and bracken management. Most areas are accessible to walkers though the network of old track-ways which run around this side of the hill. Bell pit groups themselves are less accessible with access limited in general to un-made sheep paths. The representative sample illustrated in Figure 13 is easily accessible from the main A4117. Car parking is available in the nearby Furnace Lane and a lay-by adjacent to the bus stop, which itself offers access by public transport.

## Recommendations

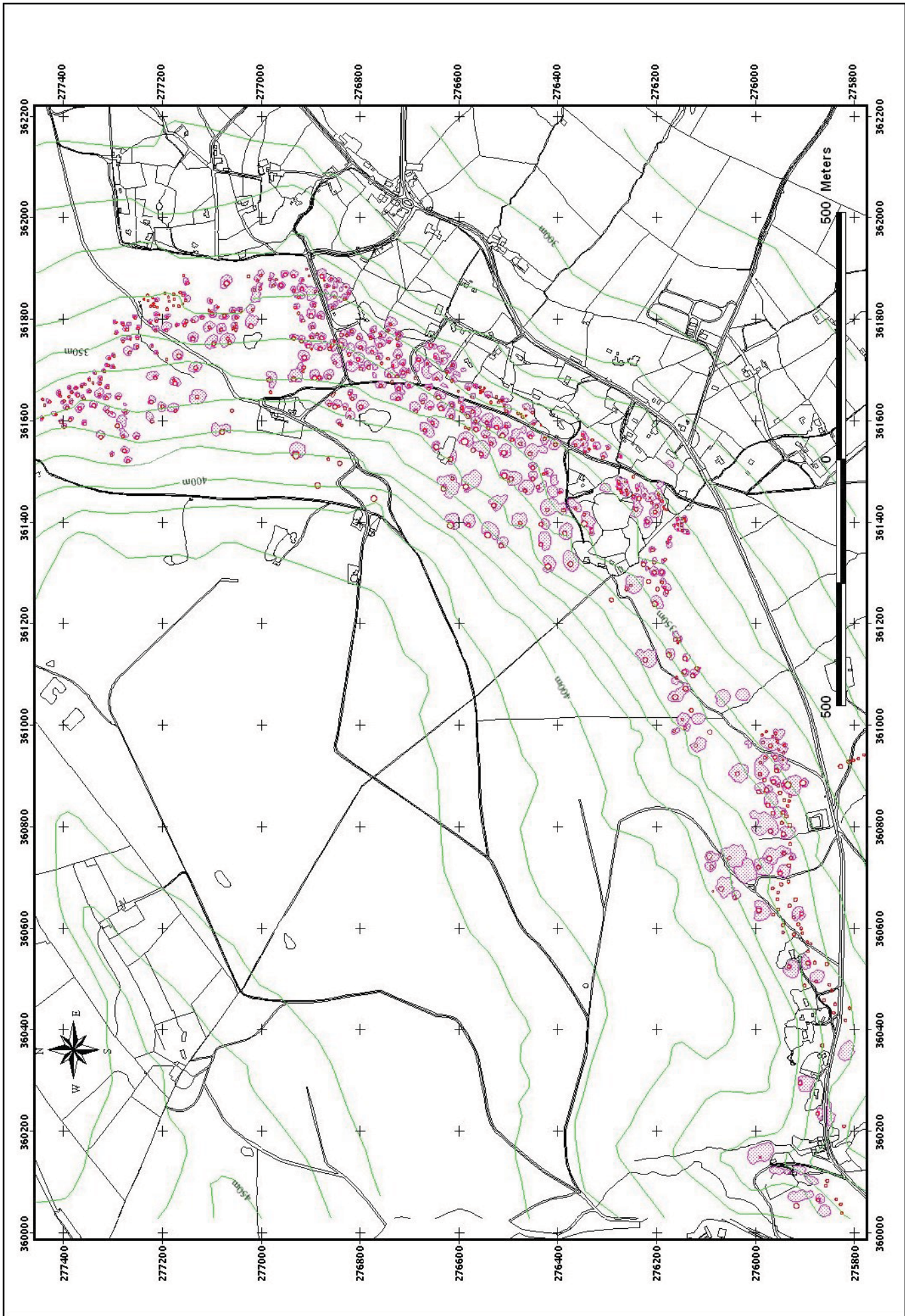
The area has good overall potential for presentation within an ‘informed’ footpath scheme. The general good state of preservation, variety of surviving works, ready accessibility and potential access by public transport make this site of high potential value for possible presentation. The specific site adjacent to the bus stop shelter, which has the benefit of direct access from public transport, is a good possible location for interpretative information. Preferred access should be pedestrian and the site would lend itself well to inclusion in a heritage footpath scheme.

## Statement of importance

CRITERIA	HIGH	MEDIUM	LOW
<b>SITE ID: TCR (C207)</b>			
<b>Rarity</b>		*	
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>		*	
<b>Amenity value</b>	*		



*Fig. 14: Detail of bell-pits adjacent to bus stop*





## **TCR (C207) includes MSA3755**

**NGR:** centred at SO 6166 7720

Situated within and towards the northern end of the main belt of bell-pits, described as TCR (C206), are the remains of a series of earlier monuments comprising a drift mine, enclosure and terraced track-way. The location of each element is shown on the overview plan (Fig.15 ) and is described separately within the single designation of (TCR C207).

The drift mine (MSA3755), comprises a linear trench and spoil mound lying on an east to west alignment (A Fig. 14). The trench lies between SO 61812 77202 and SO 61880 77202 with dimensions of 71m long, up to 12m wide and 2.5m deep. This is cut into the east facing hill-slope between the 338m and 345m OD contours. A substantial linear spoil mound lies on the same alignment immediately to the south, between SO 61886 77202 and SO 61919 77202; it is 36m long and up to 14.5m wide at its east end where it reaches a height of 2.9m above the surrounding ground surface. The small bell pits that cluster around its flanks above the 340m contour appear to post-date the linear working as one pit at SO 61829 77206 is cut into the north flank of the ditch. The elevation of the trench above OD is entirely consistent with the height of other known drift mines at the Footrail Pit and the Magpie Hill mine which lie between the 320 and 380m contours.

### **Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline. Survey drawing re-drawn to clarify phasing. Site visited to confirm condition.

### **Management Statement**

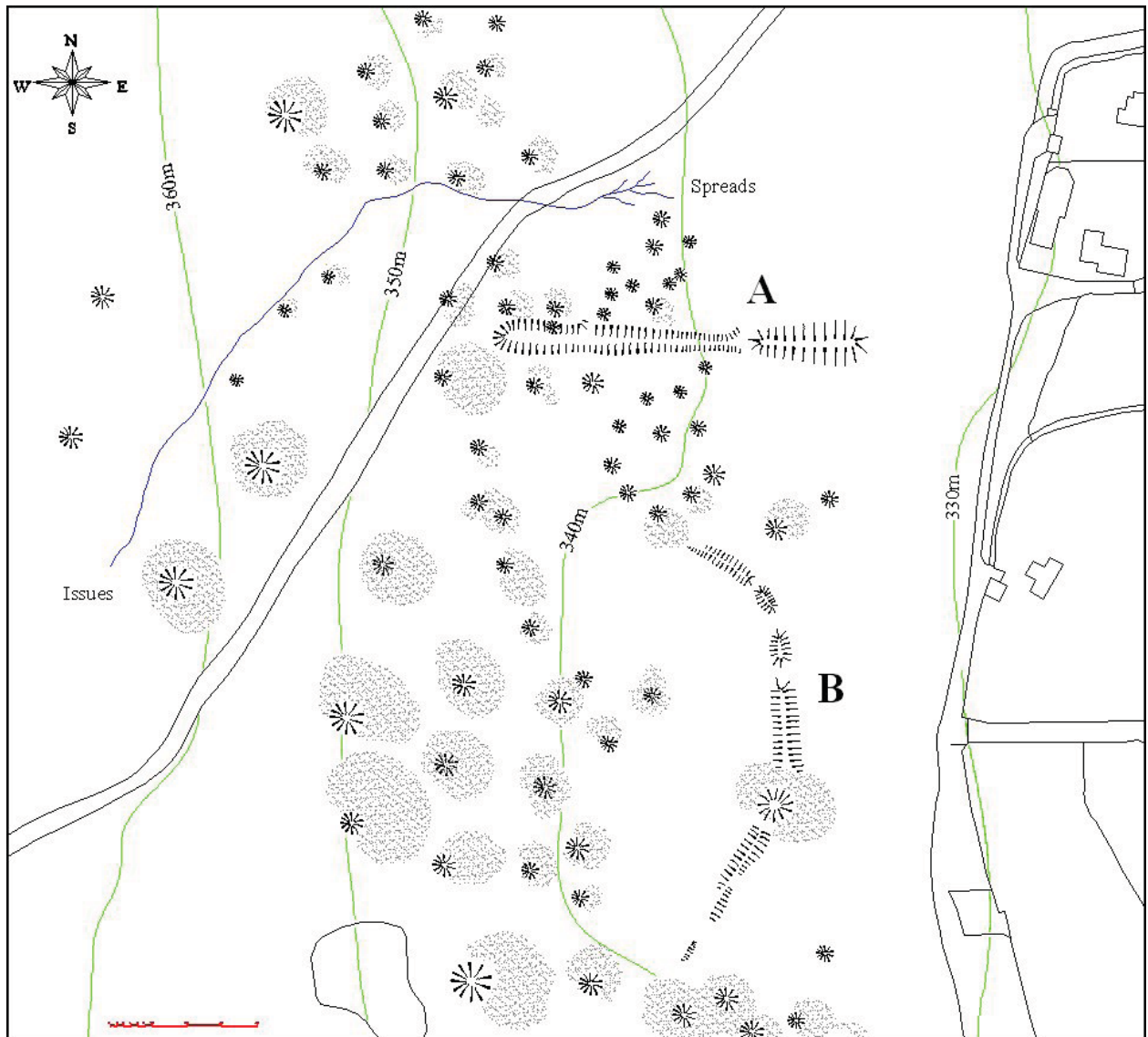
The monument is well preserved and represents possibly the best preserved example of the surface working associated with a drift mine to survive upon the hill. The site lies under a cover of coarse moorland vegetation, sheep grazed pasture, gorse and in places marsh vegetation. It is accessible to walkers from a footpath, which runs close by its western most end. It would benefit from long term control of gorse and a sympathetic managed grazing regime.

### **Recommendations**

The area has good overall potential for presentation within an informed footpath scheme. The general good state of preservation, variety of surviving works and visible phasing make this site of potential value for such presentation. Access is only by foot and then only by suitably equipped walkers. The site would lend itself well to inclusion in a heritage footpath scheme.

**Statement of importance**

CRITERIA	HIGH	MEDIUM	LOW
SITE ID: TCR (C207)			
Rarity	*		
Documentation		*	
Group value	*		
Survival/condition	*		
Fragility/vulnerability		*	
Diversity	*		
Potential		*	
Amenity value		*	



*Figure 15: Drift Mine and Enclosure*



*Plate 19: Looking east along drift trench towards spoil mound*



*Plate 20: Looking west along drift trench from spoil mound*



**NGR:** centred at SO 6186 7709

Situated within and towards the northern end of the main belt of bell-pits, described as TCR (C205) are the remains of an embankment (B on Figure 14), forming a D-shaped enclosure against the naturally rising ground to the west. The interior is flat with dimensions of 120m north to south by 60m east to west. It is comprised of a series of lengths of linear banks the most northerly commencing at SO 61868 77144 and running to the SE for 21m where it is broken before continuing on the same alignment for a further 8m to SO 61892 77124 where it is again broken. Some 4.5m to the south the embankment re-commences on a more southerly alignment running for 11m between SO 61894 77119 and SO 61895 77109 where it is again broken. From SO 61894 77105 it continues running north-south as a well-defined bank up to 1m high and 7.6m wide to SO 61896 77081 where it is overlain by the spoil and crater of a later bell-pit. South-west of the bell pit the embankment re-emerges at SO 6190 7706 to run on a north-east to south-west alignment as a slighter bank up to 6m wide and 0.4m high for a length of some 45m before fading out at around SO 61873 77037. The age and purpose of this enclosure are uncertain, but it seems likely that the embankment was originally designed to pond water against the hillside to the west. There are springs in the in flat interior, which is wet and vegetated predominantly by sedge. Water flows down to the east through the breaches in the embankment and if the bank were intact would be contained within it to form a substantial body of open water.

**Action:**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline. Survey drawing re-drawn to clarify phasing. Site visited to confirm condition.

**Management Statement:**

The monument is quite well preserved under a cover of coarse moorland vegetation, sheep grazed pasture, gorse and in places marsh vegetation. It is accessible to walkers from a footpath which runs close by its westernmost end. It would benefit from long term control of gorse and a sympathetic managed grazing regime.

**Recommendations:**

The area has good overall potential for presentation within an informed footpath scheme. Access is only by foot and then only by suitably equipped walkers. The site would lend itself to inclusion in a heritage footpath scheme.

**Statement of importance**

CRITERIA	HIGH	MEDIUM	LOW
<b>SITE ID: TCR (C207 )</b>			
<b>Rarity</b>		*	
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>		*	
<b>Potential</b>		*	
<b>Amenity value</b>		*	



*Plate 21: Section of embankment with flat wet interior to the left and hillslope to east*



*Plate 22: Bell pits in the foreground with flat, ponded area high-lighted*

**NGR:** centred at SO 6186 7709

Situated at the north-western extent of the area and lying below spoil from later quarrying to the west, is a well-defined terraced track-way (C on Fig. 15). It remains extant as a well defined terrace averaging 7m wide, cut into the slope on its uphill west side and raised above the natural hillslope on its down side. It runs from SO 61545 77414 in close proximity to the remains of a quarry tramway currently used as a main track-way around the eastern flank of the hill. It runs on a NNW to SSE orientation as a slow dogleg for some 255m to end at SO 61598 77160 at its southern end. Here, it is overlain by later quarry spoil but it almost certainly once continued on the same alignment to join with the junction of track-ways to the south at SO 6165 7700. It has the physical appearance of pre-dating the current track-way network.

#### **Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline. Survey drawing re-drawn to clarify phasing. Site visited to confirm condition.

#### **Management Statement**

The trackway is quite well preserved under a cover of coarse moorland vegetation and sheep grazed pasture. It is accessible to walkers from trackways to the north and south.

#### **Recommendations**

The terraced way by itself is of little potential interest but its importance is enhanced by its proximity and relationship to the other elements existing in this portion of landscape. Any scheme of presentation for the elements to the east should give consideration to an explanation of this quite distinct landscape feature.

#### **Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C207 )</b>			
<b>Rarity</b>			*
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>			*
<b>Diversity</b>			
<b>Potential</b>		*	
<b>Amenity value</b>		*	





*Plate 23: Looking south along terraced way*



*Plate 24: Looking north along terraced way*

**NGR:** centred at SO 6178 7702

Situated on the west facing hillslope at a height of 350m OD, within the eastern bell-pit field, are the remains of a small squatter enclosure (D on Fig. 15) The dry-stone perimeter wall survives intact up to 0.8m high to give a sub-ovoid enclosure 42m by 31m with an internal area of 0.8ha lying with its long axis along the slope. The interior of the enclosure is raised 0.8m above the surrounding hillside. Within the interior are the remains of a building, the only standing part being a solid brick pillar standing 1m high amidst brick and stone rubble and rusted corrugated iron roof sheeting .

### **Action**

Shown on the OS Landline as an enclosure. Photographed and described.

### **Management Statement**

The perimeter of the enclosure is well preserved with standing dry-stone walling and some of the original hedging still in place. The interior is undisturbed and grazed as sheep pasture. This is an unusual survival of an early squatter dwelling which has been deserted and appears to survive, sealed and intact. It will contain archaeological material relating to the domestic conditions, which were contemporary with the early mining. Few such sites survive upon the hill as few squatter dwellings have been deserted, most having continued to be occupied and in later years have been improved and modified heavily.

### **Recommendations**

This small enclosure and the material within it are an important survival of a squatter settlement which has considerable archaeological potential as a time capsule relating to domestic conditions in the coalfield in the 18<sup>th</sup> century. As such it is a site which could offer a wealth of information if subjected to a full excavation. It is under no immediate threat but should be recognised as a valuable site and possibly given scheduled protection.

### **Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C207 )</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>	*		
<b>Diversity</b>		*	
<b>Potential</b>	*		
<b>Amenity value</b>		*	





*Plate 25: External view of squatter enclosure from north*



*Plate 26: Perimeter wall of squatter enclosure*

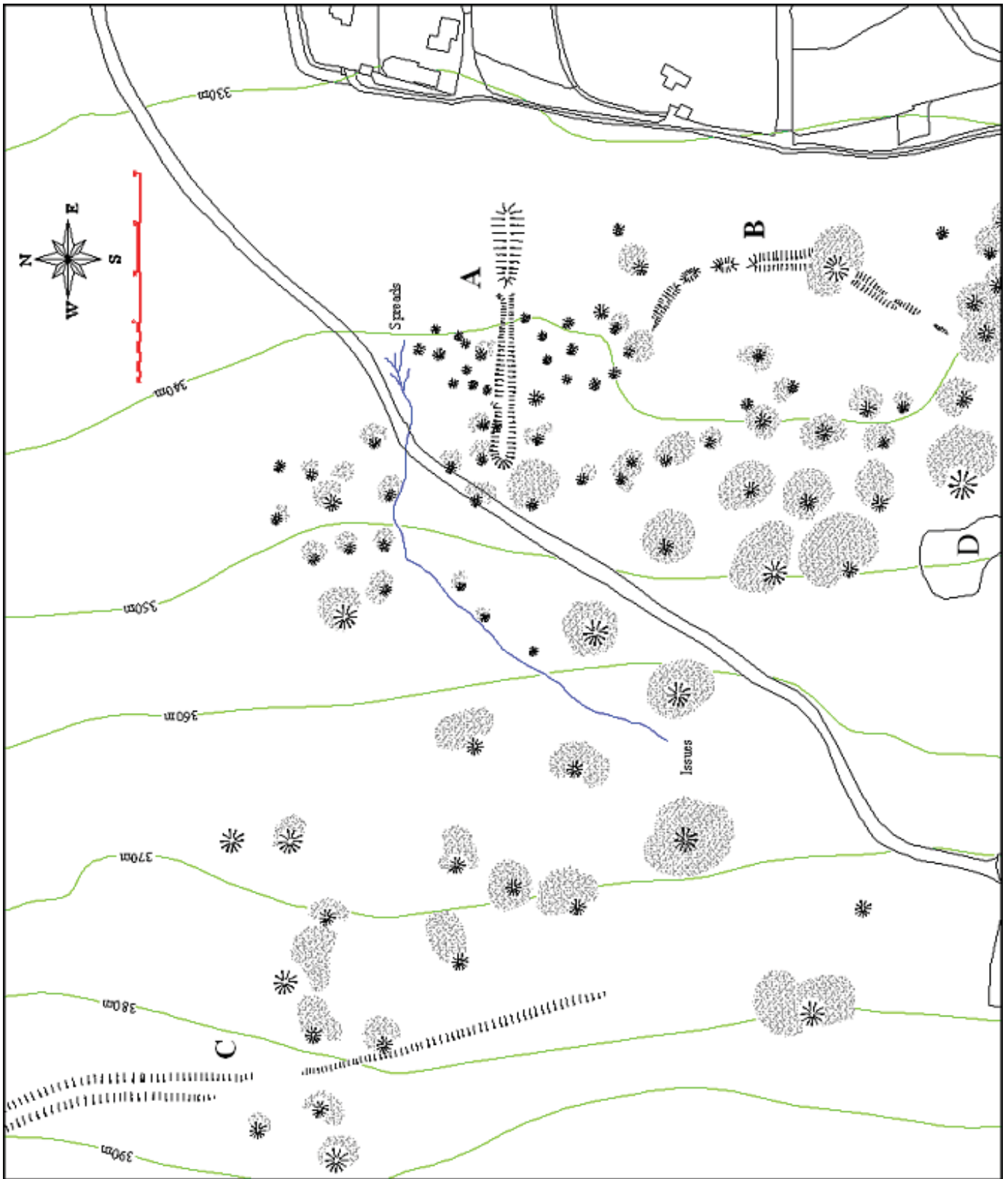




*Plate 27: Remains of building within squatter enclosure*



*Plate 28: Cast iron cistern within enclosure*



*Fig. 16: Drift mine, enclosure and terraced trackway*



## TCR (C208), MSA3749, Part scheduled as part of SM 21664

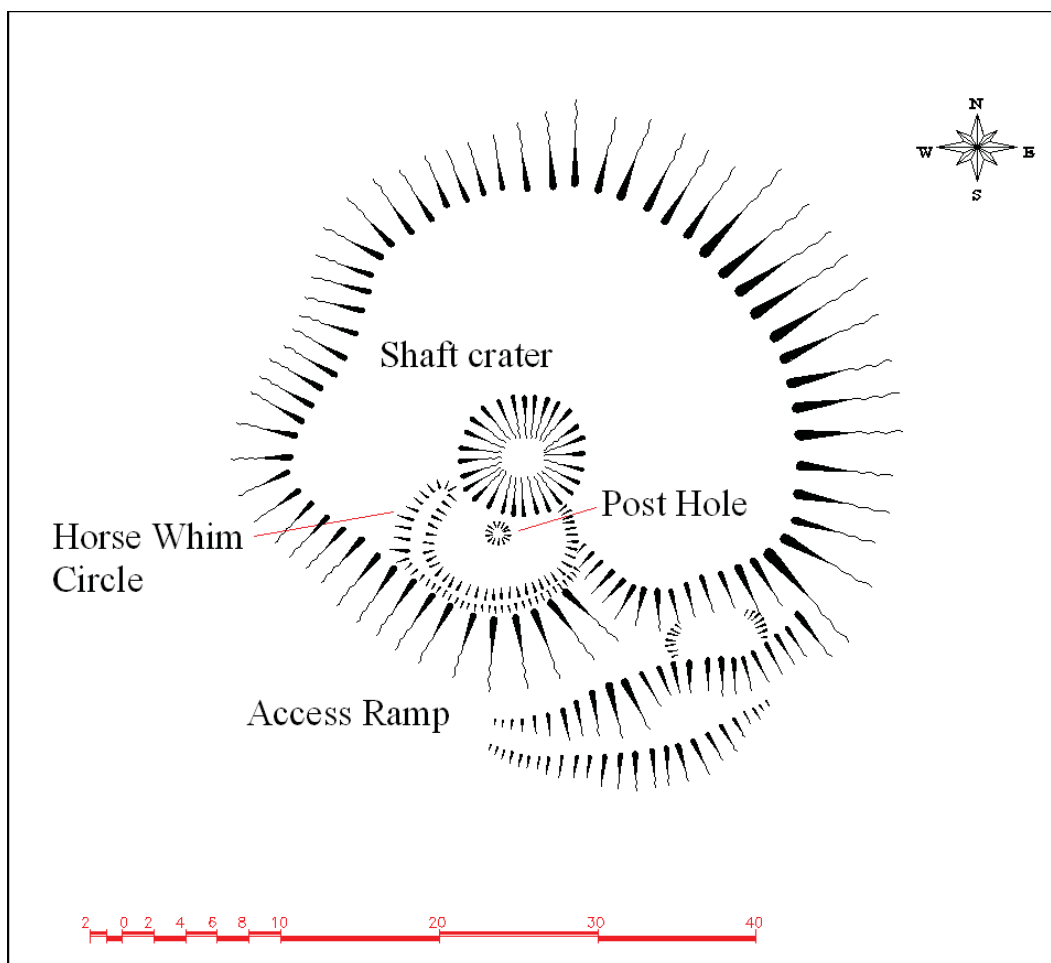
**NGR:** centred at SO 6173 7796

Situated on the north-east facing hill-slope between Magpie Hill in the west and Catherton Common in the east is a series of bell pits of varying size. Similarly to other parts of the hill, the pits are graded in size with the smallest down slope, averaging between 5 and 7m in diameter with roughly circular or crescentic spoil mounds between 10 and 20m in diameter and between 1 and 2m high. These smaller pits lie below the 280m contour and continue to the west of the Doddington to Oreton road, merging into the Crumpsbrook bell-pit complex which lies in the valleys of the Hopton Brook catchment at around 210m OD. The relatively small size of spoil mounds associated with these pits suggests that the coal and iron ore deposits are here close to the surface, towards the valley bottoms and that these are early workings.

Between 280m and 310m the character of the pits changes, shaft hollows become larger with an average diameter of 10m. Spoil mounds become considerably more extensive indicating that here, there was a necessity to sink shafts through an increasing depth of overburden. Mounds are typically between 40 and 50m in diameter and up to 3m high. Craters and spoil from individual workings occur at a wider spacing with on average between 20m and 80m between pits. This group of pits seems therefore to represent a later, more evolved method of extraction, possibly relating to the so-called 'bassett pit' method. This method of working seems to have been an adaptation of the bell pit technique. Short vertical shafts were driven to the coal seam and the coal extracted to the base of the seam. Roads were then driven out from the pit bottom along the seam as working faces. These pits produced considerably more spoil than the smaller bell pits and were spaced at wider intervals.

The surface remains of the pits on this eastern slope are also unusual compared to the pits in the main belt of bell-pits described further to the west as (TCR C207). Several exhibit secondary features such as attached enclosures and coal screening areas suggesting a more sophisticated method of mining and management. One such unusual survival is the pit centred at SO 62360 77938 (Fig.16). The shaft crater lies roughly central to a substantial mound of spoil and is 7.6m in diameter at its top and 2.6m, squared at its base and up to 2.4m deep. The spoil is a flat-topped, roughly circular, mound 42m east to west by 43m north to south standing to a height of 2.8m. The top of the mound is approached by a made ramp-way which climbs the mound at its south-west quarter. On the top of the spoil mound, adjacent to the south western quarter of the shaft crater, is a very unusual survival, possibly unique upon the hill. A shallow circle 8.5m in diameter has been eroded into the top of the spoil to create a shallow bank no more than 10cm high and up to 2m wide. The northern quarter of the circle has been lost in the collapse of the shaft crater. However at its centre is a shallow circular hollow 1.5m in diameter and up to 10cm deep. These features are almost certainly the remains of a horse whim, the central hollow being the site of the winding post and the outer circle created by the tread of the horse walking constantly around the post.



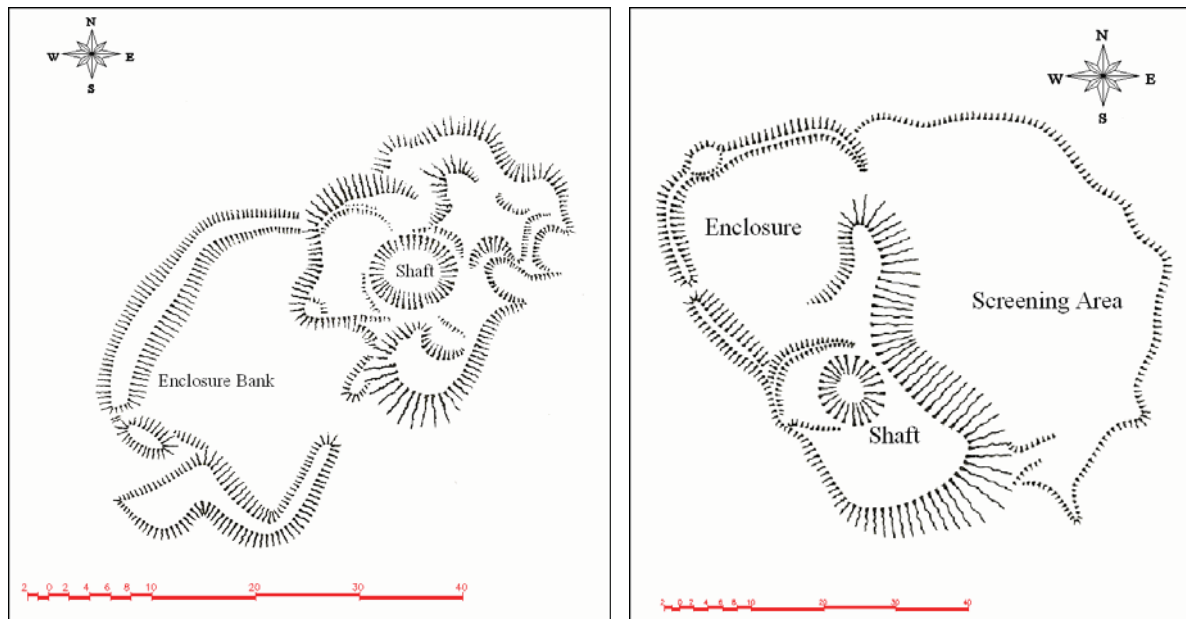


**Fig. 17: Horse Whim Pit centred at SO 62360 77938 (A)**

A second pit lying 113m to the west of the former at SO 62249 77964 is also more complex than a simple crater and mound. Here, a central crater 7.5m SW-NE, is surrounded by a rather amorphous spoil mound 26m north to south by 20m transversely. The surface of this spoil mound is disturbed and irregular suggesting that it has been secondary worked, possibly for ballast for the nearby road which lies to the south-west at a distance of some 90m. Attached to the south side of the spoil mound is a small rectangular enclosure some 20m north to south by 17m east to west, bounded by a low bank up to 4.5m wide and 0.6m high with an entrance in its eastern side. The enclosure may represent an enclosed work or storage area or perhaps a stock corral.

It is notable that as the pits progress further west and higher up slope so they continue to become larger and increasingly widely spaced so that by around 320m OD they lie on average at a distance of some 200m each from its neighbour. At SO 6184 7788 is another such pit (Fig.18) with associated enclosure. Here, the shaft crater is 9m in diameter with a spoil mound spread over an area some 38m north-west by south-east and 22m transversely. On top of the spoil mound adjacent to the north-west quarter of the shaft is a section of slight curving bank running for 18m at a width of 2m and up to 0.2m high. This could be the remains of a second horse-whim, though this

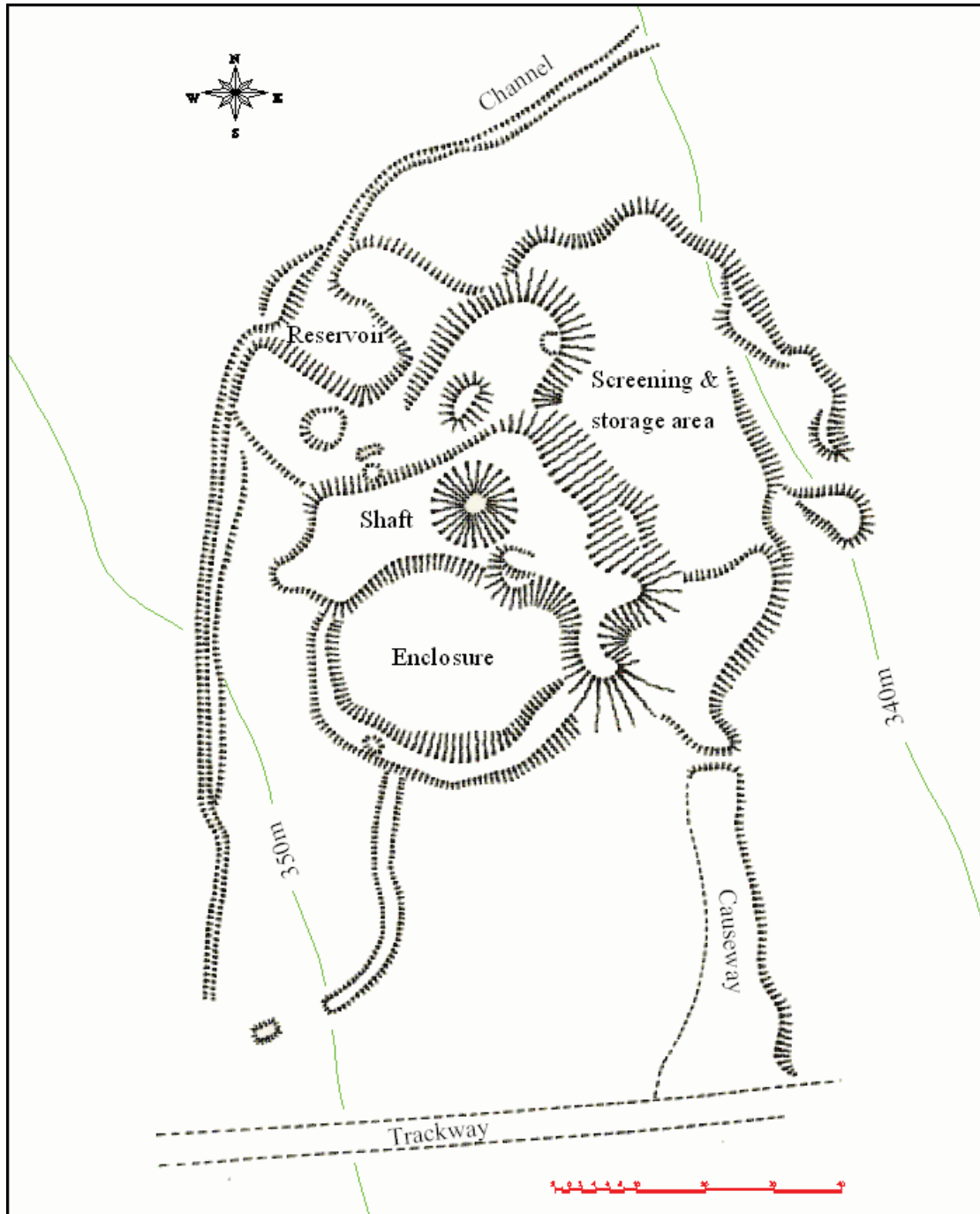
identification is far less secure than the previously described example. Attached to the north side of the spoil is a sub-circular enclosure with an internal area of 0.5ha bounded around its west and north sides by a low bank up to 4m wide and 1m high. There is a narrow entrance break approximately midway along its western side. In its north-eastern quarter it stops short of the spoil mound itself to allow entrance to a low, flat ovoid area of spoil attached to the eastern side of the pit. This has dimensions of 52m north-west to south east by 32m, raised up to 1m above the surrounding hillside. The fine grained nature of the spoil in this area, predominantly coal dust, suggests that this may have been a coal screening (washing) area.



***Figs 18 and 19: Pits with attached enclosures at SO 62249 77964 (B) and SO 6184 7788 (C)***

Further still to the west and higher up slope between 340 and 350m OD is the largest surviving pit of this group occupying an area of some 0.9ha (fig.19). It lies within 250m of the Magpie Hill drift mine and the main belt of bell pits to the west the lowest of which lies at a height of 380m OD. The shaft lies central to the complex at SO 6161 7779 and is 12m in diameter surrounded by a rather amorphous and disturbed area of spoil, some 70m north to south by 40m east to west, varying in height between 1m and 2.5m. Attached to its southern side is a small enclosure, oval in plan with dimensions of 34m east to west by 25m transversely, cut into the spoil on its north side and bounded by a low bank up to 6m wide and 0.8m high around its southern half. Attached to its south side and at right angles to it a second low flat topped bank runs from SO 6159 7775 for some 33m curving around to the south-west to end at SO 6159 7772. To the east of the main spoil mound is an area of flat, predominantly coal dust spoil probably an area used for coal screening. A narrow flat-topped tongue of spoil 42m long, 7m wide and 0.5 m above the surrounding natural land surface runs south from the southern corner of this work. Linking with the trackway (tramway) to the south probably representing spoil being used to create a causeway to support cart access to the screen and storage area. Set into the spoil mound at SO 61587 77807, on its northern side is a small rectangular shaped hollow 18m north-west to south-east by 14m wide and up to 1m deep which may have

functioned as a small reservoir. This may have been served both for supply and discharge by a now dry ditch. Commencing at SO 6163 7784 in the north at a height of 340, it runs in a roughly SW direction for 59m to SO 61584 77814 where it enters the possible reservoir, exiting at SO 61574 77807 and sluice gates at these two points could have been used to manage the water flow. From the latter position it continues south for a further 85m to end at SO 61570 77722 where it may have discharged into the side ditch of the tramway.



**Fig. 20: The highest and most complex of the Catherton-Magpie Complex  
SO 6161 7779 (D)**



The pits described above are a representative sample of other substantial pits which survive on this north-eastern flank of the hill, both in the open moorland of the common land and in the enclosed farmland to the north. The relative height and size of the pits in this area of the hill compared to those further west and higher up-slope suggests that these lower and considerably larger pits belong to a later phase of workings than the smaller and less complex bell-pits. The relative heights of the two groups suggest also that the lower larger pits were working a separate and lower coal seam below that which was being worked by the upper, smaller bell pits.

### **Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography. Survey drawing modified to clarify phasing. Site visited to confirm condition.

### **Management Statement**

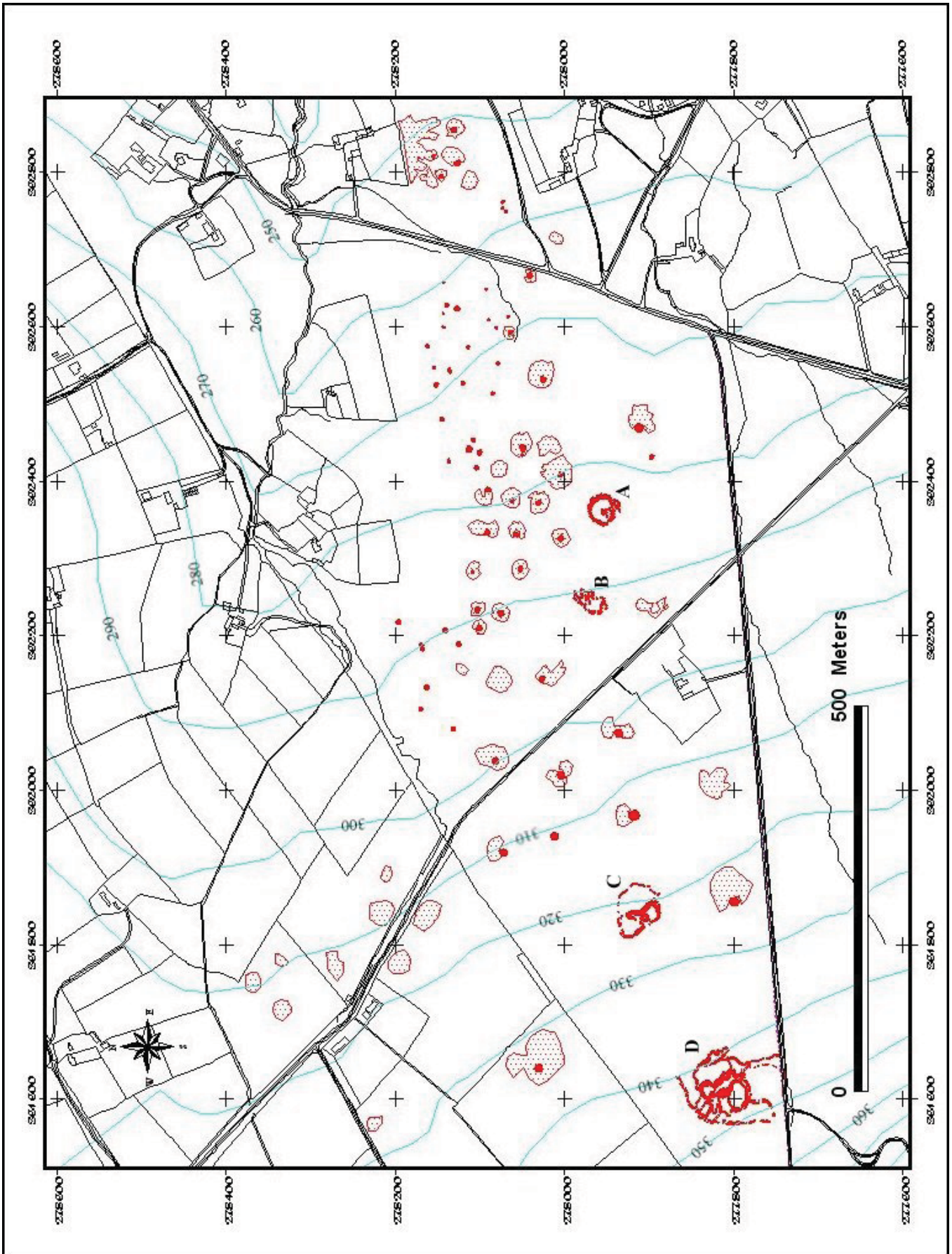
The monument is well preserved and represents a distinct episode of coal mining, probably late 18<sup>th</sup> century, as mining techniques evolved from simple bell pit working towards the later deep shaft mines. They lie in open moorland under a cover of coarse moorland vegetation, gorse and in places marsh vegetation. Where they fall in enclosed farmland they in general lie under improved sheep pasture. The open common areas are accessible to walkers. The site can be approached from the east along a metalled trackway from the Hoptonbank to Cleeton St Mary Road, past Craven Cottage, or from the open hill above along a well defined trackway, formerly a mine tramway. Its present management as sheep hill pasture is good and requires no change.

### **Recommendations**

The area has excellent overall potential for presentation within an informed footpath scheme. The general good state of preservation, variety of surviving works, ready accessibility and relatively easy access make this site of high potential value for possible presentation. In particular, there is considerable potential to use this area of the hill to illustrate the changing mining techniques, as examples of all elements survive here in close proximity.

### **Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C208)</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		







*Plate 29: Horse Whim SO 6236 7794 ( Pit A) under light snow, 1989*



*Plate 30: Horse Whim 2006; figure is standing on bank of whim*





*Plate 31: Pit 'B' SO 6225 7796; low enclosure bank in foreground*



*Plate 32: Pit 'C' SO 6184 7788; low enclosure bank in foreground*



*Plate 33: Pit 'D' SO 616 779, viewed from Magpie Hill*



*Plate 34: Pit 'D' SO 616 779, causeway from spoil*





*Plate 35: Pit 'D' SO 616 779, reservoir*



*Plate 36: Pit 'D' SO 616 779, outlet channel from reservoir*



## TCR (C209)

NGR: centred at SO 6109 7795

A small group of bell pits on the north-east flank of Titterstone Clee lying in enclosed hill pasture between 365m and 380m OD. The shafts vary in diameter between 5m and 2m. The content of the waste mound indicates that they were coal workings. This complex appears to be working the same upper, shallow coal seam as the main bell-pit complex pit further east on the upper slope of Magpie Hill.

### Management Statement

The pits lie in marginal but enclosed hill pasture which shows some evidence of having been improved. Today the grass is a mixture of grass, sedge and some gorse.

### Action

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography.



*Fig. 21: Bell Pits centred SO 6109 7795*

### Recommendations

This group of bell pits lies in enclosed hill pasture with no easy access. No further action required.

**Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C209)</b>			
<b>Rarity</b>		*	
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>		*	
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>		*	
<b>Potential</b>		*	
<b>Amenity value</b>			*

**TCR (C209)**  
**MSA 3754**

**NGR:** centred at SO 6047 7790

A group of bell pits on the north side of the saddle between Titterstone Summit to the west and Clee Hill plateau to the east. The pit group is centred at SO 6047 7790 between 385m OD in the north and 440m in the south and lies in close proximity to and on either side of Shirley Brook. These pits are known as 'Shirley Pits' (OS 1832). The stream here flows north through a deeply incised valley exposing the shallow coal levels and it is this which would have attracted the concentration of mining to an area with difficult access. The shafts vary in diameter between 5m and 2m. The content of the waste mound indicates that they were coal workings. This complex appears to be working the same upper, shallow coal seam as the main bell pit complex pit further east on the upper slope of Magpie Hill.

A well-defined stone built boundary bank 1m wide and 0.5m high cuts across the valley from SO 6076 7807 in the east to SO 6037 7825 in the west, splitting the group roughly in half. The proximity of the pits to the deserted Newfound Well farmstead to the west suggests a relationship between it and the pits.

**Management Statement**

The pits are well preserved and lie in open moorland on the north side of the hill under a vegetation of moorland grass and bracken. Pedestrian access is possible from Cleeton St Mary to the north along a footpath.

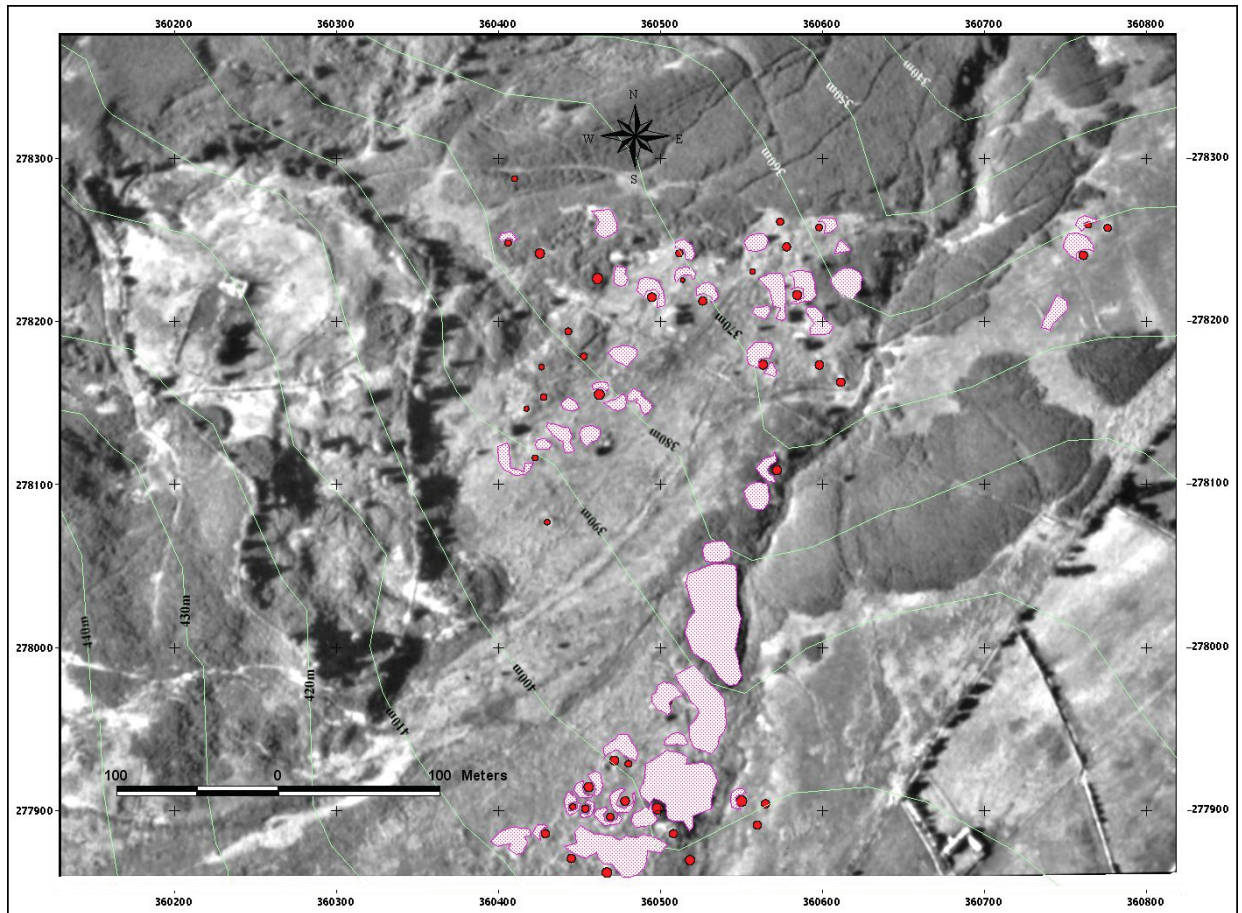
**Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography.

**Recommendations**

This is a discrete group of well-preserved bell pits which lies, unusually, on the north side of the hill. The landscape here is very different to that to the south and west, the lower sides of the Shirley valley being wooded. It is possible to park a vehicle in the vicinity of Cleeton St Mary and walk from there onto the hill. There is therefore potential to include this group in a heritage walk system - a short walk from the village or a longer walk across the saddle. The proximity of a deserted squatter enclosure 'Newfoundwell' which lies close by to the north of the group adds to its potential amenity value.





*Fig. 22: Shirley Bell Pits centred at SO 6047 7790*

**Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C210)</b>			
<b>Rarity</b>		*	
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		



*Plate 37: General view looking west across valley of Shirley Brook*



*Plate 38: Steep-sided valley of Shirley Brook*





*Plate 39: Typical bell pit in Shirley Pit group*



*Plate 40: Linear bank, SO 6076 7807 to SO 6037 7825*



**TCR (C211), Part of MSA 5386, partly within SM1763**

**NGR:** centred at SO 5996 7760

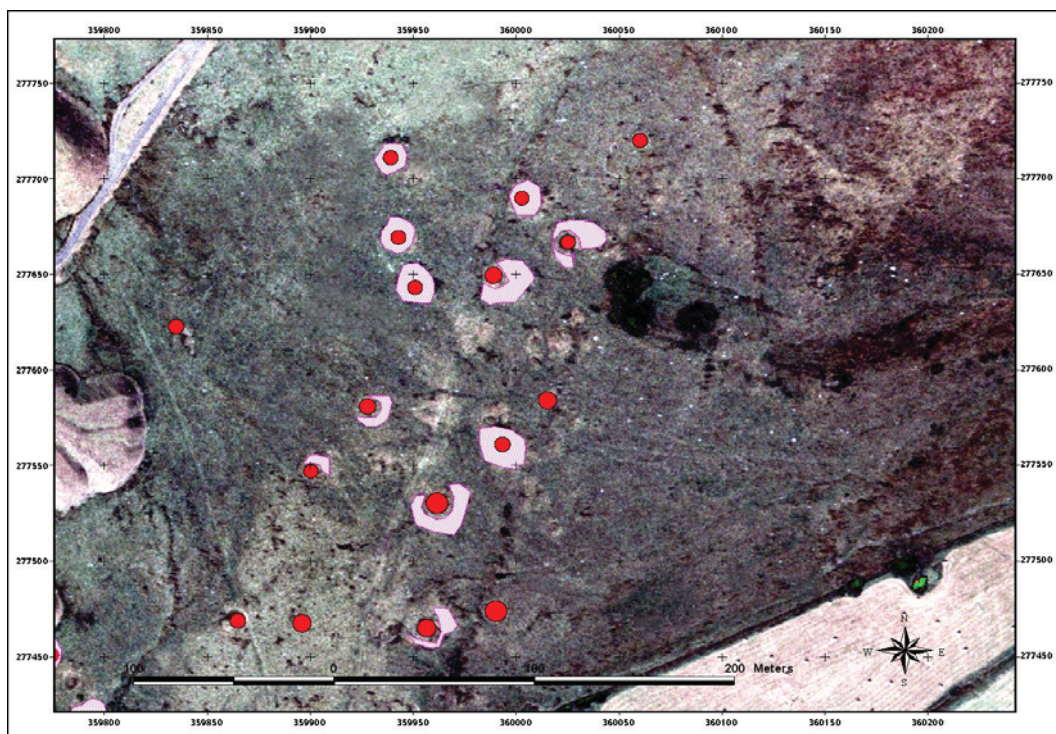
A small group of widely spaced bell pits lying in the saddle between Titterstone Clee summit to the west and Hoare edge in the east. The pits are strung out running along the contours, between 450m and 465m OD at a spacing of between 20m and 50m. The shafts vary in diameter between 10m and 4m with spoil mounds up to 20m across. The content of the waste mound indicates that they were coal workings. This complex is following the same upper, shallow coal seam as the main Horse Ditch concentration which lies close by to the south-east. Their wide spacing and comparatively large spoil mounds suggest that the coal is dipping away from the surface here possibly necessitating deeper pits. The wide spacing suggests that sub-surface tunnels were driven out from the shafts in the of the so called 'Bassett Pit' style as on the lower slopes of Magpie hill on the north side of saddle

### **Management Statement**

The pits are well preserved and lie in open moorland under a vegetation of moorland grass and gorse. Pedestrian access is possible from south and north

### **Action**

RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography.



*Fig 23: Bellpits at SO 5996 7760*

### Recommendations

This group of bell pits is a short walk from the main Horse Ditch complex and provide a contrast in style with that concentrated area of bell pits. Walking is across the open moorland along sheep paths only but it is possible to continue across the saddle to the northern slope of the hill and the TCR C210 bell pit group and then on to Cleeton St Mary.

### Statement of importance

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C211)</b>			
<b>Rarity</b>		*	
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		

**TCR (C212)**  
**MSA 3005**  
**SMR 04560**

**NGR:** centred at SO 6025 7821

Situated on the north-eastern flank of Titterstone Clee Hill overlooking the village of Cleeton St Mary, is a substantial deserted post-medieval farmstead known as Newfound Well. The farmstead occupies a terrace to the west of and overlooking the valley of Shirley Brook and the bell pits field of the Shirley Pits. The terrace lies between the 385m and 425m contours and is bounded along its top edge by a low stone wall creating an enclosure 342m north to south by 183m east to west at its widest point giving an enclosed area of 4.3ha. . Scattered hawthorn indicates that there was once also a thorn hedge running around the perimeter.

The site is approached across the open moorland above Cleeton St Mary in the north-east by a distinct pathway which runs to the west of Shirley Brook. Commencing immediately west of the road bridge at SO 60905 78723, a deep hollow way crosses the stream a short way south of the bridge, indicating that originally the path may have crossed the brook by a ford. This path could only have been used by pedestrian or equestrian traffic and it climbs the hillside crossing the passing close to the west of the Shirley Pit complex and passes into the enclosure as a well made terraced way at SO 60314 78286. A second route-way approaches the settlement from the south-west as a well made, and in places stone edged, track-way, accessing the enclosure interior at SO 60175 78194, and continuing on towards the north-west.

Within the interior of the site, several elements of the settlement survive. Principal is the farmhouse itself which stands towards the top of a small knoll of high ground at 410m OD, centred at SO 60235 78222. It survives as the ruin of a substantial stone-built house, 14m long by 10m wide lying on a north-west to south-east alignment. The house was built of the local basalt (dhu stone), dressed into rectangular blocks. The eastern end of the building is the best preserved with walling between 1m and 2.3m at the north-east corner. A straight joint between at this corner may suggest the location of a chimney. The remaining elevations are more ruinous, surviving as collapsed and spread walls, with turf covered cores averaging 1m high. The interior plan of the house can still be recognised and comprised four rooms with a central hall. The two larger rooms lay against the north side of the house, the largest being some 4m square, internally. The substantial proportions of the ground floor and central hallway suggest that the building would have had an upper floor, possibly with a stairway in the central hall. Some 20m to the south of the house at SO 60235 78201 are the remains of two small subsidiary buildings, the best-preserved being 5m square with walls up to 0.8m high. Several other residual stone walls in the northern corner of the enclosure may be the site of small farm buildings.

A collapsed stone wall runs from this building for some 28m to the south-east where it joins at right angles to an inner enclosure which runs around the south and east sides of the farmhouse at an average distance of 45m from it. This enclosure wall commences at the SW corner of the house, runs for a short distance parallel to the house and then turns to the south-west running for 45m to a corner at SO 60203 78173. From this point it runs as a ruined wall 1m wide and up to 0.5m wide around



the top of the eastern side of the terrace to end at SO 60253 78271. Contained within this wall are several notable features.

At SO 60271 78221 is an oval-shaped mound of turf-fast stone, 10m north-east to south-west by 8m transversely standing up to 1.2m high (B Fig. 47). Twelve metres to the north of this is a linear mound of similarly turf fast stone, lying with the slope on a similar south-west to north-east alignment between SO 60262 78229 and SO 60280 78242. This mound is (A on Fig. 47), some 22m long, 6m wide and on average 0.4m high. Though stony, these two mounds could represent pillow mounds associated with the breeding and management of rabbits. Although at this elevation on Clee Hill soils tend in general to be impoverished podsols, earth exposed in several molehills within the inner enclosure was observed to be a brown organic rich soil, suggesting that the interior of the enclosure may have been cultivated. In the north and west quarters of the site a mature sweet chestnut, oak and alder, and several possible old fruit trees similarly suggest horticulture. The mounds described above therefore could lie on a depth of soil suitable for the creation of a warren.

Two lesser structures lie close to this mound to the north-west. One is a spiral arrangement of stones the other roughly circular with several stones at its centre. Both are between 3m and 4m in diameter and are built of stones selected to be a roughly uniform size. Their age and purpose is uncertain, though the earth fast nature of the stones and the colonies of lichen on all of the stones suggest that they are not recent structures. They are most likely contemporary with the house and possibly simply decorative features.

Towards the north-west corner of the outer enclosure, on its uphill side lying against the inner face of the wall at SO 60163 78259 are the ruined remains of a three-celled building 12m long and 7m wide lying on a NE to SW alignment, possibly the remains of a barn.

To the south of the house and inner enclosure running from SO 60189 78153 upslope at 420m OD to SO 60316 78178 downslope at 400m OD is a substantial water channel. Considerable effort would have been required to excavate this on average 1.3m wide channel into the, here stony ground to a depth of on average 0.8m. It clearly had an important function, possibly collecting run-off water from the higher ground to the west and channelling it around the inner part of the farmstead. Once below the upper terrace it would have discharged onto the lower slope. Marshy ground in this area could be the remains of a pond.

### **Action**

Shown on the OS Landline as an enclosure. Detail added from APs, photographed and described.

### **Management Statement**

The perimeter of the enclosure is well-preserved with standing dry-stone walling and some of the original hedging still in place. The interior is undisturbed and grazed as sheep pasture and contains several structures including the substantial farmhouse. This is an unusual survival of a substantial dwelling which has been deserted and appears to survive, sealed and intact. It will contain archaeological material relating to the domestic conditions, which were contemporary with the early mining. Few such sites survive upon the hill as very few squatter dwellings have been deserted, most

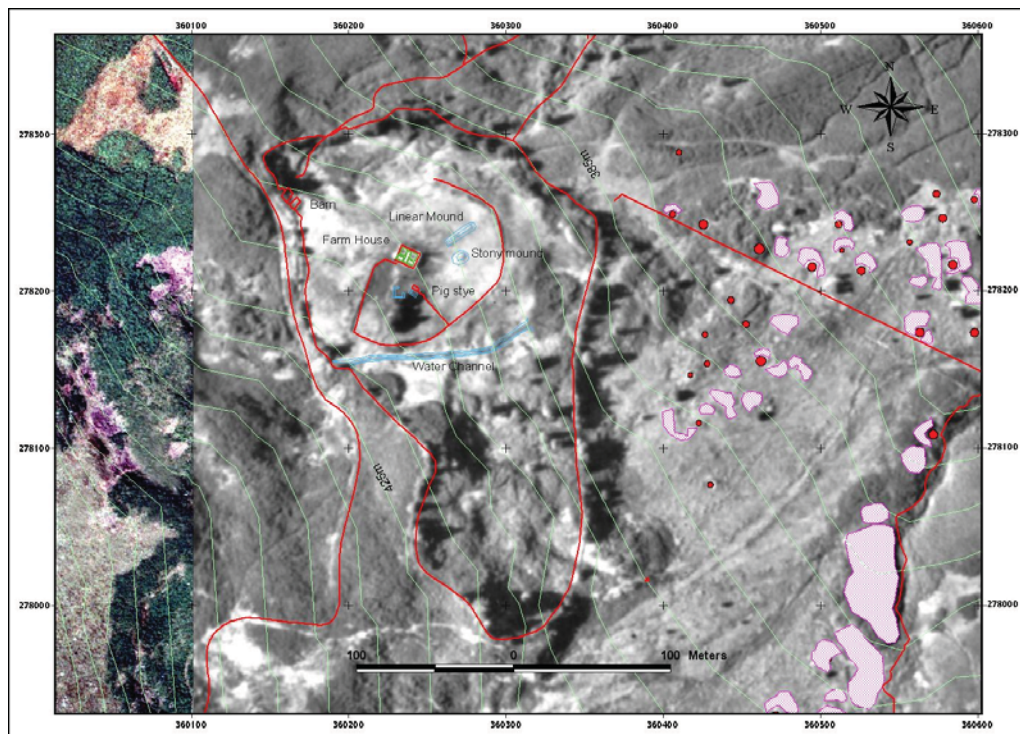
having continued to be occupied and in later years have been improved and modified heavily.

### Recommendations

This enclosure and the material within it are an important survival of settlement which has considerable archaeological potential as a time capsule relating to domestic conditions in the coalfield in the 18<sup>th</sup> century. As such it is a site which could offer a wealth of information if subjected to a full excavation. It is under no immediate threat but should be recognised as a valuable site and possibly given scheduled protection. The site should be subjected to a detailed instrumental survey and building record. Further documentary research may identify the family to which the site belonged and when and why the site was deserted. It could be a significant site in a heritage themed walkway from Clee St Mary in the NE across the saddle of the two massifs to the Horse Ditch complex in the SW

### Statement of importance

CRITERIA	HIGH	MEDIUM	LOW
<b>SITE ID: TCR (C20 )</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>	*		
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		



*Fig. 24: Newfound Well deserted farmstead*





*Plate 41: Hollow way to possible ford S of bridge over Shirley Brook, SO 60905 78723*



*Plate 42: Northern entrance to enclosure, SO 60314 78286*





*Plate 43: Western approach to enclosure, SO 60175 78194*



*Plate 44: Farmhouse from the NE*



*Plate 45: NE corner of farmhouse*



*Plate 46: Interior walls of farmhouse*





*Plate 47: Subsidiary building and inner enclosure wall*



*Plate 48: Inner enclosure south-east quarter*





*Plate 49: Oval Mound, SO 60271 78221*



*Plate 50: Linear mound, looking SW*



*Plate 51: Organically-rich soil in molehill*



*Plate 52: Sweet chestnut*





*Plate 53: Spiral stone setting*



*Plate 54: Circular stone setting*





*Plate 55: Water channel, SO 6019 7815 to SO 6032 7818*

**TCR (C213), MSA3742** contained within

**NGR:** centred at SO 6342 7832

A group of well-preserved bell pits commencing in the west at SO 62710 78123 and extending eastwards along the narrow neck of land 100m wide and 740m long, contained between the squatters settlements clustered around Crumpsbrook in the north and Welling's Brook in the south, crossing Crumpsbrook itself at SO 6341 7831 to spread onto Catherton Common to the north-east (Fig. 48, Plate 60). The pits fall into two distinct classes; to the west of Crumpsbrook, between 260m in the west and 220m OD at the brook, the workings are similar to those which occur on the lower slopes of Magpie Hill, described as TCR(C208). Shaft craters vary between 5m and 8m in diameter and spoil mounds from small crescentic mounds 10m across and up to 1.2m high to large circular mounds up to 33m in diameter and up to 2m high. They differ however from the pits to the west of the Cleeton St Mary road in that the western pits are widely spaced and individual. The pits in this belt are closer together with the larger spoil mounds in places merging at their margins to form conjoined areas of spoil. The form and the composition of the spoil in the group suggests that they were extracting a primary product of coal (Plate 61).

At the western end of this group, adjacent to Crumpsbrook itself, the character of the pits changes. From SO 63412 78283, a concentration of pits runs along the southern side of the brook, as a rough triangular 240m north-west to south east by 190m north-east to south-west, occupying an area of some 3.5ha. These pits are much smaller than those to the west, with shaft craters varying between 2m and 4m in diameter and they lie close together, in places each within 2m of its neighbour. Due to the close spacing of the pits, the associated spoil is fused into a continuous low spread of material which overlies the natural land surface and surrounds the pits. Characteristically, this is vegetated by a close-cropped sheep pasture, in places encroached upon by bracken. A similar concentration of pits lies on the north bank of the brook, contained between the enclosed land of the adjacent squatter enclosures to give a rough rectangle 144m north-west to south-east by 86m transversely with an area of 1.2ha. Here again, the spoil forms a largely continuous surface vegetated by sheep cropped grass (Plate 62).

From this point on, to the north, east and west the open moorland of Catherton Common itself is vegetated with coarse moorland grasses, some heather and gorse but predominantly bracken. Bell-pits extend out onto the common over an area of some 18ha but gorse and the bracken encroachment make observation problematic (Plate 63). The sample survey carried out by RCHM(E) as a part of the 1983 survey, reproduced as Fig.49 shows the intense concentration of pits in the area centred at SO 6344 7854. Perambulation suggests that similar groups extend over much of the west side of the shallow basin which rises from 220m at the brook to 230m to the east of the Dingle (Plate 64).

One particular group lies centred at SO 6334 7849 extending over an area 180m north-west to south-east by 70m transversely. The pits in the southern half of this group are small bell-pits with shallow craters up to 3m in diameter surrounded by low spoil mounds up to 9m in diameter and 0.5m high. However, as the group progresses north and west the character changes to one of innumerable small pits pockmarked across the surface some as small as 0.5m in diameter (Plates 65 and 66). Little spoil is associated with these pits suggesting that they were working a deposit very close to

the surface (Plate 66). It is probable that these pits were dug to extract iron stone which occurs in a nodular form known locally as ‘clumpers’ within the shale sequence above the ‘Bottom Coal’. The ‘Bottom Coal’ being the same deposit as the ‘Four Foot’ coal which occurs at a low level in the sequence of coal worked on Titterstone Clee to the west (Toghill 2004, 134).

It seems probable therefore that the small pits higher up the slope are working the iron ore of the shale above the coal while the larger pits closer to the valley bottom are working the coal beneath the shale.

### **Action**

Sequence of pits digitised from georectified APs, RCHM(E) 1983 survey digitised and georeferenced with OS Landline and aerial photography. Survey drawing modified. Site visited to confirm condition.

### **Management Statement**

The monument is well-preserved and represents a sequence of pits which reflects both coal and ironstone extraction. The pits are well known due to the St Joseph oblique photography. They lie in open moor-land under a cover of coarse grass and open sheep pasture with some gorse and an increasing bracken encroachment. Where several pits are situated in enclosed farmland they in general lie under improved sheep pasture. The open common areas are accessible to walkers. The site can be approached from the roadway from Hoptonbank to Cleeton St Mary. Its present management as sheep hill pasture is good but the encroachment of bracken and gorse is a problem. As in other areas of the hill, there is a need for a long term management programme of the bracken and gorse.

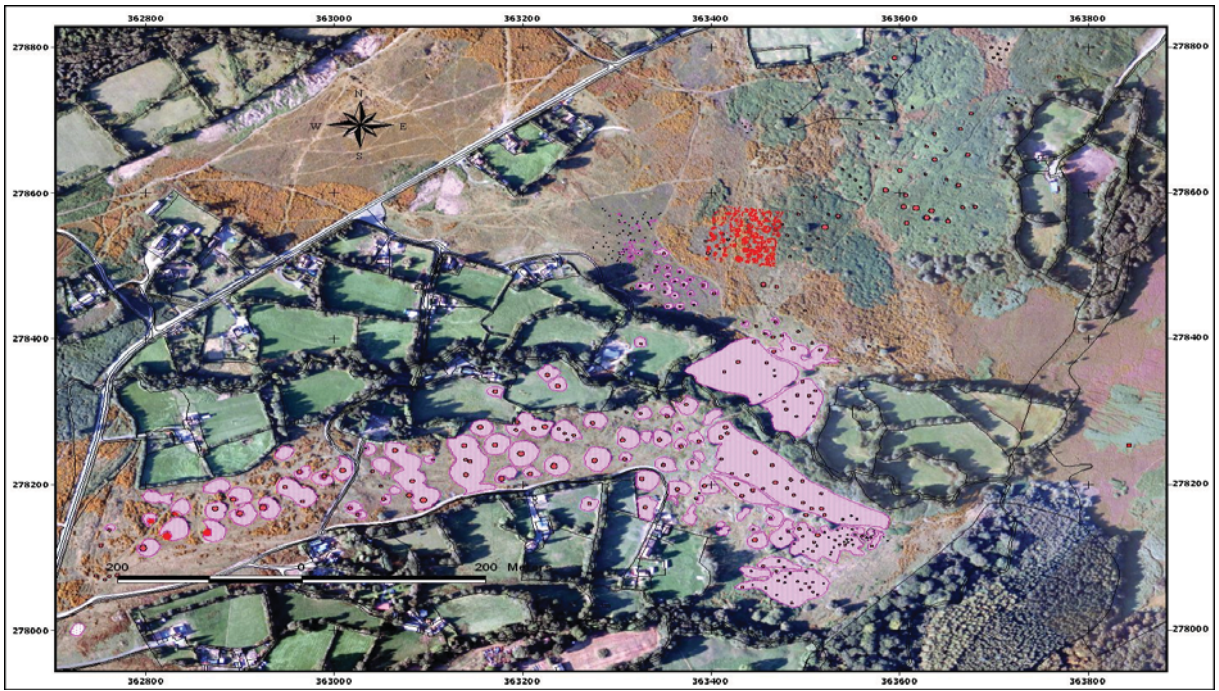
### **Recommendations**

The area has excellent overall potential for presentation within an informed footpath scheme. The general good state of preservation, variety of surviving works, ready accessibility and relatively easy access make this site of high potential value for possible presentation. In particular, the potential is considerable to use this area of the hill to illustrate the different extraction techniques employed for iron ore and coal example of each of which survive here in close proximity.

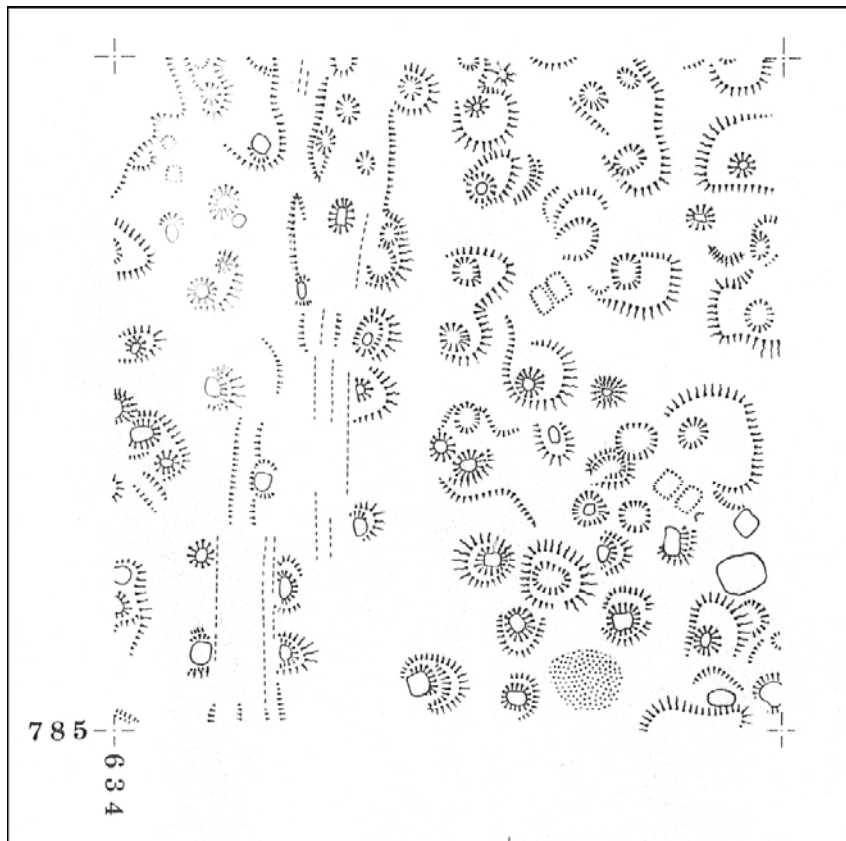
### **Statement of importance**

<b>CRITERIA</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>SITE ID: TCR (C213)</b>			
<b>Rarity</b>	*		
<b>Documentation</b>		*	
<b>Group value</b>	*		
<b>Survival/condition</b>	*		
<b>Fragility/vulnerability</b>		*	
<b>Diversity</b>	*		
<b>Potential</b>	*		
<b>Amenity value</b>	*		





*Fig. 25: Bell pits extending east onto Catherton Common. Location of RCHM survey in red*



*Fig. 26: RCHM(E) 1983 1:1000 survey*



*Plate 56: Oblique aerial photograph of Catherton complex (Photograph, copyright of Clwyd-Powys Archaeological Trust, ref. 95-C-1745)*



*Plate 57: Spoil spreads north and south sides of Crumpsbrook*





*Plate 58: Ironstone pits, Catherton Common*



*Plate 59: Ironstone pits, Catherton Common*





*Plate 60: Ironstone pits, Catherton Common*