

ART. XIV – *Excavations at Parton Colliery*

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IN June 1997, a team of archaeologists from Lancaster University Archaeological Unit excavated an area of the now disused colliery at Bank Yard Road, Parton, near Whitehaven, Cumbria. The work was funded by Cumbria County Council in advance of a scheme of protective landscaping. The colliery was founded in 1827 and in the first years of its operation was known as “Parton Drift Mine”. The colliery continued to function until around 1863, after which oral evidence suggests the colliery buildings were adapted into a brickworks.

Topography and Geology

The village of Parton is a coastal settlement, backed by a steep hill. The soils are coarse and loamy, overlying superficial clay deposits (OS Soil Survey 1983) whilst the underlying solid geology comprises Carboniferous Limestone with productive Coal Measures, including Micklam Fireclay deposits. The main seam in the Parton area is the Six Quarter or Lickbank seam (OS Solid Geology map 1983, sheet 28).

Historical Background

There is little information on the origins and early history of Parton, which was a township within the parish of Moresby, serving as a port for fishing vessels. Although there are numerous references in trade directories to it being more ancient than Whitehaven (Parson and White, 1829, 229; Mannix and Whellan, 1847, 353; etc.), the first documentary evidence for its existence is dated 1566, in a report by Commissioners appointed to survey ports, creeks and harbours in Cumberland. They describe Parton as a port exporting fish to Chester and Liverpool, using small vessels called “pickerdes” (Wood, 1988, 1).

Collieries were already well-established in Moresby parish by the seventeenth century, and the owners shipped out their coal through Parton. This took place in direct competition with other mines in the area owned by Sir John Lowther, who, late in the same century, attempted to gain a monopoly by buying up as much of the coal-bearing land as he could, thus concentrating ownership in his own hands (CRO(C), D/Lons/W1/66, 1718). In response to Sir John’s predatory business dealings, the remaining owners and merchants proposed the construction of a new pier in Parton, in order to avoid paying export duties through his port at Whitehaven (Wood, 1988, 9).

Lowther, however, succeeded in persuading the King to grant to him the land at Parton between the high and low water marks, thus gaining control of the port in 1678. Despite this constraint, William Fletcher, Lord of the Manor of Moresby, attempted to build a pier two years later. Lowther not only obtained a perpetual injunction against him, but also went on to gain trading preferment for his own port

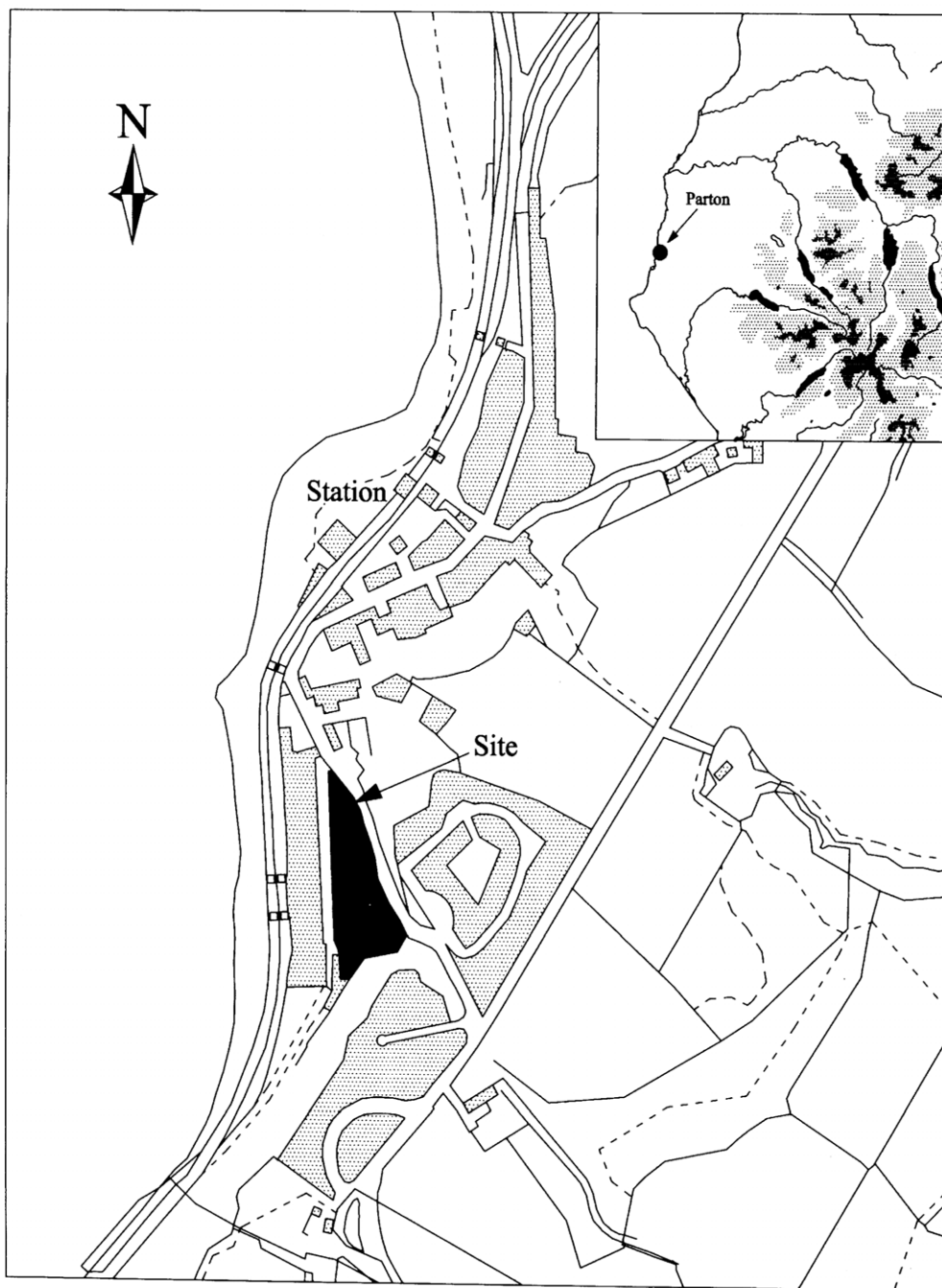


FIG 1. Parton Colliery: Site Location. Scale 1:7500

of Whitehaven. By 1681 he had made further development of the port at Parton legally impossible. Subsequently, as Lowther's own business needs made a port at Parton desirable, he relented, and allowed other coal owners to repair the pier there. When they proposed obtaining an Act of Parliament to allow the enlargement of the harbour, however, he refused to join them, although such an act was passed anyway in 1706 (Wood, 1988, 10). Mismanagement and poor investment meant that the pier was destroyed by storms in 1718 and needed to be rebuilt.

Caught up in the intense battle between a small number of local families for control of the coal trade on the west coast of Cumbria, Parton was again refurbished and, for a while, with a new pier and larger harbour, the quantity of coal exported was greatly increased, even exceeding that from Whitehaven (Parson and White, 1829, 229). In 1794, however, Parton was described by the antiquarian Hutchinson as a little haven, whose chief export was still coal (Hutchinson, 1794, 94). By the following year, a great storm had again washed the pier away, and Parton sank back to relative obscurity, becoming a fishing village once more (Mannix and Whellan, 1847, 353).

The plot of land containing the site of the former colliery is situated at the southern end of Parton village. On a plan of 1815, the northern third of the plot is shown with (presumably) domestic buildings (CRO(C) D/Lons/W Plans, 1815), with fields to the south owned by Mr H. Bragg, and a tan yard next to the foreshore. Later, the southern part of the site was transformed into a coal mine, the "Parton Drift", which began in 1827. It was used as a coal exit for the "Countess Mine", which was opened in 1832, and is shown on a map of Parton by William Gawthorpe (1835). The site expanded until the mines were closed in the 1860s, appearing on later maps as a coal depot. There appears to have been a brickworks on the site, a common juxtaposition, as coal measures often incorporate refractory clays, as well as providing a cheap source of fuel (D. Cranstone, *pers. comm.*).

The former coal mine occupies the southern two-thirds of the plot and lies above a massive stone revetment with a tan yard on the eastern side next to the foreshore. The tan yard is shown on later maps as lying at the base of the revetment. The map of 1815 does not give any indication of the presence of a cliff, and it is likely that originally the field sloped steeply down to the foreshore. Indeed, an early eighteenth century plan of a design for Parton harbour depicts the plot in one corner and it is described there as a great hill rather than a cliff (CRO(C) D/Lons/W8/101). It is probable that the hillside was terraced back and revetted when the site was developed.

Although none of the historical maps label the site, a variety of documentary evidence strongly implies that it was the "Parton Drift" and "Parton Mine". John Peile, manager of the Lowther mines, began the Parton Drift for drainage purposes in 1827 (Wood, 1988, 118-19), but plans for the drift had been in the offing for some time; an advert for workers to cut a new drift mine and to build a breast wall was published in the *Cumberland Pacquet* newspaper on 18 January 1820 (BC neg. 85).

Following the construction of the drift mine, work began on a new mine shaft to the east of Parton in 1832, called "Countess Pit" (at NGR NX 982 204; see Moore, 1968, 372; Wood, 1988, 118). This work cost £20,000 and was completed in 1836. The Parton Drift, in addition to providing drainage, served as the outlet from

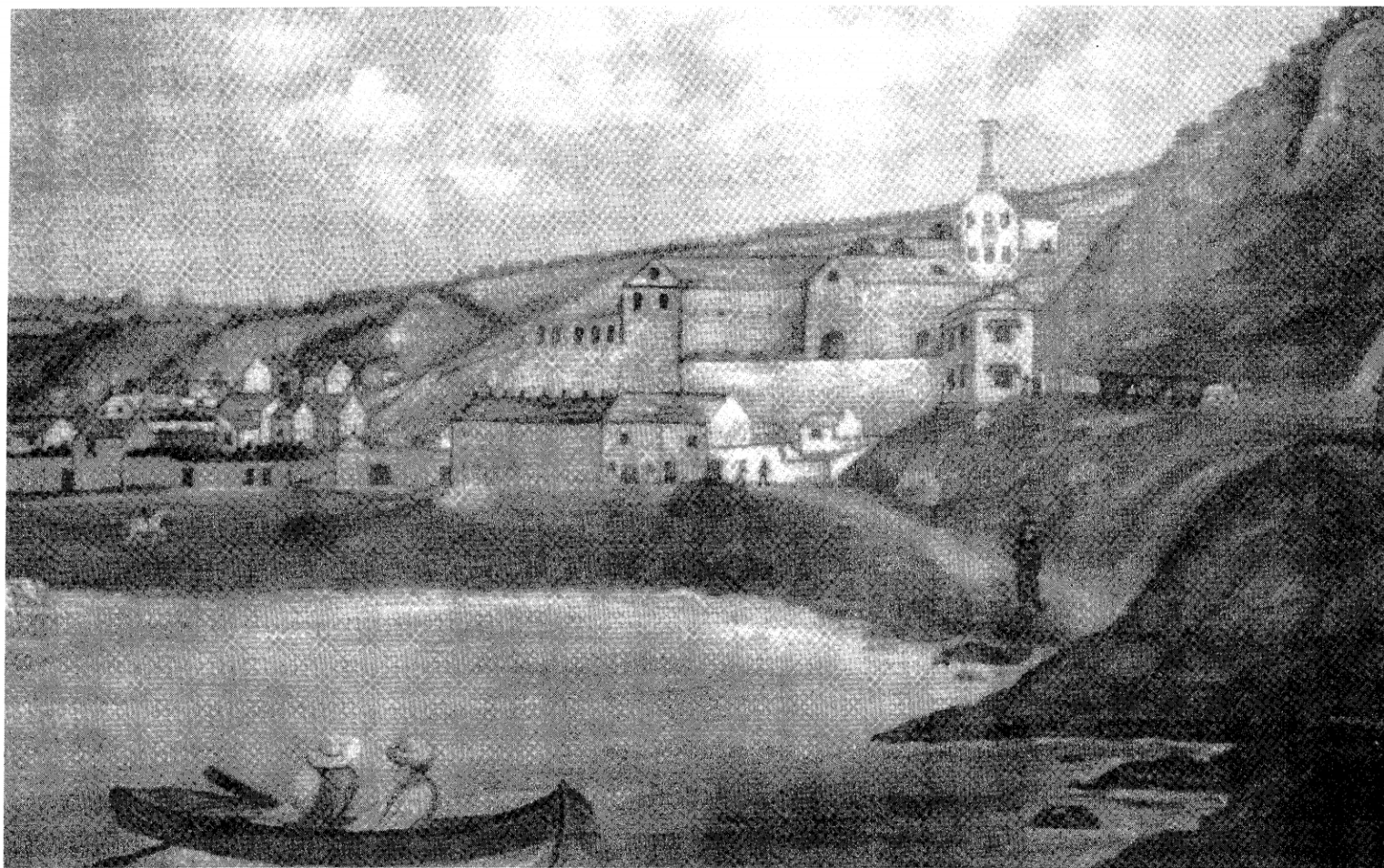


PLATE 1. 1840s watercolour of the Parton mine complex.

Countess and Moresby Pits. Coal was raised from Bannock, Main and Six Quarters seams to the level of the Parton Drift, then taken along the drift to Parton Mine, where it was hauled 10 fathoms (60', or 18.3 m) to the surface (Moore, 1968, 372).

William Gawthorp's plan of 1835 (CRO(W) 310/MS 276 1835) indicates a "Drift Entrance" and a "Pit" on the site, the latter aligned with a square building to its immediate south. In addition, the line of the revetment is clearly shown, together with the outline of a complex of buildings running east/west between the pit shafts and the revetment. There is also a small reservoir and a road entrance to the mine from Parton Brow. A "Waggon Way From Whitehaven Harbour", leads past a "Lodge", through a yard area and into the west end of the building complex.

This arrangement is repeated on the tithe map of 1838 (CRO(W) YPR 15/104 1838), and, very importantly, it is fleshed out by two watercolour paintings of the site, dating from c.1840 (Plate 1 courtesy of Jim Hewitson). They clearly indicate the large building complex to have been tall and gabled and also show the square building to the south of the pit shafts as a three-storey building with a large chimney in its west wall. A further notable feature is the depiction of wagons being hauled by a pony along the waggon-way. In addition to this evidence, accounts of coal production refer to the drift yard and pit, as well as to a tar works and coke ovens. However, there is no indication of where these were located (CRO(C) D/Lons/W7/1/132; D/Lons/W7/1/149).

A similar, slightly amended layout to the early maps is shown on the OS 1st edition map of 1863, and the OS 2nd edition map of 1899. Parton Drift and the Countess mine ceased production in 1863 (Wood, 1988, 119), and it is therefore significant that the 1863 map labels the area a "Coal Depot" rather than a mine, and shows the waggon-way replaced by sidings for the "Whitehaven Junction Railway" (built in 1847; Joy, 1983). It also shows a second, high-level reservoir, some small additions to the main building complex, and some spoil heaps to the north. By 1899 the sidings yard had been expanded on its west side (behind the lodge building), the upper reservoir was no longer marked, and the shafts are labelled "Old Shaft (Coal)". There is also a notable change in the sidings area with the addition of two square structures, one west and one south of the lower reservoir. Photographs of Parton from 1900 and 1905 (BC neg. 964, neg. 973) do not have these new structures in their field of view. However, they do show the revetment and the building complex behind, with a large chimney towards the east end (this chimney is not depicted on the c.1840 watercolours and was presumably a later addition).

It appears likely that the buildings at Parton Drift continued in use after 1863, with the buildings apparently still intact and with extensive sidings; not until 1925 do the buildings appear ruined. None of the documents consulted suggest any use other than as a coal mine or depot. It is, however, well known locally that there was a brickworks on the site, and Parton's older inhabitants remember it operating (Mr Jennings and J. Lancaster, *pers. comm.*). It is not uncommon for brickworks to be associated with mining (Daysh, 1938, 49), and it may be that there was a brickworks on the site from its first opening as a coal mine. Alternatively the brickworks may be an addition or a re-use of redundant mine buildings. In a survey of industrial facilities in West Cumberland, Daysh (1938, 49) states that shales and clays from the coal measures were used to make refractory and building bricks, clearly

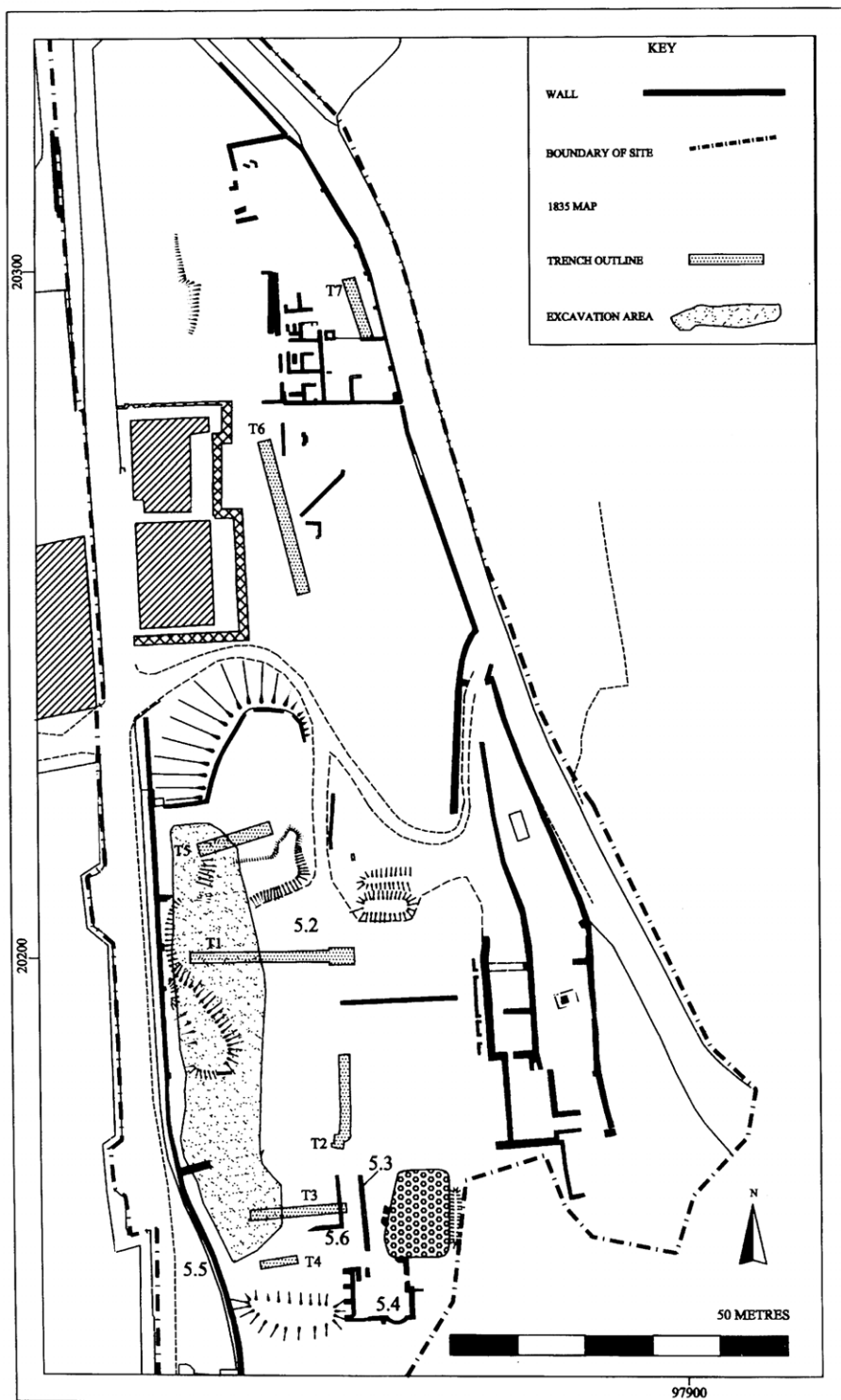


FIG 2. General Site Map and Trench Locations.

associating the collieries with brickmaking. At the time of Daysh's survey, however, Whitehaven brickworks was the only one still working.

Ground Surveys

Much of the history of the Parton colliery site is still reflected in ground level and above ground remains. As part of the archaeological works, these remains were recorded in April 1997, by means of a topographic survey, a photographic survey, and a drawn survey of upstanding structural elements. The main surviving features are summarised here.

Some evidence survives of the domestic buildings formerly present at the northern end of the plot, and first depicted on the plan of 1815. Foundations are still observable in places, although largely obscured by rubble and vegetation. The area to the south of this is primarily composed of a pronounced slope, the land falling abruptly from the east towards the site of the Methodist Church.

In the southern two-thirds of the plot, there is good surviving evidence of the substantial platform on which the colliery was largely constructed. The massive retaining wall (5.5) forming the western edge of the colliery is still present (including a blocked opening which aligns with the "drift entrance" marked on the 1885 map), and there are further well preserved revetments along the northern edge of the colliery (Fig. 2). With regard to the colliery buildings, the best degree of preservation occurs at the southern end of the plot, just to the south of the central part of the colliery. Building 5.4, for instance, first depicted on a map of 1899, is still standing to almost its original height, and contains a well preserved splayed doorway, arched recesses, and flues.

The surface evidence for the existence of the main colliery buildings is less good. Some of the structures shown on Gawthorp's map of 1815, and on subsequent maps, are still present in derelict form at the western end of the site of building 5.1, but much of the general area is covered with rubble etc., and does not contain many readily identifiable features. A square feature (5.6) shown on the 1899 map might possibly be the floor of a brick kiln, and to the east of this are the remains of a stone-built dam (5.3).

Immediately to the north of the main colliery buildings, a large enclosed area (5.2), first depicted on the 1835 map and subsequently shown as containing trackways and other features, is still, in essence, present. Demolition followed by the deposition of rubble has however obscured the detail of this area.

Evaluation trenches

A programme of trial trenching was undertaken in April 1997 in order to evaluate areas of possible archaeological significance or interest identified during the ground surveys. Seven trial trenches, totalling 100 m in length, were dug using a mechanical excavator, within the confines of the former colliery. Trenches 1-4, positioned close to the location of the colliery itself, provided evidence of walls, floors, drains, and other structural remains that were not readily apparent at ground level (Fig. 2). Trench 5, located just to the north-west of the colliery, demonstrated that a

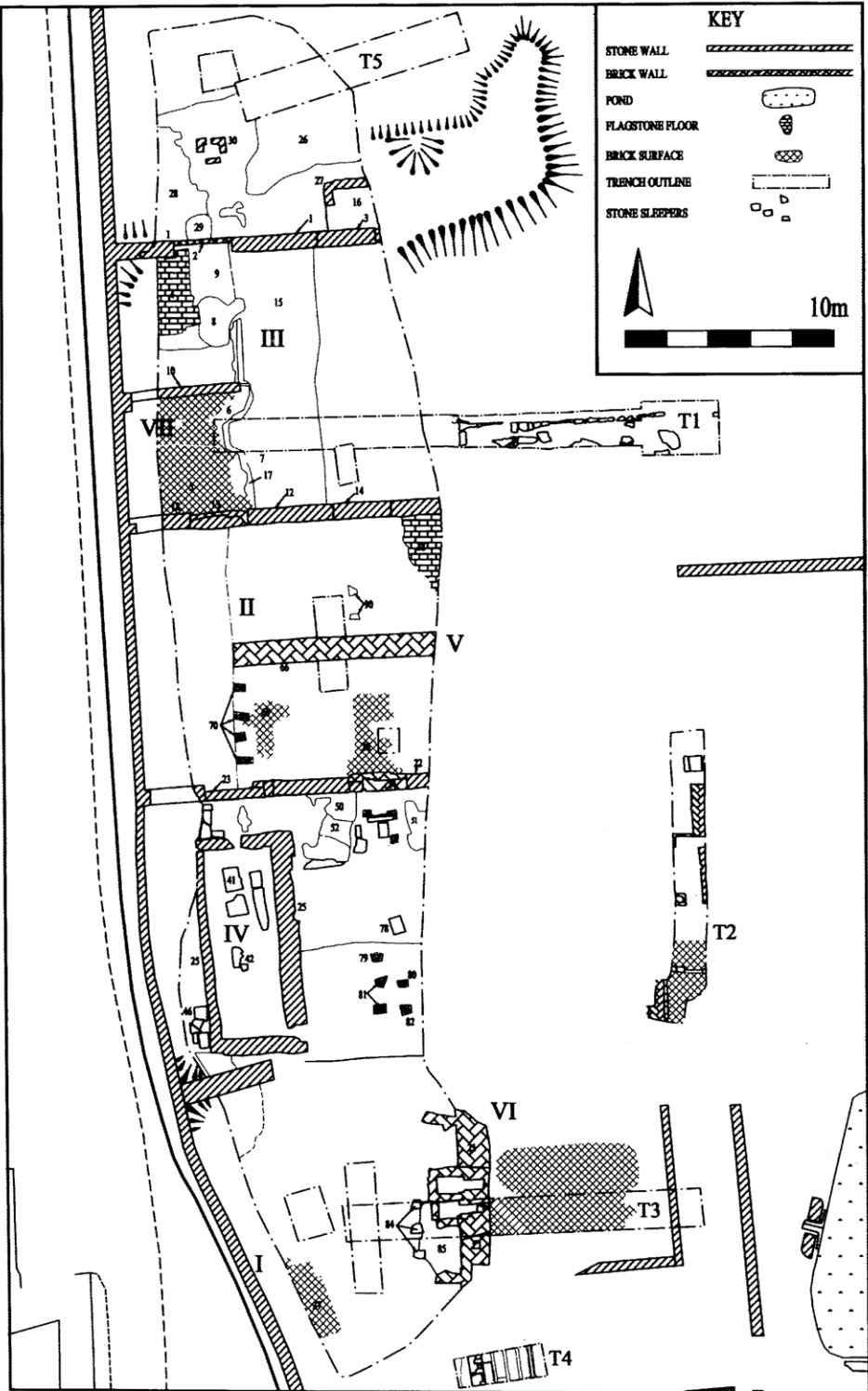


FIG 3. Excavation Plan.

considerable amount of infill was present behind the retaining walls of the colliery. Trenches 6 and 7, outwith the main scheme of works, provided clarification of the area of demolished houses to the north of the colliery.

Excavations

Excavations at Parton commenced in June 1997. The area to be investigated consisted of a sub-rectangular area to the east of the western retaining wall of the colliery (Fig. 2), measuring approximately 65 m by 12 m in extent, and was offset some 2 m from the retaining wall for reasons of safety. The excavations continued for several weeks and produced significant new evidence relating to the origins and development of the site (Fig. 3).

Phase 1 (1820-1835) Colliery

The earliest structure on the site was the massive, 10 m high, stone retaining wall (I(5.5)), supporting the platform of fill material on which the colliery was constructed. This wall was aligned north/south, measured *c.* 100 m in length, and was a minimum of 0.45 m in width, becoming wider towards a blocked adit arch at road level. A substantial amount of redeposited material had been placed behind (i.e. to the east of) this wall, and at no point within the excavation trench was natural subsoil encountered. The retaining wall was bonded to three east/west cross-walls, the southernmost of which ([12] and [22]) formed the north and south walls of a large building (II), measuring *c.* 55 m x 13 m, whilst the northernmost wall [1] probably formed the northern boundary of a yard (III). The retaining wall and colliery buildings were almost certainly constructed between 1815 and 1835, as they do not appear on a map drawn in 1815, yet are indicated on the OS map of 1835.

Wall [1] consisted of large blocks of masonry, approximately 0.40 m x 0.30 m x 0.15 m in size, with a rubble core of smaller stones. Its western end was bonded into the top of the retaining wall whilst its eastern end continued beyond the excavation trench, measuring 0.50 m in width and over 12 m in length. It was *c.* 0.50 m high, reaching a maximum height of 3 m where it bonded into the retaining wall. Two blocked entrances were visible in the wall, matching the positions of the entrances in walls [12] and [22] to the south. An iron fitting for a hinge was identified on the north side of this wall to the immediate west of the western entrance [2], indicating that there had been a door opening out to the north. A similar hinge probably once existed on the eastern side of this entrance.

Wall [12] was the northern wall of a large building (II). Like wall [1], its western end was bonded to retaining wall (I), was constructed in a similar fashion, and was 14 m long, 0.73 m wide and 0.40 m high. Two blocked entrances ([13] and [14]), measuring between 2 m and 3 m in size, were found in an identical position in this wall to those in wall [1]. These entrances were formed out of large dressed quoins measuring up to 0.60 m x 0.30 m x 0.25 m.

Wall [22] was also bonded into the retaining wall and formed the southern wall of building II. This again had an identical construction technique and character to wall [12] with matching entrances. The eastern entrance [24] had iron hinge pins

protruding from its south side, suggesting doors opening outwards towards the south (Fig. 4). Wall [22] was at least 14 m long, and, like wall [12], it extended beyond the eastern limit of the trench. It was 0.73 m wide and stood to a maximum height of 0.83 m.

Several stone blocks (typically dimensioned 0.40 m x 0.40 m x 0.15 m) found within the base of the excavation were probably stone sleepers for a north/south aligned colliery waggon-way, each block serving to hold one length of rail. All these blocks [54, 58, 59, and 60 (Fig. 4)] were set into the base of revetted coal waste. Another two sleepers ([79] and [80]) of similar size and shape were identified 5 m to the south. Sleeper [79] almost certainly supported the western side of the waggon-way sleeper [80]. A further three depressions in this part of the site, numbered [81] and [82], denote the likely position of a further three sleepers.

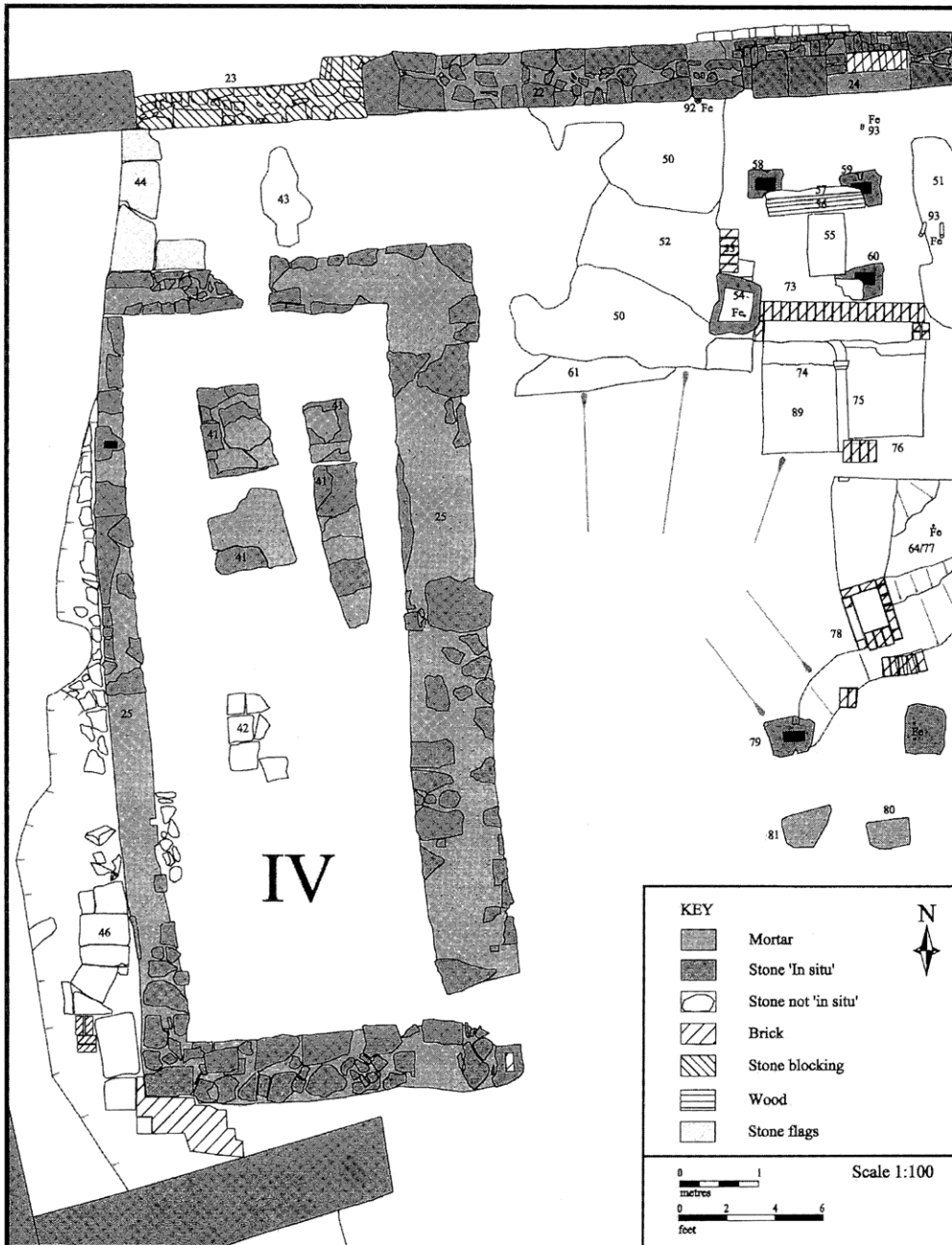
To the south, a further three stone sleepers [84] of identical construction were identified. These were equally spaced apart and all appeared to support the eastern side of the waggon-way. They were again set into a coal debris layer and had a very neatly laid cobble surface [85] butting against their eastern side. Another pair of sleepers [90] were found between walls [22] and [12], aligned along the western side of the waggon-way. This suggests that the waggon-way originally extended through the eastern entrance of wall [22] and continued into the structure. The size and alignment of the entrances within walls [12], [22] and [1], suggest that they were originally designed to allow waggon-ways to pass straight through building **II** and yard **III**.

A stone platform [18], measuring 3 m x 2 m, butted the southern side of wall [12] above coal waste layer [49]. This platform consisted of sandstone flags measuring approximately 0.60 m x 0.40 m x 0.04 m in size. The platform was bounded on its southern and western sides by a wall consisting of medium-sized mortar-bonded stone blocks. This wall did not extend above the level of the south-sloping platform, and the western edge of the platform was positioned very close to the postulated line of the waggon-way.

Another group of sleepers [70] was identified in the extreme west of the site between walls [22] and [12]. These measured at least 1.20 m in length and were 0.40 m wide and 0.20 m thick, consisting of substantial red-sandstone blocks. They again had small rectangular depressions within their upper surfaces which were probably used to attach chairs for rails. These sleepers were of a different character to those found elsewhere on the site, perhaps reflecting a different phase of waggon-way. They suggest there was an interior route that continued through the entranceways. This route was almost certainly in operation during Phase 1 of the site only, as structure **IV** (Phase 2, below) subsequently blocked the access.

Phase 2 (1835-1863) Colliery Modifications

Shortly after 1835 (the date of Gawthorp's map), a rectangular stone building (**IV**), measuring c.10.40 m by 4.80 m, aligned north/south, was constructed just south of and partially blocking the western entrance of building **II** (Fig. 4). The 1863 map depicts a structure within this area, although it appears to have been demolished by the time of the 1899 25" map. The 1863 map suggests that the roof of this structure was connected to building **II**. Wall [25] formed the external wall of structure **IV** and



was constructed out of large heavily mortared blocks of stone (average size 0.53 m x 0.34 m x 0.18 m). It varied in thickness from 1 m to 0.44 m, and was c.0.32 m in height. A group of four large mortared stone bases [41] (average size 0.80 m x 0.65 m x 0.10 m) were found in the northern part of this structure, and probably functioned as machine supports. Another possible support [42], consisting of mortared masonry blocks, was located further to the south and measured 1.08 m x 0.65 m x 0.10 m. Several fragments of stone paving [46] were found to the west of structure **IV**.

Several features were recorded to the north of wall [1] beyond yard **III**. The earliest layer identified within this area of the site comprised pink/red angular gravel between 0.01 m and 0.05 m in size which was over 0.30 m thick, and was sealed by a metallised surface [28]. This was patchy and measured 5 m by 3 m, the average size of the cobbles being 0.20 m x 0.10 m x 0.10 m. The metalling was located to the immediate north of the western entrance in wall [1]. None of the maps studied depict the waggon-way or railway extending into this part of the site.

Phase 3 (1863-1925) Brickworks

At least three of the four entrances identified within building **II** were deliberately blocked during this phase, using variable materials including roughly dressed masonry, unfroged bricks, and mortar. At approximately the same time, a large brick-vaulted east/west aligned flue (**V**) was constructed in the centre of the building. The flue was placed in a large box-shaped trench [66], 1.20 m deep and 1.20 m wide, which cut through a colliery waste layer. The flue measured 0.90 m in width internally, and was 1.14 m high, comprising two parallel brick sleeper walls, each of which was two bricks thick, supporting a vaulted ceiling.

A thin discontinuous layer of mortar [68], no more than 0.03 m thick, sealed the fill of construction trench [66], sleepers [90], and layer [49], and formed a bedding surface for a brick floor located within building **II**. Two irregularly shaped areas of this floor ([69] and [20]) survived to the south of the flue. Brick floor [69] measured c.2.50 m north/south by 2 m east/west and was 0.09 m thick. It was formed out of neatly laid unfroged bricks and half bricks, which continued right up to, yet were stratigraphically later than, sleeper [90]. Brick floor [20] was located to the east of [69] and measured 4 m north/south by 2 m east/west. The bricks were yellow and unfroged, and were aligned north/south in an offset pattern up to (originally over) the flue, and probably up to wall [12].

The eastern entrance [24] in the south wall [22] of building **II** appears to have been blocked at a late period after brick floor [20] had been laid, as this floor continued underneath the blocking, unlike the other blocked entrances which appeared to have been constructed directly on top of colliery waste [49]. This entrance possibly remained open to allow access into the structure for the railway after it was converted for use as the brickworks. The other entrances appear to have been blocked before the brick floor was laid.

To the south, a timber railway sleeper [56] set into a concrete base [57] (Fig. 4), immediately above two of the original stone waggon-way sleepers, suggests that the waggon-way became more of a "railway", perhaps adopting a different gauge, which extended at least as far as the eastern entrance [24] in wall [22] (i.e. the central

southern entrance into building **II**). The concrete foundation which measured 1.32 m x 0.37 m and was 0.02 m thick, the wooden sleeper [56] which measured 1.24 m x 0.23 m and was 0.12 m thick, and an iron rail-attachment bolt, all lay below a layer of grey clay [48].

To the east of the earlier waggon-way, a small area of metalling [51] was identified (Fig. 4). This measured 2.55 m north/south, at least 0.92 m east/west, and continued underneath the eastern section of the site. It consisted of sub-rectangular cobbles which were between 0.12 m and 0.34 m in diameter; and the western edge of the cobbling defined the waggon-way. Two iron bolts [93] extended out of this surface and were presumably used to anchor down a machine. To the west of the waggon-way another patch of metalling [50] was identified, identical to [51], measuring 3.10 m x 2.80 m, and extending right up to wall [22]; these similarly stopped in a neat alignment on their eastern side respecting the waggon-way. A repair of crushed brick [52], measuring 1.80 m x 1 m, was identified in the centre of these cobbles.

The eastern side of the cobbles was partially bounded by an alignment of four bricks [53], which also butted against possible base [54]. The southern side of the cobbles was bounded by brick flooring consisting of unfrogged crude yellow bricks. Another small (1.15 m x 0.54 m) patch of cobbles [43] was located to the west of, and probably associated with, metalling deposit [50] (Fig. 4). These cobbles butted against the north side of wall [25], and probably represent a repair. A thin, c.0.04 m thick, layer of grey clay [48] sealed surfaces [50], [52] and railway sleeper [56], and continued underneath wall blocking [24]. Another 0.08 m deep deposit of orange brown clay sand [47], which was only visible underneath blocking [24], and just beyond it to the west, sealed grey clay [48].

The area to the south of sleepers [56], [79] and [80] had been heavily disturbed during this phase, removing all evidence of the earlier waggon-way in this area, into which a large, 0.14 m in diameter north/south aligned ceramic drain pipe [75] had been cut. It had an associated brick-lined manhole [78] to the south and was covered by brick structure [76]. Drain pipe [75] continued beneath the concrete foundations [74] of a north/south aligned brick wall [73], which was located just south of timber sleeper [56]: brick wall [73] measured 2 m x 0.24 m x 0.10 m high, and was constructed out of unfrogged transverse red brickwork. A probable stone machine base [54], measuring 0.72 m x 0.54 m x 0.04 m, was located above this wall and was sealed by grey clay layer [48], indicating that the ceramic drain and associated brick manholes and walls in this part of the site were constructed before the blocking in wall [24]. To the east of pipe [75] and manhole [78], a massive stone ([64]/[77]) had a large machine bolt set into it. Another stone machine base, measuring 0.58 m x 0.46 m x 0.10 m, was located east of stone waggon-way sleeper [79] and south of brick manhole [78]. This had a flat sheet of iron attached to its surface incorporating two iron fixing bolts.

To the west of pipe [75] a large square depression [89] was identified, probably contemporaneous with the drain pipe and associated brick structures. It cut through coal debris layer [49]/[36], had gently sloping north and south sides, and appeared to extend westwards towards structure **IV**. The depression probably post-dated surface [50] to the north. Its upper fill [86] was 0.20 m thick and comprised a sandy red matrix containing brick rubble and white mortar. The secondary fill [87],

comprised a 0.40 m thick grey clay containing broken brick and fire-brick fragments, whilst primary fill [88] was 0.15 m thick and comprised yellow clay containing coal debris. A large rectangular yellow fire brick [55], measuring 0.79 m x 0.49 m x 0.07 m, was identified to the south of sleeper [56] and was above grey clay [48], indicating that this post-dated the sleeper, yet was broadly contemporaneous with wall blocking [24].

To the south a large rectangular brick and stone structure **VI** ([21]) was recorded (Fig. 3). This measured *c.* 12 m x 8 m and first appears on the 1899 O.S. Map. Structure [21] was partially investigated in evaluation Trench 3, and the western portion was exposed within the excavation area. The structure had two possible symmetrical loading bays at its western end which were positioned next to the earlier waggon-way sleepers [84]. The 1899 map suggests that the "Whitehaven Junction Railway" followed the same alignment as the earlier waggon-way although there was no evidence for it within the excavation trench. In the west of the structure the brick floor contained two parallel rectangular pits tentatively identified as ash pits whilst to their east the evaluation recorded a large level area of brick flooring. This structure is probably a brick kiln, in all likelihood a "Newcastle" kiln (Hammond, 1977) with diagnostic twin stokeholes and horizontal draught system.

To the west of structure [21] an isolated patch of brick flooring [37], measuring 4.10 m north/south by 1.10 m east/west, was identified. The bricks were yellow in colour and were neatly laid, and probably originally extended much further over this area. The floor sealed a substantial, over 0.50 m thick, deposit of topsoil [34] which extended to the north as far as building **IV** and to the east as far as building **VI**. A patch of cobbles [38] was sealed by this topsoil [34] to the north of brick floor [37]. These cobbles ranged from between 0.07 m and 0.30 m in diameter. Over the remainder of this southern part of the site topsoil [34] sealed a layer of brown/orange silty sand [35], which was 0.05 m thick and in turn sealed a layer of black clay silt [36], similar to [49], containing gravel and coal grit. An exploratory trench revealed that this layer was 0.40 m thick and sealed a yellow brown clay silt layer [39].

Some 10 m to the north-east of kiln structure **VI**, outside the excavation area altogether, and only exposed in evaluation Trench 2, was a series of brick floors and a contemporaneous sandstone wall. The wall (0.90 m wide) was orientated north/south, had a sandstone rubble core, and was faced with well-dressed sandstone blocks. It was clearly contemporary with an extensive brick surface, which stepped slightly down to the north. Within the southern/uppermost part of the brick floor was a distinctive depressed area which appeared to drain into a strip of bare soil between the upper and middle part of the floor. This strip corresponded to a gap in an alignment of well-finished sandstone blocks which ran perpendicular to the large north/south wall; the alignment was *c.* 0.30 m wide, and the gap in it *c.* 0.90 m. The northernmost and lowest brick surface was 1.2 m in width; it did not contain direct evidence for drainage channels, although the bricks were set perpendicular to one another as if to facilitate drainage.

A well-built brick wall and a brick "box" were encountered in the northern part of the trench. The wall ran approximately north-west for some 2.8 m, whilst on its southern side there was a return to the east. To the north of this wall, 8.5 m from the southern edge of the trench, there was an insubstantial (a single brick wide) wall surviving to at least two courses. This ran east/west, and was butted by a

north/south, 2.3 m long brick trough-like feature on its northern side. The base of the feature, which lay 0.10 m below the upper course of bricks forming the wall, was badly damaged, which prevented any identification of its function. To the north of the brick trough was a pair of square sandstone blocks cemented together to form a substantial base or foundation pad. There was evidence for a second sandstone block revealed in the west-facing section of the trench, potentially carrying the alignment to the east. The blocks were within topsoil, and the precise nature of this feature was never established.

Some 7 m to the south of kiln structure **VI**, beyond the excavation area, and only exposed within evaluation Trench 4, was a well-constructed sandstone cobbled surface (in the western end of the trench), sloping down to the south. The cobbles were cut by a linear trench which proved to be the construction trench for a north/south aligned wall, 0.30 m wide, filled by dark brown gritty sandy loam. The wall was well-constructed and survived to a height of 0.70 m, being built from large sandstone blocks, which, on average, measured 0.30 m x 0.15 m x 0.10 m, and there was a well-defined face on the eastern side. It was seen to be contemporaneous with an extensive brick and ceramic tile surface to the east, sloped to the south at a similar angle to that of the adjacent cobbled surface (4.9.2), and appeared to have a system of deliberately constructed channels or runnels 0.40 m apart, running north/south.

To the north of building **II** the entrances in wall [1] were also deliberately blocked during Phase 3, the blocking typically consisting of coursed red brick or stone-work. Between walls [12] and [1] in the postulated yard area (**III**), an area of densely packed cobbles [15] was present. Evaluation Trench 1 revealed that these were resting on silty sands and sandstone rubble, were subrectangular in shape, and were set into a coal dust matrix. They ranged from between 0.05 m and 0.30 m in diameter and butted against walls [1] and [12] and blocking [3] and [14]. The western portion of this surface, up to the western edge of the eastern entrances into walls [1] and [12], was laid with the cobbles orientated in an east/west direction; to the east of this line the cobbles were almost identical but were laid in a north/south orientation. It is possible that the western portion of this yard surface was in existence well before 1863 and its eastern edge stopped adjacent to the waggon-way which extended through all of the eastern entrances at this date. The eastern entrances in walls [1] and [12] were then blocked, at around the time of the conversion of the colliery into the brickworks, and an eastwards extension of cobbled surface [16] was then laid.

Evaluation Trench 1 revealed that the eastern portion of cobbled surface [15] was contemporaneous with a large, well-constructed sandstone feature, aligned east/west, which measured 10.6 m by 2.1 m. This feature, interpreted as a flue, was constructed from closely set and well-finished sandstone blocks which had a distinctive flat-topped triangular profile. The blocks on the northern side were generally of better quality, and this external side was rusticated. To the west, the flue appeared to terminate at the cobbled surface, but the poorly preserved eastern end had no obvious terminus. The flue had been filled with a very compacted deposit of sandstone rubble. Its precise function and date is open to question.

After cobbles [15] had been laid, a lean-to structure (**VII**) was constructed along the western portion of the yard. Its southern side was wall [12], and a 4 m long

stretch of stone wall [10] aligned east/west formed its northern wall, constructed from blocks of hard red stone. The brick floor of structure **VII** was laid on top of a compact layer of black material [6] which was between 0.01 m and 0.05 m thick. This in turn sealed a layer of light yellow mortar [17] which was 0.18 m thick, and appeared to have been laid on top of cobbled surface [15]. Brick floor [5] incorporated a circular manhole in the centre of its northern end. Its southern part was constructed from frogged bricks, some of which had name stamps (including "Micklam" and "Harrington"). In the northern part of the floor many of the bricks were frogged and were aligned east/west, and a line of eight mortared bricks [7], aligned east/west, was recorded just to the east of this building. The bricks were attached to one another by their long sides, and were above cobbles [15] and below mortar spread [17].

To the north of wall [10] the lean-to structure seems to have continued northwards to wall [1]. The floor of this structure was composed of a variety of different materials. In the north and west a floor [4] consisting of small flagstones had been constructed, the area of flagging measuring 3.65 m north/south by 1.90 m east/west. The flags butted up against wall [1] and the entrance blocking [2] in the north; a patch of brick rubble [8] was exposed to the south and east, and in the north-west corner of the structure a bitumen surface [9], only 0.02 m thick, appeared partially to seal surfaces [4] and [8]. This measured 3 m north/south by 2.50 m east/west and also appeared to butt against wall blocking [2]. The floor in the south of the structure comprised compacted material laid on top of cobbles [15], and surfaces [4] and [8] were almost certainly also laid on top of this surface. A north/south line of concrete coping measuring 4 m in length by 0.30 m wide extended from the eastern end of wall [10] northwards and formed the eastern boundary of surfaces [6] and [8].

North of wall [1] and entrance blocking [2] a small patch of neatly laid cobbles [29], measuring 1 m x 1 m, sealed earlier cobbles [28]. These were on average 0.30 m x 0.25 m x 0.15 m in size, and butted against brick blocking [2], suggesting that they probably dated to the later part of Phase 3. An uncovered rectangular manhole [30] was located to the north of cobbles [29], cutting pink gravel layer [31], and measuring 0.87 m x 0.66 m in area. It comprised neatly faced blocks of red sandstone and brick and extended to a maximum depth of 1.07 m. A drain was identified within its base, aligned east/west.

In the east, layer [31] was overlain by a spread of small cobbles [26], measuring 5 m x 5 m. They were on average 0.05 m in diameter and were set into a layer of compacted coal dust and gravel. Two square-headed iron pegs, 0.03 m in diameter, extended out of this surface and appear to have been used to anchor equipment. Similarly, a piece of angle iron also extended from this surface, although this did not appear to be connected with the pegs. Evaluation Trench 5 had revealed a similar sequence of deposits. An L-shaped stretch of wall [27] was constructed on top of these cobbles to the immediate north of the eastern entrance in wall [1], orientated east/west, and measuring at least 2.30 m long, extending beyond the eastern limit of excavation. It returned to the south at its northern end and continued for a distance of 1 m in this direction prior to terminating. This wall was 0.35 m wide and was only one course high, constructed from stones typically 0.40 m x 0.40 m x 0.20 m in size, bonded by loose sandy mortar. The structure it represented was not depicted on any of the early maps (1835, 1863, 1899).

Phase 4 (1925-present day) Decay

The map of 1925 indicates that by this date the brickworks had already fallen into disrepair. The site was subject to gradual decay throughout the course of the mid-twentieth century, the details of which are unclear, and may not be accurately recoverable through archaeological surveys. It is likely that the recollections of Parton's older inhabitants would provide the best information in respect of this period.

Discussion

The 1815 plan demonstrates that the future site of Parton Colliery was unoccupied at the time. The earliest construction work on the site involved the building of a stone retaining wall, and a platform of coal waste, to support the colliery buildings that were to be erected. By the 1830s, the colliery was well in production.

The coal would have been moved from the mine by means of waggon-ways, the presence of which were demonstrated by excavation. The principal surviving parts of these waggon-ways were pairs of stone sleeper blocks with central rectangular depressions, probably for iron "chairs" to hold edge-rails. The separation of the stone sleepers and the inferred position of the rail "chairs" suggest a gauge of approximately 1.16 m (3' 10"). As such this is an example of a typical northern England colliery waggon-way at the nadir of such systems, prior to the introduction of what became the standard gauge railway. Another waggon-way, found further to the west, relates to a slightly different (probably later) phase of colliery activity. Platforms found in association with the waggon-ways are probably indicative of loading bays.

Other component parts of the Parton Colliery are well shown in William Gawthorp's plan of 1835. These include the retaining wall to the east, and a number of other structures including building **II** and yard **III**. Subsequent amendments (i.e. Phase 2) included the construction of a rectangular stone structure to the south of building **II** (shown on the OS map of 1863), and the northern extension of parts of the waggon-way system. There is no evidence that these amendments were aimed at anything else but direct improvements to the colliery itself, and there is no clear indication that the area of the colliery was at this stage used for any other functions than those directly related to coal.

Parton Colliery appears to have ceased coal production after 1863, although it seems that the buildings were still used: not until 1925 do the buildings appear ruined. None of the consulted maps or documents shed light on their use during this period (Phase 3). Oral evidence from local inhabitants indicates that the site was used as a brickworks, and there is some archaeological evidence to support this view, as building **II** and the yards to its north and south appear to have been extensively modified in brick. There is also a notable change in the sidings area with the addition of two square structures, one west of the lower reservoir (see building **VI** below) and one south of it. Photographs of Parton from 1900 and 1905 do not have these new structures in their field of view, but they do show the revetment and the building complex behind, with a large chimney (connected to kilns?) towards the east end.

Building **II** was extensively modified. A large brick-vaulted east/west aligned flue, “**V**”, was constructed within building **II** below ground level, probably after the colliery had closed. All of the entrances into this building, with the exception of the south-eastern one, were blocked, before a brick floor was laid within the building. This brick floor extended right up to the flue and sealed some of the earlier waggon-way sleepers. Some time after the brick floor had been laid the eastern entrance within the south wall of this building was also blocked. This phase is almost certainly associated with brickworks’ activities. No evidence of a kiln was identified within this building, however, and it is possible that the building may have been used to dry bricks prior to firing elsewhere on the site. Several brick wasters were found, supporting the view that it was adapted for brick manufacture.

Part of a large rectangular structure (**VI**), which first appears on the 1899 O.S. map, was excavated in the southern part of the site. This structure had a brick floor and contained two symmetrically aligned rectangular pits, tentatively identified as ash pits. This structure was probably a “Newcastle” brick kiln. A timber railway sleeper set into concrete, immediately above two of the original eastern stone waggon-way sleepers, suggests that the waggon-way was eventually adapted into a railway which extended at least as far as the eastern entrance into building **II**. This adaptation of the waggon-way to a railway possibly took place between 1863 and 1899.

The 1863 map clearly labels both the Whitehaven railway and colliery tramway (presumably the existing waggon-way), but at no point on the map do the two lines converge, suggesting different rail gauges at this date. However, an 1899 O.S. map makes no such distinction, and by this date junctions between the lines are clearly visible, suggesting that all track was of the same gauge.

Cartographic evidence indicates that by 1899 the waggon-ways/railways did not continue north of building **III** and the excavation revealed an area of fine cobbles within this area. The western portion of the cobbles may have been laid before 1863, but the eastern portion must have been laid between 1863 and 1899, after the waggon-way had ceased to function. Another possible flue was identified during the trial excavations associated with these cobbles. The 1899 map also shows buildings (**VI**) located in the extreme west of this yard area, which were recorded within the excavation and had brick and flagged floors constructed on top of the cobbled surface.

It is difficult to be sure exactly when the brickworks fell out of use. The map of 1925 does suggest that the site by this time was completely abandoned, but continued small-scale extraction and processing of refractory clays cannot be entirely ruled out.

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