ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
West Cumbria Rivers Trust

Walkmill Woods and Colliery
Moresby
Cumbria

archaeological assessment

report 5879
December 2022

Durham University

Contents

Photographs

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1. Summary

1.1 This report presents the results of an archaeological assessment of Walkmill Woods, near Moresby Parks, Cumbria.

1.2 The works were commissioned by West Cumbria Rivers Trust and conducted by Archaeological Services Durham University.

The site

1.3 The woods are on the site of Walkmill Colliery, a mine that was sunk in 1879 and worked until 1961. After closure, almost all of the colliery buildings were demolished. The large pit heap was left standing in the centre and south of the present site for some years. Two phases of reclamation, in the 1970s and 1990s, ended with most of the mine spoil removed and the site landscaped and replanted with grass and trees.

1.4 A few minor structural elements of the old colliery remain. These are the 1879 pit road from Moresby Parks village, and an early 20th-century colliery dam beside it; a partly canalised beck that ran along the western edge of the mine site, together with the remains of two small weirs; the trackbed of the mineral line that served the colliery; the remains of a building that housed a weighbridge for rail wagons, installed in 1913; and a large concrete wall at the south end of the old pit heap.

Recommendations

1.5 Volunteers have done a good deal of work clearing vegetation and exposing the structures of the dam and the weighing machine building. Keeping these structures clear would help visitors to visualise something of the site's industrial past. This would be helped by some on-site interpretation, such as a marker with the name of the feature, or a more detailed interpretation panel showing how the structure fitted into the larger colliery complex.

1.6 It is considered very unlikely that any other elements of the old colliery could be revealed by excavation, so presentation of the history of the pit would rely on old maps and pictures. Although only a handful are available, the black and white photographs of the colliery site after its clearance, now in the care of Cumbria Archives at Carlisle, would be of great value for on-site interpretation at one or more of the entrances to the wood. The pictures show the dramatic change that the site has undergone through the removal of the huge black pit heap that once dominated the view from all sides. There is very good potential for 'then and now' views of the site from several viewpoints, especially from the road near the present car park. It is understood that the canalised sections of the beck will be returned to a more natural state. It is recommended that some 'before' photographs are taken in advance of this work, to demonstrate the continuing evolution of the Walkmill Woods site.

2. Project background

Location

2.1 The centre of Walkmill Woods lies about 1km south-east of Moresby Parks, Whitehaven, Cumbria, at Ordnance Survey grid reference NZ 0065 1906 (Figure 1). It is an irregularly shaped area of young woodland that covers about 35.8 hectares (Figure 2).

The project

2.2 The archaeological assessment is part of A Wilder Walkmill, a project created in partnership with Moresby Parish Council and Walkmill Community Action Group and supported by the National Lottery Heritage Fund. The proposals for the site are shown in Figure 3.

Objective

2.3 The objective of the work was to contribute to the following objectives, set out by the West Cumbria Rivers Trust: to ensure that heritage features will be in a better condition, to identify and explain such features, to involve people in the heritage of the site, and to help them to learn about it and its history.

Specification

2.4 The works have been undertaken in accordance with a brief provided by the West Cumbria Rivers Trust, dated 7th September 2022.

Dates

2.5 Field visits took place between 10th October and 30th November 2022. This report was prepared for December 2022.

Personnel

2.6 Site visits and research were carried out by Richard Annis, the author of this report. The illustrations were prepared by Janine Watson.

Acknowledgements

2.7 We are grateful for the assistance of Cumbria Archives staff at Whitehaven and Carlisle. We thank local residents Derek Dougan and Brian Mossop for their guidance during a visit to Walkmill Woods and for much information about the site and the area. Thanks are also due to William Marston for allowing us to use a photo of his pit tokens.

3. Site description

Geology and soils

3.1 The bedrock at the site is mudstone, sandstone and rocks of the Pennine Lower Coal Measures, overlain by Devensian glacial till. The presence of coal seams led to the development of numerous mines in west Cumbria, and the Walkmill Colliery was one of these.

Landscape characterisation

3.2 The proposed development area is within Natural England's West Cumbria Coastal Plain (7) National Character Area (NCA). The NCA profile describes the area away

from the coast as 'wind-swept and open pastoral farmland [on an] undulating plain … dissected by more sheltered lowland river valleys (Natural England 2014).

The site today

3.3 Walkmill Woods lie on and at either side of a low artificial hill on the north side of the River Keekle, a stream that flows south to join the Ehen at Woodend, south-west of Cleator (Figure 2). The developing woodland is a mixture of broadleaf and coniferous trees, both planted and naturally regenerated, with open meadow areas that are managed for nature conservation. Paths lead through the wood from a small parking area at the south end of the site. This lies on the north side of an unclassified road that runs from the south end of Moresby Parks, to the west, to Arlecdon at the east. A track laid as a private colliery road runs across the north end of the site, and now links Moresby Parks with the isolated farmstead of Sands Close, just to the east of the study area.

3.4 The land to the north and west of Walkmill Woods is open pasture with some arable fields. A large area of wet peaty land, Moresby Moss, lies immediately north and north-west of the site. This is drained by the Keekle and by smaller becks, one to the east of the site and one that runs through the wood. The land to the south of the Moresby Parks – Walkmill Bridge road is a reinstated opencast coal mine site.

3.5 The footpath from the car park runs along the west side of the site to meet the well-marked trackbed of a former mineral railway, where there is an entrance to the wood. The beck running south here runs in an old concrete channel and is carried under the former railway line in a culvert. At the north end of the site, a gate leads out onto open land, and a path runs north-east to the end of the old pit road. Immediately north of this road are the remains of a brick and stone dam that impounded water from the Moss for use at the colliery.

LiDAR data and satellite images

3.6 LiDAR provides a view of the ground surface beneath the cover of trees and vegetation (Figure 4). The site is dominated by a large oval mound or low hill, aligned north-east - south-west, with a smooth surface. This hill lies over the track of the former railway line that enters the site in a sweeping curve from the south-west. The same artificially smoothed surface extends to the site boundary at the north-east side and across a small beck valley at the east of the site. The north-west part of the wood is a roughly rectangular area that lies outside the boundary of the old colliery. Here there are numerous short east-west ditches, a keyhole-shaped pond and fainter drainage ditches that run north-west - south-east.

Designated heritage assets

3.7 There are no scheduled monuments or listed buildings in or near Walkmill Woods. The closest listed building to the site is the Grade II Rosehill Theatre, which is about 1.8km north-west of the middle of the study area.

4. History of the site and the colliery

Archival information

4.1 Cumbria Archives offices at Whitehaven, Carlisle and Barrow hold information on Walkmill Colliery. These sources include small-scale plans of the site as well as larger-scale drawings associated with proposals for buildings such as pithead baths,

toilets and an explosives store. The collection at Carlisle includes a small but extremely useful collection of black and white photographs of the site, taken after the mine was abandoned and the buildings were demolished, but before the first phase of landscaping was carried out. Relevant entries from the Archives catalogue are provided in section 7, below.

Note on units

4.2 Archive documents quoted below use imperial units of weight and pre-decimalisation currency. Weights are expressed in hundredweights (cwt) and tons, which are equivalent to 50.8kg and 1.016 tonnes respectively. £1 was made up of 20 shillings (s) each worth 12 pence (d); pennies were further divided into halfpennies (½d) and farthings.

The site

4.3 The village of Moresby, now known as Howgate, is at the north-west side of the parish of the same name. In 1900, the parish extended from the edge of Parton, on the coast, to the River Keekle. The old village lies on the Whitehaven – Distington Road; the later settlement of Low Moresby, a little to the south-east, is now a larger village. Until the 1880s the settlement of Moresby Parks did not exist; the name belonged to an isolated farm that stood on the east side of the road near the south end of the modern village.

4.4 Early maps show nothing at the site of Walkmill Woods. John Speed's 1610 Map of Cumberland is at a small scale, but it marks 'Moresbye' to the north of Whitehaven and 'Arledon' to the east. These two places were probably chosen because they were the centres of adjoining parishes. Thomas Donald's 1771 Map of the County of Cumberland shows the isolated farm of 'Sands Closes', and Thomas Greenwood's 1823 county map shows 'Sand Close'; neither of these maps show anything at the site of the woods, or at Walk Mill.

4.5 The name Walkmill Woods comes from the Walk Mill and its associated bridge, both of which are on the River Keekle near the south-east side of the study area. The earliest Walk Mill is believed to have been a site used for washing or 'fulling' wool for the farm at Sands Close (Archives ref. YDX 749/1). In walk mills, barefooted workers would 'walk' or trample the raw wool as it lay in troughs of water mixed with some agent that would help to release the greasy lanolin from the fleeces. In areas where fuller's earth clay was available, that would be used, but elsewhere human and animal urine was commonly employed for the job. In later years a watermill was built on the north bank of the river. The first edition Ordnance Survey map, dated 1865, shows an L-shaped building clearly marked 'Sawmill' (Figure 5). Its millpond is shown, with a head race running from a point on the river about 200m upstream. Close to this spot, the map marks a quarry and an 'Old Coal Shaft'. An old stone packhorse bridge, upstream from the mill, crosses the Keekle to these sites.

4.6 Walkmill Bridge is still in use and, although the mill has gone, earthwork traces of the pond and mill race survive. These can be seen in the LiDAR image, Figure 4. The 1865 map shows the site of the colliery and Walkmill Woods as open ground divided into large straight-sided plots. These are typical of the Parliamentary enclosure of open land that was carried out from the last quarter of the 18th century. The beck is shown running along a deliberately engineered line beside one of these field boundaries, at the western edge of the later colliery site. The farm called Moresby

Parks is shown about 600m north of the end of the lane that leads to Walkmill Bridge. The farmhouse and some of the buildings survive, and a residential development called Whinriggs Drive occupies part of its yard. The 1865 map shows two coal mines about 800m west of Moresby Parks Farm, on the west side of Scilly Banks. The David pit is marked as 'Old Coal Shaft' and the Davy pit, only about 180m to the east, is labelled 'Level' and has a brick kiln beside the working. Moresby Pit, about 1.9km north-west of Walkmill Colliery, is shown as working in 1865 but is marked 'Disused' on the 1899 second edition map.

Walkmill Wood

4.7 The first edition map shows no trees on the site or in the Keekle valley to its east; the only named woodland is Black Wood, a short way to the west of the present-day car park. The name Walkmill Wood appears for the first time on the second edition map of 1899 (Figure 6), attached to a long strip of woodland in the Keekle valley. South of Walkmill Bridge it continues towards the south-west as Bogholes Wood.

Walkmill Colliery

4.8 Although some evidence of ancient coal working has been found in the district, deep mining for coal began in the Whitehaven area in the mid-17th century and numerous pits were opened in later years. Many of the early mines were small, short-lived operations. Writing in the 1870s, a historian of the West Cumberland coal trade said that "the following pits were exhausted before 1755, *viz*. Taylor, Hunter, Carr, Fox, Daniel, Green, Watson, Pedlar, Harras and many others, the names of which are not known" (Fletcher 1877, 287).

4.9 The Walkmill Colliery was not part of this early phase of development. Oliver Wood's 1988 history of the industry says that activity at the site began when the Moresby Coal Company leased a royalty for 60 years from 25th March 1877; two years after that date, they sank the Walkmill pit. The company also opened another pit at Oatlands, south-east of Pica, in 1880. The Northern Mines Research Society's *Memoirs* suggest that the company added 'Ltd' to its name in 1890.

4.10 Technology and mining expertise had advanced since the 18th century and Walkmill mine was notably more successful than the early ones mentioned by Fletcher. Wood says that the colliery, "for many years highly profitable to lessor and lessee, worked continuously until 1961" (Wood 1988, 160). Other pits in the neighbourhood had shorter lives. The Venture pit at Whillimoor was sunk in 1852 and work there ceased in 1865. The Asby pit at Arlecdon worked from 1860 until 1908, and the Boghole Pit at Frizington was sunk in 1861 and closed in 1878 (*ibid*., 161). Oatlands Colliery ceased production during the slump in 1930 and finally closed in 1934.

4.11 The second edition Ordnance Survey map, dated 1899 (Figure 6), shows Walkmill Colliery 20 years after it had begun operating. The map shows a long group of structures aligned north-south, with the shafts at the north end and a bank of coke ovens running along the west side, all served by rail lines. These converge at the south-west side of the site and run in a sweeping curve to join the Cleator and Workington Junction Railway at Moresby Junction, south of the village. There is a spoil heap to the east of the heapsteads and another between the railway line and the road. The colliery's steam engines required a ready supply of water, so the beck was dammed to create a pond, known as the dam, near the shafts. Water flowed over the weir here into a much larger pool that stretched as far south as the railway

line. The map suggests that this was not a deliberate creation, as it appears to be dammed by the low embankment of the railway rather than by a weir.

4.12 The coke ovens were an important part of the colliery. Coke is essential for firing blast furnaces, and much of the pit's production was destined to be used in west Cumberland's iron and steel industry. Coke is made by the thermal decomposition of coal in an oxygen-free atmosphere. Although this is a fairly simple process, it requires a good deal of heat and generates foul smells and dangerous by-products. Coal was packed into chambers called retorts which were sealed before being subjected to intense heat for several hours, during which time the volatile matter in the coal was driven off. This consisted of coal gas, a mixture of hydrogen, carbon monoxide and methane, together with less-desirable materials including coal tar, ammoniacal liquor, phenol, sulphur and cyanide compounds. The gas could be collected and used to fire the coke ovens or for other purposes. Some of the by-products, such as tar and ammonia, could be sold but others had to be disposed of. The 1899 map shows a gasometer (gas holder) at the north end of the colliery site. Once the volatile material had been removed, what remained in the retorts was white-hot coke. This had to be pushed out and cooled before being loaded into rail wagons for shipment to customers.

4.13 The new colliery needed miners, so the company built houses for the workforce on the road at what is now Moresby Parks. As at Pica, which was built for miners at Oatlands Colliery, the new settlement was established on open land close to the pit and not related to any existing settlement. The 1899 map shows the four terraces of substantial stone houses that still stand at Moresby Parks today, and the road that was laid to give access to the pit. Brief historical notes held by Whitehaven Archives suggests that two terraces were built at first, in 1890, with a larger house at the end of each row. The anonymous author suggests that one was for the mine manager and the other, possibly, for the owner (Archives ref. YDX 749/1). However, information from Brian Mossop shows that the terraces must have been built earlier than 1890, and very probably at the same time as the sinking of the shaft in 1879. The building at the north end of the north-east row was larger than the other houses and had a single large room on each floor. These are believed to have been used as schoolrooms before the Moresby Parks Board School, now Moresby Primary School, was built in 1883. The large north-east building was used as a reading room, and in later years as a band room. A single-storey building attached to the end of the terrace, and projecting from the building line at the east side, was used as a maintenance depot for the colliery houses, and later as a coal merchant's premises. It is now a garage and the large north-east building has been converted into a house. The 1899 map also shows another terrace of six houses within the Walkmill Woods site. These stood east of the mine at the end of the lane leading to Sands Close. A history of Whitehaven in the Great War states that in 1914 Walkmill Colliery employed 706 people, a population much larger than that of the old village of Moresby (Mansergh 2015, 25).

4.14 By the time of the 3rd edition map of 1925 (Figure 7) the colliery had expanded and the waste tip to its south had grown to reach the Walkmill Bridge road. Smaller pit heaps lay to the east and north of the working areas. The big pool had been drained and the map marks its site simply as 'mud'. The beck was carried around the western edge of the old pool in an artificial channel that is still in use today. At the north end of the site, a new dam and weir had been built just north of the culvert that carried

the beck running from Moresby Moss under the pit road. This brick and stone structure created a squarish pool that fed the long pond or dam near the shafts and boiler house. The map also shows, for the first time, a platform just south of the signal box that controlled traffic entering and leaving the main line from the mineral railway. This platform is labelled 'Halt', was used by mineworkers travelling to and from their work.

4.15 Some idea of the working of the pit around this time can be gained from a schedule of plant and equipment drawn up in December 1919. The list includes

> an aerial ropeway made by British Ropeway Engineering Co Ltd, London: it is capable of dealing with 45 tons per hour with a speed of 90 yards per minute. It has a 32BHP motor supplied by BTH and was put into operation in late 1918 (Archives ref. T/NCB/6/33).

This ropeway was the means by which spoil was taken to the top of the pit heap, and its line is shown on the 1925 map. The colliery's steam engines were supplied by

> five Babcock & Willcox boilers, one Stirling and one Lancashire boiler, in connection with which are three chimneys, two 80 feet high by 5 feet in diameter [24.4m x 1.5m] and one 100 feet by 6 feet [30.5m x 1.8m].

One of these chimneys is shown, along with the headgear over the two shafts, in a postcard view of the mine (Figure 8).

4.16 Also included in the list of plant is a 45-ton wagon weighing machine with a 16-foot (4.9m) table, made by Avery of Birmingham and installed in 1913. This was installed on the west edge of the site and used to weigh wagons loaded with coal or coke as they left the colliery. This appears on the 1925 map, marked W.M. for weighing machine. Its remains can still be seen, and local people who used to play in the abandoned structure remember the Avery name on the weighing dial.

4.17 The 3rd edition map was made at a time of prosperity for Walkmill Colliery, as for other parts of the mining industry. In the years leading up to the First World War, national output reached a peak, with 287 million tons of coal being extracted in 1913. In the year 1911-12 the Walkmill pit produced 124,469 tons. In 1924 the Workington Iron & Steel Company bought all the ordinary shares of the Moresby Coal Company, as part of a campaign of purchases intended to guarantee supplies of coal and coke for its blast furnaces. The colliery, which retained the old company name, continued to be very productive; in 1927 and 1928 annual output was over a quarter of a million tons, and until 1940 each year's production was higher than of 1911-12 (Wood 1988, 211). This was achieved despite the difficult working conditions posed by the geology of the Cumberland coalfield. The seams sloped steeply and were disrupted by numerous faults; a great deal of ingenuity and engineering was required to extract coal at an economical cost, and even the good output figures reported by Walkmill Colliery were low by comparison with pits in other parts of the country.

4.18 At the end of the 1920s economic conditions deteriorated as the world entered the Great Depression: in 1930 one of the foremost economists of the day, John Maynard Keynes, wrote that "the world has been slow to realise that we are living this year in the shadow of one of the greatest economic catastrophes of modern history" (Keynes 1930). The coal trade was very badly affected by the slump; by 1929, a quarter of all the coal miners in Britain were unemployed (Stevenson & Cook 1994).

In 1932, almost half of Maryport's miners were unemployed (Bainbridge 1949, 132). Production at the Moresby Coal Company's Oatlands Colliery was suspended in 1930 and stopped altogether in 1932. The archives suggest that there were problems at Walkmill Colliery, too. A plant list drawn up in October 1932 mentions "a battery of 60 Koppers Regenerative Coke Ovens with all plant and apparatus for the production of furnace coke, tar, sulphate of ammonia and Crude Benzol", but notes that "this plant is idle at present" (Archives ref. T/NCB/6/38). It is reasonable to assume that coke production had stopped because of a lack of demand from the region's iron and steel businesses. The brick-built Koppers ovens mentioned in the list are shown on the 1925 map as a shorter, wider block than the original cokeworks bank.

Nationalisation

4.19 After the Second World War, the British coal industry was nationalised with the creation of the National Coal Board (NCB) in 1947. Walkmill Colliery and the other mines in the Cumberland coalfield became part of the NCB's Area no. 10. A review carried out in 1954 was critical of the productivity of the Area, saying "two things stand out from the history of the working of this coalfield: the results have always been relatively poor, and in the more recent past the results have been outstandingly bad" (Archives ref. TNCB/6/65). The report's author said that in 1948 each ton of Area 10 coal was sold at a loss of 13s 6½d, which is equivalent to over £28 at today's prices.

4.20 Soon after nationalisation, the future of Walkmill Colliery was under discussion. The following account is taken from a report submitted to the NCB in April 1949.

> This colliery is not scheduled for reconstruction. During 1948 the output from the colliery was 28,000 tons at an output per man-shift of about 10 cwt and a loss of nearly £70,000. The Region is highly faulted and practically all the coals that can be got have already been extracted. The present output comes from an area of the Six Quarters [seam] in the eastern part of Zone 31 where the coal is three feet thick. The ground is so troubled with faults that continuity of work has been impossible and the provision of reasonable transport is a work of art.
>
> Before Vesting Date [1st January 1947] two drifts were started from the shaft bottom to dip down into a trough area to the south-west of the shafts in Zone 32. These drifts have now found the Six Quarters coal and are being continued into the Main Band [seam].
>
> There should be a limited area of coal in this trough which may contain 400,000 tons in the two main seams. While there is definitely no future in the colliery it is proposed to give this new winning a chance in 1949. If working conditions are found to be good two or three years output at 60,000 tons per year should be possible at a time when the Area will still be short of output.
>
> On this assumption the Colliery has been scheduled to go on until 1951, but the information that is disclosed [this year] and the results that are obtained will be the deciding factors. Cumbria Archives ref. TNCB/6/65, pp. 26-27.

The closure of the pit

4.21 Despite the pessimistic tone of this 1949 report, the colliery continued to be worked for ten years beyond the expected closure date, though at a less and less productive rate. Whitehaven Archives holds proposal drawings for new buildings at the site in the 1950s, including a small explosives store at the north-west edge of the site (1954) and pithead baths (1957). The baths appear not to have been built, as they do

not appear on the 1957 or 1961 OS maps. The proposal drawings record that the row of six small houses on the east side of the site was demolished before February 1954. By the time of the 1961 Ordnance Survey map (Figure 9), the coke ovens and the aerial ropeway had also been removed.

4.22 Wood's history of the coalfield says that in 1961

> the Walkmill or Moresby pit had to close because of the exhaustion of its coal seams; production there had diminished annually from 81,297 tons in 1953 to 51,105 tons in 1960. Nearly two-thirds of the 170 men employed at the pit when it closed were transferred to the Haig, Lowca and Solway collieries, and about 40 were retained for salvage and safety work (Wood 1988, 261).

The workforce mentioned here is a little over a quarter of the number of people recorded as working at the mine in 1914 (para. 4.13, above).

4.23 Photographs in a collection of historic environment records at Cumbria Archives, Carlisle, show that almost all of the colliery buildings were demolished before any work was done on landscaping the pit heap (Photograph 1). The only structures that can be recognised in pictures of the site taken from the north and the west are a small shed and a long row of brick arches, probably the very bottom of the Koppars coke ovens. A couple of the photos show structures on the top of the pit heap, probably remnants of the ropeway.

Opencast mining

4.24 The closure of the Walkmill pit was not the end of coal mining in the area. In the 1980s and early 1990s opencast working was carried out at Keekle Head, about 3.5km north-east of the study area, and at the larger Keekle Extension site immediately south of Walkmill Woods. When coal extraction was finished, the Extension site was used for disposal of mining waste from the Walkmill Colliery.

Reclamation of the Walkmill Colliery site

4.25 Ruth McPhee's undated report on the reclamation of the site provides information derived from personal observation and from former miners and residents of Moresby Parks. A first phase of work, carried out in the early 1970s, involved some regrading of spoil heap slopes followed by soil spreading and seeding with grass. This work had mixed success in terms of the appearance of the site, but it did not address the problem of runoff from the old tips. The geology of the site and the methods employed during more than 80 years of coal mining had left a large volume of acidic waste. The highest and widest part of the black pit heap was at the south end of the site, close to the road and the River Keekle. These conditions meant that the pH of rainwater that ran over and percolated through the tip was lowered, and the water produced damaging acid flushes in the river, especially in periods of wet weather. A pollution hazard was also identified at the mine site, which contained toxic by-products from the coke ovens. Ground investigations carried out in 1980 found phenols, as well as traces of cadmium and arsenic, undoubtedly derived from this past use of the land (Hughes & Clarke 2003, 75).

4.26 In the mid-1990s work began to remove most of the colliery waste from the Walkmill Woods site. A temporary haul road was made across the road west of Walkmill Bridge and the pit heap was carried on lorries into the Keekle Extension opencast working. Because this large excavation reached below the natural level of

the river, the pit was lined and capped with a thick layer of compacted glacial clay subsoil (*ibid*., 76), to prevent the noxious materials in the colliery waste from escaping into the groundwater. The contaminated ground around the old coke ovens was left in place, capped and buried.

4.27 McPhee reports that clearance work on the colliery site uncovered a shaft and a culverted stream, probably the one shown running past the east side of the pit heap on the 1925 map (Figure 7). The LiDAR plot (Figure 4) shows clearly that part of the mine spoil was used to create a low hill at the middle of the present Walkmill Woods. The plot shows that the smooth surface of this hill extends across the whole of the old mine site; the present north-south path through the wood runs along its west flank. The summit of the hill is just south of the spot where the old coke ovens are buried. After this landscaping work, a substantial thickness of soil was spread over the site and land drains were laid before the area was grassed. After a period of settlement and consolidation, tree planting began in 1996 (McPhee n.d.).

5. Colliery and other features at Walkmill Woods

5.1 The thoroughgoing reconstruction of the site in the 1990s means that almost nothing of the old colliery remains to be seen today. The paragraphs below list the surviving features that were identified on and in the immediate vicinity of the site during this project. Features within the study area are numbered in square brackets and marked on the site plan, Figure 2.

5.2 **Walkmill Bridge** and the **Walk Mill** are just south-east of the study area and the bridge is still in use. The south gable of the ruined mill stands on a rocky outcrop just east of the road (Photographs 2, 3). A little to the east is an old **packhorse bridge** leading to a quarry and early coal shaft on the south side of the river (Photographs 4, 5).

5.3 An old **milestone** lies on the south side on the road immediately south of the site (Photographs 6, 7). The red sandstone block is in a fair condition but the iron plates that carried its inscription have been removed. Nineteenth-century OS maps show that the east face once read ‘Whitehaven 3 miles’.

5.4 North-west of the Woods, the original rows of **miners’ houses** stand in Moresby Parks (Photograph 8). From the south end of the rows, the **pit road [1]**, laid down in 1879, runs eastwards across the north end of the site (Photographs 9, 10). The old road is still used as a track and a public footpath between Moresby Rugby Club and the main north-south path through Walkmill Woods. The track (but not the right of way) continues east around the north end of the colliery site and eventually to Sands Close farm. An old tarmac surface remains in many places. The principal structural feature within the study area here is a brick culvert that carries the water from Moresby Moss under the road, beside the dam (Photographs 11-13). Low walls that flank the road here contain bricks with the stamp of Micklam brickworks (Photograph 14). This works, now demolished, was north of Lowca, about 3.7km north-west of the dam.

5.5 The **early 20th-century dam [2]** stands just north of the pit road (Photographs 15-17). It is a brick wall with a mass concrete capping and sloping brick buttresses against the south face. Near the middle of the dam, a brick arch braces one of the

buttresses against the embankment of the pit road. A large breach in the middle of the dam shows the thickness of the wall under the water (Photograph 17). The wall was originally lower here to make the spillway of the weir, as marked on the 1925 map. There is a bypass pipe under the dam here, installed to allow water to be drained for maintenance or other work. The tapered stem of the valve on this pipe can be seen just downstream of the dam wall today (Photographs 18, 19). A firebrick made for an arch, vault or other curved structure in a kiln or a furnace was found, re-used, in the dam wall (Photograph 20).

5.6 The **partly canalised beck [3]** runs south from the dam along the west side of the former colliery before turning east along the south boundary of the site. The stream separates two distinct compartments of the present Walkmill Woods. The lower part of the beck, beside the road, flows in a concrete channel built by the colliery in the first half of the 20th century (Photograph 21). Near the car park the stream walls are a mixture of stone and concrete (Photographs 22, 23), and further north there are long stretches of straight concrete channel (Photograph 24). The upper part is returning to a more natural condition, but the remains of **two weirs [4, 5]** can still be seen (Photographs 25-27).

5.7 A large culvert carries the beck under the trackbed of the **old mineral railway [6]**, where there is a picnic table beside an entrance to Walkmill Wood (Photograph 28). Just outside, north of the low embankment, are the remains of the 1913 **weighbridge [7]** (Photograph 29). The remains of the building have recently been cleared by volunteers, revealing that the north wall of the brick structure still stands up to 0.75m high; elsewhere, only the bases of the walls survive (Photograph 30). The building was 7.4m long and 3.4m wide, with its long south face aligned with the vanished railway line. A gap in the brickwork on this face shows the position of the lever that linked the weighbridge platform with the scale mechanism and dial inside the building (Photographs 31-32). The stump of a **steel column** a few metres to the west of the building may have supported the signal used to tell train drivers to move the next wagon onto the weighbridge; it could simply have been for a sign (Photograph 33). Further to the west, some elements of the mineral line's **signalling gear** survive beside the old rail line (Photographs 34, 35).

5.8 At the south end of the site, a large **concrete wall [8]** runs along the side of the road just west of Walkmill Bridge (Photograph 36). This was built in the 20th century to contain the toe of the slope when the pit heap was at its largest.

6. Mining heritage

6.1 Although 143 years have passed since work began at Walkmill Colliery and the pit closed over 60 years ago, the heritage of the area's coal mining history survives. It can be seen in the pattern of settlements like Moresby Parks and Pica, which owe their existence to the collieries, in memorials to miners who lost their lives at work or in the two World Wars, in landscape features like the remains of the old mineral lines, and in documents and objects large and small that have been kept by mining families and the descendants of those who worked in the coalfield (Photographs 35, 36). Pit tokens are good example of this kind of memorabilia. Pit tokens, also known as tallies or checks, were brass discs stamped with a unique number and assigned to a miner. These were used in various ways. In many places, a token would be

exchanged for a lamp at the pit bank before a miner descended the shaft to start work. The tokens acted as a record of who was underground at any particular time.

6.2 It is hoped that the history of the colliery set out in this report, together with information available from people in Moresby Parks and its district and the photographs held by Cumbria County Archives, will contribute to on-site interpretation that will tell the story of the pit that once occupied the site of Walkmill Woods.

7. Recommendations

7.1 Volunteers have done a good deal of work clearing vegetation and exposing the structures of the dam and the weighing machine building. Keeping these structures clear would help visitors to visualise something of the site's industrial past. This would be helped by some on-site interpretation, such as a marker with the name of the feature, or a more detailed interpretation panel showing how the structure fitted into the larger colliery complex.

7.2 It is considered very unlikely that any other elements of the old colliery could be revealed by excavation, so presentation of the history of the pit would rely on old maps and pictures. Although only a handful are available, the black and white photographs of the colliery site after its clearance, now in the care of Cumbria Archives at Carlisle, would be of great value for on-site interpretation at one or more of the entrances to the wood. The pictures show the dramatic change that the site has undergone through the removal of the huge black pit heap that once dominated the view from all sides. There is very good potential for 'then and now' views of the site from several viewpoints, especially from the road near the present car park. It is understood that the canalised sections of the beck will be returned to a more natural state. It is recommended that some 'before' photographs are taken in advance of this work, to demonstrate the continuing evolution of the Walkmill Woods site.

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Photograph 1: A view looking south across the demolished colliery site, with the pit heap in the background. The shafts and heapstead were on the level ground at the middle of the view. Three tall poles, upper right, mark the approximate position of the coke ovens. Similar photos, now held by Cumbria Archives in Carlisle, show the scale of the pit heap after closure

Photograph 2: The River Keekle and the ruins of the Walk Mill, seen from Walkmill Bridge

Photograph 3: The south face of the old mill building, with an arched opening low in the face

Photograph 4: The old packhorse bridge upstream from the Walk Mill. Photo by Brian Mossop

Photograph 5 (left): A view looking across the narrow packhorse bridge. Photo by Brian Mossop

Photograph 6 (below): The old milestone on the roadside verge south of the colliery site. A view looking west towards the car park

Photograph 7: Slots in the east face of the milestone were used to fix the iron plate with the inscription 'Whitehaven 3 miles'

Photograph 8: The houses built by the Moresby Coal Company in 1879-80. A view from the south-west

Photograph 9: The pit road [1] running towards the old colliery. The trees in the middle distance are in the north-west part of Walkmill Woods

Photograph 10: A view looking west along the old pit road, with the later dam [2] at the right

Photograph 11: The beck emerging from the culvert, with the dam in the background. A view looking north

Photograph 12: The south end of the culvert and the low brick kerb on the side of the road

Photograph 13: The north end of the culvert

Photograph 14: A Micklam brick in the kerb of the pit road. The brickworks was attached to a colliery not far from Walkmill Woods

Photograph 15: The brick and concrete dam [2] seen from the south-east. The large gap in the centre of the wall is obvious in this view

Photograph 16: Buttresses and the dam wall west of the breach, after clearance by volunteers

Photograph 17 (above): The same construction on the east side of the breach

Photograph 18 (left): A view looking west along the dam, with the lower wall of the pit road to its left. Brickwork of the breached dam can be seen under the water, with the stem of a bypass valve to its left

Photograph 19: The tapered end of the valve stem is visible above the water, lower left. A key that was fitted onto this allowed the pool behind the dam to be drained when required

Photograph 20: A tapered firebrick, intended for an arch or vault, found re-used in the dam wall. The scale is 100mm long

Photograph 21: A moss-covered concrete channel carrying the beck [3] beside the road at the south end of the woods. A view looking west, near the car park entrance

Photograph 22: A mixture of concrete and stone forms the beck channel south of the railway embankment

Photograph 23: This deep culvert carries the beck under the old railway line. A view looking south-west

Photograph 24: A typical section of canalised stream a little to the north of the old railway. A view looking north

Photograph 25: The remains of a brick weir [4] at the south end of the old mine dam. A view looking north-east

Photograph 26: The same weir structure [4] seen from the north-west

Photograph 27: Looking north along the beck, with the site of Photo 9 in the distance. The semi-natural beck is flowing over the step of a small weir [5], north-west of the site of the mine shafts and boiler house

Photograph 28: This footpath runs along the line of the old mineral railway [6] at the west entrance to Walkmill Woods. The remains of the weighbridge building [7] lie under trees and scrub at the left

Photograph 29: The same area after clearance, seen from the picnic table at the east side. The low railway embankment [6] is at the left and the remains of the building [7] under the fence at the right

Photograph 30: The north wall of the old weighbridge building [7]. The projection at the right is at the end of the beam trench that linked the building to the platform on the rail line

Photograph 31: The weighbridge building after clearance by Green Gym volunteers. A view looking north-east

Photograph 32: The same view with the approximate site of the weighbridge platform shown in red shading. A trench, marked by the dotted red outline, held a balance beam that linked the platform to the weighing mechanism and weight dial inside the building, the shape of which is shaded in yellow

Photograph 33: Looking east across the weighbridge site in October 2022. The stump of a steel post can be seen in the foreground; this was probably connected with the business of weighing loaded wagons leaving the colliery

Photograph 34: The signal box and platform south of the junction of the railway and the mineral line to the colliery, at the left. A view looking south. Photo by courtesy of Brian Mossop

Photograph 35 (left): One of the posts that carried cables that connected the box shown above to a signal on the mineral line. This was to control traffic from the colliery as it joined the main railway line

Photograph 36 (below): A substantial concrete wall [8] built to contain the south end of the pit heap. A view looking east towards Walkmill Bridge

Photograph 37: A group of pit tokens. The upper ones, embossed 'Walkmill', were issued by the Moresby Coal Company Ltd sometime after 1890. The others are older and from the Moresby pit; one bears the name 'Morresby'. Reproduced by courtesy of William Marston

Photograph 38: Some of the range of printed material relating to Walkmill Colliery. Photos by courtesy of Brian Mossop

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Figure 1: Site location

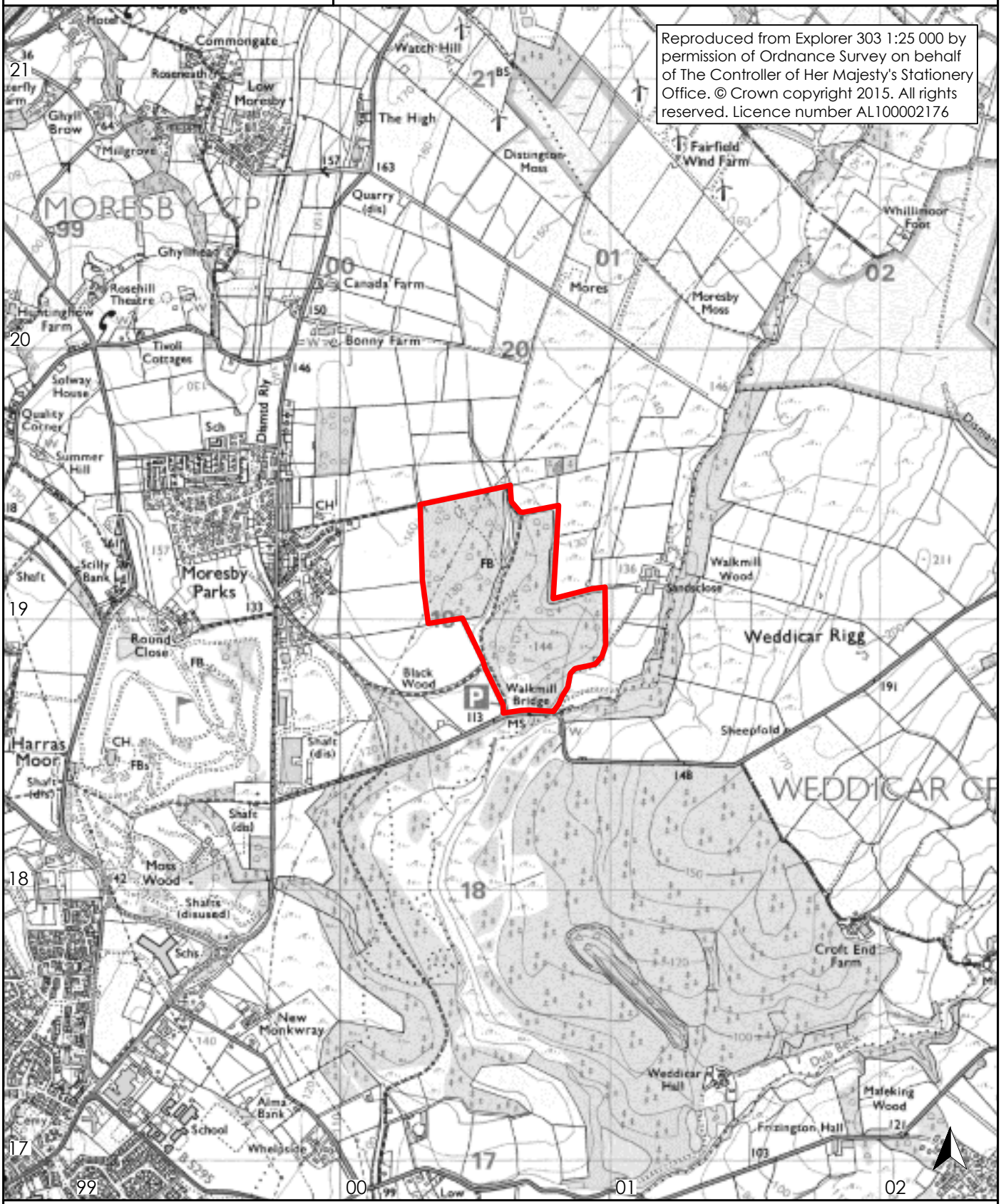

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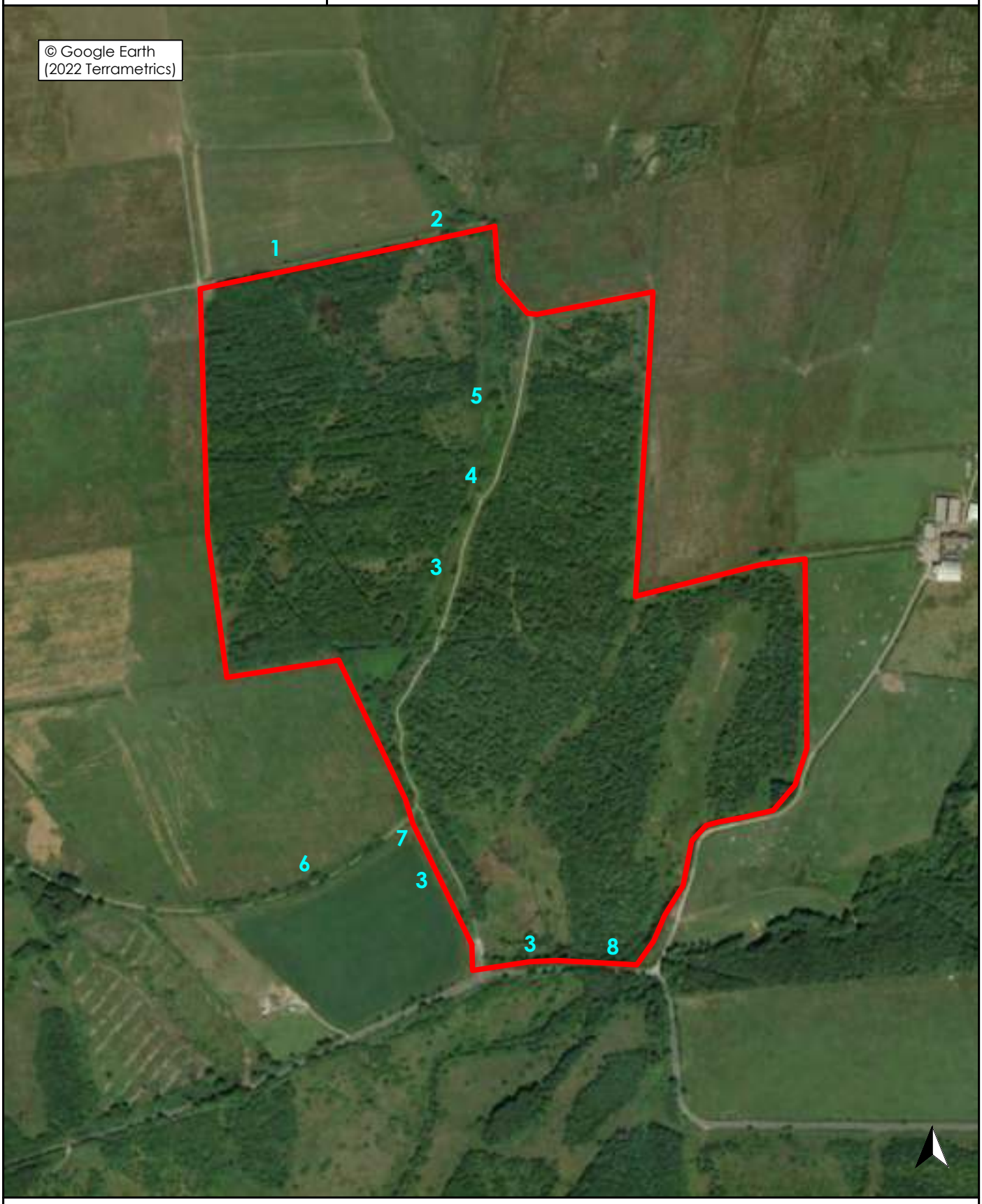
Figure 2: The site



site boundary

8 site labels

0 300m
scale 1:6000 for A4 plot

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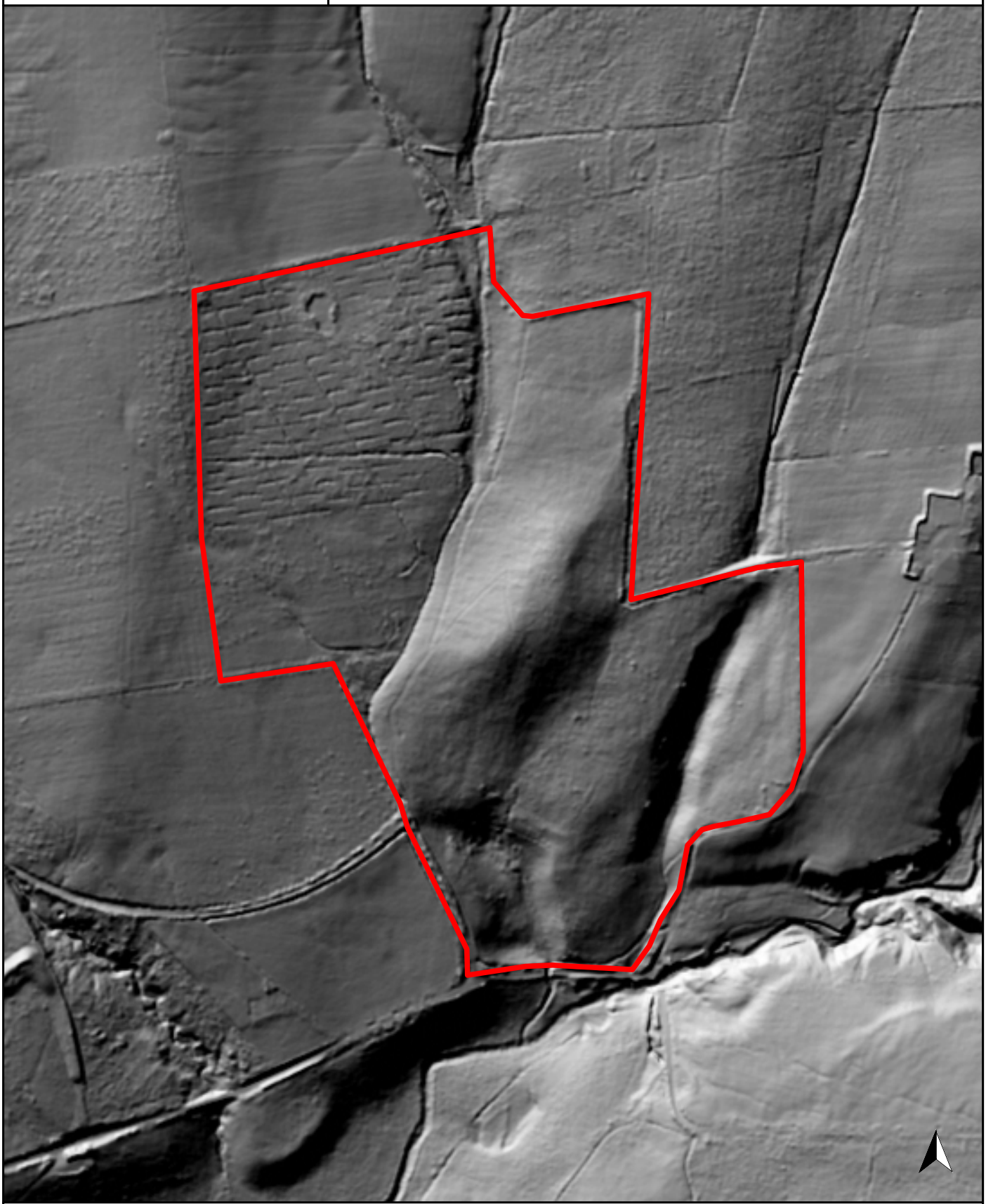
Figure 3: LiDAR data



site boundary

0 300m
scale 1:6000 for A4 plot

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Figure 4: The Wilder Walkmill proposals

approximate site boundary

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scale 1:10 000 for A4 plot

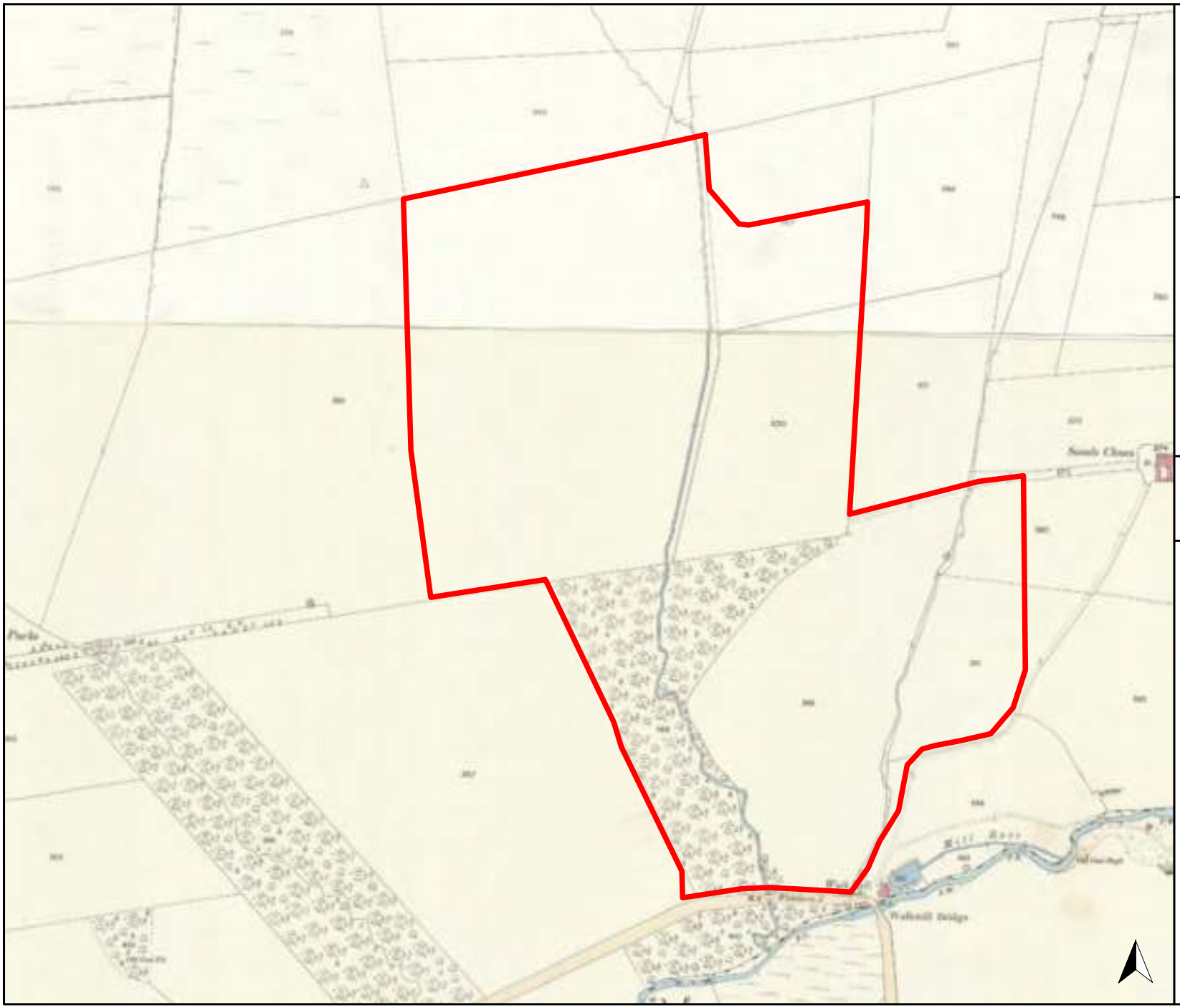

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Figure 5: Extract from the 1st edition Ordnance Survey map, 1865

0 300m
scale 1:6000 for A4 plot

site boundary

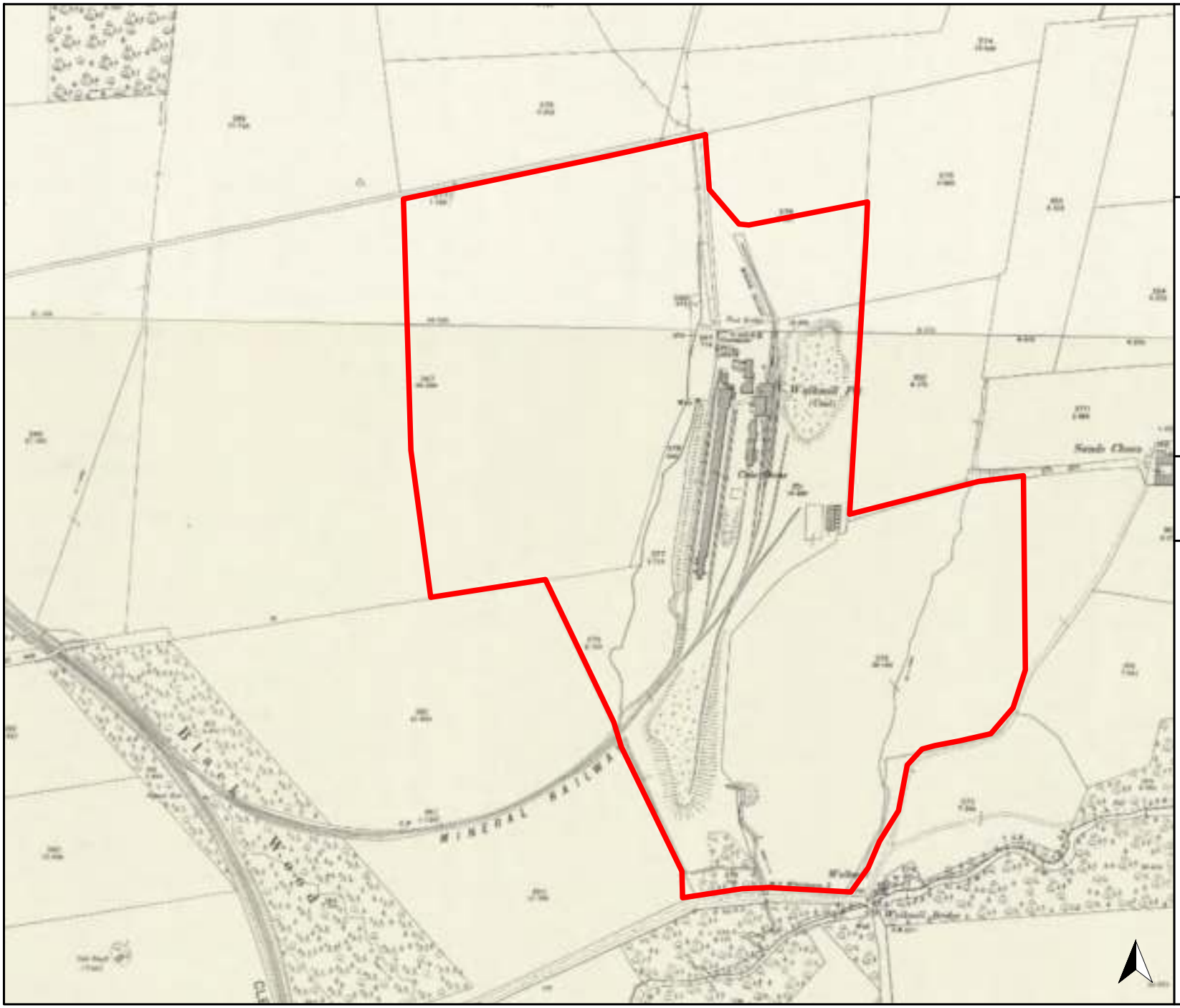

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Figure 6: Extract from the 2nd edition Ordnance Survey map, 1899

0 300m
scale 1:6000 for A4 plot

site boundary

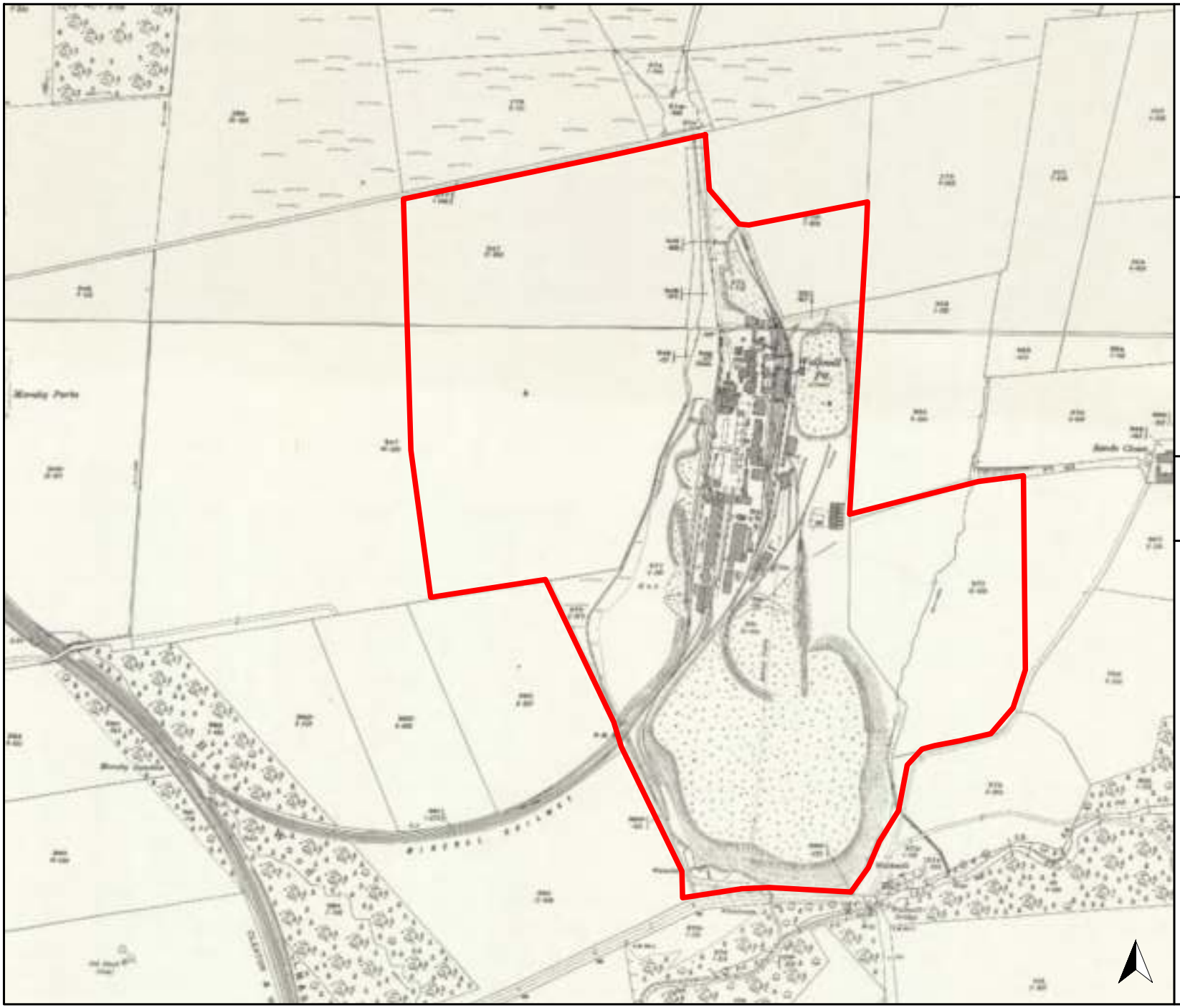

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Figure 7: Extract from the 3rd edition Ordnance Survey map, 1925

0 300m
scale 1:6000 for A4 plot

site boundary

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Figure 8: Early 20th-century postcard view of Walkmill Colliery. The headgear of the shafts can be seen, together with the northern winding house and one of the boiler chimneys. The coke ovens are out of shot to the right; the water in the foreground is an artificial pool known as 'the dam'. A view looking south-east.

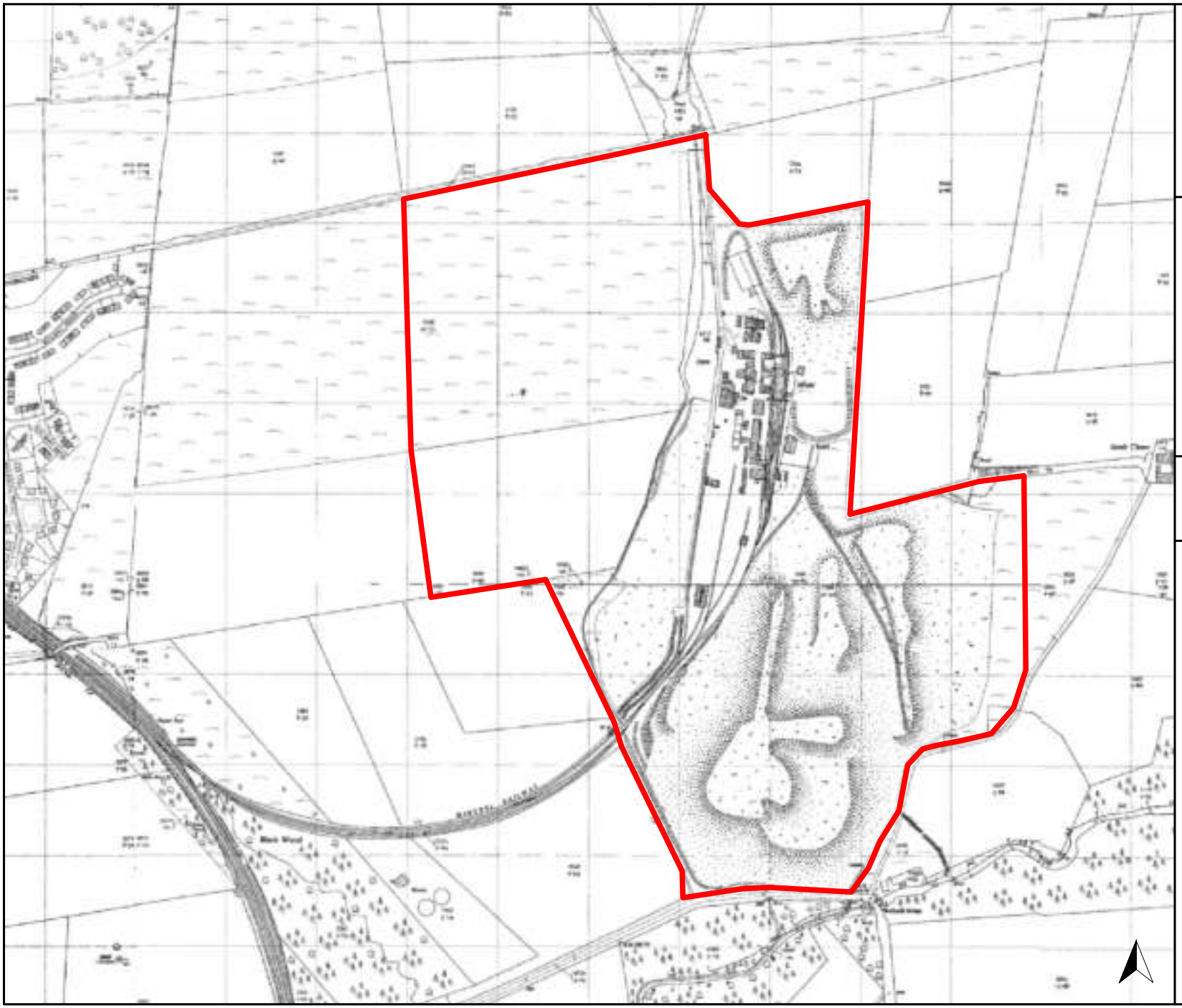

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Figure 9: Extract from the 1961 Ordnance Survey map

0 300m
scale 1:6000 for A4 plot

site boundary