Historic England

The Village of Elsecar, South Yorkshire: Historic Area Assessment

Jayne Rimmer, David Went and Lucy A Jessop

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THE VILLAGE OF ELSECAR, SOUTH YORKSHIRE

Historic Area Assessment

Jayne Rimmer, David Went and Lucy A Jessop

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SUMMARY

Elsecar, the industrial village near Wentworth Woodhouse in South Yorkshire, was developed in the late 18th- and 19th-centuries under the patronage of the Earls Fitzwilliam to take advantage of the abundant local reserves of coal and ironstone beneath the estate, and the arrival of the Dearne and Dove Canal followed by the South Yorkshire Railway. Elsecar's industries, in particular its collieries, contributed to the Fitzwilliams' extraordinary wealth and supported the village's planned expansion. Throughout the 19th century the Fitzwilliams dictated the provision of housing and various social institutions at Elsecar and, much more unusually, maintained a direct controlling interest in the management of the collieries and, when necessary, the ironworks. Many groups and individuals have contributed to the preservation of Elsecar's industrial heritage since the last coal mine closed in 1984. The significance of this heritage, which in some respects can be seen as a microcosm of the whole Industrial Revolution, was further recognised in 2017 by the creation of a 'Heritage Action Zone' (HAZ): a three-year partnership between Historic England and Barnsley Council to assist with the growth of Elsecar as a heritage destination and the identification of new development opportunities which support and enhance Elsecar's unique character and history. This Historic Area Assessment forms part of the HAZ project. It is intended to illustrate the varied character and significance of the village and its setting in order to inform interpretation, conservation and development under the direction of revised planning guidance.

CONTRIBUTORS

The Assessment was researched and written by Lucy Jessop, Jayne Rimmer and David Went with assistance from Cara Pearce. Photographs were taken by the authors and by Alun Bull. Petra Wade, Sharon Soutar and Cara Pearce created maps and plans.

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INTRODUCTION

Elsecar, a small industrial village in the Metropolitan Borough of Barnsley and county of South Yorkshire, was selected as a Heritage Action Zone (HAZ) in 2017 as part of a national, Government-sponsored programme of targeted support for villages, towns and cities. The Elsecar HAZ is a three-year partnership between Historic England (HE) and Barnsley Metropolitan Borough Council (BMBC) involving a range of local stakeholders. It is intended to increase our knowledge and understanding of the industrial heritage of the village and its surrounding landscape so as to develop the present heritage offer, promote a sustainable increase in visitor numbers and inform future development opportunities.

Alongside HE's other activities in the first two years, our research focus has been to complete an Historic Area Assessment (HAA), drawing together existing research and primary evidence to demonstrate the evolution of the village's built and landscape heritage.

The variety of buildings and archaeological features associated with Elsecar's industrial and estate history is considerable, representing the development of a late medieval landscape of agricultural settlements into a 19th-century hive of industrial activity, with the inexorable expansion of coal mining, the creation of two substantial ironworks, the development of transport from road to canal to railway, and the planned provision of residential and civic buildings to serve a growing industrial population. From the late 18th century onwards this expansion was driven by the ambitions of the owners of nearby Wentworth Woodhouse, specifically the 2nd Marquess of Rockingham and the 4th to 7th Earls Fitzwilliam, to whom Elsecar still owes the greater part of its present character.

This report presents the results of the HAA covering both the village and its hinterland. Elsecar's general history is summarised below, followed by a more descriptive assessment of the settlement's present character divided into eight character areas. Elsecar's overall historic significance is discussed in the concluding section.

AIMS OF THE AREA ASSESSMENT

The principal aim of this Historic Area Assessment is to explore the history of the industrial village of Elsecar and its setting through a study of its historic buildings and its principal, but now less visible, industrial enterprises. It examines a wide selection of buildings and building types from the earliest surviving examples to the present day and charts the development of Elsecar through time, using documentary and archaeological evidence, with particular reference to the overarching influence of the Wentworth Estate in shaping both the industries and the accompanying settlement. It aims to give an account of the varying character of the different parts of the settlement, based on the persistent influence of early landholding and the transformative effects of industrial development and its subsequent decline. In doing so, the assessment draws attention to the distinctive and significant aspects of the historic environment which underpin Elsecar's character and require particular consideration in terms of the appreciation of the village's heritage and the challenges of future development.

METHODOLOGY

Historic Area Assessment (HAA) is an established research technique, developed to examine the evolution, character and significance of the historic environment within a defined geographical area.[1] These areas are normally urban in character, although the approach has been successfully applied to more rural places.[2]

The initial phases of the area assessment concentrated on desk-based research, including evidence obtained from Ordnance Survey (OS) historic mapping, national databases of designated heritage assets, and on-line sources such as the national census and the British Newspaper Archive. The catalogue of The National Archives and those of Sheffield and Barnsley were examined, leading to an exploration of available archive material including historical maps and building development plans. This research extended over the life of the project and was greatly assisted by advice from local historians with specialised knowledge of relevant collections.

The core of the fieldwork was carried out between June-July and November-December 2017, with additional winter visits to areas previously inaccessible due to vegetation. Examinations of more complex areas of the settlement continued later in 2018. The historic core of the village - the present Conservation Area extending along Wath Road and Fitzwilliam Street, including both Elsecar Green and the former Earl's workshops - has been assessed in the greatest detail, to the Level 3 HAA standard as defined by present guidance.[3] Similarly, detailed research was conducted for the area of the former Milton Ironworks and Old Colliery which, though now less visible, were equally instrumental in Elsecar's development. The wider area has been assessed in a more rapid fashion (Level 2) except where individual buildings have required closer inspection.

The assessment area is almost exactly the same as that defined for the HAZ, embracing the historic core and later expansion of the industrial settlement within a broader hinterland that provides a context for this development, both in terms of the earlier history of this landscape and the controlling hand of the Wentworth Estate. For the purposes of description and analysis the assessment area has been divided into eight Character Areas, each based on commonality of historic development and present appearance (*see* Figure 201 at the end of the report).

Prior to and during the HAA research both HE and BMBC commissioned a number of other studies to elucidate particular aspects of Elsecar's past, the results of which are published elsewhere and woven into this report. The first of these was an HAA of the landscape on the west side of Elsecar, undertaken in 2016 by ArcHeritage on HE's behalf to inform deliberations around the Local Plan.[4] This research is drawn on as part of the present HAA, particularly concerning character areas 3, 4 and 5. In May 2017 HE's Geophysics Team undertook four surveys around Elsecar: on the Forge Playing Field at Milton; across the buried canal and yard areas alongside the Heritage Railway; within the boiler yard of the Newcomen-type engine house, and across the former charging yard for the Elsecar Ironworks.[5] Further geophysical studies were commissioned by HE in early 2018 to examine the sites of a fan house for Simon Wood Colliery and a row of lime kilns near Reform Row, and line of

the inclined plane between Elsecar and Milton.[6] The latter survey has since been extended to cover more of Elsecar Green and the site of the former gasworks on Wath Road through collaboration between BMBC and Leeds University School of Earth and Environment. In October 2017 HE commissioned the University of Reading (Quest: Quaternary Scientific) to carry out a bore-hole survey across sections of the buried head of the Dearne and Dove Canal in order to sample the material used to level the cut prior to the expansion of the railway sidings, and to assess the survival of the original canal architecture.[7]

Latterly, in the summer of 2018, the specialist archaeological consultants ArcHeritage were commissioned by BMBC (with a grant from 'Great Place Wentworth and Elsecar' Heritage Lottery and Arts Council England funded project) to carry out a series of small excavations on parts of the former Milton Ironworks. These excavations were guided by the results of HE's geophysical investigations and carried out with the help of numerous local volunteers. ArcHeritage returned, in May 2019, to assess the survival of buried remains of the Newcomen engine boiler house within the Elsecar Heritage Centre, drawing on the results of HE's geophysical survey mentioned above. This work may preceed further community excavations in the summer of 2019.

The results of this assessment and these investigations are expected to be used in due course to inform a revised edition of the visitor guidebook, 'Elsecar: The Earls' Village of Iron and Coal'. [8]

LOCATION, GEOLOGY AND TOPOGRAPHY

The village of Elsecar is situated some nine kilometres to the north of the historic powerhouses of the Yorkshire metal trades at Sheffield and Rotherham, and six kilometres south of Barnsley. It lies below the town of Hoyland on the broad south-east facing slopes of the valley of the Harley Dike, a minor tributary of the River Dearne, which continues eastward as the Knoll Beck. The village sits above the Pennine Middle Coal Measures where closely inter-bedded strata of Carboniferous sandstone, mudstone and siltstones are disrupted by a series of major geological faultlines, some visible as slight ridges running broadly north-west to south-east across the landscape. The rich Barnsley bed, up to nine feet thick in this area, was the main source of Elsecar's colliery wealth, pursued through the late 18th and 19th centuries by successively deeper mines following the valley from west to east as the bed dropped by incline and faults. Ironstone, the area's other main mineral resource, was mined further to the west at Tankersley, beyond the area of the present study. Wentworth Woodhouse, the historic seat of the Fitzwilliam family under whose patronage Elsecar developed, lies beyond the valley less than 2km south of the village. The tower and spire of Wentworth's old church and its successor are clearly visible from the more elevated areas of Skiers Spring and Milton on the western side of the study area. The valley landscape is now characterised by the nucleated settlements of Elsecar, Hoyland, Jump and Hemingfield; by a scatter of outlying farmsteads in an open prospect of agricultural land, some of which was reinstated following open-cast mining in the 1950s and 60s, and by blocks of woodland which frequently mask the remains of industrial processes or their waste products.

The Heritage Action Zone (Figure 1) is designed to encompass the core of Elsecar village within its wider historical setting, including areas of former industrial activity, settlement expansion, recreational space and farmland. At its heart lies the present village conservation area, established in 1974, centred on the junction of Wath Road, Fitzwilliam Street and Wentworth Road, and on the Earl's workshops now preserved as the Elsecar Heritage Centre. The wider HAZ area includes the site of the Milton Ironworks (now Milton Recreation Ground) to the west, where the boundary is drawn along Millhouses Street, Pine Close and Clough Field Road. To the south the area includes the former ironmaster's house at Skiers Spring, the open farmland associated with the historic farmsteads of Alderthwaite, Skiers Hall and Linthwaite, and the wooded early coal pits on the south-east side of the valley bounded by Burying Lane and a combination of field and parish boundaries leading through King's Wood to Linthwaite Lane. The east side of the zone is drawn along Royds Lane, returning to the valley floor at the Wath Road bridge and following that road north to include Hemingfield Colliery. The northern extent of the zone, drawn along field boundaries and returning along the railway, encompasses the later expansion of Elsecar village and the remaining farmsteads beyond. In total the HAZ, and the Historic Area Assessment based on it, covers an area of 3.46km^2.

The Harley Dike (largely subsumed by the Elsecar Reservoir) and the Knoll Beck, (now an overflow channel for the Dearne and Dove Canal) mark the lowest points of the valley, which descends from 65m aOD in the south-west to 45m aOD in the north-east. The former Milton Ironworks site occupies the highest point within the study area on the north-west side of the valley (90m aOD), while at 125m aOD Linthwaite Farm occupies the most elevated location to the south-east.

Fig 1. The location and extent of the Elsecar HAZ © Historic England. Shuttle Radar Topography Mission [SRTM] data, 90m resolution: courtesy of the CGIAR, http://srtm.csi.cgiar.org. Contains Ordnance Survey data © Crown copyright and database right 2019.

THE HISTORY OF ELSECAR

Early Elsecar

There is little detailed evidence for early settlement in the immediate vicinity of Elsecar, only a number of undated archaeological sites, largely visible as cropmarks, which are likely to be either late prehistoric or Roman in date. These were examined and recorded from aerial photography as part of the HAA project, to supplement the information currently available from the South Yorkshire Historic Environment Record (HER).[9]

Within the HAA boundary the most significant feature is a rectangular double-ditched enclosure with at least two internal divisions recorded from cropmarks, located on the northern side of the valley between Skiers Hall Cottages and the Old Vicarage. This has been dated on morphological grounds to the Iron Age or Roman period. Similar rectilinear enclosures, often paired, some combined with elements of contemporary field systems, have been recorded some 3km beyond the HAA boundary to the south-east, within Wentworth Park and particularly in the vicinity of Hoober where the plateau is crossed by a linear boundary known as the 'Roman Ridge'. Opinions vary as to whether this boundary is most likely Iron Age or Early Medieval in date. Other circular and D-shaped enclosures have been found within the southernmost part of Wentworth Park. Closer to Elsecar, near the southern corner of the HAA area, a single-ditched hexagonal enclosure lies immediately to the west of the Wentworth Sawmills, and further to the west, beyond Barrow, two sides of another possible rectilinear enclosure have been recorded.

Compared to the wider surroundings, Elsecar and Wentworth have returned comparatively few settlement sites from the examination of aerial photographs - a reflection, perhaps, of the expanse of opencast mining which surrounded Wentworth in the 1940s and 1950s (Figure 2), as well as the extent of woodland cover. Clearly, however, the area of Elsecar, and in particular the higher ground to either side of the valley was attractive to settlement in Roman and pre-Roman times. To the north of Elsecar, at Roebuck Hill, Jump, excavations in 2008 revealed an Iron Age roundhouse, which was superseded by an enclosed settlement in the late pre-Roman Iron Age, and then abandoned in the Roman period when it was overlain by a series of trackways and probable field boundaries. A number of worked flints from the Mesolithic and Neolithic periods were also discovered here.[10] Less than 2km north of Elsecar, beyond Hoyland, an investigation of the Woodhead opencast mining site in 2001 confirmed earlier evidence of Roman enclosures forming part of a ladder settlement. Occupation here is thought to span the 1st to 4th centuries AD,[11] and perhaps to have some association with the earthwork enclosures and trackways found further north in Wombwell Wood, which are scheduled as dispersed elements of a Romano-British settlement (National Heritage List for England [NHLE] No. 1004796).

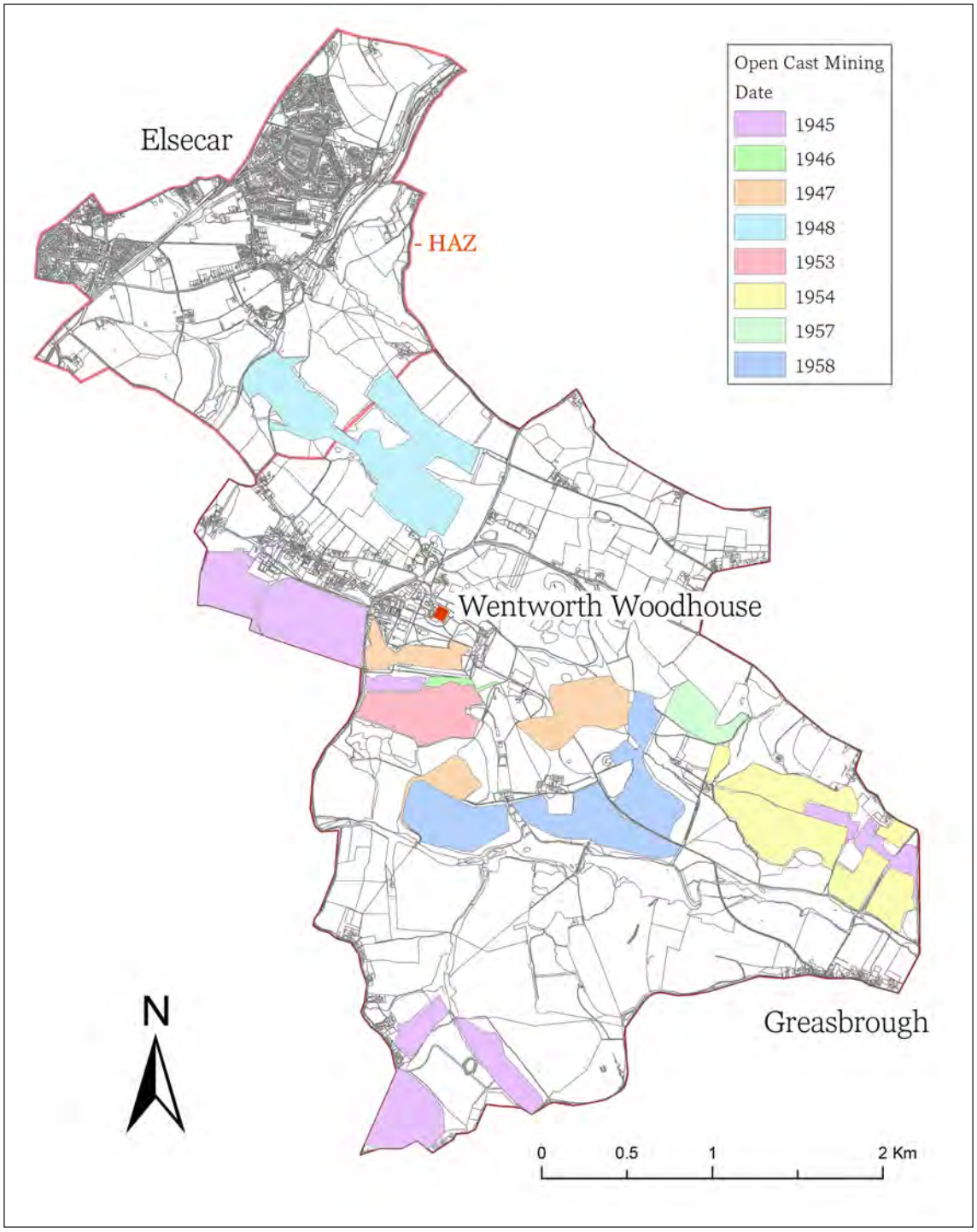


Fig 2. The extent of opencast mining around Wentworth Woodhouse 1945-58 recorded from contemporary aerial photographs (after Pearce 2017) © Historic England.

Medieval and early post-medieval Elsecar

Elsecar does not appear in the Domesday Survey of 1086 as it was a later creation at the interstices of the townships of Hoyland, Brampton and Wentworth within the historic parish of Wath upon Dearne. Modern Elsecar falls largely within the later township of Nether Hoyland, although the HAA study area extends southwards into the neighbouring civil parish of Brampton Bierlow up to the boundary of Wentworth, and eastwards into the township of Wombwell in the former parish of Darfield.[12] Prior to the Norman Conquest, the lands of the three principal townships encompassing later Elsecar were divided between several estates. Portions of Hoyland were held by Earl Harold Godwinson, Reiharr (or Rethar) and Swein. Reiharr and Swein also held land in Wentworth, and Swein in Brampton. After the Conquest, Reiharr's lands were granted to Roger de Busli and held under him by the Newmarches, while those of Earl Harold, formerly held by him as part of the royal lordship of Conisborough, passed to the Earls de Warrenne. Brampton passed to the great fee of Tickhill, but was held from that honour by Adam fitz Swein, presumably the successor to its Saxon proprietor.[13]

Hoyland and Wentworth, recorded in some detail in 1086, were sparsely settled, with four households apiece and only two and three ploughlands respectively. Much of the landscape was woodland pasture and waste, although common place-names in the area, such as 'royd', 'thwaite' and 'stubbin' reflect a long history of woodland clearance.[14] Physical evidence of medieval cultivation within the assessment area is almost non-existent, for reasons discussed below, although mapping from aerial photography identified one small area of medieval or early post-medieval ridge and furrow ploughing at the northern corner of the assessment area, near the intersection of Cemetery Road and the railway cutting, which was visible in 1963, but has since been obscured by housing.[15]

Named settlements within the Hoyland township begin to appear in documents from the 13th century onward, including Alderthwaite and Skiers, both of which still exist as farms to the south of Armroyd Lane to the west of Elsecar.[16] The family name 'Skyres' or 'de Skiris', thought to be of Scandinavian origin, is recorded in 13th- and 14th-century deeds and a will, and by the 14th century it appears to have defined a distinct manor or estate. In 1536 John Skyres held a water mill, 80 acres of arable land, 40 acres of meadow, 20 acres of pasture and 20 of wood, a total of 160 acres, all in Hoyland and Wentworth. Assuming that the medieval estate was perpetuated in the farmland associated with Skiers Hall when mapped in 1771, it would appear to have covered most of the fields to either side of Armroyd Lane short of Alderthwaite, extending north as far as the later inclined plane and south beyond the reservoir into Wentworth township.[17]

Prior to 1556 the Skiers Hall Estate was sold to Rauf Rokeby of Richmondshire, a Sergeant-at-Law who had fought against Wyatts' Rebellion in London in 1554. His son William was noted as living at Skiers Hall and a later William Rokeby was created 1st Baronet Rokeby of Skiers in 1661 (a short-lived title which became extinct with the death of Sir Willoughby, the 3rd baronet, in 1678). Sir William is credited with improving Skiers Hall, adding his coat of arms which was still to be seen in

1830 and may have survived, along with that of his wife, until the hall's demolition in 1964. His monument can be found in Holy Trinity, Wentworth's old church. After Sir William's death in 1675 the hall and the estate were sold to William, Earl of Strafford, and subsequently, prior to 1751, by Lord Galway to the Marquess of Rockingham, at which point it became a part of the Wentworth Estate.[18]

The now lost Skiers Hall is discussed at some length in the West of Elsecar HAA report, and is considered again in Character Area 4, below. Here it is only necessary to note that it was essentially a 'C' shaped range, timber-framed in part, with evidence of Sir William's 17th-century improvements. A schedule of lands from 1771 names a group of fields to the south-east of the hall as 'Fine Parks' and 'Rough Parks' implying an ornamental or recreational setting perhaps suited to the seat of the baronetcy. However, any such use would not have endured alongside the hall's subsequent decline into tenement cottages in the 19th century.[19]

The other substantial holding to the west of Elsecar, the manor of Alderthwaite, was granted to Monk Bretton Priory by Henry de Newmarch of Alderthwaite early in the 13th century. The manor is recorded in the priory's cartulary of 1239, but in 1316 the priory gave up its rights to Robert Russell of Tickhill, and by the close of the 14th century members of the Skiers family were in residence. It remained the seat of one branch of the Skiers family until the early 17th century.[20] According to Joseph Hunter's history, published in 1831, Alderthwaite was a 'valuable specimen, rare in this district, of the half-timbered house of the reign of Elizabeth'. However, it afterwards fell into ruin and was demolished in 1878. Inventories compiled for the wills of Thomas Skyers in 1627 and Charles Souter in 1678 list the rooms and provide some evidence for changes which took place between those dates.[21]

The third substantial early holding within the assessment area is Linthwaite, situated on the east side of the valley between Simon Wood and King's Wood. Linthwaite was one of several possessions in Brampton Bierlow given to St John's Priory of Pontefract by Adam Fitzswain in 1153-4, and later transferred to his new foundation, St John's daughter house at Bretton.[22] Linthwaite's particular history is obscure, but much of Brampton, centred on Newhall, remained in hands of Monk Bretton Priory until the dissolution. By 1774 Linthwaite Farm, presumably the successor to the medieval entity, was held by a tenant from the Marquess of Rockingham, while the steep pastures of Nearer and Great Linthwaite Cliffs were managed in-hand by the Wentworth Estate.[23]

The earliest mention of Elsecar occurs in the Wentworth Court Roll of 1576. The 'car' element (from old Norse 'Kjarr' meaning marsh or brushwood [24]) indicates that the place was low lying, and when the name reappears (as 'Elseacre') in the will of Sir Willoughby Rokeby in 1678 it is perhaps no surprise that it relates to a water corn mill, perhaps the same water mill that had belonged to John Skyers of Skiers Hall in 1536.[25] A sketch in one of William Fairbanks' field books for the survey of Elsecar Colliery in 1757 locates this mill and a nearby horse mill, both 'old', on the north side of the Harley Dike, south of Elsecar Green. Both are shown again, with less detail on the plan itself (Figures 3 and 9). Clayton states that the enclosures in which the mills stood, Milne Close and Dam Stead (the latter referring to former dams across

Fig 3. Extract from Fairbank's 'Map of the Collieries of Elsicar (sic), West Wood, and the Wharf at Kilnhurst…' 1757. Reproduced courtesy of Barnsley Archives and Local Studies A/3491/Z/1/1.

the stream) lay within the area developed for housing alongside Wentworth Road around 1970, at which time no remains of the mills were reported. However, a close comparison between Fairbanks' 1757 sketch, his later township plan of 1771, the enclosure award plan of 1794 and subsequent maps, suggests that the old corn mill might have stood somewhat further south, its position marked approximately by a house which stood in the area of the present visitors' car park alongside Forge Lane until demolished in the early decades of the 20th century.[26] The pond associated with the mill might conceivably therefore be the same as that shown nearby on the 1818 Hoyland township plan (Figure 4), later subsumed within the Earl's workshops and adjacent ironworks.

The corn mill speaks of the essentially agricultural nature of the area in the later medieval, Tudor and Elizabethan periods. Mention of a fulling mill in Hoyland as early as 1292 suggests that cloth-making may also have played a part in the local economy; yet, according to the evidence presented to the commissioners for the

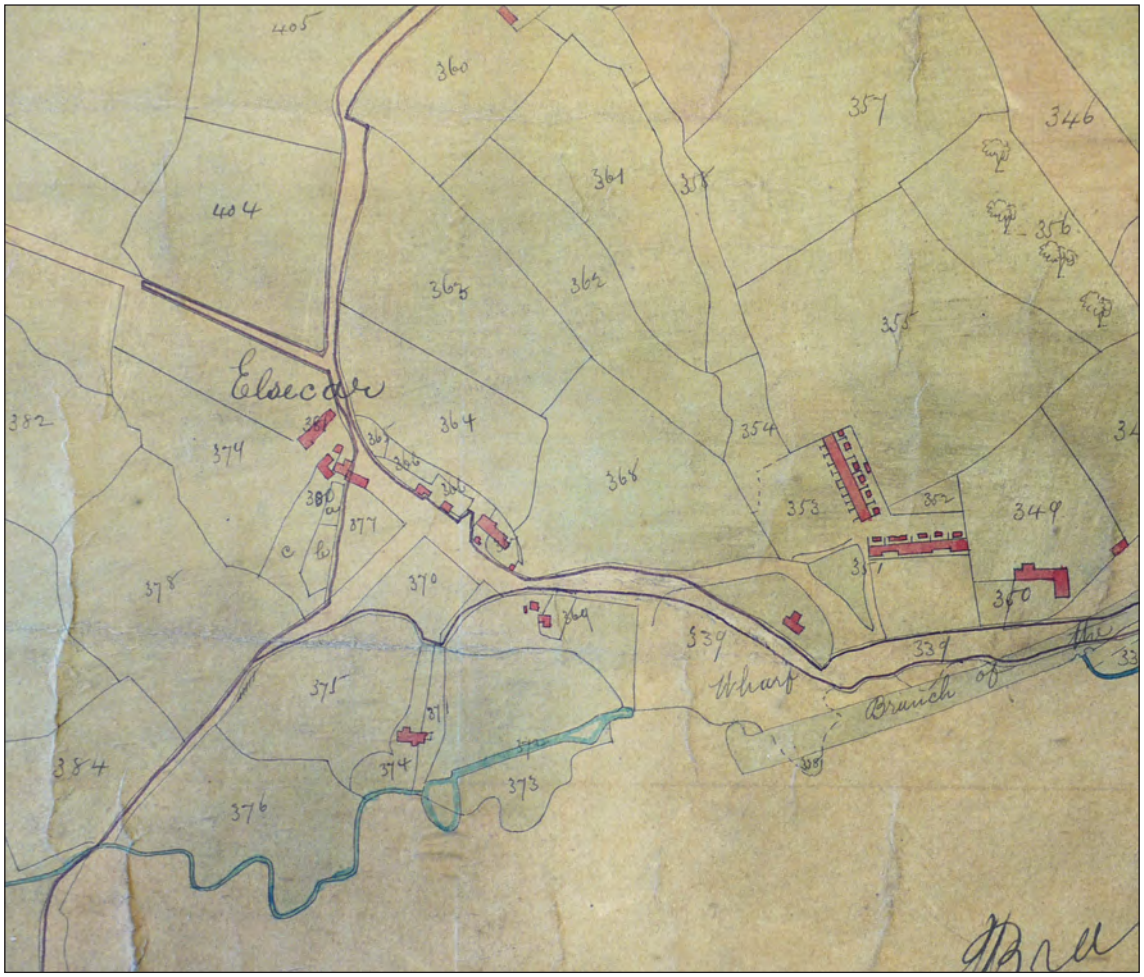


Fig 4. Extract from the Hoyland Township Plan of 1818 showing the house (Plot 374), which may be developed on or from the former mill, and adjacent ponds. Reproduced courtesy of Barnsley Archives and Local Studies (NBC 417R).

fleece tax (*Inquisitionem Nonarum*) in 1340 by Henry de Allerthwaite, William de Holand, John de Skires and John de Barlay, no merchant made a living in Hoyland at that time except by agriculture.[27] The pattern of agriculture was, however, clearly undergoing change around this time. In 1356 a gang of villagers assaulted Robert De Syers (Skyres?), broke his closes and houses at Wombwell and Hoyland, and carried away his crops and goods apparently in protest against an unpopular enclosure of land. The event may mark the early part of the process by which the main estates - Alderthwaite, Skiers and Linthwaite – consolidated and perhaps extended their holdings to the detriment of the commons of Hoyland, Brampton and Wentworth, a process which remained contentious in 1536 when another violent protest occurred at Skiers Hall.[28]

By the 18th century the farming estates at Skiers Hall and Alderthwaite may well have contracted somewhat from their medieval extents; land at Skiers Spring, for example, now lay beyond the Skiers' boundary. However, they together still controlled most of the landscape immediately to the west of Elsecar, as well as the sites of the mills and lands around Elsecar Green. What little remained of common

land lay, notably, across the northern edge of the assessment area, around Milton, where former pasture is suggested by a preponderance of 'ing' field names. This was finally partitioned following the Hoyland Inclosure Act of 1794. Brampton's enclosure was similarly completed following an act of 1814-15.[29] Surveys of these townships drawn up on the eve of enclosure show a marked contrast between the remaining regimented strip fields clustered around the villages of Hoyland to the north or Brampton to the east, and the broad patchwork of more anciently enclosed fields around Skiers, Alderthwaite and Linthwaite.[30] The lack of mapped or physical evidence for strips in these areas strengthens the case that these manors and farms developed outside the common fields of the adjacent settlements. The only example of early ridge and furrow found within the assessment area, at the intersection of Cemetery Road mentioned above, was on the periphery of Hoyland's great fields. In their open agricultural aspect therefore, these three farming centres still evoke something of the character of the medieval estates from which they developed, only now with somewhat fewer field boundaries compared to those mapped for the Township of Hoyland Plan in 1818, or to a lesser extent, the Township of Brampton plan of 1842.[31] Among the field boundaries which remain, the longer and more sinuous hedgerows would seem to reflect the earlier stages in the enclosure process.

Aside from agriculture the earliest landscape activity that than can be detected is the mining of coal, largely from higher, poorer quality riders above the main Barnsley bed. Precisely when mining began around Elsecar is a matter of pure conjecture, given how close to the surface these deposits could be. The earliest surviving document referring to coal working in the area involving the Wentworths dates from around 1300, and by the early 16th century deeds and chancery bills demonstrate that the family were leasing tracts of coal for mining in Greasbrough, Barbot Hall, Aldwarke and other manors in Rotherham. Members of the Fitzwilliam family are named in coal leases for the Barnsley and Deep Hard seams at Cortworth, Haugh and Greasbrough from *c* 1370 to 1478. It has been suggested that the shallowest coal in the Elsecar valley could have been worked (slowly, and on a small scale) at a similar time.[32]

The earliest recorded collier in the immediate area (if not a 'wood coal' or charcoal burner) is named in the will of John Bell of Nether Hoyland dated 1609. A coal mine was certainly in operation on the Barnsley Seam at Stead Farm, some 1km west of the assessment area, shortly after 1632. This was being worked by three picks in 1683, that being a fairly typical number of hewers for the mines of this neighbourhood and period. There are records of the Rokeby family operating a mine, probably on the same seam, to the north west of Elsecar in 1681. The tenant collier, William Coe, was to sink his pits upon the bassett, or outcrop, and take all the coal before him leaving props to support the roof of the mine, employing no more than four men in the process, three to hew and one to draw up the coal, thereby limiting the damage that mining might cause to the surrounding surface. Similarly, no more than one pit was to be left open at any time.[33]

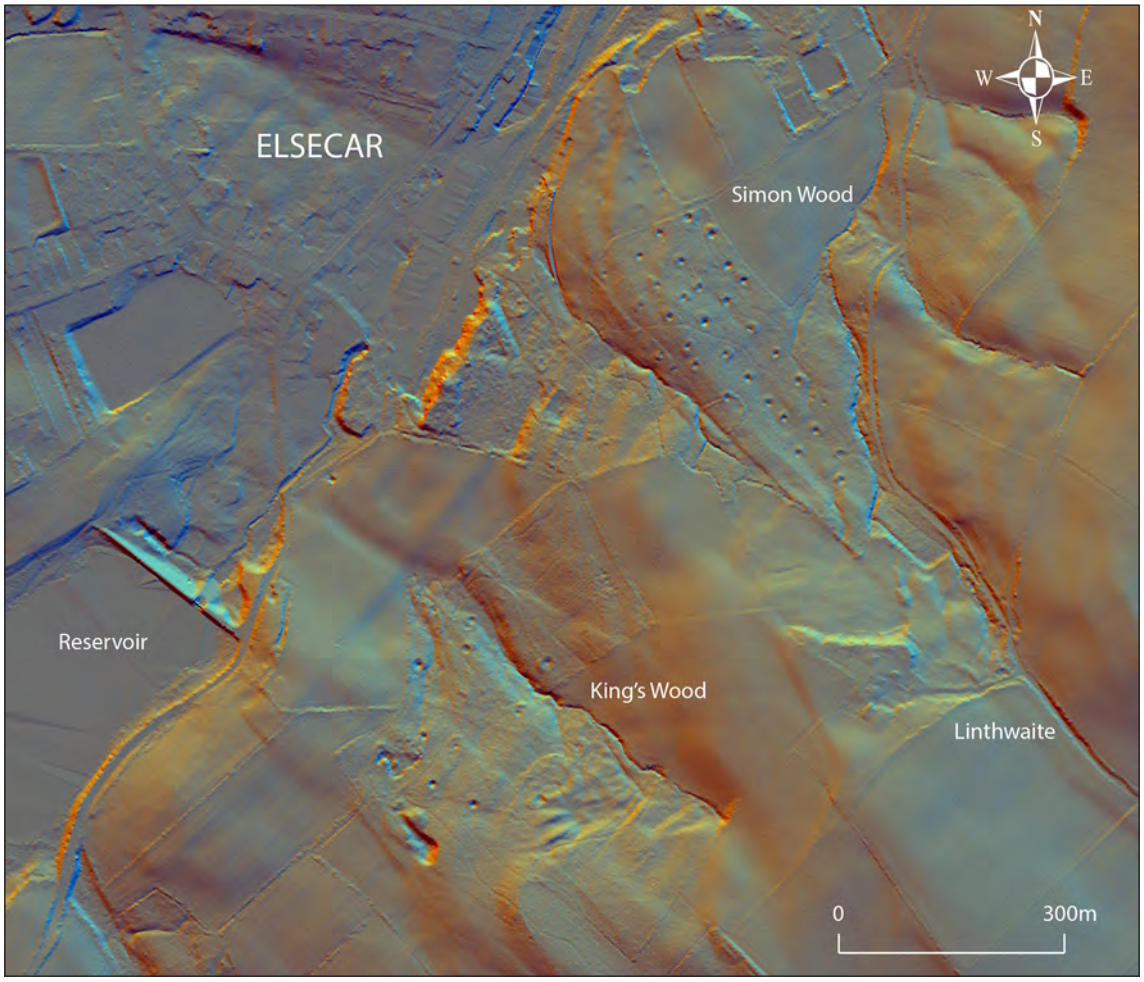


Fig 5. Lidar image of the landscape south of Elsecar showing the distribution of early mining shaft mounds in Simon Wood and Kings Wood. 16-direction hill shade terrain mapping © Historic England. Source: Environment Agency lidar at 1m resolution.

This early form of mining by shafts, sometimes termed 'bell pits' on account of the bell-shaped chambers created around the foot of the shaft, must have been quite ubiquitous in the vicinity of Elsecar. Their impact is best preserved within the woodland in the south-west part of the assessment area where recent Lidar imagery clearly shows patterns of shafts and the mounds of spoil created around them (Figure 5). The pattern is most intense in Simon Wood where the shafts are set out in a fairly regimented grid-like arrangement. The King's Wood shafts are fewer, less regular and more widely spaced, but their presence must have similarly made the land here only good for trees once the mining had stopped. Toward the higher, southern end of King's Wood a series of irregular channels and dumps hint at persistent but less structured mining activity, perhaps simply exposing outcrops of poorer quality coal, not unlike those mined by open-cast operations which ran up to the southern margins of the wood in 1948 (*see* Figure 2). Such a rudimentary operation is difficult to date. It could precede or be contemporary with the development of shaft mining. It is perhaps less likely to post-date the mid-18th century when mining began to be undertaken on a much more organised basis across the Wentworth estate, which had by then acquired Alderthwaite, Skiers, Linthwaithe and much else which was to become Elsecar.

Roads and lanes

The road network serving the Elsecar area prior to the mid-18th century was probably little altered since the late medieval period. Although the major thoroughfare between Sheffield and Leeds lay only a short distance to the west, this does not appear to have greatly influenced Elsecar's development. The sale and transport of coal, for example, remained primarily a local affair well into the 18th century given the difficulties of long-distance transportation. The 1757 collieries map (Figure 3 and 9) shows a convergence of lanes forming a triangle around Elsecar Green: early versions of Water Lane (leading toward Wentworth), Fitzwilliam Street and Wath Road – the latter having become a more important route for the carting of coal along the valley to reach the new wharf at Kilnhurst, near Swinton, from whence it was shipped along the River Don Navigation to reach available markets with a *c* 40 kilometer radius to the north-east and east.[34] Armroyd Lane was then marked only by a stub running along Elsecar Croft, apparently gated at the entrance to the 'Great Arm Royd' field.

At the end of the 18th century Hoyland's final phase of enclosure by parliamentary act led to the creation of Milton Road and Broadcarr Road (as they were later named) across what had been a linear strip of commons along the northern edge of the assessment area. The road north from Elsecar Green to Stubbin Green and thence to Hoyland (latterly Fitzwilliam Street and King Street) had also reached its established position by this time. Armroyd Lane is shown on the 1794 draft enclosure map linking Skiers Hall with Milton Road, although the final section through Great Arm Royd was marked as an allocation which was yet to be taken up by the then landowner, Earl Fitzwilliam. This gap had been removed by the time of the 1818 Hoyland township plan, and the completed road appears to have been operated by toll, at least by 1840, when it was presumably used to transport some of the products from Milton Ironworks.[35]

Medieval Hoyland lay within the extensive parish of Wath and did not have a church of its own, but by 1235 its parishioners were able to attend a more convenient chapel established at Wentworth which, together with its successor church, became a place of local burial.[36] The 1771 plan of the manor of Hoyland shows the most direct route from Hoyland to Wentworth, then known as Long Lane running south from Broadcar Common. Earl Fitzwilliams' household accounts for 1806 refer to payments of one pence for funeral processions to carry bodies from Hoyland to Wentworth Chapel through Skiers Hall land,[37] a tradition which may have led to this nearby route acquiring the name 'Bury Lane' by the time of the 1867 plan of Hoyland. It is now known as Burying Lane. The southern section of this road, leading to its intersection with Water Lane on the south side of the Harley Dike, was straightened and given a new bridge when the reservoir was created for the Dearne and Dove Canal in 1796 (*see* Figure 107), and the route of Water Lane towards Elsecar Green was subsequently altered and improved.[38] The reservoir also removed the earlier route 'Skyres Hall Lane' shown in 1771, which had run northwards from Water Lane. Thereafter Skiers Hall was entirely reliant on access from Armroyd Lane.

On the south side of the valley, the routes of Royds Lane and Linthwaite Lane, extending to their respective farms and beyond, appear on the 1842 tithe map for Brampton Bierley much as they do today, except that Royds Lane's continuation east to Tingle Bridge and Thief Hole Lane was lost to the expansion of tips from Elsecar Main Colliery in the latter half of the 20th century.

Cobcar Lane, in the north-east part of the assessment area, is shown on the 1771 Hoyland map extending first west then north from the Knoll Beck and its junction with Royds Lane. It may have developed from the 'foot way' crossing Cobcar Ing on the 1757 collieries map but the relationship is unclear. In 1771 the lane entered the southern triangular end of Cobcar Green, linked by a further lane branching south-eastwards to Stubbin Green. By 1794 both greens had been enclosed, and the lanes were more sharply defined.

Elsecar in the 18th and 19th centuries

The Fitzwilliam Estates and the Wentworth Woodhouse landscape

Thomas Watson-Wentworth, 1st Marquess of Rockingham (1693-1750) was responsible for the transformation of Wentworth Woodhouse from the Jacobean house of his great-grandfather, Thomas Wentworth, 1st Earl of Strafford (1593-1641), into the vast mansion that it is today. Both sides of the house - the polychromatic Baroque garden front with its exuberant sculpture and the Palladian west front by Henry Flitcroft (1697-1769) - were commissioned by Rockingham after his father's death in 1723. Not content with the rebuilding of the house, Rockingham also commissioned Flitcroft to design structures for the garden as well as elsewhere on the estate, including the Hoober Stand in 1746-48 and probably the Hoyland Lowe Stand. These have prominent positions on hilltops around the estate, designed as prospect towers from which to view the surrounding landscape as well as highly visible markers of the extent of the Marquess' landownership. Rockingham, then the Earl of Malton, was also responsible for the early exploitation of the estate's mineral wealth, leasing out the Lowwood Colliery to William Spencer in 1737.[39]

The Fitzwilliam Wentworth and Malton Estates were then inherited in 1750 by Charles Watson-Wentworth, 2nd Marquess of Rockingham (1730-1782). He employed John Carr of York (1723-1807) to carry out the small task of raising part of the wings of Wentworth Woodhouse and the larger one of building the stable block (1766-79). The 2nd Marquess also followed his father in creating monumental garden features, adding Keppel's Column to the estate in 1778-81, also designed by Carr. Rockingham inherited his father's Whig political interests too, eventually becoming Prime Minister twice, in 1765-66 and again just before his death in 1782.

He combined national and local politics with being one of the richest landowners in the country, a love of the visual arts and horse racing, and investment in his estates. In his own words, he enjoyed being 'of use and assistance to many'; his exploitation of the coal under Elsecar, the building of the Greasbrough Canal and his development of mining in the area certainly brought employment and income to the area.[40] Rockingham's interests in the arts and mining were combined in his

circa 1762 commission from the artist George Stubbs (1724-1806) an equestrian study including a liveried estate employee, perhaps the overseer Thomas Smith, beside a horse-powered winding engine, possibly at Elsecar (Old) Colliery (Figure 9), alongside many paintings of his racehorses, and a later portrait which is certainly of Thomas Smith, who was evidently held in high regard (Figure 6).[41]

William, 4th Earl Fitzwilliam (1748-1833) inherited Wentworth and the Rockingham estates on the death of his uncle, the 2nd Marquess of Rockingham, in 1782. He was very much his uncle's heir, as a landowner, politician and as an industrialist. He was known for his concern and help for the poor and needy, as his friend Frederick, 5th Earl of Carlisle noted in a poem, writing that:

> Say, will Fitzwilliam ever want a heart,
> Cheerful his ready blessings to impart?
> Will not another's woe his bosom share,
> The widow's sorrow and the orphan's prayer...
> Who feeds the hungry, who assists the lame?
> All, all re-echo with Fitzwilliam's name.[42]

His beliefs were liberal, disliking dogma and extremism, and he particularly believed in the 'dignity and freedom of the individual'.[43] His inheritance brought together the Rockinghams' estates in Yorkshire, notably at Malton and Wentworth, with the Fitzwilliams' estates in Northamptonshire, Lincolnshire and Peterborough. This quantity of land, his industrial and agricultural concerns, the great country seats of Milton and Wentworth Woodhouse, and the attendant political influence made Fitzwilliam simultaneously a country gentleman, a leading Whig politician and industrialist, allied with a considerable bent towards philanthropy. This made his

Fig 6. '*Thomas Smith at the age of about 70*' by George Stubbs, 1765/6. The 2nd Marquess thought so highly of this portrait that it hung in the Antechamber to his bedroom at Wentworth Woodhouse. From *www.the-athenaeum.org/*

estates 'one of the best run in the two kingdoms', and not at his tenants' expense.[44] His building activity included the addition of the Rockingham Mausoleum to a design by Carr in 1784-93 but it was his investment in his industries and workers' housing which made Elsecar the place it is today.

The 4th Earl was responsible for the creation of the Elsecar branch of the Dearne and Dove Canal and its reservoir, and for the sinking of Elsecar (New) Colliery, in the 1790s, joined by the end of the decade by the Elsecar ironworks and in 1799-1802 by the Milton ironworks. New cottages were built by the estate at Skiers Hall, similar in design to plans in the Wentworth Woodhouse archive by Carr (*see* Area 4). Elsecar was gradually transformed from the small hamlet of 1757 into a village of planned housing for colliers and ironworkers such as Old and Station Rows (*see* Area 6) and industry (Area 1), with further developments of industry and housing at Milton (Area 5). The canal and the chimneys and furnaces of Milton and Elsecar's Ironworks became further monuments to the estate's enterprise, commerce and investment, continuing the dominance of the landscape by buildings put up by the Rockinghams and Fitzwilliams. Elsecar was deliberately developed as the estate's industrial village – a centre for coal and iron-working – just as the more traditional settlement of Wentworth served the interests of the house, garden, park and wider estate.

His work was continued by his son, Charles Wentworth-Fitzwilliam, 5th Earl Fitzwilliam (1786-1857), who added his own Christian paternalism to the family tradition of investing in industry, housing and agriculture. His patronage continued the building of more workers' housing in Reform Row, Cobcar Terrace and Fitzwilliam Street whilst providing serious social and religious infrastructure in the form of Holy Trinity Church and the neighbouring school, as well as a large lodging house and subscription reading room (*see* Area 6). Hemingfield Colliery was also sunk, with housing built nearby, followed by Simon Wood Colliery (*see* Area 2). The South Yorkshire Railway and the light railway to Thorncliffe both arrived in Elsecar under the 5th Earl, not for public transportation but for the distribution of coal and the products of the ironworks. Farms were improved and expanded, such as Linthwaite and Alderthwaite (*see* Areas 2 and 4). And next to the ironworks was built the complex of workshops with their distinctive perimeter wall which forms the heart of the Elsecar Heritage Centre today (*see* Area 1).

Charles' son William Wentworth-Fitzwilliam (1815-1902) inherited the title of 6th Earl in 1857 and continued the family's industrial interests, though few innovations are directly attributable to him. The estate's coal mining certainly continued but the unprofitable ironworks at Elsecar and Milton were closed down, the former site continuing as part of the estate's workshops supporting the collieries (Area 1). No further workers' housing was added by the estate to Elsecar at this time.

It was not unusual for aristocrats in the second half of the 18th century to be directly involved in the development of industry on their land. The 3rd Duke of Bridgewater (1736-1803) led the way, building canals and collieries in order to extract, move and sell the coal under his lands in Lancashire from the late 1750s onwards. Bridgewater and the two Marquesses of Rockingham were not alone: the 2nd Earl Gower, the 5th Duke of Beaufort and the 6th Earl of Balcarres were involved in setting up ironworks on their estates during the 1760s to 1790s.

However, where the Earls Fitzwilliam differed from many of their aristocratic contemporaries in the 19th century was the degree of involvement that they continued to contribute to their industrial affairs: the estate directly controlled its coal mining activity and sometimes the ironworks rather than selling leases and handing control over to others. Instead of distancing themselves from industry and trade as many aristocrats did in the course of the century, they took considerable pride in their products and their workforce, for whom the 5th Earl in particular felt an 'acute sense of responsibility towards his fellow-Christians' in keeping them in employment.[45]

This is not to say that other mine owners and industrialists did not provide housing alongside social, leisure and religious buildings for their workers in the 19th century. But the importance of the Rockinghams' and Fitzwilliams' work at Elsecar and Milton lies in the continuous involvement of one aristocratic family in industrial endeavours and social provision through the better part of two centuries in extremely close proximity to their principal seat. That the majority of their creations survive – Wentworth Woodhouse itself, the associated monuments around the estate, the estate village of Wentworth and the industrial village of Elsecar with its housing and the remains of its ironworks and collieries – compounds the significance and importance of every part.

The development of the village

The earliest known depiction of 'Elsicar Green' is as a tiny hamlet on the 1757 Collieries map drawn by William Fairbank junior (*see* Figure 3) At this date it appears to consist of an undefined but roughly triangular space linked to Hoyland by a lane later named Fitzwilliam Street, the stub of what later became Armroyd Lane, a road running southwards towards Wentworth and another to the east towards Tingle Bridge. Two or three properties, perhaps farms, lay to the south-west of the foot of Fitzwilliam Street, roughly in the area of nos. 71-79 today. The two buildings marked as 'Old Mills' north-west of the meandering Harley Dike, discussed above, had presumably once milled corn but were perhaps already out of use. To the north of the triangular green was a cruciform building with gardens behind, which may be the present 9 and 10 Market Place. Three more buildings are depicted towards the east, bringing the total in the hamlet to no more than nine. Orchards and gardens surrounded the green, at the centre of which was an 'Old Engine Pit fill'd up' and an 'Old Sough' for mine drainage. A coal level was dotted on, running roughly north-west to east from the area of Milton House via the present cricket pitch to the centre of the hamlet; this is marked as 'Deep Level intended to be pursued'. This demonstrates that the hamlet was already set within a partially industrialised landscape of coal mining, but its transformation into a much more substantial settlement – both residential and industrial – was yet to come.

As the 4th Earl Fitzwilliam's plans for the canal, colliery and ironworks at Elsecar gathered pace, the small hamlet of Elsecar Green was gradually transformed into a substantial village. At its core remained the road layout depicted in 1757 with the embryonic Armroyd Lane, Fitzwilliam Street, Wath Road and Wentworth Road given greater definition and permanency. These are all shown on the 1818 Township of Hoyland map (*see* Figure 4) along with the major infrastructure of the canal, its basin and its reservoir added in the 1790s.

In 1818 there were a few more buildings grouped around the green than there had been in 1757; even one of the mills had survived. The principal departure was the presence of the entirety of Armroyd Lane and the construction of two rows of houses by the estate, with forecourts to the front and yards with outhouses to the rear. These are Old Row and Station (originally Colliery) Row; there is also shown a large building, perhaps agricultural, to the east of the latter. Stubbin is depicted as two buildings with only a single farmstead between it and Elsecar. Nothing is shown to the other side of the Harley Dike and the canal, because this area lay outside the boundary of the Township of Hoyland, but the buildings of Milton within the township are also absent, though the ironworks and Milton House had long been built. For these areas is it necessary to consult later maps.

By locating the two terraced rows of purpose-built cottages near to the canal bank, Nigel Cavanagh has argued that the 4th Earl was making a physical distinction between the new industrial colony focussed around Elsecar New Colliery and Elsecar Ironworks, and the older settlement clustered around the village green.[46] The newly-erected workers' housing was a key component of this planned, integrated industrial settlement, which was inspired by the estate model villages of the 18th and 19th centuries, and driven by the ideals of paternalistic benevolence.[47] They played an important role in enticing new employees into the village, and met a practical demand for new housing as the workforce grew. The estate built a further terrace, Reform Row – a very long row of 28 houses - next to the canal in 1837, commemorating the passing of the Whig-sponsored Reform Act of 1832, the ring-leader of which was Viscount Althorp, whom the 5th Earl Fitzwilliam, as Viscount Milton, had particularly supported.[48] The date of construction also marks the accession of Queen Victoria, reinforcing the Fitzwilliams allegiance to the crown.[49]

The houses erected by the Earls in Elsecar were regarded as being superior examples of their type. The Government Inspector of Mines and Collieries, Seymour Tremenheere, visited the village in 1845 as part of a survey of the conditions within mining communities and made the following observations about the miners' housing:

> [The housing was] of a class superior in size and arrangement, and in the conveniences attached, to those belonging to the working classes. Those at Elsecar consist of four rooms and a pantry, a small back-court, ash-pit, a pig-sty, and a garden; the small space before the front door is walled round, and kept neat with flowers or paving stones; a low gate preventing the children from straying into the road. Proper conveniences are attached to every six or seven houses, and kept perfectly clean. The gardens, of 500 yards of ground each, are cultivated with much care. The rent for cottage and garden is 2s a week. Each man can also hire an additional 300 yards for potato ground. Every spot within and about the back courts of these cottages was swept as clean as the front; all the cooking and washing utensils were neatly arranged; and each cottage within seemed to show that scrupulous attention to cleanliness which would enable it to bear examination into its inmost recesses.[50]

He continued to say that Elsecar presented 'a remarkable contrast with the degrading neglect of cleanliness in person, house, and habits, exhibited in so many of the colliery villages of Scotland'.[51] Tremenheere's observations on the housing conditions at Elsecar were echoed in later accounts of the development of the village, which viewed it as an exemplar of both industrial and social progress.[52]

The growth of the two main industries – iron manufacture and coal (*outlined below*), fuelled the village's expansion through the early 19th century, as the population of Nether Hoyland rose from 1,229 in 1821 to 2,892 in 1851.[53] Elsecar had expanded considerably by the time that the first Ordnance Survey 6-inch map was published in 1855 (Figure 202 *at rear of report*). A cluster of buildings lined Elsecar Green, including The Milton Arms pub on the corner of Armroyd Lane. New housing had also appeared at Stubbin and Stubbin Bottom, and Trinity Church had been built close to the canal south of Reform Row and Meadow Row. The village, with houses, shops, a public house and a church, was now well established. The growth of the Milton Ironworks and associated housing at New Houses led to the development of Milton as a distinct settlement separate from both Elsecar and Hoyland.

By the late 19th century, the 25-inch 1892 map (Figure 203 *at rear of report*) shows that Wath Road and Fitzwilliam Street had been established as the principal roads of the village, and a new road – Church Street – had been built to link the two. Estate housing was erected along each of these thoroughfares and new public buildings such as the Market Hotel at the corner of Wath Road and Forge Lane, and the Milton Hall at the corner of Fitzwilliam Street and Wath Road, were built in the village. A new school was also constructed next to Holy Trinity Church, near the canal. Hill Street, Stubbin Bottom, and an area to the north-west of the village which became known as St Helen's, was greatly expanded with housing. In 1879, the population of the ecclesiastical district of Elsecar stood at 2161 inhabitants, attesting to the formidable expansion that had occurred over the course of the 19th century.[54]

Coal Mining in the 18th and 19th centuries

The Wentworth Estate, an area of 15,000 acres located between Barnsley and Rotherham, contained the rich coal reserves of the Barnsley, Parkgate and Silkstone seams.[55] The nine feet thick Barnsley seam extended across the Elsecar valley, at a depth that varied according to the surface topography and the altitude of the coal bed.[56] It was accessed at several points across Elsecar and Hoyland, outcropping in a line through Hoyland Lane End, Stead Farm, and Skiers Hall, across the north-east corner of the Elsecar reservoir, and on to Low Wood and King's Wood, before extending to Nether Haugh near Greasborough.[57] The seam was made up of both hard and soft coal which meant that it was a highly-desirable resource that could be used in a wide range of processes from powering steam vessels and locomotives, to fuelling domestic fires.[58] Between the coal seams lay deposits of ironstone which outcropped within the estate in the township of Tankersley.[59] The rapid expansion of the British coal industry after 1750 and the availability of both of these minerals led to the mutual development of coal mining and ironstone industries in Elsecar from the late 18th century onwards.[60] The Lowwood and Elsecar Old collieries, which began winding coal in the first half of the 18th century, were joined in 1795

by Elsecar New Colliery, a deeper mine which was opened around the same time as the Elsecar and Milton Ironworks (*see below*). Simon Wood Colliery replaced Elsecar New Colliery in the 1850s, and a further colliery at Hemingfield was also established. The opening of the Elsecar Branch of the Dearne and Dove Canal in 1798, followed by the Elsecar Branch of the South Yorkshire Railway in 1850, brought about new opportunities for markets in coal and iron beyond the region.

Lowwood Colliery and Elsecar (Old) Colliery

In the first half of the 18th century there were two collieries operating in Elsecar: Lowwood Colliery (also known as Law Wood Colliery) and Elsecar Colliery (known as Elsecar Old Colliery following the opening of Elsecar New Colliery, and later as High Elsecar Colliery). These mines were initially leased out by the Wentworth Estate to capitalist entrepreneurs.[61] Lowwood Colliery, located in the township of Brampton Bierlow on the south-east side of the Elsecar valley, was active from at least the 1720s.[62] In October 1737, Lowwood Colliery was leased by the Earl of Malton to William Spencer of Bramley Grange, for a yearly rent of £17 17s 0d for each of the six colliers that worked there.[63] Spencer was well-known to the Wentworth Estate, as he also held the lease for a number of mines in the Greasbrough area.[64] In 1741, he sold a half share of Lowwood Colliery for £210 to Richard Bingley of Bolton upon Dearne and Jonathan Smith of Ravenfield. Smith was a millwright, and was skilled in making mining equipment. Bingley later became the sole lessee of Lowwood Colliery.[65]

Elsecar Colliery, located in the township of Hoyland approximately where Milton House now stands alongside the railway cutting, was probably opened around the same time as the Lowwood Colliery. A rental agreement dated to 1750, the earliest-known document relating to this site, suggested that it had been in operation for some time, and there was at least one previous lessee, a Mr Monckton.[66] At this date Richard Bingley, the occupier of the Lowwood Colliery, took on the lease of Elsecar Colliery for £35 14s 0d per year. The rental agreement described the mine 'level' - a drainage road which ran alongside the deepest side of the colliery workings starting near to Elsecar Green and continuing westwards towards Hoyland. Bingley was contracted to maintain:

> ... the Level formerly made and Driven by Mr. Monckton ... from the Beginning thereof to the place upon Elsiker Green in the Township of Hoyland afores'd where the same was discontinued by the said Mr. Monckton and from thence continue and Drive the same to and untill it shall reach the foot of the Coal now lying or being in a certain Close...in Hoyland...called the Great Arm Royd....[67]

The 'Great Arm Royd Close' was a field now crossed by Armroyd Lane.[68] Bingley was bound to pay a penalty of £200 if he failed to maintain the 'level', and was not permitted to employ more than two men in getting the coal at the bottom of the pit.[69]

The workings at Elsecar Colliery were shown on William Fairbank's early coal mining map of 1757 (Figure 7). It depicts a Basset Level (a shallow level) running

in a west/north-west direction through 'Little Park', 'Bye Close' and 'Broom Close' to the west of Elsecar Green before heading north-west through the 'Barley Field' towards Hoyland Common. At the east end was the sough tail, a drainage tunnel that would have taken water from the mine. The Level roughly follows the modern course from the Sports Ground to the north of Elsecar Park, across Armroyd Lane, to Milton House, and corresponds with the description of the 'level' or drainage road described in Richard Bingley's lease. The Basset Level was well worked, and along its length were shown a number of pits or shafts, identified as 'working pits', 'air pits' and 'old pits'. A Deep Level 'intended to be pursued' was also shown running in a north-west direction from Elsecar Green through the fields of 'Elsicar Croft', 'Great Arm Royd' and 'Barley Field'. The extraction of coal from this level was underway at Elsecar Green, where two open pits, or air pits, were shown. An open pit or an air pit along the line of a Throw (a fault or break in the coal seam), and an 'Old Engine Pit filled up', were also identified at Elsecar Green. As the Barnsley seam was relatively shallow, it was more cost effective for the early collieries to sink new shafts at intervals along a level, and relocate the winding equipment further along the workings, rather than transport coal over a distance underground. Three mine shafts were sunk every two years and were in operation, on average, for twenty-four months at a time.[70]

Fig 7. '*Map of the collieries at Elsicar and West Wood, and the Wharf at Kilnhurst, with the lands demised therewith to J. Hall and others, for the accommodation of the collieries and wharf. Surveyed and drawn by William Fairbank Junior in 1757*'. Reproduced courtesy of Barnsley Archives and Local Studies, A/3491/Z/1/1

The basset level and a deep level at Lowwood Colliery are shown on William Fairbank's 1773 plan of Brampton (Figure 8). They are later annotations, and were probably added to the map in 1790, the same date as they are shown in William Fairbank's field books.[71] The deep level ran south-west from a point roughly below the footrill off Wentworth Road, out between Low Wood and Simon Wood, and beyond Linthwaite Farm to the south of the village of Street near Wentworth.[72] The line of the sough was also shown, which exited into a brook on the far (downstream) side of Elsecar.

From the 1760s, both Lowwood and Elsecar Old Colliery were managed directly by the Wentworth Estate. Lowwood Colliery was taken under direct management when Richard Bingley's lease expired in 1763.[73] Elsecar Colliery was temporarily taken under estate control in September 1752, when Bingley's lease was not renewed and Thomas Smith was appointed by the Marquess of Rockingham as mine supervisor.[74] Once in position, Smith set about making a number of improvements to the colliery. A new pit, 15 yards and 1 foot deep, was sunk by Thomas Hoyland and George Smith at a cost of £2 16s 0d.[75] This was evidently a success, as Smith reported that 'The Coal is Exceeding good in ye new pit'. In 1754, he wrote a note to the Marquess explaining that he had erected a 'Ginn'.[76] In the late 1750s Elsecar Colliery was again re-let to tenants; 'Thomas Smith, John Hall and Jones' were listed as the joint tenants on William Fairbank's survey of 1757.[77] Thomas Smith evidently retained his position as overseer; the following year he received a yearly salary from the estate for supervising Elsecar, Westwood, and other collieries.[78] Rockingham commissioned a number of paintings of him, one of which (*see* Figure 6) hung in his antechamber.[79] Smith is also believed to have been the man riding horseback in George Stubbs' *c* 1762 painting of Elsecar Colliery (Figure 9). In 1764/65 Elsecar Colliery was again taken under direct estate control.[80]

Coal from the Elsecar and Lowwood Collieries supplied a local market of ironworks, forges, farms, limekilns, brickworks, maltsters, and domestic consumers.[81] The Chapel Furnace in Chapeltown, three miles south-west of Elsecar, was a major consumer of Elsecar coal. The coal output varied year on year. Across the period December 1767 to December 1771, between 960 dozens and 1683 dozens and 4 pulls, were extracted per year.[82] The workforce at Elsecar Colliery in the mid-18th century comprised two 'getters' who extracted coal from the coal face, one 'filler', who loaded the coal into baskets, one 'hurrier' who transported the coal to the shaft, and three workers above ground.[83] This rose to nine employees in 1769, when five colliers and four labourers were listed.[84] Between seven and nine colliers were employed there in subsequent years.

The markets of both collieries were limited by the expense of road transport and their distance from a navigable waterway.[85] Out of the two collieries, Lowwood had better access over land to the River Don Navigation. Coal from this colliery was sold as far as north Lincolnshire to the east and North Nottinghamshire to the south. By 1790, however, the future of the Lowwood Colliery was in question.[86] The managers began to approach landowners and colliery competitors with coal reserves in the surrounding area. In 1793 the Lowwood Colliery was successful in obtaining additional land at Hoober, Wentworth and Greasborough, and in 1797 a new pit

Fig 8. Extract from the Draft Brampton Bierlow Township Plan 1773, showing (highlight added) the line of Lowwood Colliery deep level and sough. North is to the top. Reproduced courtesy of Sheffield City Archives, FC/P/Wath/4L.

Fig 9. '*Thomas Smith, Lord Rockingham's Colliery Overseer*' by George Stubbs, c 1762. From *www.the-athenaeum.org/*

belonging to the Lowwood Colliery was sunk at Street, near Wentworth, where the seam was 100 yards deep. A steam-driven whimsey (steam winder) was erected to wind the coal and drain the mine. In this location, the Lowwood Colliery also had better access to the River Don Navigation. The Lowwood Colliery was still in operation in 1828, though it may have ceased to operate by 1845.[87]

From the end of the 18th century, the underground workings at Elsecar Colliery became larger and more sophisticated. The expansion of the mine operations were managed by Benjamin Hall, steward at Wentworth Woodhouse, with the assistance of his nephew Joshua Biram, who took over as steward when Hall died in 1805.[88] Joshua Biram's plan of 1793 showed that the coal was mined from a series of banks 9 yards wide and 7 and a half feet high (I), separated by ribs of coal three feet (1 yard) wide (N) (Figure 10).[89] On the south-west side of the throw, where the roof was more vulnerable, the banks were eight yards wide (Q). A series of broad gates (underground roadways) two yards wide (D), and cross gates (F and G) enabled the transportation of coal to the pit bottom. A series of holes (K) were driven through the ribs of coal for ventilation. The colliery was drained by a deep level or water course (A) measuring two yards wide and five feet high. The method of mining outlined in

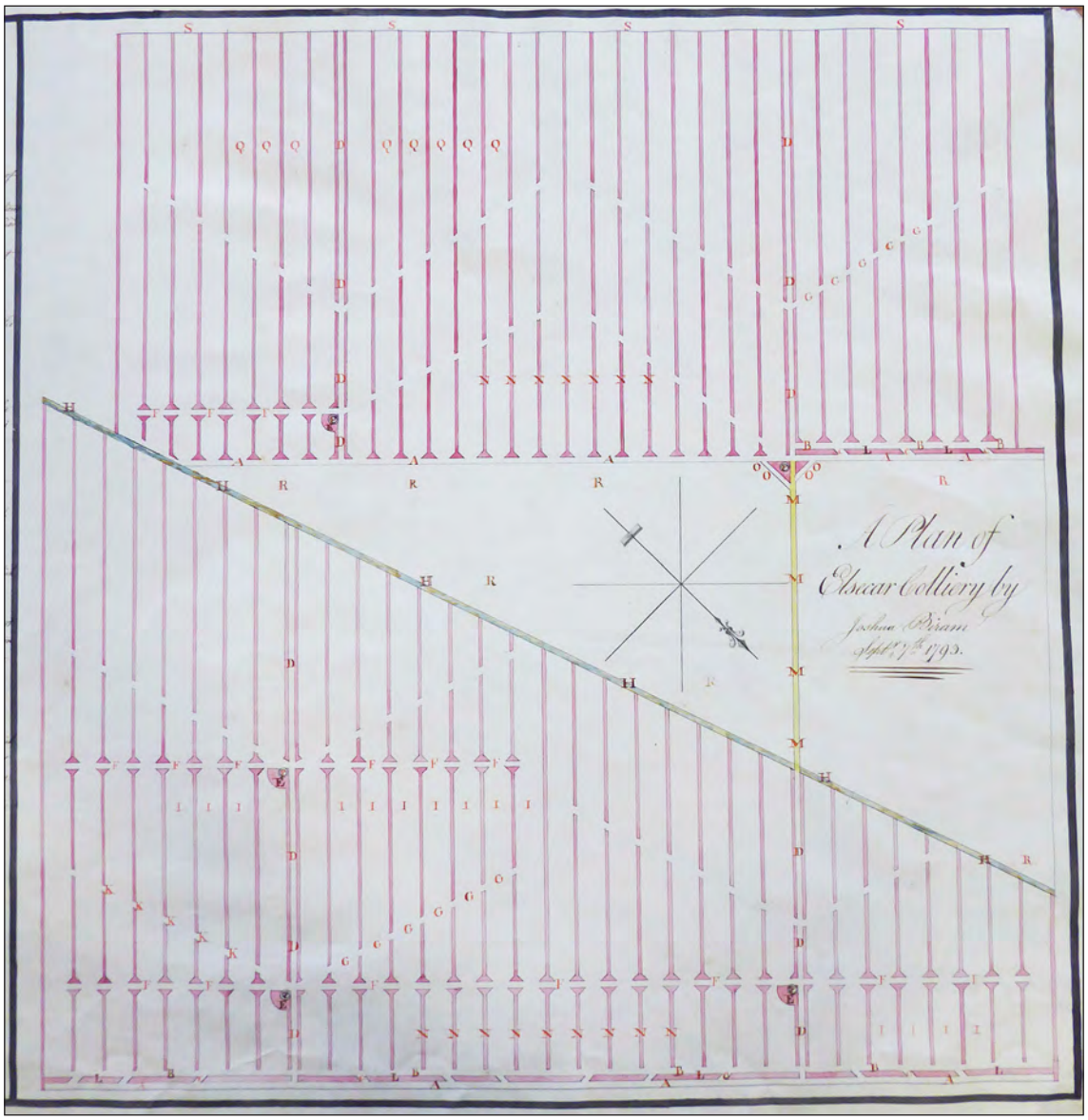


Fig 10. A Plan of Elsecar Colliery by Joshua Biram, September 7th 1793. The plan is schematic and idealised, with north oriented bottom right. The fault separates coal on two levels, as clearly shown on the accompanying section drawing (Figure 11). Reproduced courtesy of Sheffield City Archives, WWM MP 56 (see note in Archival Sources).

Biram's plan was known as 'bord and pillar mining'. The coal was extracted from roadways or bords, leaving pillars of coal in between to hold up the roof. The pillars were extracted later, leaving the roof to collapse in a controlled manner as the miners retreated. The plan also indicates that the underground workings were adequately drained and ventilated to prevent disruption, and the coal was transported underground in corves driven by horses. This new method of mining would have substantially increased the output from the colliery.

Improvements were also made to the drainage of the mines. The Elsecar collieries relied on stone lined soughs driven into the bottom of the mine at an angle to allow the water to drain into the Knoll Beck.[90] In 1790, the Lowwood Colliery sough was

in a poor condition, putting the working places in the pit in danger of being flooded. A number of attempts were made to clear it, though this was dangerous work due to the risk of roof falls and gas. A new sough was sunk in the Elsecar valley in 1800 to improve the drainage of both the Elsecar Old Colliery and the Lowwood Colliery.

In November 1798, Thomas Cooper was instructed by Mr Deakin, a colliery official, to dig a number of trial boreholes in preparation for the expansion of the Elsecar Colliery westwards. In December 1798 work began on a drift to recover the coal and in March 1799 an oval pit, 9 feet by 7 feet, was ordered to be sunk at the head of the new drift. There has been some speculation as to where the main winding pit at Elsecar Colliery was located. Comparisons between Joshua Biram's 1793 plan and sections of the colliery (Figures 10 and 11) and the geology of the west of Elsecar has led to the suggestion that the main winding pit is the former air shaft located in a field adjacent to Milton House (Character Area 4), and that a second pit may have been located within the Milton House complex, as shown on later mining plans.[91] The section drawing includes two sketches of the surface infrastructure, including horse-powered whim gins to raise coal from the winding pit, and low stone buildings with short chimneystacks. This depiction of Elsecar Colliery has further significant because, high up in the Elsecar landscape, the above-ground colliery workings would also have been visible from Wentworth. In December 1799, Mr Deakin ordered Thomas Cooper to 'drive the levels towards Milton Furnace with all speed; to work two shifts; and to go dead level'.[92] By 1800 the workings of Elsecar Colliery had reached beneath the Milton Ironworks and began to supply them with coal. This new market, coupled with new ways of mining, led to an increased output at the colliery, which rose from 5,631 tons in 1788 to 27,692 tons in 1825.[93]

A valuation of Elsecar Colliery made in December 1841 indicated that the above-ground mining complex at the main site contained an engine building with a high pressure steam engine and boiler, headgear, coal screens, plus ancillary buildings including stores and a blacksmith's shop.[94] A 'footril for horses' was also listed, indicating that horses were guided in (and out) of the mine on foot. Among the horses listed as working at Elsecar Colliery in 1841 were 'Drummer', 'Shaper', 'Duke' and 'Farmer'.[95] The new pit at the Milton Ironworks was described in the valuation as having a 60 yard drawing pit, a drift 'to take the top water off', 80 yards of heading levels, and a further 91 yards of heading levels. Changes to the underground mining methods were also made by Benjamin Biram, Joshua Biram's son.[96] Benjamin was appointed as his father's clerk in 1823, working alongside him until his retirement in 1833, after which he was made Superintendent of the Wentworth Estate and Superintendent of the Collieries. In 1845, Benjamin drew a section through the Colliery showing that the coal was worked in wide 20 to 40 yard banks, with supporting pillars of approximately the same width between the banks, rather than the 8-9 yard banks shown in the 1793 plan.[97] By 1882, an average of 1200 tons of coal per week was being produced at the Elsecar Colliery.[98] It continued to operate until 1888, when it was abandoned because the Barnsley seam had been exhausted in that area.[99]

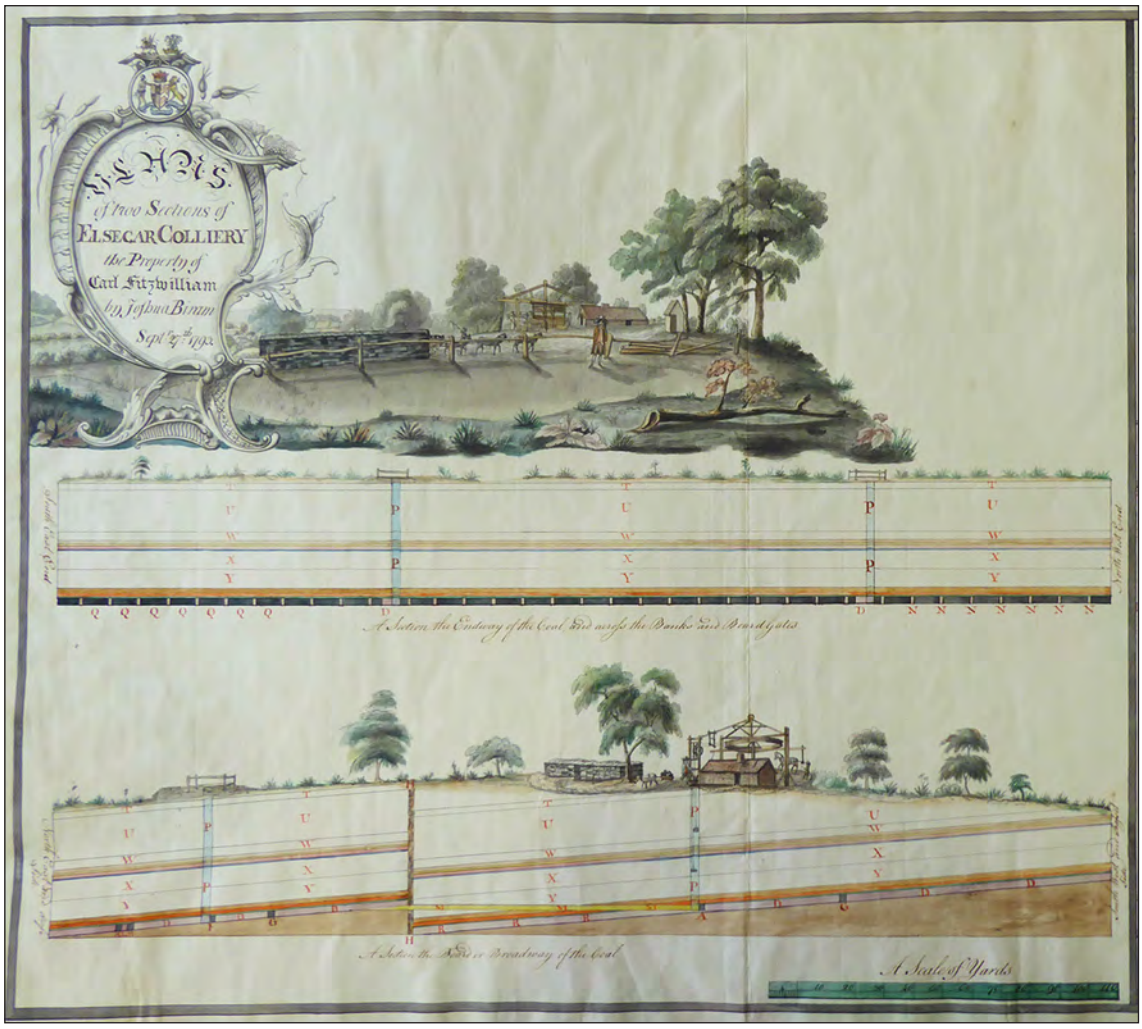


Fig 11. Two sections of 'Elsecar Colliery the property of Earl Fitzwilliam' by Joshua Biram September 27th 1793. Reproduced courtesy of Sheffield City Archives, WWM MP 56 (see note in Archival Sources).

Elsecar New Colliery

In September 1795, a third colliery in Elsecar, named Elsecar New Colliery (also known as Elsecar Mid following the introduction of Hemingfield Colliery (Low Elsecar Colliery) in 1840), was opened near to Elsecar Green.[100] It was sited in this location after exploratory borehole drilling in 1790 by Michael Hague, overlooker of the Elsecar (Old) Colliery, discovered the Elsecar fault. The sinking of this pit coincided with the construction of the Elsecar branch of the Dearne and Dove Canal.[101] The canal, which ran to the head of Elsecar New, was constructed following the Act of 33 George III, Capt. 115, which received Royal Assent on 3 June 1793 (Figure 12).[102] The 4th Earl was one of the shareholders, clearly recognising how a canal branch through his land would benefit his coal and ironworking industries, especially as the new waterway would connect the Barnsley area with the port of Hull. The Elsecar Branch was originally designed to extend only as far as Cobcar Ing, though - at a cost of £3497 10s 6d - Earl Fitzwilliam persuaded the Canal Company to extend it further towards Elsecar Green, close to where the New Colliery was sited.[103] The Elsecar branch was opened in late 1798, although the stretch beyond the branch to Barnsley was not yet completed.[104] It remained in use, albeit foreshortened to allow the expansion of Elsecar's railway sidings around 1860, until its closure was forced by subsidence and rising maintenance costs in 1928.[105] Elsecar New Colliery was also opened at the same time as Elsecar Ironworks (*see below*) which, in addition to Milton Ironworks, near enough guaranteed a demand for coal.

Advances in mining technology in the late 18th and early 19th century enabled deeper-mined coal to be extracted and raised to the surface more quickly and efficiently.[106] Two shafts situated twenty yards apart from each other were initially sunk at Elsecar New Colliery; an 'engine pit' which was used for pumping water out of the colliery and a 'by-pit' which was used for winding coal.[107] A third shaft was sunk in 1797-98, also for the purpose of winding coal. In order to drain the collieries effectively, Earl Fitzwilliam purchased the necessary parts for a Newcomen engine to pump the water from the 'engine pit', which has now been incorporated into Elsecar Heritage Centre (Figure 13). A datestone over the engine house doorway bears the date 1787, though the engine house and engine were built between 1794 and 1795. The parts for the Newcomen engine were purchased from a number of suppliers including Longden, Chambers and Newton of the Thorncliffe Ironworks, Chapeltown, near Sheffield and John Darwin & Co. of Sheffield. The pumps and pipes came from the Park Iron Works, Sheffield and the huge wooden beam was made from timber felled from the Earl's woodland in Wentworth. The engine, with a 42 inch diameter cylinder, was built by John Bargh from near Chesterfield. The 'by-pit' was initially wound by a horse-driven gin, though it was quickly replaced in 1796 by a small steam winding engine, purchased from Jarrett, Dawson and Hardy of the Low Moor Iron Works. This pit is adjacent to the 'engine pit' and is crowned with light concrete headgear which dates to the 1940s.[108] The third shaft, located on the west side of the Canal (*see* Figure 36), was operated by a steam winding engine also purchased from the Low Moor Company.

Fig 12. Extract from *'A Plan of the intended Dearne and Dove Canal: describing the Branches from it with the adjacent Rivers & Brooks.'* John Thompson, Engineer and William Fairbank, Surveyor. 1793. The intended line of the canal is shown in red. Reproduced with permission from Sheffield Archives, X466.

At 40 yards deep and with two winding pits and a pumping pit driven by atmospheric and steam-powered equipment, Elsecar New Colliery became a highly profitable colliery.[109] In 1798 the output was 12,710 tons, which had risen by 1825 to 48,567 tons.[110] This was all the more impressive given that the workforce rose only marginally from 95 men and boys in 1808, to 103 men and boys by 1825. The proposed method of underground working was similar to that outlined by Joshua Biram in his 1793 plan of Elsecar Colliery.[111] The deep level advanced towards Wentworth for a mile, almost parallel with the Lowwood deep level, and the coal was mined from banks 400 yards in length. Michael Hague's plan of the proposed workings at Elsecar Colliery dated July 1794 indicated that the banks were 10 yards wide, as at Elsecar Colliery, though John Deakin's plan of October 1796 identified banks of 8 yards wide.[112]

Fig 13. Photograph of the Newcomen Engine, possibly dating to the late 19th century. Keith Robinson Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies.

Over time, improvements were made to the engine to improve its pumping capacity. In September 1797 Joshua Biram calculated that it could raise 386 gallons of water per minute, running for 9 hours and 49 minutes per day to ensure that the mine was free of water. In 1801, the cylinder was replaced and in 1802 additional parts were purchased for the engine. By November 1812, the engine worked three pumps raising 604 gallons per minute, running for twelve to sixteen hours a day. In 1836, the Milton Ironworks replaced the aging wooden beam with an iron beam fitted with Watt's parallel motions. It was reported in 1917 that the engine 'makes 6 strokes a minute, and with a total single lift of 43 yards delivers 50 gallons per stroke'.[113]

Over the course of the first half of 19th century the majority of the coal from Elsecar New Colliery was sold directly to Elsecar Ironworks.[114] Though the Elsecar Branch of the Dearne and Dove Canal gave access to long-distance markets and enabled coal to be transported in bulk at a cheaper cost than over land, in practice, the transportation of coal could still work out to be expensive. Even within a relatively short distance, the cost of transport could effectively more than double the price of coal. The Elsecar collieries were successful in developing markets in Gainsborough, Lincoln and Wisbech, though a number of attempts to access the London market were unsuccessful. In 1810, Elsecar New Colliery sold 58 per cent of its coal output to the Elsecar Ironworks and Elsecar Old Colliery sold 77 per cent of its output to Milton Ironworks.[115] The ironworks in turn supplied the collieries with any necessary machinery or equipment.

A valuation of Elsecar New Colliery made in December 1842 itemised three engines: an engine with two boilers, a 12 horse power condensing steam engine and a further engine with a boiler house.[116] These would have been associated with each of the three pits, identified as the 'engine pit' which was 40 yards deep, and the 'drawing pit' and 'old drawing pit' which were each 38 yards deep. A stable and smith's shop were listed, along with two weighing machines which were located at the canal basin. The railway included 3000 yards of wrought iron rails, presumably forged at the Elsecar Ironworks. There was also a 506-yard footrill 'for the horses'. The boardgates and headings were listed, and above ground, 28 coke ovens. Elsecar New Colliery was abandoned in the mid-1850s when Simon Wood Colliery opened.

Hemingfield and Simon Wood Collieries

A further two collieries were opened in Elsecar in the mid-19th century. Hemingfield Colliery (also known as Low Elsecar Colliery) started working in the late 1840s[117] and Simon Wood Colliery (known as Elsecar Mid or Mid Elsecar following the closure of Elsecar New Colliery) began winding coal in 1853.[118] Hemingfield Colliery was situated on the east bank of the Elsecar Branch of the Dearne and Dove Canal and was served by its own canal basin and canal-side buildings, where coal was loaded directly onto barges for transportation. In 1850, shortly after Hemingfield Colliery opened, the Elsecar Branch of the South Yorkshire Railway was completed, running parallel with the canal.[119] The 5th Earl Fitzwilliam was a shareholder and chairman of the railway company from 1848, and was undoubtedly involved in the decision to establish a branch at Elsecar. The railway allowed coal to be transported more quickly and in greater quantities than by water, and created opportunities for new markets to be established in London and the South, as well as abroad. Hemingfield Colliery and Simon Wood Colliery were conveniently situated on the route of the new Elsecar Branch of the South Yorkshire Railway, which also extended to Elsecar New Colliery and connected to Elsecar Old Colliery (High Elsecar Colliery) via an inclined plane which had served the canal basin since 1837.[120] With these new transport connections, the Elsecar collieries became part of a rapidly expanding and increasingly competitive market.

Hemingfield Colliery, much of which still survives above ground, is situated to the north-east of Elsecar village near to Tingle Bridge.[121] It is shown on the 1855 OS map (Figure 202), and is depicted as a small compound of structures on the southern side of the Elsecar branch railway with a U-shaped canal basin on the northern side. The colliery is immediately north east of an old sandstone quarry and a row of terraced workers cottages associated with the mine. The sinking took a number of years to complete because of problems with keeping the shafts free from water.[122] Benjamin Biram wrote in his diary in December 1842 that 8,000 gallons of water were pouring into the pit each hour.[123] It was only a quarter sunk at this point in time. A pumping engine was purchased by Benjamin Biram second-hand from the sale of assets of Thomas Wilson's Falconer Colliery at Kexborough.[124] On the 29th January 1847 Biram recorded in his diary that 'The new Bye Pit near Hemingfield sunk to the top of the thick coal this day.'[125] It may have been up to a year later before coal was extracted.[126] When complete, the two 468 feet deep downcast pits comprised a circular 'engine pit' or 'pumping pit', with a 130 hp Cornish Engine

fired by three boilers and an elliptical winding shaft with a 30 hp high pressure engine.[127] In *c* 1852-53, two additional circular-shaped upcast shafts 9ft and 7ft wide respectively, were sunk to improve ventilation.[128]

The deeper pits were at greater risk of explosion. Problems with gas were encountered during the sinking of Hemingfield Colliery, and in June 1847 there was an explosion at the mine which was heard as far away as Wentworth Woodhouse.[129] Nobody was hurt and no serious damage was caused, though this was not the only explosion at the pit. An underground hydraulic engine fan, 8ft in diameter, was installed at the pit by October 1851.[130] In December 1852, however, a further explosion, the most serious to have occurred in the development of the Elsecar collieries, killed eight men and a further two died from their injuries.[131] Benjamin Biram sought thereafter to improve the ventilation system at the pit. In 1858 a visitor to Elsecar noted that the Hemingfield ventilation shafts had two fans; one which was about 21ft in diameter and housed in a stone building, and a standby fan measuring 14ft in diameter.[132] The aboveground 'Hemingfield Colliery Fan' was identified on a railway map of 1887 (Figure 15) and later on the 1892 Ordnance Survey map as an 'Engine House'.

Over the course of the late 19th century the Hemingfield Colliery site expanded, with buildings erected either side of the railway line (*see* Figure 203). In 1920 the pit closed, and was taken over by the South Yorkshire Pumping Association, which was formed to prevent water flowing from old abandoned mines into new developing mines to the east of the district, thereby saving deep pumping costs.[133] The site became known as 'Hemingfield Pumping Station' and operated until 1989.

In the mid-1850s the workings at Elsecar New Colliery were abandoned and a new pit – Simon Wood Colliery - was sunk to the north of this site, strategically positioned between the canal and the railway line (*see* Figure 203). Though coal extraction was discontinued at Elsecar New Colliery, the Newcomen engine continued to pump water from the underground mine network until 1923, when it was replaced by electric pumps.[134] The first of two downcast pit shafts at Simon Wood Colliery reached the Barnsley coal seam at a depth of 93 ½ yards in September 1853.[135] The pit shafts were positioned only a few yards apart, separated by a winding engine house. The colliery became known as the 'bicycle pit', because of the projecting headgear above the shafts which each carried a single pulley wheel which rotated together when the cages were lowered and raised. A third (upcast) shaft was also sunk at this site and a ventilation fan was installed there. The fan house was chosen for further geophysics investigations in 2017 (*see* Character Area 2). The colliery was abandoned in 1903, when it was replaced by Elsecar Main Colliery (*see below*). The fan was kept on for emergencies, and was still *in situ* in 1910.[136]

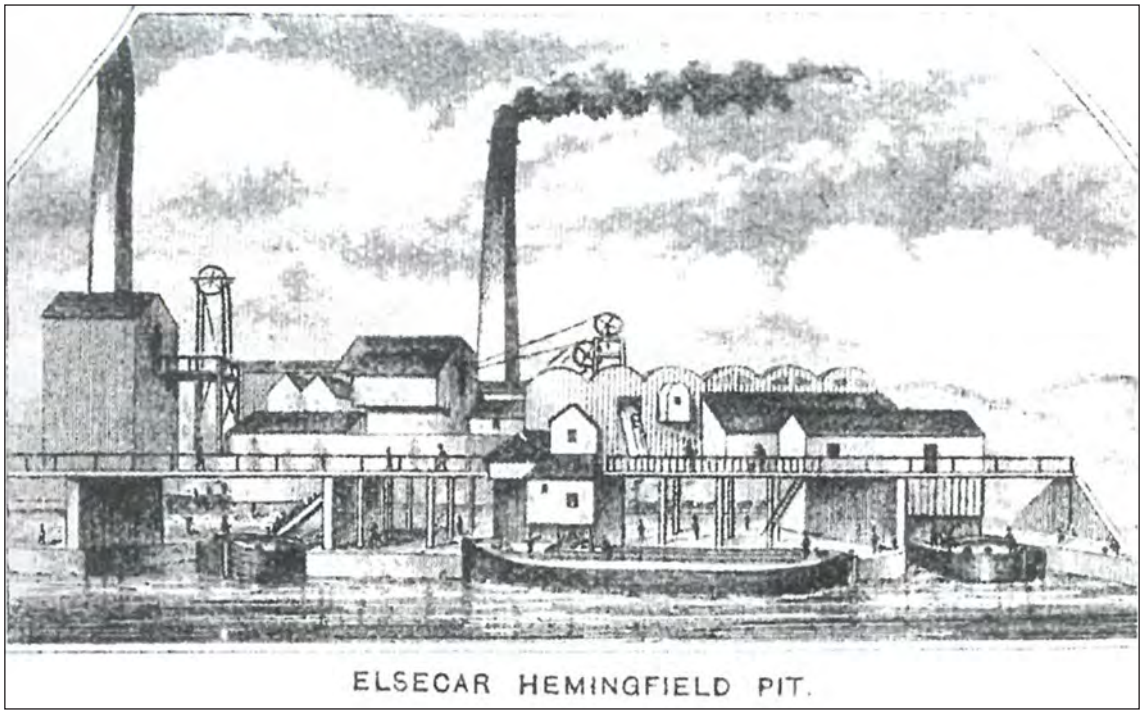


Fig 14. Detail of Elsecar Hemingfield Colliery from an engraved billhead used by Earl Fitzwilliam's Collieries in the 1880s. From Goodchild, J 2005 'The Earl Fitzwilliam's Elsecar Colliery in the 1850s' in Memoirs 2005, *British Mining* 78, p.9 figure 2 (the image is from the John Goodchild Collection, West Yorkshire Archive Service – Wakefield). Reused with permission from the Northern Mine Research Society.

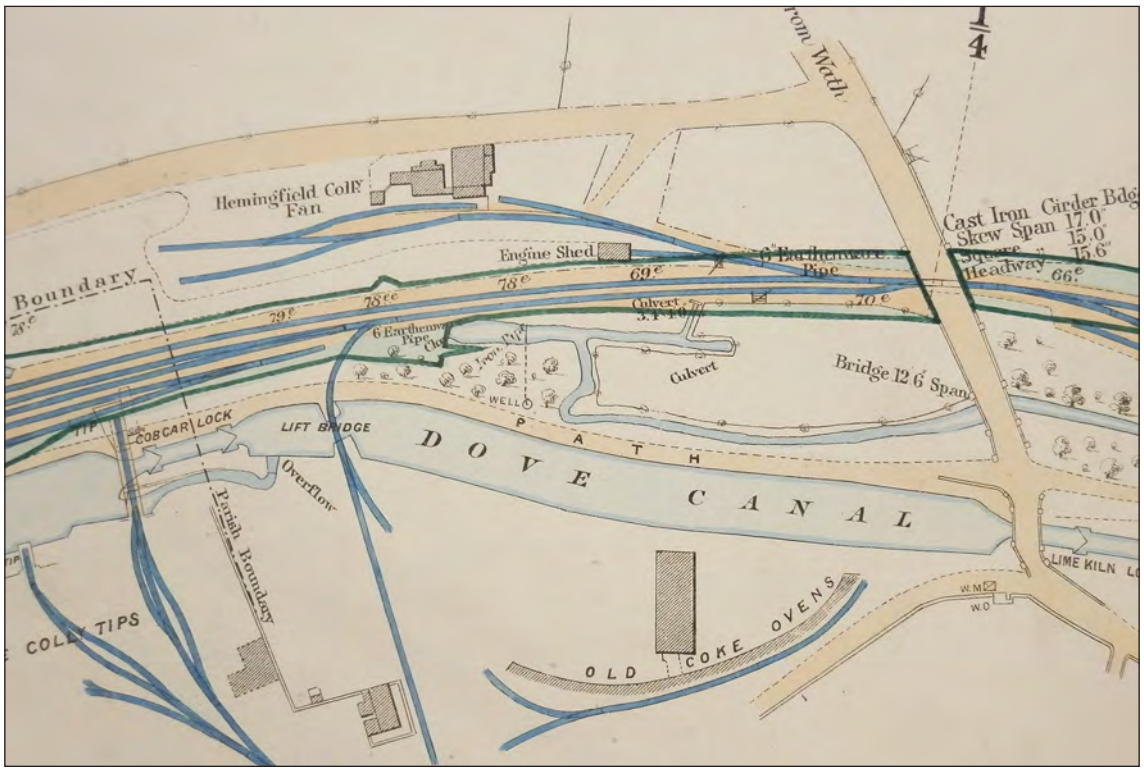


Fig 15. Manchester, Sheffield and Lincolnshire Railway Company Estate Plans, 1887. Detail of the Hemingfield Colliery Fan. Reproduced courtesy of Sheffield City Archives, MD7787 2005/16.

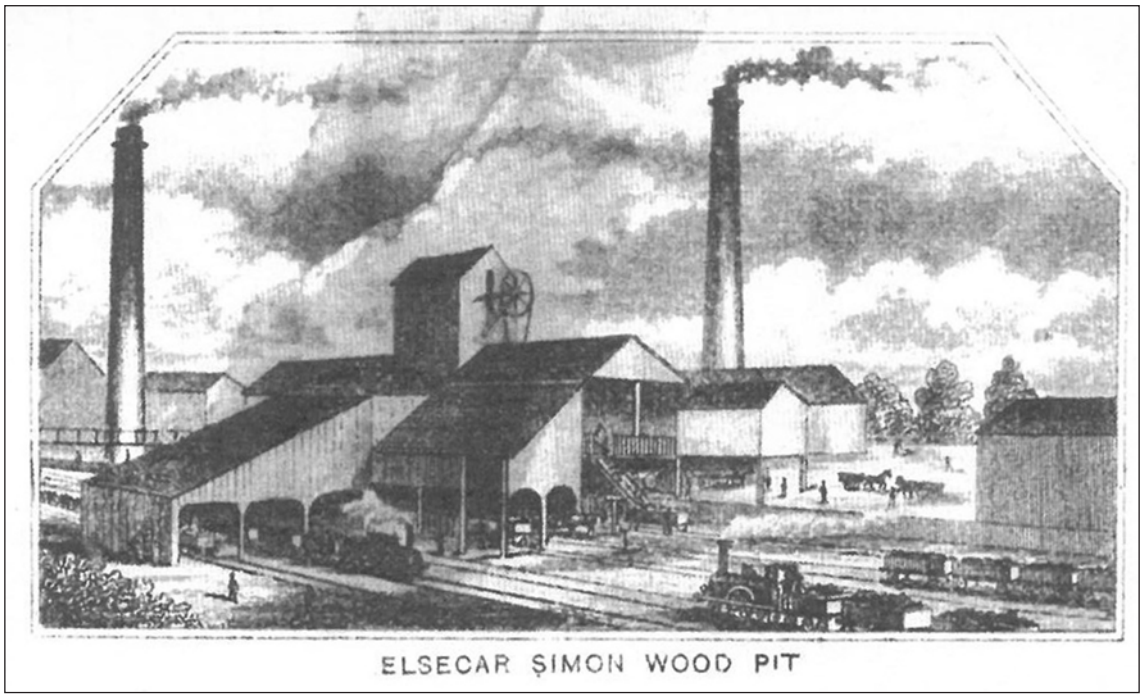


Fig 16. Detail of Simon Wood Colliery from an engraved billhead used by the Earl Fitzwilliam's Collieries in the 1880s. From Goodchild J 2005, 'The Earl Fitzwilliam's Elsecar Colliery in the 1850s' in Memoirs 2005, *British Mining* 78, p.10 figure 3 (the image is from the John Goodchild Collection, West Yorkshire Archive Service – Wakefield). Reused with permission from the Northern Mine Research Society.

The 'Central Establishment' of Workshops

In 1850, a new centralised workshop complex serving all of the Elsecar collieries was built at Elsecar Green. On the 23rd June 1849, John Hartop wrote to the 5th Earl Fitzwilliam outlining the potential benefits of a 'Central Establishment' where all new engineering, smithing and woodworking tasks, together with the repair and maintenance of machinery and equipment including steam engines, would be carried out.[137] Hartop argued that the amalgamation of the individual blacksmiths', carpenters' and repair shops located at each of the colliery sites would be more cost effective and easier to manage, reducing the number of employees and enabling materials to be purchased in bulk and stored together in one place. The idea for centralised workshops where the blacksmiths, joiners and repair shops were housed together within a single site may have been inspired by management practices on the Wentworth Estate; the concept of an integrated estate yard being highly familiar to the Fitzwilliam family. It was also an affirmation of the Earl's power and authority at a time when his industrial enterprises in Elsecar were expanding at a high rate.

A highly-visible central plot of land at the junction of Wath Road and Fitzwilliam Street was chosen as the location for the new workshops. This site, adjacent to the Elsecar Ironworks and easily accessible from each of the collieries, was also in close proximity to the canal and railway. Often referred to as the 'New Yard', and later as the 'Central Workshops', the workshop complex was first shown on the railway sidings plan of 1859 (*see* Figure 42). The complex still survives, and is now Elsecar Heritage Centre (*see* Figure 60). The buildings are described in greater detail in

Character Area 1, though they comprise two long, continuous ranges to Wath Road (Buildings 7 to 12) and Forge Lane (Buildings 4 to 5), and a shorter range to the eastern boundary (Buildings 14 and 15), which together framed a stand-alone suite of buildings at the centre of the complex (Building 17, 22 and 16B). An existing row of cottages to the north-east corner of the site, dating to the early 19th century (Building 14), was retained as part of the new development. It was an enclosed site with a single entranceway and gatehouse to the north-west corner (Building 13), which provided the necessary security for the equipment and materials housed within it.

A series of newspaper articles and photographs from the mid-19th century demonstrate that, beyond its industrial function, the New Yard was considered to be a showcase complex, where public events and tours were often held. In 1856 a 'grand fete' was held at the 'new shops at Elsecar', attended by around 500 people.[138] At this event, mineral steward Benjamin Biram, and underground steward and general viewer James Utley, were presented with silver cups in recognition of their work at the Elsecar collieries. A festival to celebrate the appointment of John Hartop as general mineral agent was also held at the New Yard in the following year. The *Sheffield Independent* reported on the 18th July 1857:

> Tea was provided in the 'fitting shop', a work-room appertaining to the colliery works, of from 40 to 50 yards in length, and nearly 30 yards wide. The removable part of the works had been transferred into the adjacent premises, but various parts of the fixed machinery remained, and, viewed in conjunction with the decorations, formed not inapt symbols of the enterprise and industry which of late years have contributed so much to the enlargement and prosperity of the now important village of Elsecar and its teeming population.

The fitting shop is the large building at the centre of the New Yard complex (Building 17). The structure is very striking, both internally and externally, and would have made the perfect backdrop for public events. By *c* 1900, it was known as an 'engine and boiler repair shop'. A photograph of this date (Figure 17) shows two employees standing in front of a locomotive in the central portion of the building. In the background can be seen the roof and outer wall of one of the aisles, and the cast iron columns and brick arches of an internal arcade. The locomotive is situated on a set of internal rails, above what appears to be an inspection chamber.

During the Royal visit to Elsecar in 1912, King George V and Queen Mary made a tour of the New Yard, accompanied by the Earl. A newspaper article of the 10th July 1912 in the *Sheffield Daily Telegraph* reported on the tour, stating that after a brief visit to the engine-repairing shop the Royal party went into the joiner's shop:

> Here, waggons were being put together, and the King asked many questions as to the methods employed. The Queen meanwhile was interested in a delicate steam saw, which worked its way in and out of wood in all sorts of fantastical curves.[139]

The joiner's shop was located on the ground floor of the two-storey building (Building 22) at the south-east corner of the fitting/engine and boiler repair shop (Building 17).[140] The engine was housed in the northern part of the joiner's shop, Building 22, which was open to the roof across two storeys. The first floor over the joiner's shop, accessed from an external staircase to the south of the building, is said to have been used as a saddlery.[141]

A photograph of the King outside the blacksmith's shop, which was located in the north-east section of the Wath Road range, shows a single-storey range with a series of three, possibly four chimneys projecting from the roof, along with a ventilator. A collection of tools, and an anvil and a large wheel, appear on display in front of the building (Figure 18). The Royal party also visited the smith's shop, where the Earl is said to have drawn the King's attention to a Nasmyth steam hammer – the second of its type to have been made by the well-known engineer.[142] The steam hammer had evidently been in operation for over 60 years, suggesting that it had been installed when the New Yard opened in the mid-19th century. Situated near to the hammer was a machine which punched holes in thick metal, which was demonstrated to the Queen. The Royal party also briefly admired the blacksmith's furnaces, which would have been situated against the back wall of the range and joined to the chimneys visible in the photograph.

This description of the blacksmith's shop was also echoed in Frank Bird's recollections of working at the New Yard in the mid-20th century.[143] He remembered from his first visit to the blacksmith's shop:

> Opening the door I saw a low roofed building with seven hearths against the farthest wall. There were two steam hammers, one in working condition and the other, a *Naysmyth*-style machine, was a museum piece. In the middle of the shop stood a shearing and punching piece.

The Nasmyth hammer mentioned in the King's visit was evidently still *in situ* some years later, though it had been replaced by a later hammer which was 'operated in the same way as the old one' though it been modernised, and 'had it's [sic] own air compressor built into it and was driven by electricity'. The punching machine could have been a later model, though this process was still evidently carried out in the blacksmith's shop.

The long ranges to Wath Road, Forge Lane and the eastern boundary of the site would have probably originally functioned as stores. Large stretches of these buildings were open-sided, supported on iron columns (*see* Character Area 1, below). The two-storey building in the middle of the Wath Road range (Building 10) is said to have housed the manager's office. The cottage range to the north of the complex (Building 14) was identified as a 'house' on a railway plan dated 1887, suggesting that it continued to be used as a domestic dwelling long after the workshops had been opened.[144] The 1891 census listed a single household under 'New Yard', which comprised occupants George Birkenshaw, a clerk (aged 43), his wife Mary (45), son Harold, also a clerk (14), daughter Mabel (10) and a domestic servant.[145] It is probable that this family lived in the cottage within the workshops, and that George Birkenshaw and his son also worked there.

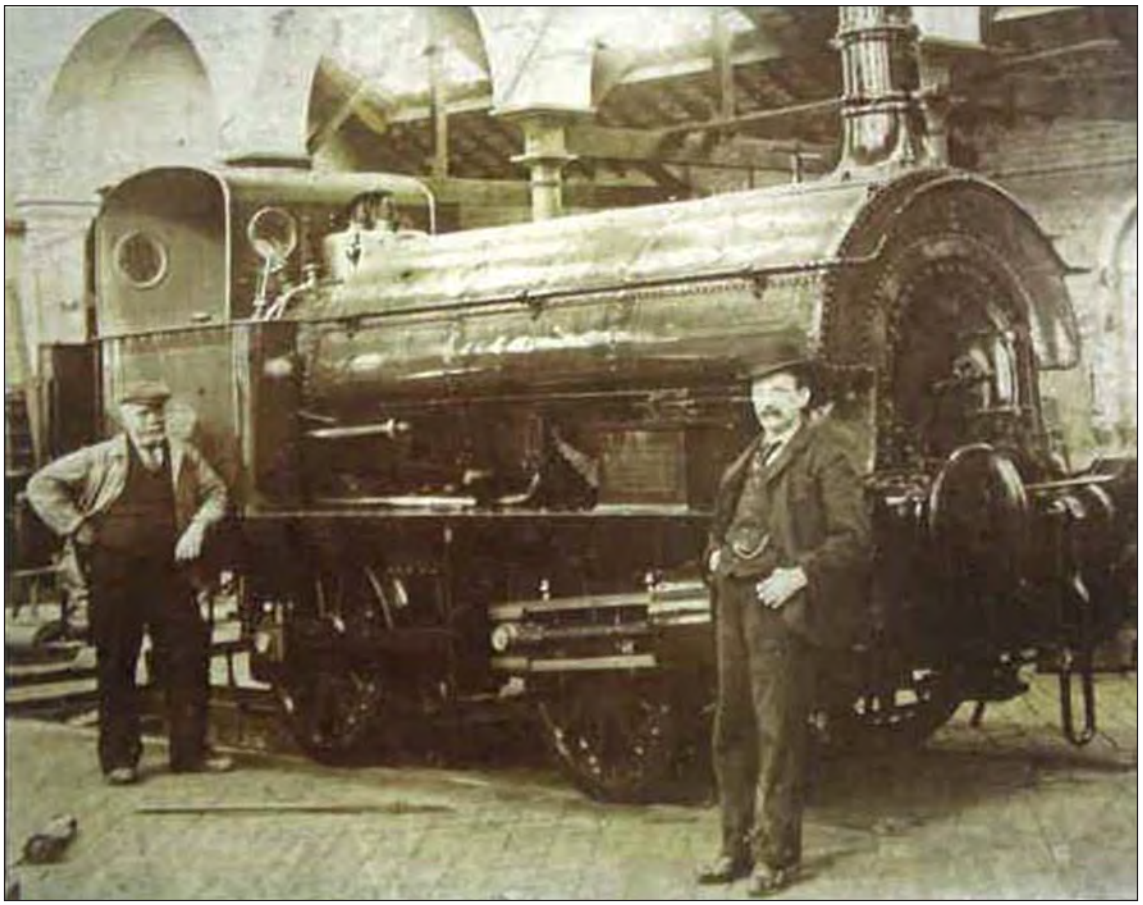


Fig 17. Inside the engine and boiler repair shop, c 1900 (Building 17) Reproduced with the kind permission of Barnsley Archives and Local Studies.

In 1870, the 6th Earl Fitzwilliam opened a private railway station at the New Yard, emphasising the continued sense of pride that the family held for their showcase site, and a desire for the increased visibility of their industrial achievements. The gateway and part of the cottage range (Building 13) to the north of the site were re-modelled and extended to accommodate this new facility, which was connected to the Elsecar Branch of the Manchester, Sheffield and Lincolnshire Railway.[146] In the late 19th century the canal basin was shortened and the railway lines to the north of the workshops were reorganised. A railway plan of 1876 shows two lines sweeping around the end of the truncated canal basin and into the new railway station and the workshops.[147] A photograph of King George V and Queen Mary leaving the workshops by car in 1912 shows the railway station in the background (Figure 19). The photograph was taken looking south-west, with the gateposts to the workshops visible to the right of the image. The station was built for the exclusive use of the Earl and his guests. As a child, Elsecar resident Herbert Kay remembered watching the Fitzwilliam coaches, driven by coachmen in yellow and black liveries, arriving at the station in the late 19th century and the Earl and his guests departing on 'E.F.W. Specials'.[148] Other special trains, including excursion trains to the seaside, also departed from the station.

Fig 18. The King and Queen visiting the Blacksmith's workshop at the New Yard in 1912. Reproduced with the kind permission of Barnsley Archives and Local Studies.

Fig 19. The King leaving the New Yard in 1912. Reproduced with the kind permission of Barnsley Archives and Local Studies.

The Major Ironworks

Elsecar Ironworks

The first ironworks at Elsecar were built in 1795, capitalising on the availability of both ironstone and coal from the Earl's estate. These works, combined with the sinking of the first deep shaft colliery in the valley bottom and, by 1798, the completion of the Dearne and Dove Canal, together provided the main impetus for the development of Elsecar as the estate's industrial village.

The ironworks was constructed about 200m to the south-east of the original canal basin and the site of the 'New Colliery' which had begun to operate its Newcomen-type pumping engine in the same year. The location of the ironworks, the remains of which lie behind and beneath the present Heritage Railway station, was chosen for the natural severity of this part of the valley side which lent itself to the architecture of the works and particularly to that of the blast furnace. It was separated from the small settlement at Elsecar Green to the north by the course of the Harley Dike which was already used to drain the adits from the earlier mines and had lately been adapted to supply the canal from the reservoir established further up the valley to the south-west.[149]

Estate correspondence indicates that Stacy and Company (quite probably Smith, Stacey and Co, based at Queen's Foundry, Paradise Square, Sheffield) were seeking ironstone deposits in an area known as Shirt's Ground on Hood Hill to the west of Elsecar in 1793, and were postponing any agreement to build a furnace until they had proved this part of the Tankersley Park ironstone bed.[150] Evidently it was found, as a letter to the Earl dated 29 January 1794 from Charles Bowns, the Earl's solicitor, mentions that the furnace was to be placed near the intended site of the fire engine for the Earl's new pit. The Earl's rental book for Brampton Bierlow covering the years 1794-5 notes that the farm tenant Joseph Bailey was 'taken out of the rental for half a year to Whitsun 1795 for land laid to Messrs. Darwin and Company, to erect a furnace etc. upon'. John Darwin and Company appears to have taken over Stacey and Co's business by this time. Darwin & Co. is noted occupying Queen's Foundry on a sketch in one of Fairbank's field book from February 1811, and their name appears on trade directories at Queen's Foundry from 1814. [151]

A copy of the lease, undated but probably drawn up shortly before firing, sets forth the arrangement that the Earl would supply coals from his pits lying within a mile of the furnace throughout the eighteen years in which John Darwin, Francis Frith, Joseph Ridge and William Darwin were to get ironstone from his estate. The Earl's new pits began delivering coal on 25 September 1795, and on 24 November Bowns wrote to the Earl '... Messrs. Darwin have begun their blast and find the Metal extraordinary good, and to answer their fullest expectations ...'.[152]

To begin with, Elsecar appears to have had a single furnace. In 1796 this was producing 19 tons of foundry metal and 28 tons of forge metal a week according to a rather confusing account by Benjamin Hall, the Earl's household steward and supervisor of collieries. This may have meant the combined output of any given

week, or the products of alternate blasts. Hall was a little clearer on the size of the workforce, which included 23 workmen employed for seven days a week and a book keeper.[153] According to Charles Twigg's 'Village Rambles' published in 1879 a second furnace was added in 1800, and by 1806 there were certainly two in blast together yielding 2,495 tons.[154] In 1802 receipts from the New Colliery indicate that the Elsecar works expenditure on coal accounted for £2505, or four fifths of the colliery's total output.[155]

Darwin & Co. enjoyed a prosperous first decade in the 19th century. Joshua Biram, the Earl's steward, noted this boom which he saw reflected in the great cluster of boats at the wharf loading coal and metal soon after the canal basin had been cleaned and reopened in 1808.[156] By 1809 Darwins were prospecting for new ironstone in anticipation that the mine at Shirt's Ground might run short, a situation which might have suited the farmer John Shirt, who, according to another letter to the Earl from Charles Bowns, hoped to leave his tenancy due to the reduced value of the land and the ironstone getters being such disagreeable neighbours. Darwins did start bringing ironstone from Rockley around 1811, and they also considered erecting another furnace on Hoyland Common, but this did not come to pass.[157]

A description of the Elsecar works in a French publication on modern technologies dating from 1811, mentions two blast furnaces with elevations of 15m and 16m, one providing material for the refineries, the other producing soft cast iron for the trade. The blast was provided by cylinder bellows, similar to those then used at the Bowling works near Bradford.[158]

By the summer of 1812 trade had deteriorated, due in part to the fall in exports brought about by the Napoleonic War. In June, Biram wrote to the Earl about stoppages at the ironworks, and the sale of coals to the furnaces took a dramatic downturn, from 13,503 and 12,777 dozen (a dozen being 42 hundredweight) in 1810 and 1811, to just 5,665 dozen in 1812. Trade picked up as Napoleon's fortunes fell and Darwins introduced another furnace, either a new one or a replacement, which was reported in blast on 26 February 1813. This raised again the demand for coal, but there were intimations that not all was well.[159] Bowns expressed concern that there needed to be a better contract to control Darwin & Co's extraction of ironstone from the Westwood Black Mine, indicating that if terms were not met he would restrict the supply of coals for their second furnace. In 1816 William Darwin appears to have been seeking employment at Thorncliffe Ironworks, if a suitable managerial post became vacant, and in 1817 he was declared personally bankrupt, though the company continued to trade.[160]

There was no furnace in blast at Elsecar between 1816 and 1817. One furnace was restarted in 1818 and a second in 1819, but a note to the Earl in July of that year indicates that one of these was being discontinued. Darwins continued to operate at Elsecar, reportedly with three furnaces in 1823 producing only 1,400 tons, and more major problems were evident toward the end of 1825 when they fell behind in payments for coal.[161] By January 1827, when matters were handed to Biram to resolve, this debt had risen to over £730. The remaining partnership of John Darwin, Joseph Ridge and Francis Frith was in disarray, and in 1827 the whole

company, including branches at Queen's Foundry, Chapeltown and Worsbrough, entered into bankruptcy.[162] John Darwin and Company's name disappeared from the estate rental books in 1826, and in 1827 it appears that the Earl took over direct control of the works, placing Biram in charge of the one furnace that remained in blast. In November of that year Biram ordered even this furnace to be blown out for repairs. In June the following year the Earl paid £50 to Henry Hartop (who was soon to be in trouble at his own Milton ironworks) for a year's supervision of the Elsecar works. Curiously, the ironworks themselves may have remained the property of the Darwin Company throughout this period, or at least of their creditors, for the Earl was paying rent for the furnace in 1830.[163] A sketch of the internal dimensions of one of the Elsecar furnaces made in that year (Figure 20) shows a fairly typical layout, some 41ft 5in high overall, 12ft 7in in width across the top of the boshing, with tuyère holes at the base 1ft 9in high and 12in wide.

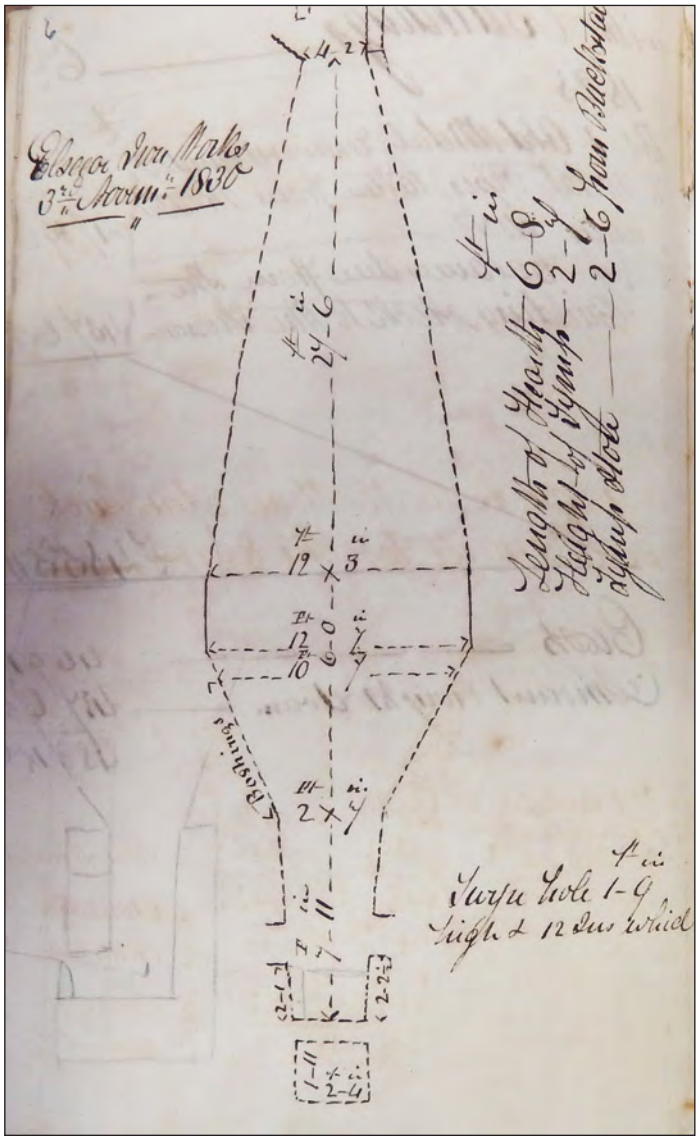


Fig 20. Sketch of an Elsecar furnace, 3 November 1830. Notebooks of mining engineers from Fitzwilliam Estates, Reproduced courtesy of Sheffield City Archives X417 (2010/91).

Henry Hartop continued to manage the Earl's Elsecar ironworks after the acrimonious collapse of his partnership with the Grahams at the Milton works in 1831, injecting a bitter rivalry into the relationship between the neighbouring businesses which was to continue for a further 15 years. In particular this rivalry manifested itself in arguments about the methods of coke manufacture used at the two works and the introduction of hot blast furnaces, which Hartop rejected, but the Grahams were keen to adopt (*see* Milton ironworks, below).

By 1832 the Elsecar works comprised three furnaces, a casting department and a nailing department.[164] In 1838 Hartop was seeking more coal from Joshua Biram's son and successor, Benjamin, due to the good demand for iron, and expressing his concerns that the shortage of available coal was due to the amount being processed at the collieries for shipment elsewhere and for use on the railways.[165] By 1841, however, trade had slumped once again and Hartop was obliged to ask the Earl to support the cost of the workers' wages which had exceeded receipts from iron sales. When this is considered alongside a statement of Elsecar's losses over a period of 12 ½ years from March 1827 to June 1840, which amounted to £9,955, or about 10 shillings on every ton of iron made,[166] it has to be wondered whether the works could have survived to this point without constant benevolent or philanthropic support.

In August 1842, 58 men and boys, including Henry Hartop and his son John, the assistant manager, were employed at Elsecar. Among these were five moulders, three pattern makers, five setters, two iron turners, one stove fitter, three nailers, one ironstone burner, two coal setters, four fillers and one bridge stacker.[167] In September Henry Hartop wrote to the Earl expressing his intention to resign and enter into private practice as a consulting engineer, although he was still present in October writing to the Earl about the virtues of cold blast iron and expressing the view that the two ironworks should be merged to prevent inferior hot blast iron (evidently in production at the Grahams' Milton works) from being sold as cold iron and sullying the reputation of the Earl's enterprises. In 1843 John Hartop took over his father's management of the Elsecar ironworks, and appears to overseen a period of some growth, as by 1846 75 men were employed, 30 around the furnace, 42 in the casting sheds and three nail makers. By this time, however, the Earl may have been exploring means to limit his future involvement with the Elsecar works. An inquiry about the possible terms of a lease from the Effingham Works in 1845 led nowhere, but when the Grahams gave up the Milton Works in 1848 the Earl offered both works to let. A Royal Commission report in 1849 noted that Elsecar was producing good quality cast iron, using cold blast furnaces, described as 45 feet high and 11 ½ feet wide at the top of the boshing, and 'in other respects the same plan as had been continued during the late war'. Wrought iron was no longer produced. That same year saw the closure of both of the works and their associated ironstone pits, causing widespread unemployment and distress across the district, followed shortly afterwards by the taking up of both leases by William and George Dawes, who were expanding their business from their father's Bromford Ironworks in West Bromwich.[168]

The output from the Elsecar works prior to the arrival of the Dawes brothers appears to have been quite varied. Pig iron was produced for further refining and processing elsewhere, as in 1827 when the practice was to 'weigh the metal every day as it was cast, and set it in lumps of one ton ready for sale'. Fire grates, ranges and rain spouts were cast in the same year, but these were just small scale requests, mostly from the Earl's estate. More substantial accounts included cast rails for the local collieries, tippers for tipping coal into barges on the Elsecar canal, and boiler plates for steam engines. Henry Hartop noted in a letter to Lord Milton in 1842, that when he was at the Park Ironworks prior to coming to the Milton works in 1821 the 'two boilers of Elsecar iron were used at the blowing engine for 14 years without requiring repairs'.[169] Hartop was arguing that the pumping engine for the new Hemingfield Pit should be made at Elsecar, using cold blast iron, as the products were superior in every way to those made with hot blast iron from the Milton works. In the end the engine was made at Elsecar and the boiler at Milton from prepared plate out of the Elsecar stock. The cylinder was made at Park Ironworks, and paid for in pig iron.[170]

The relationship between the Elsecar ironworks and the Earl's collieries was always close and reciprocal. As early as 1795 the Earl paid Darwins £581 13s 7d for 'sundry goods for the engine' at the new pit and in 1798 an order was placed for '3 tons of iron road plates', the first of many consignments for the underground workings, including recurring orders for wagon wheels and by 1830, for cast iron supports which were replacing wooden 'punches' in the mines. In 1843 over 70% of the orders from the Elsecar works were placed by the estate, mostly for the Earl's collieries. Throughout this time the ironworks both here and at Milton formed the major market for the Earl's coal; in 1811, for example, the twin Darwin furnaces took 26,831 tons of Elsecar coal, and in the previous year when both ironworks were fully operational their combined consumption was 42,247 tons, over 50% of the output of the Fitzwilliam collieries.[171]

Under the Dawes' management the Elsecar ironworks went through several phases or redevelopment and expansion. The year 1855 brought reports of both ironworks being rapidly extended to meet the opportunities afforded by the South Yorkshire Railway which had arrived in Elsecar five years before. The open-sided rolling mill, which still stands (*see* Character Area 1), was added to the Elsecar works in 1850 and used nine years later to roll the plate for HMS Warrior, the Navy's first ironclad warship.[172]

In 1856 the Elsecar works were employing about 300 people, all of whom went on strike in July in support of two of their number facing warrants for having 'knocked off work' without notice owing to the intense heat. This resulted in 17 workers being similarly charged, although all but one returned to work later in the month. A further strike occurred at both ironworks in the winter of 1856-7, when the puddlers refused to accept a 10 per cent pay cut imposed by Dawes due the depressed state of the iron business. This shut-down affected the local colliers also, until the issue was resolved in February. The opposite situation occurred from October to December 1858 when a strike at the Earl's collieries over a similar pay cut led to the furnaces being put out at the ironworks,[173] although the Elsecar works were 'busy in the execution of an order for rails' by September 1859 which suggests a return to full operation.[174]

The years 1860 and 1861 were overshadowed by a legal dispute between Dawes and the Earl concerning the adequate provision of coal for the works and perhaps the development of hot blast furnaces at Elsecar, adding to those which had already been created at Milton by the Grahams, and there was further trouble with strikes occurring periodically in 1862 and 1865, usually prompted by reduced wages during periods of limited demand. But by late January 1865 these reductions were apparently accepted as an inevitable consequence of the present state of the iron trade, and both works, in common with all other iron establishments in South Yorkshire, were in full if not particularly profitable work.[175]

In 1866 a puddling furnace at Milton was adapted to incorporate Edward Wilson's patented improvements, and was consequently able to use less and cheaper slack coal in the furnace, while producing less smoke due the higher combustion temperature. This pleased the ironmasters, but as the technology was rolled out across the works it met resistance from a workforce who complained that they had to work longer to produce iron which was inferior to that of the existing furnaces. Nonetheless, by the time a further strike was brought to a close that September, all the furnaces at both Milton and Elsecar were being altered to the Wilson process, those at Elsecar alone numbering 44.[176]

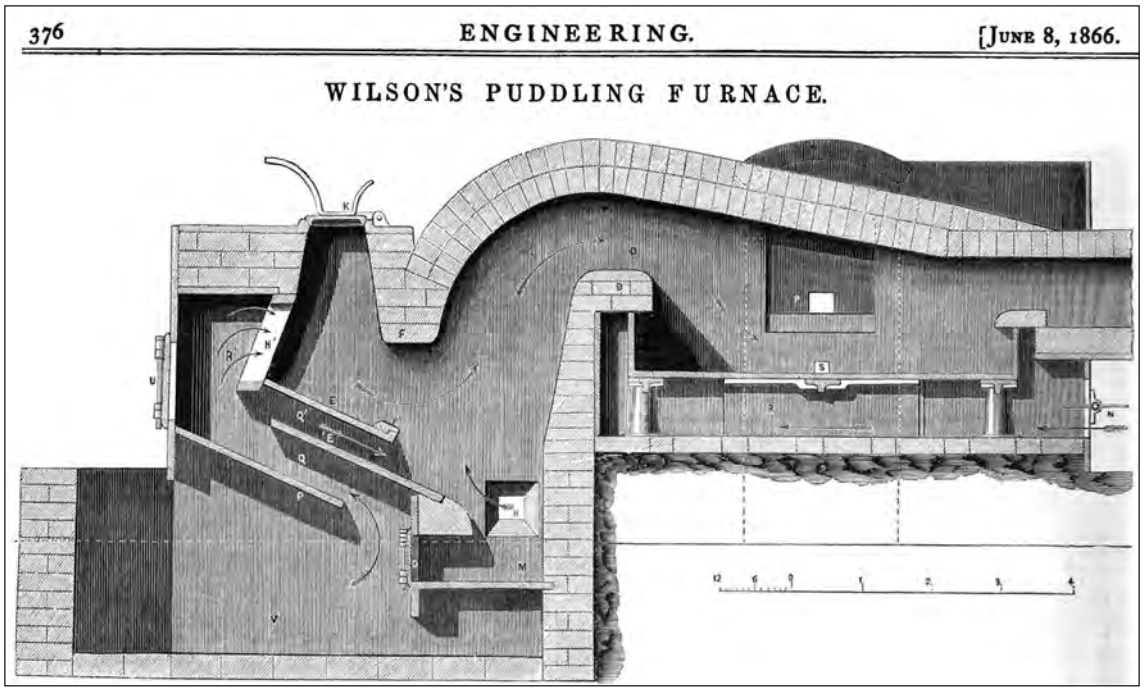


Fig 21. A E B Wilson's adaptations to a Milton puddling furnace, illustrated in *The Engineer*, Vol 1 186, p 376.

Despite various economic tribulations the Dawes brothers continued, as with the Wilson process, to invest in and develop the works. Two sheet mills at Elsecar, which had been for some time undergoing repairs, were set going again in December 1866, one considered to house one of the finest trains of plate rolls in the kingdom, made at Elsecar itself, as were the first large rolls employed by John Brown & Co. at Sheffield for rolling armour plates.[177]

During a quiet period in April 1867 two of the old furnaces were pulled down to be 'replaced by a new one, put in columns and so dispensing with the mason-work at the bottom'.[178] A report of the Elsecar works in June 1869 described two such blast furnaces in operation, plated outside, and two more partially built, all to work with hot blast, returning gases 'to heat the blast, as also the boilers of the blowing engine'. By December 1871 all four were in operation, one having recently been put in blast. Also in 1869 they were engaged in laying down a new rail mill which would 'embrace all the latest improvements in that class of machinery'. Given that steel (not produced at Elsecar) had by now eclipsed iron as the material of choice for rails, this might be a reference to the White's patent blooming mill, used to refine and roll cast metal into more useable lengths, which was certainly installed by 1872. For future archaeological reference it should be noted that the foundations of this mill, or more probably for the machine beds, were being 'laid deep in the ground in solid masonry, on which are laid large beams of American birch, which are filled in with cement and other materials in a liquid state so as to make it very firm'. Some processes were converted to gas power, a gas plant (not to be confused with that on Wath Road) having recently been constructed within the works at considerable expense - including Siemen's gas furnaces for puddling and heating, one of which exploded in 1874 seriously injuring two puddlers.[179]

Newspaper clippings in the Goodchild collection in the Wakefield Record Office, dating from the early 1870s, record a series of visits to the Milton and Elsecar Ironworks and give a strong impression of the scale and nature of the operations at the time.[180] The Elsecar blast furnaces were blown by a horizontal steam engine, similar to one then under construction at the Milton works for use at the Trent Ironworks, the latter with a steam cylinder of 24 inches and an air cylinder of 50 inches. The Elsecar engine reportedly produced twice the air pressure of the Milton engine as it had twice the number of furnaces to blow. The moulding shop contained a scaled down version of a blast furnace (taking air from the same blowing engine) which was used to re-melt the pig iron, together with scrap iron and offcuts, ready for casting, as well as a capacity to mould objects for all manner of machines and other purposes. The forge contained 32 puddling furnaces for converting pig iron into malleable iron, most manned by an individual puddler with a long rake who kept the molten metal in a state of agitation until the impurities were removed and the refined iron clung together in a glowing 'pastry ball'. The same work was performed by mechanical means at several furnaces, but it appeared that these had yet to prove themselves as superior to the manual operation. The iron blooms from the puddling furnaces were transferred first to a number of steam-powered hammers (five of which were observed), then through rolling mills, and then through numerous other devices used to form, cut, trim, perforate, rivet, harden or otherwise render the iron suitable for use as rails, boilers and any number of other purposes. Recycling was

a recurrent theme. Surplus heat from the puddling furnaces passed to a number of vertical boilers which in turn provided steam to engines of between 10 and 60 hp used across the works. Iron scraps were re-melted in a refining furnace, re-puddled and used for the finest ironwork. Slags and cinders from the puddling furnaces were pulverised in a mill and afterwards used to re-line the same furnaces. Throughout the visit the reporter was conscious of the movement of hot and heavy items around him, some in hand trucks, others by a 'small but very energetic locomotive'.

In 1876 the Dawes brothers separated their interests, George maintaining control of the Milton and Elsecar works as well as the Denby Iron Company in Derbyshire, while William became sole proprietor of the Trent Iron Works at Frodingham near Scunthorpe.[181] George was feted at a testimonial in the town in 1880 at which he intimated his desire to retire after 48 years in the business. He mentioned his concerns for the state of the iron trade in face of competition from Germany, Belgium and elsewhere, and his hopes that a willing younger tenant might be found to take the Earl's lease, which having expired in 1879 was now being renewed on a yearly basis with either party able to withdraw on 6 months' notice. According to a letter written to the Barnsley Chronicle in 1885 by G H Douglas of the Estate Office, there were efforts to find another tenant in 1879. Among others, Newton and Chambers were invited to take on the works, but 'after inspection and due consideration, they declined, stating that they could not be worked to advantage'.[182]

At the close of 1880 three out of the four furnaces were still in blast, but one of these was blown out early in 1881 and the other two were damped down by the summer. Until the end of the following year, there were 31 puddling furnaces and two rolling mills yet in operation, presumably working their way through stockpiles of pig iron, but the depressed market and exhausted state of the local ironstone pits could not be overcome. Milton closed in 1883 and the final blow fell at Elsecar in January 1885 when the whole of the workforce was discharged. The machinery and plant belonging to Dawes was dismantled and on Wednesday 4 March 1885 the 'inhabitants of Elsecar, Hoyland and surrounding districts were alarmed on hearing explosions in the neighbourhood' resulting from the dynamiting of the hammer beds. There were suggestions in the summer that since certain buildings, engines and furnaces belonging to the Earl had not been demolished the works might be revived, but these hopes were dashed in September 1885 when five large chimneys connected with various parts of the works were brought down, witnessed by a large company of astonished villagers. George Dawes, the Elsecar and Milton ironmaster for over 30 years, retired to Smethwich Hall near Birmingham where he died three years later aged 71.[183]

Several of the ironworks buildings were absorbed into the workshop complex described above, which the 5th Earl had created immediately to the north in 1850 to serve his collieries and other interests. The greater part of the ironworks, however, has vanished from sight, or nearly so, but its former extent and present remains can be assessed in some detail (*see* Character Area 1) based on fieldwork and the evidence of historic maps.

Milton Ironworks

The Milton Ironworks, named in honour of Viscount Milton, heir apparent to the Fitzwilliam title, was situated on a broad shelf in the hillside below Hoyland village, immediately to the north of Elsecar Old Colliery (*see* Figure 202). The land was leased out for an ironworks by the 4th Earl in 1797, shortly before the completion of the Dearne and Dove Canal which made the development of ironworks and the expansion of the adjacent collieries viable so far from a navigable river or the coast. Milton did not enjoy as close a relationship to the canal as did the contemporary Elsecar Ironworks, established two years before on the valley floor, but it was positioned conveniently alongside an existing, proven colliery, and within easy reach of the Tankersley Park ironstone grounds which lay over relatively level ground barely some 3km to the west. It might also be speculated that the Milton works were to some degree intended to be on display. They would certainly have been visible across the valley from Wentworth in much the same way that the Old Colliery had been before. Indeed, it is hard to imagine the Milton works as anything but a prominent landmark - its furnaces and chimneys smoky by day and fiery by night – interposed between Wentworth and tower at Hoyland Lowe on the skyline to the north. This consequence could scarcely have failed the Earl's notice when he approved the lease.

The ironworks were built by a major Rotherham-based firm, Joshua Walker and Co, who maintained the lease on the works until 1821. The title 'Joshua Walker and Co' is written across the relevant fields on the draft enclosure map for Nether Hoyland, perhaps indicating that they took up a lease as early as 1794,[184] but this annotation may be somewhat later than the map itself. The company first paid rent on the furnace site in 1799, and was paying rent for mining ironstone at Tankersley in 1802.[185]

In April 1798 Walkers wrote to Boulton and Watt's Soho Works to enquire about an engine for their new Milton works. At that time Walkers speculated that the engine would have to be sufficient to blow two furnaces, perhaps requiring a 40-inch cylinder, but they also expressed some reservations about the water supply which might have a bearing on their final choice. By December, Walkers had dug an 'engine pit or well' to a depth of 40 yards, encountering the coal but failing to find the 60 gallons per minute required by the proposed engine. They found themselves in the curious situation of needing the engine in place to enable them to reach the water which was estimated to lie a further 10 yards down, below the coal. With the engine thus engaged in pumping its own water it would only have enough power left to blow a single furnace, and the idea of it also serving two 'fineries', or secondary furnaces, had to be abandoned. A reservoir for the engine mentioned in this correspondence may be the first in a series of large ponds subsequently created across the site.[186]

In 1806 there was a single furnace in blast, but in 1810 the company applied to the Earl for permission to build a second furnace the following year. This was certainly operational in 1812 when, during a period of low demand for coal, Earl Fitzwilliam diverted men from Elsecar New Colliery to workings closer to Milton (presumably the Old Colliery) in order to supply this new furnace.[187] Greenwood's 1817 map of Yorkshire provides the earliest depiction of the works, on which it is simply marked as 'Milton Furnace'.[188]

Walker and Co's expansion around 1800 owed much to the military contracts they held during the Napoleonic Wars. Their foundry, forge and rolling mills at Masbrough, Rotherham and The Holmes produced cannon, mortar, cannonballs and shot, including many of the cannons on HMS Victory, and by 1813 the company was producing some 300 tons weight of guns.[189] It is not known if any of this ordnance was produced at the Milton works. The company was otherwise notable for the manufacture of bridges, having begun in 1788 by exploring the ideas of Thomas Paine, who experimented with bridge design during interludes in his varied career as corsetmaker, pamphleteer, author, political theorist and statesman.

Paine's intricate designs proved largely impractical, but the company persevered with other designs and undertook its first major bridge commission in 1795-96, manufacturing ribs of cast iron voussoir blocks and ring-shaped spandrels for Rowland Burdon and Thomas Wilson's Sunderland bridge across the River Weir.[190]

Walkers became closely associated with Wilson's 'Sunderland design', supplying castings for his other bridges at Spanish Town, Jamaica (1800-1801), Stratford Saye (1802), Staines (1802-3) and Yarm (1805). Unfortunately, the Staines and Yarm bridges each failed after standing for barely a year, perhaps due to inadequate abutments, and Walker's next bridge at Boston, designed by Wilson and John Rennie, developed cracks soon after completion which led to protracted discussions until finally repaired in 1819. However, these well-publicised failures do not appear to have damaged Walker's reputation. In 1810 they supplied ironwork for Henry Provis' Wilson-style bridge at Newport Pagnell, and in 1811 John Rennie engaged their services when designing his enormous Southwark Bridge. This included thirteen main rib segments ranging from 6 to 8 tons apiece (ignoring Walker's requests to keep the casting below 5 tons), all manufactured at the Holmes works using coal purchased from the Elsecar collieries,[191] although some smaller castings may have been cast at the Milton works.[192] When the segments were erected near the Holmes works to test the assembly the spectacle drew thousands of visitors,[193] and when complete in 1818 the bridge took the record for the longest single span in cast iron (240ft) and was considered one of the 'great wonders of the day'.[194] Southwark Bridge served as a beacon for Walker's bridge building prowess, but it also played a part in the firm's downfall. The client disputed payments and defaulted on their debt before the bridge was even completed. This added to financial difficulties attendant on the reduction in arms manufacture following the Napoleonic Wars, and the growth in competition from other firms now with direct access to Walker's markets following the completion of the Sheffield branch of the Don Navigation. There were also problems obtaining adequate supplies of Tankersley ironstone to keep the furnaces in blast, and 1821 the firm ended its lease and entered into bankruptcy.[195]

A new partnership of Sheffield businessmen, Hartop, Sorby and Littlewood, purchased the works in 1821, and in 1823 they were operating two blast furnaces.[196] Following in Walker and Co's footsteps, their output also included ironwork for bridges, most notably two suspension bridges for the Ile de Bourbon (now Reunion Island) in the Indian Ocean, south-east of Mauritius, designed by Marc Brunel, the father of Isambard Kingdom Brunel, under contract to the French government. A

newspaper article from 5 April 1823 reported that crowds of sightseers gathered to witness the test erection of these bridges in a nearby field, stating that:

> ... the curiosity excited in the neighbourhood of Sheffield by two chain bridges erected at the ironworks of Messers. Hartop, Sorby and y as great as when the arches of the Southwark Bridge were put up.[197]

Two of the partners withdrew in 1824, leaving Henry Hartop, the son of the operator of Park Ironworks in Sheffield, to form a new association with the London iron merchants William and Robert Graham, who invested £30,000 in the business.[198] Disagreements soon emerged within this new partnership, however, and in 1828 the Grahams complained to Earl Fitzwilliam about the confused state of Hartop's accounts and the company's lack of financial stability at a time when the iron trade was 'so unfavourable'.[199] They subsequently took the matter to law and the resulting arbitration in 1829 left them in sole charge of the Milton works. At around this time Earl Fitzwilliam bought 'the buildings and machinery' for £27,000 and then let the Milton works back to the Grahams for 21 years at 6 per cent. Presumably this rather extreme act of support was intended to prevent the Grahams from closing the works, thereby maintaining demand for the estate's ironstone and coal.[200] It might also indicate a desire to maintain the local workforce and to ensure that these prominent works did not stand idle. The Grahams continued to run the Milton Works until 1848, whereas Hartop, who had reputedly lost almost everything in the Milton dispute, took on the role of overseer at the Elsecar works which the Earl (in an even greater act of direct industrial involvement) had taken fully in hand following Darwin & Co's collapse in 1827. He remained there as the Earl's manager until March 1843.[201]

The circumstances described above produced a bitter rivalry between Hartop and the Grahams, a rivalry only worsened by competition for the limited supply of local ironstone, brought about by the Earl's reluctance to extend mining into the deer park at Tankersey.[202] Hartop clashed with the Grahams in 1827-30 over the merits of different forms of coke manufacture, and conducted numerous experiments to demonstrate the economic benefits of burning coke in round mounds, compared to the long mounds preferred by the Grahams. He appears to have proved his case to the satisfaction of the Earl's land agent, but the Grahams were reluctant to accept his recommendations. Instead, they opened up a fresh area of contention by embracing hot-blast furnace technology in its early and tentative stage of development.[203] The process of preheating blast air had been patented by James Neilson in 1828 and successfully developed at the Clyde Ironworks in the early 1830s where a 20% reduction in furnace fuel was achieved.[204] Perhaps, being relatively new to the industry, the Grahams were open to innovation, or perhaps they saw the promise of efficiency as a way of easing their financial burdens, often reflected in late rent and coal payments to the Earl's agent. By 1836 Grahams' had installed two hot-blast furnaces at the Milton works, as a result of which their demand for coke was reduced such that they no longer involved themselves in its production.[205] Hartop remained a confirmed cold-blast man, insisting that the cold process was (if properly managed) just as efficient, while the iron produced by the hot process was decidedly inferior. A prolonged and acrimonious debate ensued, leading to Hartop's recommendation that

the two ironworks be merged in order to protect the reputation of the Earl's iron. He appears to have swayed the Earl's opinion in favour of cold-blast, but in so doing he also seems to have overplayed his hand. In 1843 Hartop left Elsecar to take up the management of the Bowling Ironworks at Bradford, expressing some satisfaction that he would 'no longer be the object towards whom your Lordship can be thought to have a foolish preference'.[206]

In 1830 Graham and Co. advertised the manufacture of pig, rod, hoop and sheet iron, castings, steam engines, boilers, suspension and other bridges, ironwork and millwork in general. Their more notable products included a railway bridge at Castleford, a suspension aqueduct near Wakefield, the cast iron gates at Goole Docks, a pumping engine on the Cromford Canal and the iron beam and two parallel motions for the Newcomen-type engine at Elsecar New Colliery.[207] Although clearly specialists in cast iron, Graham and Co. also produced wrought iron in considerable quantities, not least in the form of waggonway rails, which they laid to carry ironstone between Tankersley Park and the Milton works 'at some time previous to 1835'.[208] Rather surprisingly, given that the canal and the ironworks had existed in tandem for nearly 40 years, the continuation of the railway to join the Milton works to the Elsecar basin came somewhat later, in 1837.[209] Prior to this it would appear that goods from the ironworks, however large, were transported first down the hillside south of the works and then along Armroyd Lane.[210]

Graham and Co. supplied railway goods to other Fitzwilliam properties, including rails for the waggonway between Swallow Wood Colliery in Greasbrough and for a railway at Stubbin.[211] In 1831 Grahams' supplied many of the components of the self-acting inclined plane on the Silkstone Waggonway.[212]

For most of the 1830s and early 1840s the iron industry was in a depressed state, and by 1848 Graham and Co's financial difficulties at Milton were such that they withdrew from the business. The lease was surrendered and the Earl, who had owned the works since about 1827, sought to attract a new tenant. The advertisement placed in the Sheffield and Rotherham Independent on 24 June 1848 gives a very clear impression of the works at that time.[213] It included:

- two blast furnaces (with every requisite appendage);
- a forge and mill with puddling and other furnaces, a chafery for drawing uses, together with rolling and slitting mills capable of manufacturing from 90 to 100 tons of finished iron per week;
- a foundry with pits, drying stove and all the requisite apparatus for making engine work and castings of every description, to the extent of 100 tons per week;
- engine-fitting shops with lathes, boring and planing machines, boiler makers and smith's shops, and every requisite for carrying on engine and railway work to a large extent;

In addition, the prospective tenant was promised an ample supply of Elsecar coals and Tankersley Park and Swallow-Wood ironstone, excellent canal and river communications, and the forthcoming advantage of the South Yorkshire Railway. As a footnote, perhaps in respect of Henry Hartop's ardent stance, the owner (the Earl) let it be known that, while not absolutely restraining lessees from making hot-blast iron, he would prefer to treat with parties who would undertake only to make cold-blast iron. This concern was also noted by the Grahams in 1849, who suggested there was reason to believe that the next lessee would be restricted to make and use only cold-blast iron.[214]

John Hartop had assumed control of the Earl's Elsecar Ironworks after the departure of his father in 1843, but despite receiving valuable orders from the Bowling Works, where Henry Hartop now presided, John was unable reverse the trend for annual losses which had characterised the previous decade. In 1845 the Earl rejected an offer from James Yates of the Effingham Works to lease the Elsecar works. Three years later, however, when the Grahams surrendered the Milton works, the Earl decided to put both ironworks up for lease, thereby bringing to a close 21 years of direct involvement in iron production.[215]

In March 1849 the Earl's agents went to London to seek his approval for leasing both works to William Henry and George Dawes, sons of the Staffordshire ironmaster John Dawes of Bromford Ironworks in West Bromwich.[216] The deal appears to have been struck in April, so it is curious to find notices placed in the Sheffield Independent and several other papers in May advertising a general auction of engine makers' and boiler makers' equipment and other stock from the Milton works to take place on 25 June.[217] These notices refer to:

> ... the whole of their extensive STOCK of Engine Makers', Boiler Makers', Ironfounders', Fitters', and Turners' Tools; 30 Hearths of Smiths' Tools complete; Steam Engines, Slotting Machine, Drilling Machine, two Railway Wheel Lathes, Boiler Plate Bending Machine, Cupolas, Fans and Shafting, Screwing and Nut Machine, a large Pipe Proving Machine, and various other Machinery suitable for the Iron Trade; 10 Double and Single Purchase Crabs, various Block and Ropes, Metal and other Cranes, two Road Weighing Machines, two Filling Machines and one smaller Weighing Machine, and large strong Fly Punch, a set of three large Legs, Crab and Breaking Ball; 600 Tons of Forge, Pig and refined Plate Metal, 100 tons of Bar and Rod Iron (various sizes;) a quantity of English Oak and other Timber; the whole of the Office FURNITURE, Fittings and Fixtures, which are very good and complete, together with a 'Fire-brick Furnace Lining complete; a quantity of seasoned Hearthstones and Damstones', and a great number of other Articles ....[218]

The auction notice stipulates further that 'the Casting and Engine Department will not in future be carried on at the Milton Iron Works' from which it would appear that this part of the works was not subject to the Dawes' lease, and that the Earl, who owned the Grahams' former premises outright, was seeking to dispose of surplus

equipment. This view is supported by a further entry in the notice which states that a separate sale at the same time and place would, 'unless a treaty be concluded previously by Private Contract', include:

> ...all the STEAM ENGINES, CUPOLAS, MACHINERY, Pipe Proving Engines, Cranes, Wood and Iron Models & Patterns, Metal Casting Boxes, Core Barrels, Drawing and Working Plans, lately used by Messrs. Graham in carrying on their extensive Foundry and Engine Manufactory, at Milton Iron Works.

The sale may not have gone entirely according to plan for a further notice was issued on 7 July indicating that the auction had either been postponed or possibly extended to the 11 July,[219] by which time the Dawes were doubtless in full possession of the site. On this occasion the particulars included horses and a 'remarkably strong, double-shafted and broad-wheeled carriage, capable of carrying 30 tons weight, built to carry large boilers, heavy girding or locomotive engines'.[220] This may have been the earlier means and the later alternative method of bringing large engine parts to the canal basin and railway yard via Armroyd Lane.

The Fitzwilliam leases were the Dawes brothers' first major venture beyond West Bromwich, and George Dawes, who established his home in Hoyland, was to manage the two ironworks at Elsecar for the next 30 years.[221] But the Dawes' interests were to spread further in subsequent years, to include both the Denby ironworks in Derby (1860) and the Trent Ironworks near Scunthorpe (1862), which was built to capitalise on the Frodingham ironstone deposits, newly discovered in 1859.[222]

If the Earl's interest in obtaining new lessees for the works was intended to lessen the effects of local unemployment, as well as to ensure a market for his ironstone and coal, this new venture may have been a qualified success. John Hartop, writing to the Earl in April 1849 expressed concern for George Dawes' intention to 'bring the greater part of his workmen out of Staffordshire with him' and that only a part of the existing Elsecar workforce (which stood at 74 men in 1846), would be able to get employment.[223] A detailed study of the enumerators' books for the 1851 census shows that this migration was not so very extensive; but it did including specialist Black Country iron workers (eg moulders, puddlers and furnacemen) who were preferred to their local counterparts.[224] Together with their families, and in some cases servants, these migrants amounted to some 232 individuals (8 per cent of the Hoyland population in 1851) and their arrival is clearly reflected in new housing discussed below (*see* Character Area 5).

By the time of the 1851 census the two furnaces at Milton were back in blast, the ironstone pits had reopened to service both ironworks and all the houses in Hoyland were tenanted.[225] In 1856 the Milton works produced castings for the Ball Street Bridge in Sheffield (which they restored and enlarged after the flood of 1864), and a decade later their output included rails and bars for India and the East Indies, and also engines, which suggests that Dawes had either purchased part of the Grahams' engine making equipment in 1849, or had invested in newer equipment of his own.[226] By that time the two open-topped, brick-built furnaces at Milton were reportedly 40 feet high with an interior diameter of 16 feet.[227]

The Dawes brothers also took over the operation of the Elsecar Ironworks in order to obviate the need to build three additional furnaces at Milton. This led to a dispute with the Earl in 1855 when the Dawes added bar iron works and puddling furnaces at Elsecar beyond the terms of the original lease.[228] In 1860 the Dawes brothers came into more serious conflict with the Earl, again over the terms of their lease, taking their case to the Liverpool assizes in August of that year. The lease stated that the Dawes were required to take all their ironstone from Tankersley Park and other sources stipulated by the Earl, who in return would ensure that they were amply supplied throughout the 28 years of the contract. The Dawes complained that the Earl had not fulfilled his obligations, causing them to fail to meet contracts which they had taken on in expectation of adequate supplies, and compelling them to seek ironstone from elsewhere at a disadvantageous cost. The Dawes calculated their damages at £50,000. The Earl, for his part, maintained that the Dawes' demands for ironstone were extraordinary, caused by alterations to the works which he never anticipated and which, he alleged, were absolutely prohibited in the lease. The Dawes won the case, although their settlement after arbitration was far less than the amount claimed in damages.[229] According to the Sheffield Daily Telegraph it was to take another year, and the 'friendly mediation of a north country ironmaster', to bring the whole matter to a complete and satisfactory settlement, both parties having agreed upon honourable and advantageous terms.[230]

The legal case may allude to the Dawes' development of hot blast furnaces in contravention of the Earl's wishes, but it might also reflect the Dawes' desire to free themselves from some of the constraints of the lease, given that they had begun to experiment with Lincolnshire ironstone at Elsecar in 1859.[231] A report taken from the Mining Journal in the Sheffield and Rotherham Independent, 18 December 1871, relates that ironstone both from Earl's pits and from Frodingham pit was being combined at Milton to produce a very good quality of iron suited to mill, forge and foundry, the resulting plates and rails being held in high regard. At that time there were five mills of various sizes in full operation, and 23 of the 25 puddling furnaces (noted as not recently upgraded, unlike those at Elsecar) were at work, together with 9 heating furnaces for the mills, 2 softening and one balling furnace. It was also noted that the machine shop was particularly large, and extensively fitted up with all the necessary equipment for producing every type of stationary engine, and that all castings required for all the varied output of the works were made on the premises.[232]

A newspaper report of a visit to the ironworks in 1873 again reflected the multifarious activities at Milton, describing an 'assortment of machinery' which was 'much more extensive than at the Elsecar works', and captured something of the drama of the works with its 'mills, forges, hammers and an endless variety of ferocious looking articles banging, smashing and grinding way'.[233] Ironstone from Tankersley Park was being smelted in 'five huge kilns, each capable of containing 150 tons' and the two blast furnaces were supplied by a large blowing (beam) engine of 80 hp. The forge had gained one further puddling furnace by this date and had two steam hammers with which to prepare slabs of puddled iron for the rolling mill. The rolling mill was powered by further large engines whose boilers used surplus heat from the puddling furnaces. Annealing furnaces and a refining furnace were also

mentioned, and two cupolas operating in the casting and fitting shops. Brass casting was also undertaken at the works, which by this period included a gas works with four retorts utilising refuse coal from the blast furnaces.

By 1882 five rolling mills and 14 puddling furnaces were still at work at Milton, but shortly afterwards, reflecting the major national downturn in the market as well as the difficulty of obtaining sufficient local ironstone from the now depleted Tankersley pits, George Dawes surrendered both his Milton and Elsecar leases.[234] The two blast furnaces at Milton were blown out in 1883 and the works were largely dismantled, although the puddling furnaces remained in operation for several years afterwards.[235] Part of the site was leased to Thomas Ashforth who operated a smaller brass and iron foundry registered as 'Ashforth, Hall and Hawthorne Ltd' in 1898. By 1902 the firm had well-established moulding and fitting shops and they were installing a new boiler and 66 foot chimney on the site, whilst advertising as: 'makers of all descriptions of colliery and sanitary castings' and as 'contractors to the City of Sheffield and other Corporations' in the local trade directory and Barnsley Chronicle.[236] The business, subsequently renamed the Milton Foundry Ltd – a name which is still to be found on manhole covers around Elsecar and Wentworth – went into liquidation in 1905.[237] Some of their buildings stood for several years afterwards, including that with the tall chimney which is shown on a postcard commemorating the opening of a rifle range across part of the abandoned site in April 1911 (Figure 22).

Fig 22. Postcard showing the opening of a rifle range across the Milton Foundry area (now the Milton Recreation Ground) in April 1911. The view appears to be from the west, looking toward the recently closed Milton Foundry Ltd works, and across the lower pond shown on a plan of 1849 (Fig 136). Reproduced with the kind permission of Barnsley Archives and Local Studies.

Smaller industrial concerns

Elsecar was home to a number of smaller industrial operations and premises, many of which are identified and discussed in the relevant Character Area sections below.

In addition to the Ashford, Hall and Hawthorne foundry mentioned above, a similar small works was constructed in 1869, presumably giving a name to Foundry Street, off Fitzwilliam Street. The firm was established as a partnership called Davy and Lax, but this ended in 1876 when the former partners, Jonathan Davy and William Lax, both former employees at Newton Chambers' Thorncliffe Works, separated to run two independent small foundries adjacent to each other. Lax's works closed around 1942, but Davy and Co. continued trading until 1980s.[238] Some of the foundry buildings are still standing, though derelict. Davy and Co. appears to have produced mantel pieces, Yorkshire ranges, palisading and gates, as well as numerous types of colliery, brickworks and coke oven castings, wagon castings and sanitary castings, including manhole covers, gully grates and path pipes.[239] Manhole covers bearing the Davy name, like those of the Milton Foundry, can be found around Elsecar and further afield. Local volunteers have been encouraged to photograph all such covers and report their locations to the HAZ Project Officer at BMBC.

The more eccentric industrial enterprise in Elsecar was a coal tar works established by the 4th Earl in the early 19th century. The Marquess of Rockingham may have taken a direct interest in the experimental process as early as 1762 and subsequently patronised several unsuccessful attempts to extract tar from coal in the Sheffield area, perhaps spurred by the need to free British shipbuilders from their dependence on wood-tar from abroad, and particularly from the American colonies. The 4th Earl's concerns, however, may have been more to do with trying to improve a means of coke manufacture while deriving useful by-products from the process.[240]

In 1813 the Earl employed T M Parker, the former manager of a 'colour works' at Newcastle, to carry out extraction experiments. Parker began with the limited production of coal tar in a barn at Skiers Hall, using a 'close distillation' process involving two stills cast by Walkers and Co, probably at the Milton Ironworks. The first attempts produced quantities of good coke that was tried in the furnaces at Milton and Elsecar, but little tar, though after resetting the condensers he had better success.[241]

Although Parker may have acquired some experience of the process at the British Tar Works in Newcastle and perhaps at Dundonald's works near Leith, he does not appear to have been particularly expert in the field; indeed, a report by the Earl's agent revealed a disastrous past business record and suggested that Parker was an impractical schemer with an insufficient knowledge of chemistry. Nevertheless, he seems to have retained the Earl's confidence and in 1814 he was employed (albeit under close supervision by the Earl's steward Joshua Biram) to construct and manage a further 10 experimental stills at a site located close to the New Colliery and Darwin's Elsecar Ironworks, in the area now called Distillery Side (*see* Figure 36). The new stills were manufactured at the adjacent ironworks, and the works were evidently sited to provide a ready supply of coke for their furnaces, as well as

to benefit from the adjacent colliery (Biram added a rail branch and tippler in early September). But the venture was beset by technical problems including regular explosions, such as one on New Year's Day 1815 when the top of the second still was 'blown out' and the condenser 'blown to atoms'. In August one of the condensers was 'blown to shivers' and a valve sent flying into the canal. Despite these and other difficulties Parker did develop a wide market for Elsecar's tar, varnish, lamp black, spirits and coke. But any success was outweighed by the cost of replacing equipment and structures, and by Parker's inadequate accounting. The venture made substantial losses and lasted only until 1818 when the Earl called time, having decided to disregard Parker's entreaties to expand the concern to 20 stills.[242]

Gas comes to Elsecar 1857

The *Sheffield Independent* reported the opening of a new Gas Works in Elsecar on the 5th December 1857.[243] The mains were laid to Stubbin, Hoyland, Wentworth, and Tingle Bridge, and a number of establishments were said to have 'illuminated the fronts of their premises', including the 'Model Lodging House'. The market was also said to have been '... unusually thronged, a great number of people being attracted by the novelty of the thing, and the weather proving very favourable for an exhibition of the sort'. The gas works were first shown on a plan of proposed railway sidings dated 1859 (*see* Figure 42), with a single gas holder and retort house located to the north-east of the workshops. From 1863 it was known as The Elsecar, Hoyland and Wentworth Gas Company.[244] The gasholder, which had a decorative iron frame (Figure 23), is shown in photographs dating to the late 19th century. By 1892, the OS map shows that the site had expanded, and a further gas holder had been erected to the north.

Gas lighting was introduced into the collieries shortly after the gasworks was opened. *The Welshman* reported in June 1858 that gas light had been installed in all the board-gates and stables. If this proved successful, it was proposed that gas would be set up in all parts of the underground workings, even including the Davy lamp. By 1904, the Company provided 1293 meters of gas.[245] Frank Bird remembered walking past the site of the gasworks on his way to work at the workshops in the 1940s/50s and noted that they also '... provided the illumination in the old days of the Works'.[246] A detailed plan of the site drawn up in 1949 showed the retort house with retort beds, boilers, condensers, chimney, gas holder and other gas manufacturing equipment to the south-east of Wath Road and the oxide shed, purifiers, stores, blacksmiths and second gasholder to the north-west (Figure 24). The buried remains of the sodium chloride beds in the purifier house showed up as parch marks in the field to the north-west of Wath Road during the hot summer of 2018.[247] The Gas Works were closed by the Gas Board in September 1970 and, by May 1972, was almost demolished.[248]

Fig 23. Gasholder on Wath Road, late 19th century. Keith Robinson Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies.

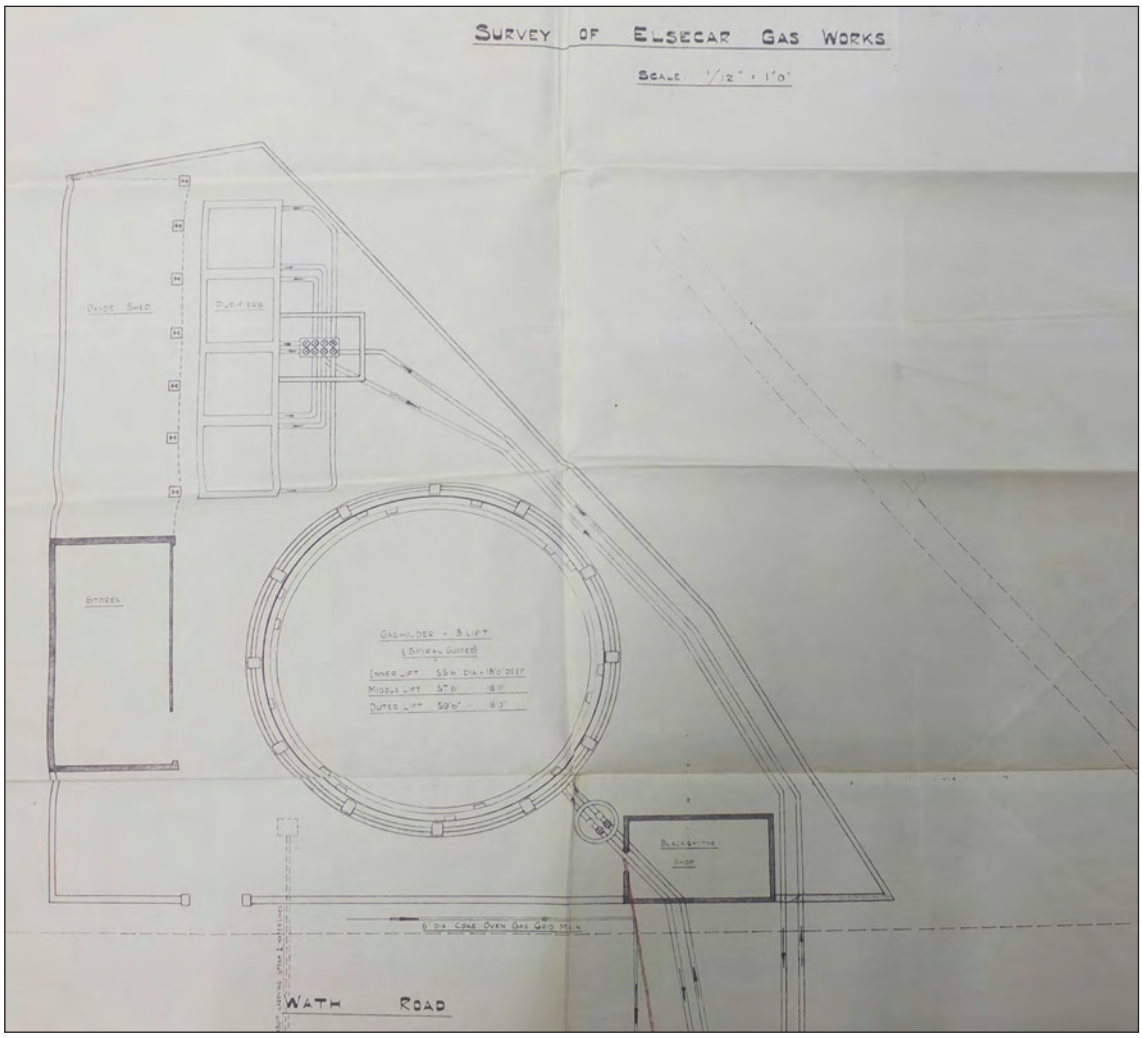


Fig 24. Sheffield Gas Company Survey of Elsecar Gas Works 1949. Reproduced with the kind permission of Barnsley Archives and Local Studies, UDC Plan 1447.

ELSECAR IN THE 20TH AND 21ST CENTURIES

Coal Mining in the 20th century

Elsecar Main Colliery 1908-1983

Following the closure of Simon Wood Colliery in 1903, Elsecar Main Colliery, situated on a site near Tingle Bridge to the north/north-east of Elsecar Village, was opened in 1908. The Colliery mined the Parkgate seam, and later the Thorncliffe and Silkstone seams. The Barnsley seam had, by this time, been exhausted by the earlier mines at Elsecar.[249] Hemingfield Colliery continued to operate until 1920, when it was repurposed as a pumping station.[250] The first sod of the number 1 pit at Elsecar Main Colliery was cut in July 1905.[251] The shaft was 16 feet in diameter, and when it was 33 yards deep the Blackledge brothers took over the sinking of the rest of the shaft. They reached the Parkgate seam of coal which was 4 feet 6 inches thick, at a depth of 344 yards 1 foot in September 1906. The first sod of the number 2 shaft was cut in September 1906. This shaft was 18 feet in diameter and when it was 35 ½ yards deep, the sinking was taken over by a William Joyner. The Parkgate seam was reached in February 1908 at a depth of 350 yards. The sinking was continued to the Thorncliffe seam and in 1925 the shaft was deepened to the Silkstone seam, 450 yards deep. The above ground buildings itemised in the building accounts for the Colliery included engine houses for the No. 1 and No. 2 pits, a tower over the No. 1 (upcast) pit, the pit bottom for the No. 2 pit, a fan engine, chimney, screen walls, a lamphouse, powerhouse and cooling tower, a wagon weigh, and retaining walls to Royds Lane and Wath Road.[252]

Fig 25. Simon Wood Colliery (foreground) and Elsecar Main Colliery (background) *c* 1911. Keith Robinson Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies.

Shortly after it opened, King George V, the Archbishop of York and Earl Fitzwilliam descended the shaft to view the works at Elsecar Main Colliery as part of the Royal visit to Elsecar in July 1912 (Figure 26). The newspaper report in the *Sheffield Daily Telegraph* summarised the underground tour and described the various features of the coal mine:

> While waiting [for the King], we had time to look round at the lofty, bricked, whitewashed pit bottom. The roof was something like 25 feet high, and there was very little, apart from the men working there, to suggest that one was in a coal mine. On the main road leading to the workings were many full tubs of coal waiting to be brought to the surface.[253]

The King was taken to the lamp room and to stables, '...which seemed to have been fashioned after the pattern I saw at Wentworth last Sunday. Except for the darkness, no one visiting the stables could imagine that he was in a coal mine.'[254] He was then escorted to the coal face, where he saw the colliers at work, before completing his tour with a visit to the electric power house.

In July 1929, the coal output at Elsecar Main Colliery was reportedly 3,500 tons per day, over two shifts.[255] The output had risen steadily since it opened at the beginning of the 20th century. In February 1908 the colliery produced 71 tons of (mixed) coal, and in January 1914 it had reached 10,000 tons over the course of a week.[256] A report on Elsecar Main Colliery compiled in 1930 explained the methods of working.[257] The downcast shaft, which extended to the Parkgate seam was used for winding coal, and the upcast shaft, which reached the Silkstone seam, was used for winding

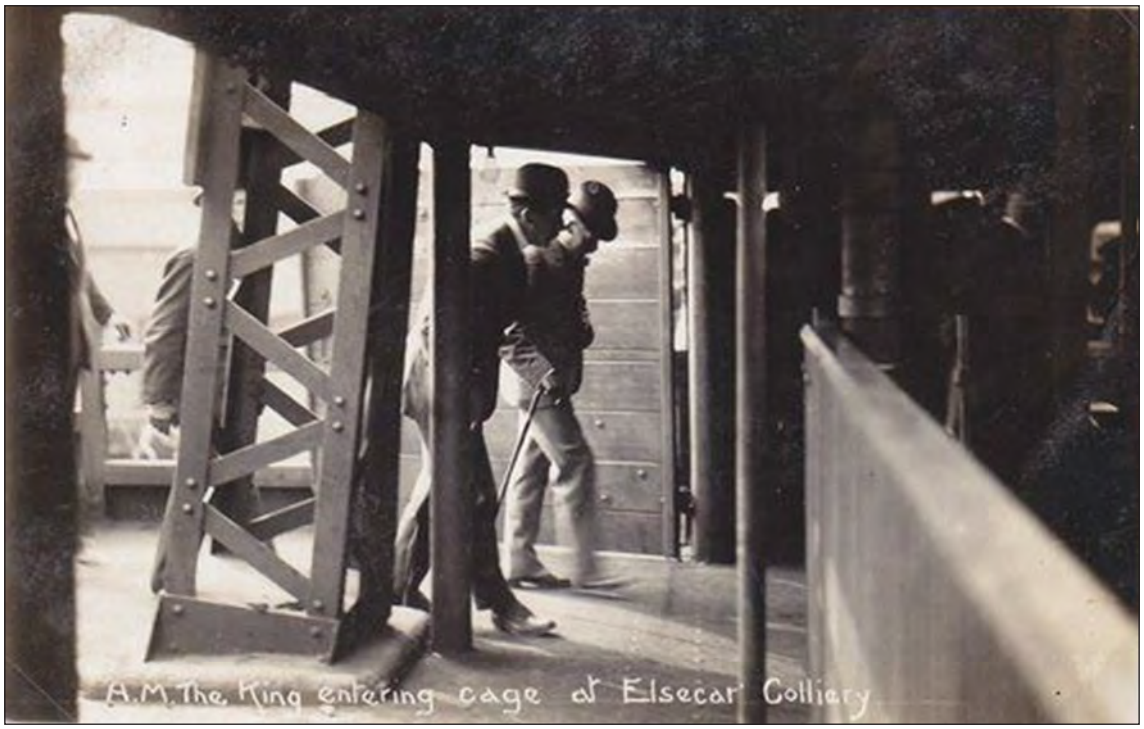


Fig 26. The King entering the cage at Elsecar Main in 1912. Reproduced with the kind permission of Barnsley Archives and Local Studies.

men and materials only. A cross measure drift extended from the Parkgate seam to the Silkstone seam where coal was wound from the Parkgate level. The cage carried six tubs, three on each of two decks. The head gear was a steel lattice with steam winders, reaching 90 winds per minute. The Parkgate seam was well advanced, with the furthest face three miles out. It was worked entirely by hand using the longwall method. The Silkstone seam was in the process of being opened up, and only one 80 yard face was worked at this time. This coal was cut by machinery and then blasted using explosives before being won using pneumatic drills. The coal was placed onto a shaker (trough) conveyor which discharged into a gate loader. The main haulages were powered by electric, and the conveyors and picks by compressed air. Around 2,000 men were employed at the mine, working alongside 35 ponies.

The National Coal Board (NCB)

On the 1st January 1947 the coal industry was nationalised and the National Coal Board (NCB) took over the ownership of the Fitzwilliam collieries in Elsecar. As with other collieries across the country, a sign was hung outside the collieries which read 'This colliery is now managed by the National Coal Board on behalf of the people'.

Following nationalisation mining at Elsecar Main became increasingly mechanised. From the early 1940s a new method of coal-getting was developed, which enabled the coal to be stripped from the coal face by a machine without prior preparation in the form of cutting and shotfiring. The idea was that the machine would load the coal directly onto the conveyor as it stripped it from the face. This system of mining was to be known as 'Continuous Mining'. Subsequent design and research work led to the development of the Sampson Stripper, which was tested on a retreating panel in the Parkgate Seam at Elsecar Main Colliery in 1948.[258] The steam winding engines were upgraded to electric in 1959. David Camm, who worked at Elsecar Main as a Fitter, described the Winding House and old steam engine with affection:

> ... and like a palace it was. The floor all done in red-brown tiles, the walls were of white tiles with huge glass windows that opened like double doors on to a balcony overlooking the boilers and shaft top. In the centre of the building was the engine, a magnificent piece of machinery. Gleaming, highly polished piston rods, brass slippers that shone like gold, even the handrail that guarded the engine shone from the continuous rubbing and wiping by the engine house attendant.[259]

A number of changes were made to the workshops when it was taken over by the NCB. As outlined in Frank Bird's recollections, the complex began to specialise in the repair of powered roof supports:

> Central Workshops throughout the Coal Board were going to be reorganised into repairing just one of the items which were required by Collieries to produce coal. In their wisdom, the High Command decreed that Elsecar Workshops would repair powered roof supports. The days of holding the roof of the coal seam up with wooden bars or planks, with pit props wedged underneath them while the coal was extracted, was long gone. Everything that could be was mechanised ....[260]

Fig 27. Aerial photograph of Elsecar Main Colliery, taken before the site closed. The car park and coal stack can be seen in the foreground. The chimney, winding gear and coal preparation plant are visible at the centre of the complex. Aligned in parallel with the canal are a series of slurry settling beds. Reproduced with the kind permission of Barnsley Archives and Local Studies.

The reorganisation of the New Yard site involved the closure of the Blacksmiths' Shop which occupied the northern part of the long range to Wath Road (Building 11). A new brick structure built alongside the Blacksmith's Shop became the Leg Shop, where hydraulic legs were repaired. This new building had tall metal-framed windows and an asbestos roof, and was in stark contrast to the earlier buildings of the New Yard complex (Figure 28).

A number of additional brick buildings were erected within the workshops as the operations developed over the course of the second half of the 20th century. These included a large building at the southern end of Building 17, which completely obscured the western elevation of Building 22 (Figure 29) and a long, narrow extension to the eastern aisle. These buildings have now been demolished. A single-storey structure (Building 20b) was constructed at the south end of Building 21, along with a small structure towards the northern end (Building 21a and b). Two further extensions were also built onto Building 1. A large metal-framed building (Building 18) was also erected in the open yard space to the south of the site. This was originally clad in corrugated metal. In 1980 a large warehouse for the storage of powered supports and associated components was constructed on land to the north of the workshops.[261] This building (now demolished) is better known as 'Dawson's', after its most recent occupants, Dawson's MMP Ltd.

Fig 28. Photograph of the Leg Shop, taken in 1987. John Hislop Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies.

Fig 29. Photograph of the large NCB building at the southern end of Building 17. Reproduced with the kind permission of Barnsley Archives and Local Studies, Elsecar NCB workshops archive photo 11.

Open-Cast Mining

Aerial photography shows that open-cast mining works were carried out across the Fitzwilliam Estate in the 1940s and 1950s (*see* Figure 2). An aggressive rolling programme of open-cast extraction moved through the landscape around Wentworth Woodhouse and Elsecar, extracting and reinstating parcels of land over a relatively short number of years. Open cast mining in Wentworth had begun by 1945, and by 1947 had encroached on the grounds of Wentworth Woodhouse, while the Fitzwilliam family were still in residence. Aerial photographs show large spoil heaps on the southern side of the main path leading up to the west front of the house. During the 1950s almost all open areas on the Estate not under tree cover were subject to extraction.[262]

In Elsecar, the area to the east and west sides of the lane from Skiers Hall to Burying Lane, covering a total area of 6.14 hectares, was subject to open cast mining.[263] The western area (1.66 hectares) was worked in 1943; the eastern area between Skiers Hall lane and the reservoir (4.48 hectares) was opened in 1953 and had been reinstated by 1955. In the latter area, shallow and perhaps very early pillar and stall coal workings were said to have been revealed in several places, though these were not recorded in any detail. The opencasting in this area also removed the remaining traces of the former route of Skiers Hall lane to Water Lane, which survived as a tree-lined avenue up to the edge of the reservoir in 1905, and as a field boundary in 1930. Revered Walter de Voil, writing in 1943, noted that:

> Skiers Hall at the present time is the scene of certain War work which temporarily destroys the beauty of the adjacent fields. Here Sir Lindsay Parkinson and Co., Ltd. are operating plant to remove outcrop coal, which is found just below the ground surface. The top soil will be replaced when the coal seam is exhausted.[264]

Aerial photography shows that land surrounding Low Wood, Kings Wood and Simon Wood, and possibly as far as Linthwaite Farm, was also mined in this way in 1945 and 1947, with the land reinstated by 1948. This quick turnaround could suggest that mining began prior to 1945. The material extracted from these locations was probably processed at the nearby Elsecar Main Colliery.

Elsecar Heritage Centre

The closure of Elsecar Main Colliery in October 1983 brought an end to coal mining in Elsecar. Following uncertainty about their future, the surviving structures of the Central Workshop, including those which had formerly been part of the Elsecar Ironworks and the New Colliery, were acquired by Barnsley Council in 1988. The buildings of the workshops were the subject of an extensive and award-winning renovation project which involved the demolition of a number of later NCB sheds and buildings, and the conservation and repair of key historic structures.

The site was re-opened in the early 1990s as the Elsecar Heritage Centre. In the early years the council received support from a volunteer group - the Cortonwood and Elsecar Project Group - which had been established in the mid-1980s with the aim of preserving the industrial and social heritage of the Elsecar to Cortonwood valley. That group also worked with the Council to undertake important conservation works, including on the canal.

The Heritage Centre initially comprised of a small brewery, craft shops, artist studios, with a compact 'Elsecar Story' museum offer built in the former Earl's Railway Station (Building 13 *see* Figure 60) and an impressive hands-on science park - the Powerhouse - created in the former carpenters' workshop/fitting shop (Building 17). Slightly later, an events space was then opened in the former rolling mill – known as Building 21. Over the next few years, the fortunes of the site fluctuated in terms of visitor numbers with the result that, in the early 2000s, the Elsecar Story and the Powerhouse were closed down and their collections and exhibits redistributed to other sites in the region. Since around 2010, there has been an ongoing process of renewal. In 2011, a small Visitor Centre was opened in the former NCB medical centre (Building 10). The conservation of the New Colliery and its beam engine was completed in 2014. In 2015, the impressive arched entrance to the ironworks (Building 3) was saved from potential demolition and is now home to four businesses. Visitor numbers have been steadily growing in recent years and the site has become a popular leisure destination.

Elsecar Heritage Railway opened in the mid-1990s as part of Elsecar Heritage Centre and runs on the former Elsecar Branch of the South Yorkshire Railway.[265] The track was relaid and the platform and bridge constructed to serve passengers – for the most part re-using historic railway structures from elsewhere in the borough. Initially the railway was run by volunteers under the auspices of Barnsley Council. A lease was granted transferring responsibility for the operation and future development of the railway to the Elsecar Heritage Railway Trust in 2006. The Railway is now exploring the potential to extend the line to Cortonwood.

Parks, sporting events and recreation

Public events and social gatherings in Elsecar were traditionally held on the site of the Market Hall (Milton Hall) on the corner of Fitzwilliam Street and Wath Road.[266] At 'Feast' time - the weekend following Whitsun (the 7th Sunday after Easter) - a fair with swings and roundabouts and other attractions was held there. When the Market Hall opened in the 1870s, this annual event was relocated to the Crab Field, an open plot lying to the south/south-west of Fitzwilliam Street, between Armroyd Lane and Wentworth Road (Figure 30). This move opened up more space for side-shows and amusements, and drew in a larger crowd of people.[267] On the 2nd June 1877 the *Barnsley Chronicle* reported that: 'The two days of the year which perhaps are thought most of by the rising generation of the entire Hoyland township were spent in the customary manner at Elsecar on Monday and Tuesday last. Never has there been such a turn-out of both old and young as there was on these two days.'[268] In 1900 the Feast was held across three days, by which time one of the main attractions was the 'modern cinematograph', which showed motion pictures. This would have been quite an opportunity for the residents of Elsecar; the cinema on Hill Street was established over a decade later, in 1912 (Character Area 6).

Fig 30. Crowds flocking to the annual Elsecar Feast in 1913 along Fitzwilliam Street. A 'Hospital Sing' was organised as part of these celebrations, which raised money for local hospitals. Reproduced with the kind permission of Barnsley Archives and Local Studies.

The Crab Field was also home to the cricket and football clubs, as well as an annual flower show which was held in a marquee before later moving into the Market Hall.[269] Earl Fitzwilliam was instrumental in the setting these up, and was said to have acquired a field 'for cricket and other games' in 1857.[270] By 1867 it had grown into '... a spacious cricket ground, in which many an athletic and healthful contest has taken place with neighbouring disciples of the bat and wicket, attest[ing to] his lordship's concern for the recreation and improvement of his tenants and workpeople'.[271] Elsecar Cricket Club enjoyed a period of success in the 1880s, when it won the Wake Challenge Cup for three years running.[272] The football ground was later moved to the north of Armroyd Lane, and tennis courts were erected next to the cricket pitch.[273]

From the early 1900s, Elsecar reservoir became a popular visitor destination.[274] In 1910, Sheffield barber and keen photographer Herbert Parkin, who had recently moved to Stubbin Hill, sent a number of images of the reservoir and surrounding area to the *Sheffield Star* newspaper. The newspaper published the photographs with the subtitle 'Elsecar-by-the-Sea', which caught readers' attention and promoted the village of Elsecar as a place to visit. Day-trippers from Sheffield could easily get there by rail, and Elsecar reservoir subsequently became a popular tourist spot. Building on its increased popularity, an artificial beach was created along the north side of the reservoir and boat rides could be taken out across the water (Figure 31). By the late 1920s, the area to the north of the reservoir had also been transformed into a landscaped park known as Elsecar Park, with footpaths and bridges over the Dike, and amenities including a refreshment room and a band stand (Figure 32). Bandstand concerts also became popular, and continue to be held in the Park during the summertime.

The sites of both the Elsecar and Milton Foundries were also used for leisure pursuits. Following the closure and partial clearance of the Milton Foundry, a rifle range was opened there in 1911 (*see* Figure 22). The former marshalling yard of Elsecar Foundry (known locally as 'Furnace Field') was also used as a football field and fair ground for a number of years (*see* Character Area 1).

Fig 31. Elsecar-by-the-Sea with open cast mining at Wentworth Woodhouse in the background. Reproduced with the kind permission of Barnsley Archives and Local Studies.

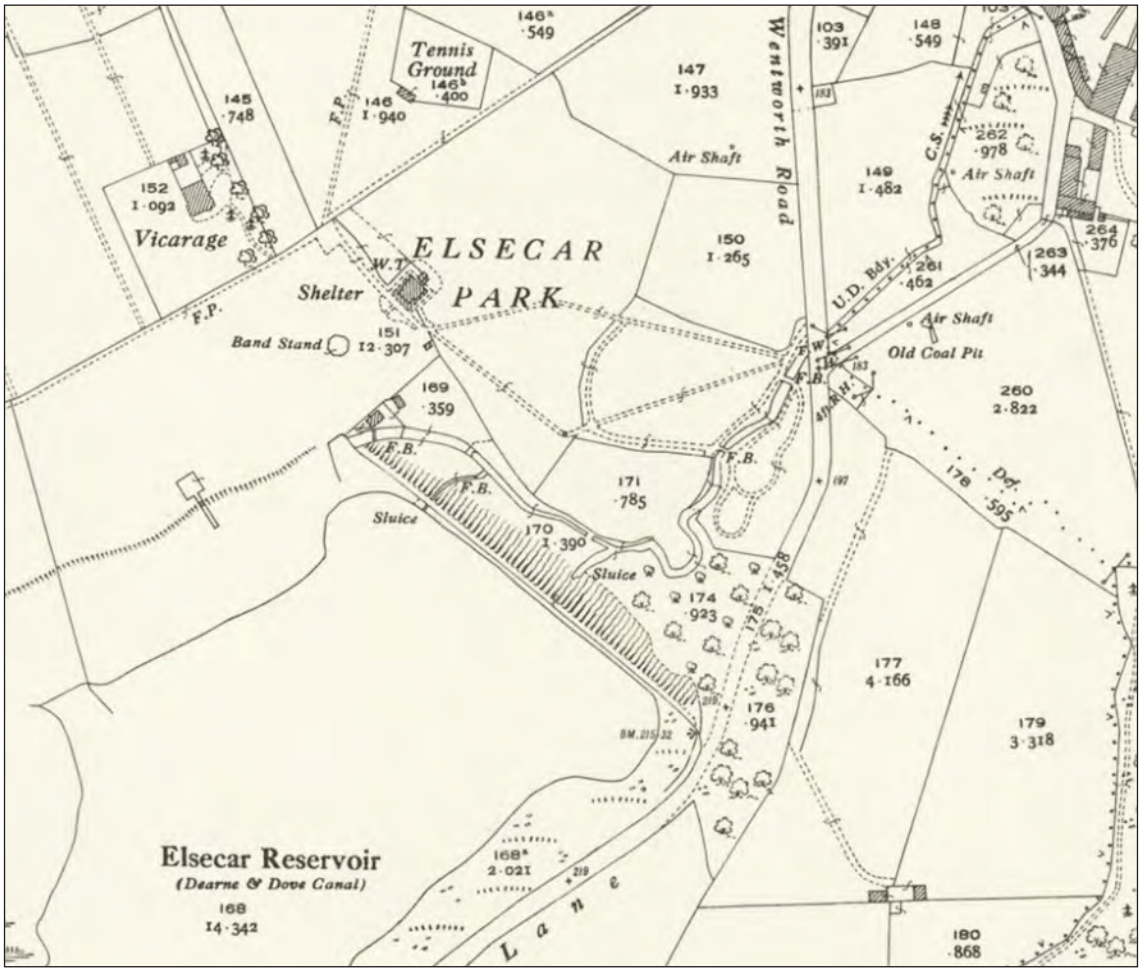


Fig 32. Extract from the 1930 25 inch Ordnance Survey map showing Elsecar Park. © and database right Crown Copyright and Landmark Information Group Ltd (all rights reserved 2018). License numbers 000394 and TP0024.

CHARACTER AREAS

A single map showing all eight Character Areas covering the HAZ can be found at the back of this report (Figure 201). Each Character Area chapter is illustrated by a relevant extract from that map.

Character Area 1: Elsecar Heritage Centre

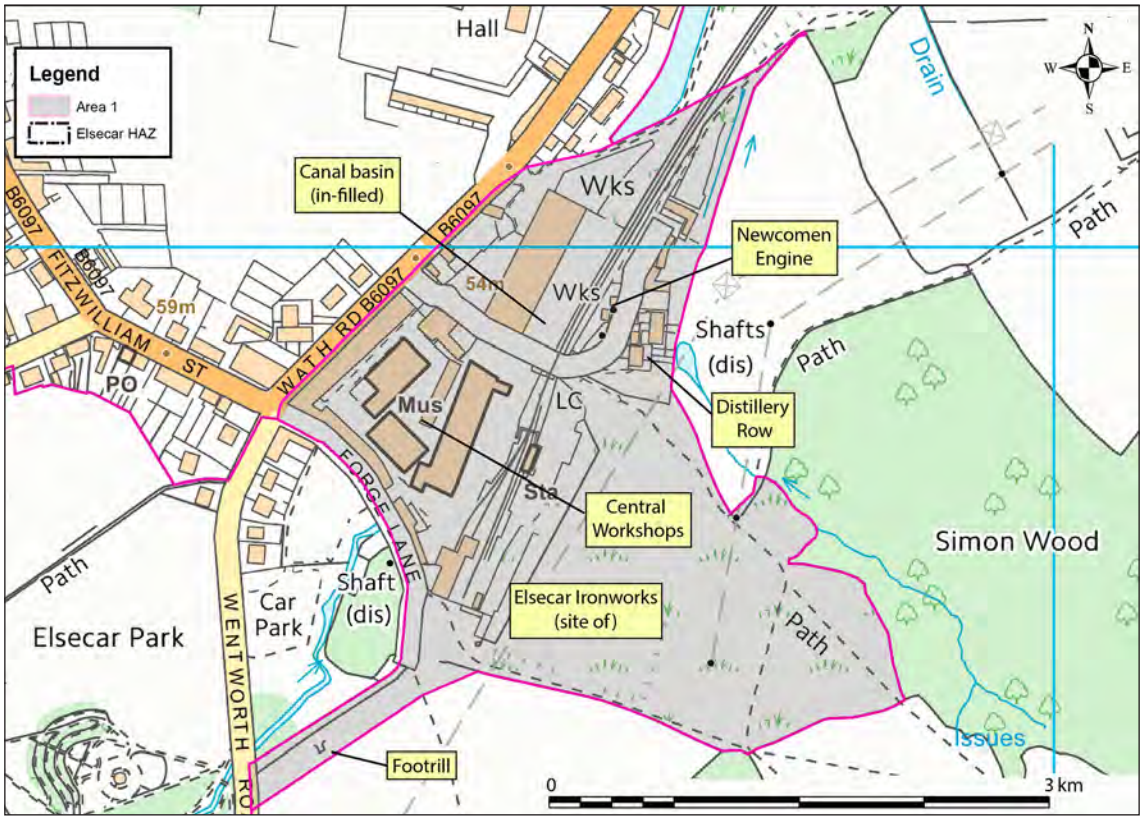


Fig 33. Detail from Figure 201 showing the extent of Character Area 1. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

Character Area 1 includes above-ground remains of Elsecar Old Colliery and Lowwood Colliery, Elsecar New Colliery (1795 - mid-1850s), Elsecar Ironworks (1795-1885), the workshops (1850), the former canal basin (1795 – mid-19th century) and the Elsecar Branch of the South Yorkshire Railway (1850s). In addition to these industrial complexes are the remains of the gasworks (1877) and the domestic buildings in Forge Lane and Distillery Side. The built environment of this area is highly important for understanding and communicating the history and development of the coal mining and ironworking industries in Elsecar in the late 18th and 19th centuries. It was one of the two major centres of industry in the HAZ, and the most enduring.

Elsecar Old Colliery and Lowwood Colliery

The only mining feature which survives above ground that relates to the early 18th century collieries is the grade II listed footrill (a pedestrian mine entrance) to the south-east of a public footpath extending from the south end of Forge Lane to Wentworth Road (NHLE No. 1315026). The mine entrance is overgrown with vegetation, though part of a dressed sandstone retaining wall with two openings was visible at the time of inspection. To the left is a quoined pedestrian entranceway with a rebated surround and a substantial lintel. It is now fitted with a square-latticed iron door. To the right is a shallow brick-lined recess with a wide, sunken-arched entranceway with voussoirs and jamb stones. It is unclear what this recess was used for, though the brickwork was probably added later, and the opening may originally have functioned as a second, wider entranceway into the mine. There is an iron plaque mounted above the left-hand entranceway which reads: 'THE FOOTRILL Opened in 1723. Entrance to the Mineworkings of Law Wood Colliery, Also to Elsecar Old Colliery'. According to Clayton, stonemasons received payment for walling the entrance to this footrill in 1820.[275] Elsecar Old Colliery and Lowwood Colliery were active from the early 18th century, so it is possible that this reference refers to either the remodelling or rebuilding of an existing entranceway. The Earls regularly used the footrill to take parties of aristocrats and royal acquaintances down into the Elsecar mines on tours to admire the underground workings and perhaps also to hunt for fossils, something which the mines became well-known for.[276]

Fig 34. Historic Photograph of the footrill to Lowwood and Elsecar Old Colliery, date unknown. © Keith Robinson Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies.

Fig 35. Footrill to Lowwood and Elsecar Old Colliery, heavily overgrown, L Jessop. July 2017. © Historic England.

Elsecar New Colliery: The Newcomen Engine

The only surviving above-ground structure directly related to Elsecar New Colliery is the house for the Newcomen engine (Figure 36), which was constructed in 1795 to pump water from the mining levels sunk between 1794 and 1795. The Newcomen atmospheric engine is the only 18th-century engine of its kind in the world that is still at its original site.[277] The engine and its house is a designated scheduled monument (NHLE No. 1004790). The engine house is a tall, roughly square-shaped structure of three storeys with a gable roof.[278] It was built of coursed sandstone with tooled and margined quoins to the corners, and string courses between each of the floor levels. The south wall is a thick bob wall, designed to take the weight of the cast iron beam housed at third floor level. There is a pedestrian doorway to the west elevation with quoins forming the door surround and a stone lintel bearing the date 1787. It is unclear what this date represents, as documentary evidence has established that the engine, and the engine house, dates from 1795. An arched opening to the ground-floor north elevation (now blocked) would have originally provided access to external boilers positioned to the north of the former engine house. Two vertical straight joints above the arched opening suggest that this feature replaced a smaller, earlier opening. A doorway at third floor level in the south elevation provides access to an external timber platform positioned over the beam and pump shaft.

Fig 36. (a) The Newcomen engine with 20th-century brick pump- and fan house in the foreground, Alun Bull, October 2017, and (b) looking north-west showing the current boiler and the base of the former chimney behind, L Jessop, June 2017. © Historic England.

There are window openings to the first- and second-floor north elevation, and ground-floor south elevation. They each have monolithic stone lintels which are scored to appear as though they were formed out of a series of individual blocks. The openings to the north elevation have concrete sills. The windows take the form of vertically-sliding Georgian sashes, although they are probably replacements. There are areas of disturbed stonework, blocked up openings, empty mortice holes, and metal fixings across each of the elevations, which are remnants of the changes associated with the continued working life of the building.

The interior is dominated by the engine (Figure 37). At ground floor level there is a cylinder with a steam admittance valve on the north side connected to the external boiler, and a water injection value to the south side for cold water. Below ground is an eduction pipe for draining off the condensed hot water and a hotwell for collecting the water before it was recirculated for reuse in the boiler. At first floor level is a piston which extends from the top of the cylinder to the cast-iron beam at third floor level. Between the second and third floors are two huge timber beams running from north to south which function as supports for the cast iron pivot beam. There are two chimneystacks to the east and west elevations, and diagonally-set fireplaces in the south-east corner at ground floor level and south-west corner at first floor level. The fireplaces have monolithic stone lintels and jambs. Staircases provide access between the floors.

Other structures and features surrounding the Newcomen Engine include the lower section of the former chimney, the footprint of a former boiler house, the pump shaft and a 20th-century brick pump and fan house. The chimney base is situated at the north-east corner of the Newcomen engine house and is a square-shaped, stone structure which tapers towards the top. The 1849 Plan of Milton and Elsecar Iron Works shows a long, rectangular-shaped engine house which probably housed a so-called 'wagon' type boiler, which was common to engines built in the later 18th century.[279] By 1859 the boiler house had either been replaced, or reduced in size, as it was depicted as a much smaller structure.[280] The remains of the boiler house consist of a brick wall to the north of the engine house, and brick and stone floor surfaces. An archaeological excavation of this area in May 2019 revealed the ground floor plan of the boiler house and a number of internal features.[281]

The pump house is a small rectangular brick building with a flat, concrete roof. It replaced an earlier, narrower structure identified on the 1892 OS map and probably dates to the late 1930s or early 1940s. The concrete roof is visible to the external elevations as a string course and has a crenelated brick parapet above and a dentilated cornice below. There are several inset panels around the structure, a pedestrian doorway to the east elevation and central double-doors flanked by windows (now blocked) to the west elevation. The building houses switches for pumps and ventilation fans, and was still in use by the National Coal Board in 1989. A second shaft with a concrete headstock, which originally functioned as a winding shaft for the late 18th- century New Colliery (and later as a ventilation shaft for Simon Wood Colliery and Elsecar Main Colliery), is situated directly to the south of the Newcomen engine.

Fig 37. The Newcomen Engine: (a) ground floor interior showing the cylinder (b) first floor interior showing the piston and staircase and (c) second floor interior showing the pivot beam, L Jessop, June 2017. © Historic England.

The Newcomen engine operated until 1923, when it was replaced by electric pumps. The boiler house was demolished in 1937 and the chimney was removed by 1931. Up until the 1950s, it was occasionally powered by steam piped from a Lancashire boiler in the Elsecar Workshops. In 2014 it was the subject of an extensive repair programme which brought the mechanism back into use, and enabled public access to the building.

Elsecar Ironworks

Mapped and physical evidence

The earliest known plan of the Elsecar ironworks is a sketch accompanying a letter among the papers of the 4th Earl, dated 1814 during the occupation of the first tenants, Darwin & Co.[282] This sketch, drawn from memory or perhaps based upon an estate map, shows a small cluster of buildings to the south-west of the canal basin, in much the same location as the later more extensive works (Figure 38). It depicts two quite substantial buildings, that to the south projecting considerably to the west, and a smaller detached building the north. The southern building could be the furnaces with an attached casting shed, with the house for the blowing cylinder and engine, as mentioned in the report of 1811, to the north; but the nature of the sketch is such that it cannot bear too much interpretation.

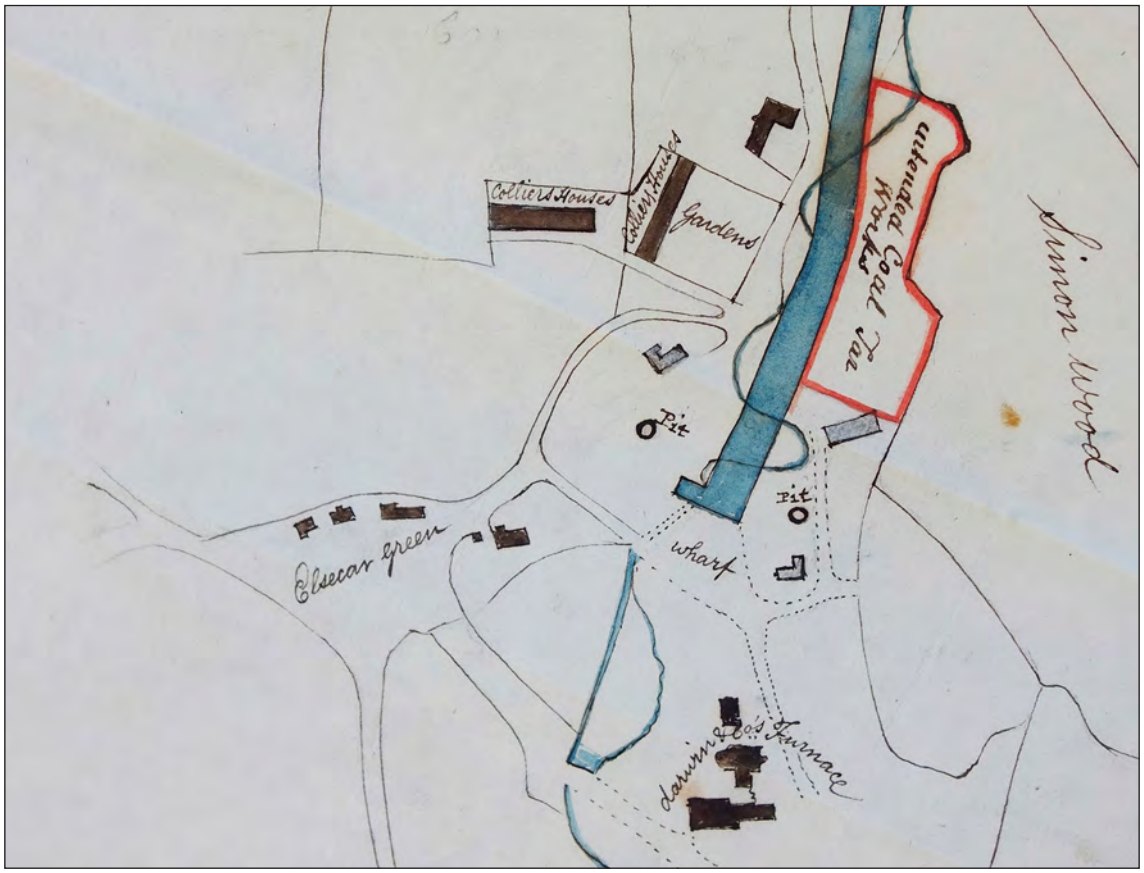


Fig 38. Sketch plan of the proposed new coal tar distillery to the east of the Dearne and Dove Canal in 1814, complete with the 'Darwin and Co Furnace'. Reproduced with permission from Sheffield City Archives, WWM/F/70/142 (see note in Archival Sources).

The orientation of the works on the 1814 sketch may be imprecise and it is certainly at variance with their next depiction on the Brampton Bierlow township plan of 1842 (Figure 39). This depicts a somewhat different arrangement of more buildings set closer to the Harley Dike or Knoll Beck, still with the largest structure (a combined furnace and casting house perhaps) to the south-west. While the township plan may have a claim to greater accuracy than the earlier sketch, its accuracy may also be questionable where elements which were not subject to tithes, such as ironworks, were concerned.

The first reliable mapped evidence dates from 1849 when the ironworks were surveyed for the first edition OS map published in 1855 (Figure 40 and 199). The works at this time, in the last days of their direct management by the Earl's estate, appear to have little in common with those shown on the earlier sketch and map, though it is quite probable that their furnaces had been renewed and rebuilt without a radical change of location. The buildings are depicted with far greater precision and accuracy, and oriented with the valley side and partly overlying the older course of the brook which is still perpetuated by the line of the township boundary.

Fig 39. Detail from the 1842 Plan of the Township of Brampton Bierley (sic). Reproduced with permission from Sheffield City Archives,WWM/MP/134 (see note in Archival Sources).

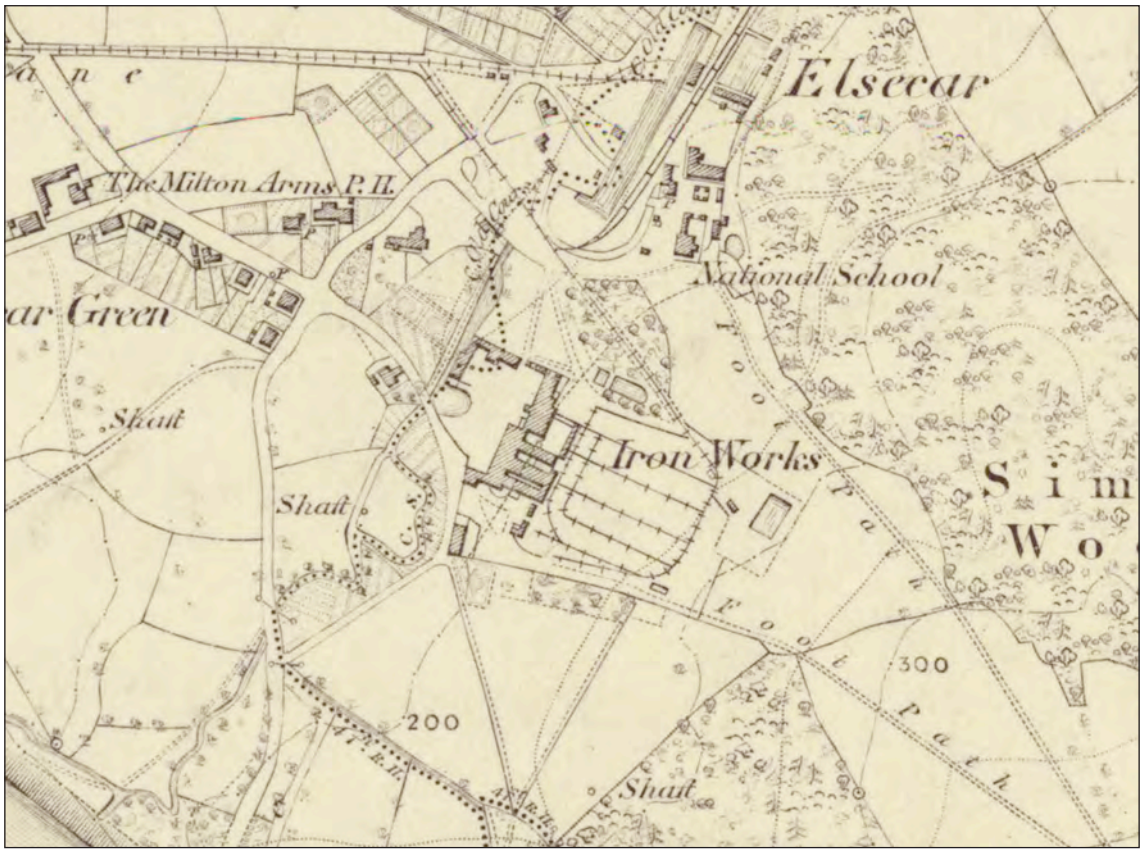


Fig 40. Extract from the Ordnance Survey 1st edition 6-inch map, Sheet 283 surveyed in 1849-50, published in 1855. Reproduced with permission from the National Library of Scotland.

The three narrow parallel ranges straddling the contour of the slope represent the three blast furnaces, the bridges used to transfer the charges of iron, coke and limestone to the furnace tops from the marshalling area to the east, and their respective casting houses projecting from the base of slope. The building to which all three furnace structures are joined must comprise the forge with other processes continuing into the northern extension and other buildings around the works yard. Supplies from the collieries and ironstone mines were drawn to the marshalling yard via a light railway which was linked to the inclined plane from Milton, and recently connected to the South Yorkshire Railway which was being laid alongside the canal when the map was surveyed.

The works are depicted in greater detail on a set of near contemporary plans held in the Barnsley Archive. These show the ironworks as leased to the Dawes in 1849, some copies clearly annotated for later use in the legal dispute between the Dawes and the Earl around 1860-1. Two versions of the plan show both the Milton and Elsecar ironworks, one plan perhaps a close copy of the other, or both being copies of a third plan now missing. Two further copies show the Elsecar works alone.[283] The Elsecar works are similarly depicted on all four plans, one of which is reproduced here as Figure 41.

Fig 41. Detail from '*Plan of the Elsecar and Milton Ironworks*' showing the extent of the Dawes' lease (pink) in 1849. Reproduced with the kind permission of Barnsley Archives and Local Studies, 466 (R) 2.

The massive walls encasing the three blast furnaces are the most characteristic elements of the works, each pierced by apertures for the air blast nozzles, or tuyères, to either side and perhaps to the rear, with the forth openings for the tap holes and dams facing into the works. Walls for the charging bridges form corridor-like compartments to the rear of the furnaces, linked to a curious pattern of pipes or rails extending across the marshalling yard to the south-west. The railway lines leading to and surrounding the yard are marked in blue, the thicker part annotated 'Site of the old incline originally excluded by now granted to Messrs. Dawes'. This incline was operated from a winding engine, close to the weigh house, where the now level track entered a passage between solid walls or revetments to the rear of the yard.

The three ponds, one divided into two parts, surrounding the yard are small by the standards of those used to drive ironworks machinery at the time, certainly when compared to those at Milton. These ponds, derived from springs and by drawing water across the hillside to the south, must have been chiefly designed to supply

the works' boilers and engines. The closest association is between the largest pond and the adjacent winding engine, although buried pipes may have extended much further. Some of these pipes are mapped (as thin paired blue lines), in particular those carrying water from the double pond to a set of four long boilers located within the northern extension to the furnace row. There are two adjacent small square structures, either or both of which might be chimneys, the southernmost forming part of a more complicated structure which could have been the blowing engine house at the time. The casting house and its attached range to the north-west is similar in plan to that shown by the Ordnance Survey, except here, for reasons of clarity perhaps, the buildings are depicted roofless, as are the others along the north side of the works yard.

In 1849 the area to the north-west of the ironworks was yet to be developed for the Earl's workshops. The main gates to the ironworks appear to have been on Forge Lane to the west (at this time yet to acquire its characteristic curved perimeter wall) and to the north where a pair of pecked lines indicate an avenue between the outer boundary wall and the gate to the inner yard, complete with small gatehouse. The channel of the Harley Dike, later the boundary between the Dawes' and Earl's respective yards, remained visible on the surface providing water for the canal but also partly impounded to supply the works. Curiously, although land to either side of Forge Lane was included in the lease, this did not include the detached property alongside the land to the south, which given its proximity to the ironworks is unlikely not to have had some connection.

A map of the railway sidings and Elsecar works ten years later, in 1859, shows that considerable changes had taken place (Figure 42). The line of the former avenue to the north works gate had been overlain by the rolling mill, to the east of which lay three ranges of covered workshops, most probably containing puddling and finery furnaces to judge from the associated ranks of chimneys. A further covered workshop lay further to the east, replacing and extending the former buildings at the northern end of the blast furnace row. The boiler house seen on the Dawes' lease plan of 1849 is still depicted, but its function may have transferred to the southern end of the furnace row where a rank of six long boilers can be seen abutting a large rectangular building which is likely to have housed the relocated or replacement blowing engine, with the detached rectangular chimney base slightly further to the south.

The arrangement of the blast furnaces is far from clear given the schematic nature of the plan. It would appear that three furnaces are depicted, but these are not necessarily all same as those shown in 1849. The southern furnace, that enclosed by a dark wash (a roofed structure) appears to occupy the same position as the central furnace on the earlier map. This being the case, the old southern furnace would appear to have been removed and the one to the north replaced by two smaller furnaces, accompanied by two further furnace-like structures - calcining kilns perhaps, used to break down the chemical composition of the ironstone to produce iron oxide ready for smelting. The elongated building set into the bank to the rear of the furnaces seems little different from that shown on the earlier map, and provides a useful point of comparison when assessing these changes, as too the narrow building across the southern end of the works yard.

Fig 42. Detail from an untitled plan of the railway siding and Elsecar works, marked with the date 25 Nov 1859. Reproduced with the kind permission of Barnsley Archives and Local Studies, NBC 460a. Annotation on the reverse: Earl Fitz William & M.S. & L. late South Yorks Rway / Land at Elsecar / Sidings. Etc in Agreement of 1859 / 1879 April 8th Received From Mr Sacre (?) / Newman & Sons North is at the top left of the image as shown here.

The means of bringing materials to the marshalling yard had changed somewhat by this date. The incline railway appears to have moved slightly northwards to accommodate the works' growth and to link to a more complicated arrangement of sidings, junctions and branches, some of which clearly run into the heart of the ironworks. The positions of the winding engine house and weigh house remain largely unchanged, although further buildings have been added adjacent to the tracks. The tracks themselves are now shown as a complete circuit around the terraced yard, albeit with no details of the arrangements within.

The last known map to show the ironworks prior to their demise is that drawn up for the Brampton and Bierlow township in 1867 (Figure 43).

A precise depiction of the ironworks is unlikely given the scale and purpose of this map. However, it appears to be quite reliable where it indicates the expansion of the workshops or forges to match the scale of the adjacent rolling mill, and where it shows the complete workshop and cottage row along Forge Lane together with the projecting casting shed which is now used as an engine shed/workshop for the Heritage Railway. Most curiously the blast furnace row is barely depicted, although four circular rail terminals hint at the four furnaces which were to develop over the next few years. The other curious feature is the row of 11 ovens or kilns along the north side of the marshalling yard; these will be discussed in light of geophysical survey below.

By the date of the first OS 25-inch map (surveyed 1890, published 1892), the ironworks were no more. The OS depicts a boundary wall to the east and north, the former comprising numerous indents where former buildings were set into the rising bank. The rolling mill is extant, shorn of the forges and related chimneys to the east, and the cottage row on Forge Lane, complete with the single late casting shed. The furnaces and earlier casting sheds are gone. Only the southern building, that suggested above as the later blowing engine house, remains, together with a corridor-like projection to the west which was also shown (somewhat skewed perhaps) on the 1867 map).

Fig 43. Detail from the Brampton Bierlow Township plan 1867. Reproduced with the permission of the Sheffield City Archives WWM/ MP/115 (R) (see note in Archival Sources).

Early photographic evidence for the missing buildings

Barnsley Archive holds three photographs of the Elsecar ironworks in its later incarnation, each bearing the stamp of John W Wilson, architect and surveyor, Hoyland, and all loosely dated to the 1870s.

The first (Figure 44) shows the bank of blast furnaces in their final form: two pairs of plated, cylindrical furnaces, doubtless those mentioned in the local papers as being under construction from 1867 to 1871.[284] The two pairs, slightly different in design, are each served by a single bridge from the marshalling yard to the rear. In the foreground to the right stands the casting shed which appeared between the 1859 and 1867 map, now used as a workshop for the Heritage Railway and instantly recognisable from the three half-round ventilation holes in the gable. The building to the left is possibly that shown on the 1867 map, which might be part of a former casting house or even the earlier blowing engine house. The later blowing engine house, that indicated by the range of boilers to the south of the furnaces on the 1859 map, cannot be seen from this angle or through the haze, although the boilers' chimney is clearly visible rising behind the casting shed. Ironworks could be messy places, but the choked state of the yard suggests either that the rebuilding of the blast furnaces was barely complete and the detritus from the demolition of the earlier furnaces had yet to be carted away, or that this photograph was taken around 1880 when the final demolition of the works was underway. The broken windows in the left hand building and the blockage of rail access to the furnaces may favour the latter interpretation.

The second photograph (Figure 45) provides a view across the interior of the ironworks facing north-east from within the yard in front of the blast furnaces, a view which can be compared quite closely with the layout of the works shown on the 1859 plan (Figure 42).

In the centre of the picture are the two southern gables of the long thin sheds shown on the plan to the east of the main railway thoroughfare. The sheds are clearly separated by four double flue chimney stacks at the south end, as marked on the plan. At the north end a further chimney appears to have been added to the planned pair. Paired flues and open-sided sheds are characteristic of puddling furnaces of this date, and these are presumably just some of the 32 hearths which were in operation at Elsecar around this time. In between the stacks are three domed vessels (perhaps the circular items shown on the 1859 plan). These may be cupolas for further re-melting, or perhaps the vertical boilers mentioned in the 1870s which used to recycle heat from the puddling furnaces to serve the work's engines. In either case, they are clearly linked by elevated pipes carrying hot gases or steam.

In 2016 an archaeological watching brief was carried out during minor ground works to install drains and automated barriers in the area around the northern end of the long since demolished sheds. The excavations revealed a couple of railway sleepers, possibly in situ from the works wagon way which ran between them, and the inevitable layers of industrial waste. In addition, however, two trenches capped with iron plates were discovered, perhaps the armoured conduits from the period when the works were fuelled by the adjacent gas works.[285] The domed vessels and elevated pipework seen in Figure 45 could equally relate to that period in the site's history.

Fig 44. Photograph of the blast furnaces at Elsecar c 1870-80 taken from the north-west. Reproduced with the kind permission of Barnsley Archives and Local Studies 738/Z1/1.

Fig 45. A view of the Elsecar Ironworks c 1870-80 facing north-east from within the central yard. Reproduced with the kind permission of Barnsley Archives and Local Studies 738/Z1/1.

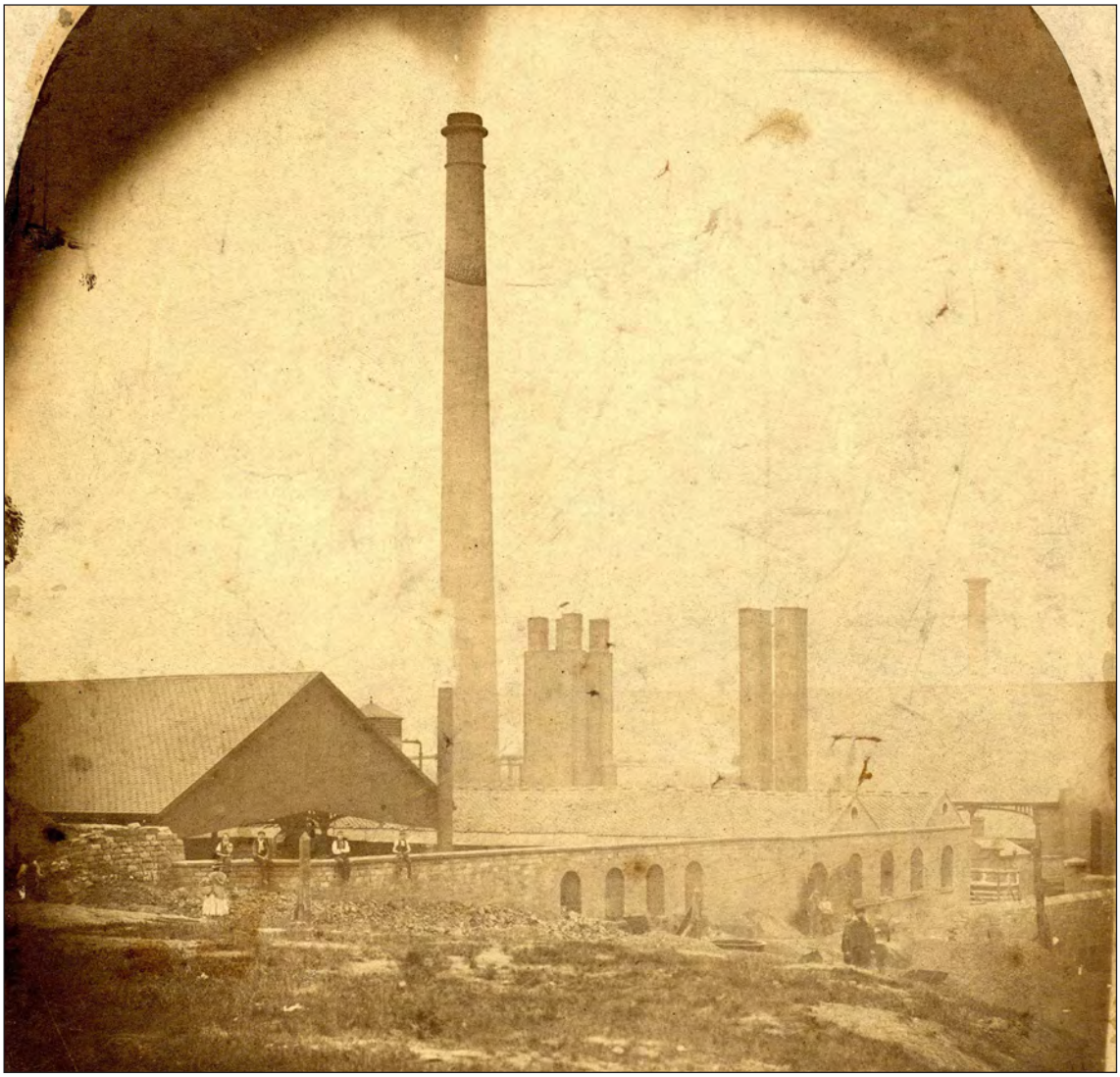


Fig 46. A view of the Elsecar Ironworks c 1870-80 facing south west from a point outside northern boundary of the works. Reproduced with the kind permission of Barnsley Archives and Local Studies 738/Z1/2.

The arrangement of sheds and domed vessels can be seen extending eastwards in a range which is not present on the 1859 plan, although the gable rising behind this range is surely that of the larger rectangular building, which is depicted. The growth of this area, presumably the amassing of various sheds and rows, is indicated on the 1867 township plan (Figure 43).

The left hand side of the photograph catches the north end of what appears to be the third and most westerly narrow shed shown on the 1859 plan, from which it would appear that at least one building shown along the southern end of the rolling mill in 1859 had since been demolished. The photograph also captures what appears to be the corner of the rolling mill, and the lower part of a chimney rising from the engine house at this end. The workmen clustered next to the wagons and the smoke rising from the chimneys indicates that the photograph was taken while the works were still in operation.

The third photograph (Figure 46) views the ironworks from the north-east, outside the northern boundary wall as it shown on the 1867 plan, quite possibly from a point on the edge of the cutting for the incline railway. In the near corner of the works, behind the men sitting on the wall, stands the large gabled shed which is glimpsed in the background of Figure 45. Beyond that lie the two longer and lower sheds with their matching gables built into the boundary wall, and beyond those stands the open-sided rolling mill. The groups of tall round-headed openings in the stone-faced boundary wall, including at least one doorway, are similar to the blocked examples at the eastern end of the southern boundary wall on Forge Lane. Aside from the boundary wall, the unique evidence in this photograph includes the full view of the immense chimney at what appears to be the southern end of the rolling mill (although the perspective is unclear), and a single recognisable cupola furnace peeking out from behind the foreground gable.

The Elsecar blast furnace today: physical and geophysical evidence

The physical remains of the blast furnace process at Elsecar are best described broadly in the order of the smelting process, which required the raw materials to be added to the top of the furnace for as long as it remained in blast, while the liquid metal was periodically tapped from the base. The charge comprised a mixture of combustible material, iron ore and other substances to improve the metal, which was brought to extreme temperatures within the body of the furnace by a constant blast of air.

From the outset, materials for smelting – iron ore, coal, coke and limestone - had to be amassed on the hillside above the blast furnaces. The 1814 sketch suggests that a lane led up from the canal basin to the rear of the furnaces, but the scale of the process demanded greater investment. A newspaper report of a fatality at the Ironworks in 1845 states that:

> ..adjacent to the iron works, there is a railway on which coals and ironstone are conveyed to the furnace by means of a rope which is attached to the engine which draws coals from the pit, and to keep the rope in its place there are pullies and horizontal wheels.[286]

This railway is shown fully established on the 1855 OS map (Figure 40). Its route is still partly visible on the ground, although its can be difficult to find in the dense undergrowth and self-seeded woodland which now covers the whole hillside to the rear of the works. The northern end of the incline is buried by dumps of soil and rubble along the base of the hillside, and towards the south it fades way where the route levelled off toward the eastern corner of the marshalling yard. In the middle, however, the cutting required to maintain a steady gradient is easy to find and follow, the channel measuring up to 1.5m in depth and 3m wide across the base over a distance of about 70m (Figure 47).

Fig 47. The deep cutting for the inclined plane. February 2018 © Historic England.

The site of the winding engine can still be found at the eastern corner of the yard, where it is depicted on the early OS map and lease plans. The walls have been robbed but a low rubble platform, 7m by 4m, aligned with the incline, marks the building's former extent alongside the suggestion of a pit for a horizontal wheel, as described above, or a turntable.

The adjacent weigh house, mapped on the inside curve of the wagon way, is less easy to locate, although a few slight earthworks still mark the spot. The pond to the east, which must have been the principle supply for the winding engine's boiler, is little changed: cut into the hillside above the engine house and retained by a bank, it is still seasonally wet and therefore choked with osiers and willow. The lower pond, now in thick scrub woodland adjacent to the incline, is dry and partial in-filled. The third pond, at the south corner of the yard, has been completely buried.

The route of the railway ran round the margins of the terraced yard which measures approximately 100m square, and it is still clearly evident as a level strip along the foot of the steep artificial scarp which defines the rear of the yard, although there is no sign of the flanking wall shown here on the lease plan. There are no obvious traces of its continuation along the south-west side of the platform, which is only marked by a ragged scarp, bounded along the base by the footpath to Wentworth.

The 1855 OS map (Figure 40) shows a pattern of four parallel lines crossing the yard from front to back. These are connected to and drawn in the same manner as the encircling railway and apparently formed part of the system for amassing the charge and carrying it forward to the furnaces in the correct sequence and proportions. The

near contemporary lease plans (Figure 41) may also indicate the yard's system of rails, but their depiction is ambiguous. On these plans the four lines are not linked with the surrounding railway. Instead they are shown connecting rows of small circular features and drawn with a convention used elsewhere to show buried pipes. A series of pipes or flues here, immediately above the furnaces, could represent rows of coke ovens. There are, however, two reasons for doubting this interpretation. Firstly, both coke ovens are clearly labelled and depicted elsewhere around Elsecar on the 1855 OS map (for example along the Wath Road – *see* Figure 202), and so the lack of similar markings above the furnace at this time makes their presence less likely. Secondly, under Henry Hartop's recent supervision of the works all the coke for Elsecar was made in open piles, not in ovens, as Hartop demonstrated through his published experiments to prove his circular coke piles superior to the long mounds favoured by his bitter rivals at Milton.[287] A newspaper report of the death of a young boy in 1856, whose father was 'employed by Messrs. Dawes to waggon coals on a line of railway to the coke-pits on the furnace hill', could indicate that coke was being made in the yard, or that coke was simply banked here ready for use. [288]

The rails and other features of the marshalling yard were no doubt removed once the last furnace was blown out in 1881. Several local residents have recounted that the area was cleared in the post-war years and given a rough cinder surface as a football field, and it is certainly marked as such on post-war OS maps between 1956 and 1982. Others have recalled that deposits of coal and coke were dug from the yard during the strike years, which might perhaps explain a series of mounds and hollows along the south eastern side – mounds which incidentally reveal fragments of puddling slag and other iron waste evidently returned to the yard to be re-melted in the furnaces.

In May 2017 Historic England undertook a geophysical survey in the hope of discovering some buried evidence for the former operation of the yard. Given the dense undergrowth the only practical application was Earth Resistance Tomography (ERT) which generates images in the form of vertical slices through the ground. Six lines were cleared across the more accessible south-eastern part of the yard, four of which were set across the pattern of rows shown on the historic map and plans. The results revealed no evidence for ovens, nor indeed for rails running across the yard. The only feature of note was a single very high resistance anomaly located broadly in the middle of the southernmost row (Figure 48). Measuring up to 8m in diameter and 6-7m in depth and interpreted as a rubble-packed pocket or a void, this feature was considered too large for a kiln. The investigators concluded that it is more likely to be the head of an early mine shaft, similar to many others still visible in the woods to the east, capped and overlain when the yard was created.[289] Its discovery prompted some speculation about the location of Elsecar's first solitary blast furnace, but this feature is buried too deep and set too far back from the valley-side to qualify.

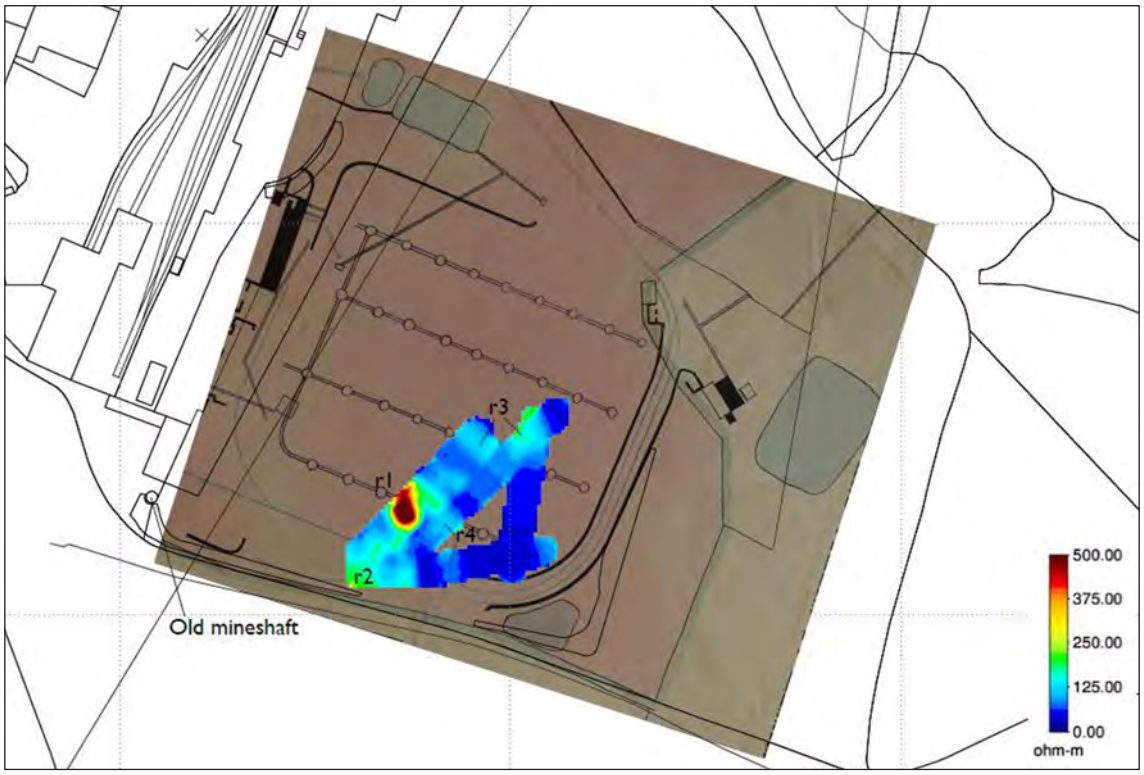


Fig 48. Extract from Linford, Linford and Payne 2017 (Fig 24) showing a horizontal slice at 2m depth through the combined ERT sections, overlain on the Dawes' lease plan (see Fig 39) of c 1849. © Historic England.

Unfortunately, the geophysical survey could not be undertaken where the undergrowth is thickest along on the northern side of the yard, since it is along this side that a row of far more convincing oven-like features is shown on the 1867 township plan (Figure 43). Their location is now marked by some very slight undulations, but the potential exists, here more than anywhere, for the survival of buried foundations. The Wentworth Estate's 'cropping books' for 1870 to 1882 use the same system of numbers as the 1867 township map, and mark the 3 acre yard (plot 610) as 'Cooking ground & waste'.[290] The 'cooking' could mean coking, of course; but an alternative and perhaps more likely explanation is that this was a row of calcining kilns, used to prepare the iron ore, much as seen at contemporary ironworks such as Blaenavon or Ynys-fach in south Wales.

The north-west side of the terraced yard looks out over a steep slope which falls some 10-12m to the level of the Heritage Centre below. The furnaces positioned along the base of this slope must have stood lower than this present ground surface, since their recorded heights are between 45 feet (13.7m) in 1847 and 16m in 1811, and their charging holes would have been reached by bridges which must have been broadly level with the yard above.

Fig 49. The area of the former blast furnaces, which stood in front the alcoves at the rear of the Heritage Railway station, following tree clearance, D Went, April 2019. Note the solid retaining wall across the slope to the left and the massive brick wall in the background which formed part of the blowing engine house and boiler yard. © Historic England.

A substantial section of the retaining wall which supported the upper face of the terrace, and presumably the springing for the former charging bridges, still survives in remarkably fine order. The northern corner of this wall can be seen from the Heritage Centre (when the undergrowth is thin), rising above the alcove with the red door at the rear of the Heritage Railway yard (see Figure N and below). The corner is of well-fired red brick in English garden wall bond surrounding a rubble core. Ties rods were employed to restrain the upper courses, one of which retains its original oval tie plate (Figure 50 a). The wall stands to about 7m, its now incomplete top broadly level with that of the terrace above, and has a batter of about 10 degrees. The corner brickwork extends about 2m southwards along the outward face where it is grafted into a façade of well-coursed sandstone that continues along the rest of the wall. The angle of the wall face is uniform, but the union of stone and brick is clumsy, suggesting either that the stone façade had failed and been replaced, or that the length of the wall was altered and a new corner was required. To judge from the type of brick this alteration is unlikely to have occurred prior to the mid-19th century. The impressive stone façade continues southward for about 20m (Figure 50 b) at which point much of the face has been dislodged by root action to reveal its jumbled core of rubble, bricks and mortar. The final section of the wall line, about 13m in length, is devoid of facing stones and marked only by a rubble scarp and some projecting metal plates used here, as elsewhere along the wall, to bond the façade with the core. In several places the stumps of girders which formerly projected from the wall face hint at the bridging structure, but little can be made of these without more detailed recording and without exploring the possibility of other buried remains along the upper edge of the terrace.

Fig 50. (a) North corner of the furnace bank wall, showing the transition from stone to brick and part of the exposed rubble core, and (b) the southern end of the remaining furnace bank wall. J Rimmer, July 2017. © Historic England.

Below the foot of the retaining wall a sloping surface of cinders, coke, slag, fallen brick and rubble drops sharply towards the rear of the Heritage Railway yard. It levels out above the vestiges of a lower stone-faced wall, punctuated by five brick-built alcoves (Figure 51). Four of these alcoves are spaced at quite regular intervals of between 1.5m and 2.2m. The southern three in this group are very similar, each approximately 4m wide, and framed by three concentric arches of brick in stretcher-bond, giving the appearance of a three-header arch around the openings. The alcove at the north of this group of four is of the same construction, but significantly narrower at only 3.2m. The fifth alcove, to the north, stands about 5m apart and is different again: converted to a storeroom in the NCB era, with additional brickwork and a metal door; yet it retains part of its original triple-coursed surround, and is the only arch to expose its full height of around 2.25m, with masonry instead of brick below the springing of the arch. The other arches have been partly obscured by built-up ground behind a low yard wall of reused stone.

Based on their size and location these alcoves almost certainly formed part of a system of passages to the rear of the massive supporting structures of stone and brick which encased the blast furnaces until they were replaced by the plated cylindrical stacks of 1867-71. Similar alcoves exist to the rear of the comparable blast furnaces, for example at Blaenavon, where they provided easements for the pipework carrying the blast from the blowing engine to the tuyeres set into the crucibles at the base of each stack (Figure 52).

Fig 51. The five alcoves along the rear wall of the Heritage Railway yard, corresponding to the former location of the blast furnaces. The images is derived from a laser/orthophotographic scan taken in 2018 to inform conservation measures. © Historic England.

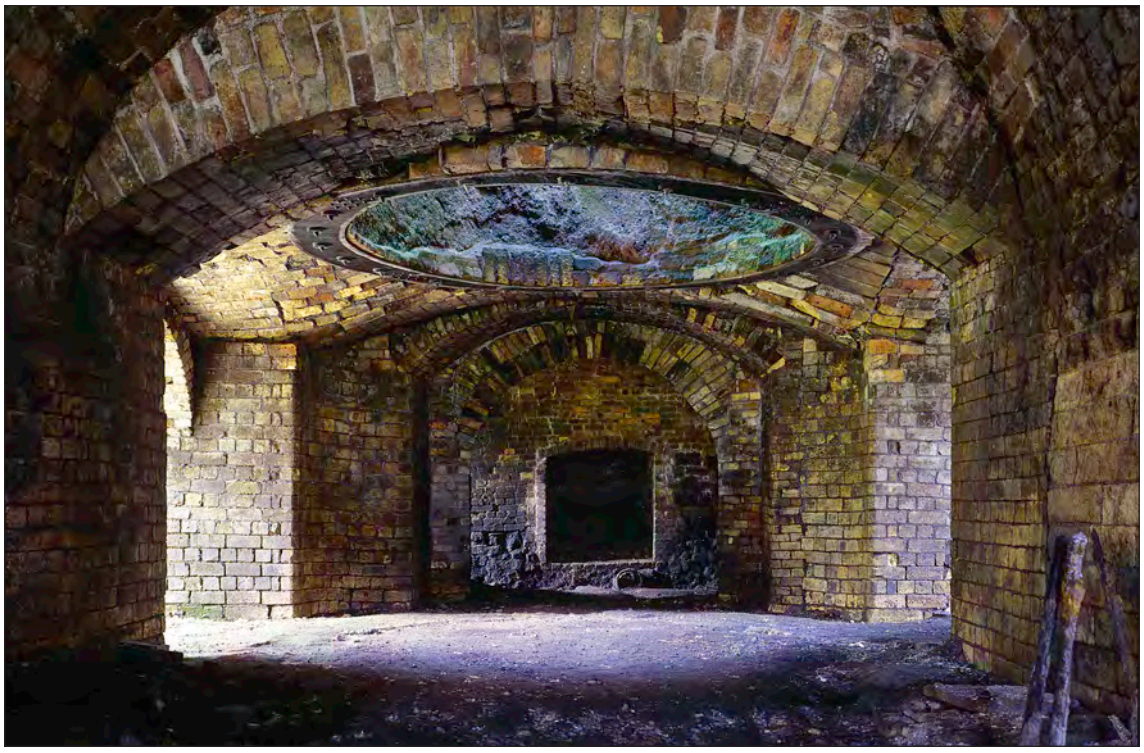


Fig 52. A view through the interior of Furnace 2 at the Blaenavon Ironworks. The base of the stack had been cut out ready for relining when it was decided to cease production around 1900, hence it is possible to see through to the alcove for the blast pipe at the rear of the superstructure. © Crown copyright (2018) Cadw, Welsh Government.

We lack the precise reference points needed to match the positions of the arches closely with the furnaces shown on the historic maps and plans, so this correlation must wait until such time as the furnace foundations may be revealed by excavation. The alcoves are too numerous and too closely spaced for each one to have served a single furnace. Five is, however, a sufficient number to place one alcove behind each of the three furnaces surveyed in 1849, with two others serving the spaces in between. The greater separation of the fourth and fifth alcoves, to the north, suggests perhaps that these may have been added when the third furnace was constructed, perhaps as early as 1813, but certainly by 1832.

The four new cylindrical furnaces of about 1870 were almost free-standing, and their reorganised air supply is unlikely to have required the arches. The arches were retained, however, presumably to consolidate the base of the bank when the three old furnaces were removed. Curved brick walls were inserted within each opening to create the alcoves and hold back material from the bank and any other structures which had been demolished to make way for the new arrangement of furnaces.

The alcove wall, largely stripped of facing stones to reveal the brick and stone rubble within, extends northwards along the rear of the present Heritage Railway yard for a further 11m, accompanied by a the narrow terrace and a low boundary wall mentioned above. If the Earl's blowing engine was located to the north of the furnaces, as suggested by the Dawes' lease plans, there is nothing now above ground

Fig 53. The blacked and scorched section of the rear yard wall, about 11m north of the paint store alcove. Note the straight joint between the brick structure to the left and the stone wall to the right, and the traces of a brick wall projecting into the yard from this junction. The lower boundary wall below is a 20th-century construction of reclaimed materials, February 2018 © Historic England.

to mark the spot. A section of the rear wall, soot-blacked and scorched, stands close to where the boilers are marked on the plan and has something of the appearance of a chimney. However, the burning appears to post-date the demolition of two adjoining structures (leaving just their rear walls set into the boundary) and the purpose of these structures and the cause of this burning is presently unknown (Figure 53).

To the north of this burnt structure the yard has been pushed back further into the hillside. The remains of the retaining wall which stretch northwards for about 45m are similar to that seen to the south, and indeed to the large retaining wall on the slope above: an exposed core of brick and mortar, 2-3m in height, with traces of a former masonry face including through-stones. The construction method and the coarse, un-frogged brick of the core, indicate that this wall also belongs to the pre-Dawes era. One truncated iron pipe, perhaps for carrying water from the ponds above, projects through this section of wall and there are a number of rudimentary drains along the base. Water escaping through the wall at chest-height has created large concretions in two places and a similar deposit has coated the entire surface in one place, evidently before the surface stone was robbed. (Figure 54). These deposits appear to be an industrial residue carried in suspension from the slope above. It may be no coincidence that the location is, broadly speaking, below that of the row of ovens or kilns shown on the 1867 plan.

Fig 54. Part of the retaining wall to the rear of the Elsecar ironworks, viewed from the south. Note the projecting sandstone 'throughs' which indicate the depth of masonry facing which has otherwise been stripped away, and the water-borne deposits coating and projecting from the wall in the foreground, J Jenkinson, August 2018 © Historic England.

Beyond the north end of this brick and stone wall the yard is set back still further to form a rectangular bay, 4m deep and 22m long, with a retaining wall entirely built of a hard red brick set in English Bond. This bay might well relate to the expansion of the yard under the Dawes' tenure (Figure 55 a). Immediately beyond the northern end of this bay the remnants of a curved wall in a similar brick suggest the remnants of a chimney incorporated in the boundary, but there is neither mapped nor photographic evidence for its purpose (Figure 55 b).

To the north of this chimney the wall curves around to the modern entrance to the Heritage Railway yard. This is largely a modern construction of the NCB-era, or later, incorporating upper courses of reclaimed early brick and topped with ironworking slag (Figure 56). A section of masonry incorporated with this wall could, however, be part of the stone boundary wall shown with seated workers on photograph of *c*1870 (*see* Figure 46).

Fig 55. (a) The later 19th-century retaining wall to the rear of the ironworks/Heritage Railway yard, D Went, August 2018 © Historic England; and (b) the chimney-like remnant of wall at the northern end of the ironworks (Heritage Railway) yard, D Went, August 2018 © Historic England.

Fig 56. The northern section of ironworks/Heritage Railway yard wall, incorporating reused brick and earlier in-situ masonry, D Went, August 2018 © Historic England.

The later blowing engine and boiler house

Whether simply to improve the blast, or to create additional space for the expanding foundry and forge, by 1859 the Dawes brothers appear to have moved the blowing engine to the southern end of the furnaces, where significant elements of the associated buildings still stand. The 1859 plan (Figure 42) depicts what appears to be a bank of six long boilers set parallel to and abutting a rectangular building at the south end of the works, with a small square detached structure lying slight further to the south. This smaller structure, misleadingly labelled as an old mineshaft on modern OS maps, is unquestionably the base of a large cylindrical chimney faced with purpose-made curved bricks,[291] perhaps overlying a square base now buried in the sloping ground (Figure 57).

The boilers have long since been removed leaving a broad hollow across the former yard. The north side of the yard is defined by a narrow brick-built range which is not shown on the 1859 plan, although something very similar appears on the 1867 township map (*see* Figure 43), and the east yard wall is attested by the springing for an arched gateway visible in the brickwork at the south east corner of the narrow building (Figure 58). To date no satisfactory explanation has been advanced for this building, other than it screened the works from the boilers (or the boilers from the works) and may have provided a corridor and gantry carrying pipework around the south side of the furnaces. It is in essence a thin, rectangular, roofless brick box, 6m high, 3.5m wide and 15.5m long, abutting but not properly bonded to the larger building to the east. The long walls are braced by rows of tie rods near the top and through the centre, and the interior is divided into two equal cells by a central partition wall. The structure has been patched and repaired but appears to have

Fig 57. The chimney base to the south of the boiler yard which is shown on the 1859 plan, D Went, June 2017 © Historic England.

had neither windows nor doors, unless a doorway, now lost, allowed access from the adjoining building. It does have a curious segmental archway at the base of the south wall however, which is similar in scale to those in the bank to the rear of the furnaces, and similarly supported by a triple arch ring of brick headers. The rear of this arch is likewise closed to form an alcove, although in this case the blocking is a well-crafted, semi-domed insert. We can only speculate why this was preferred to flush-fitting brick. This opening might have carried pipework leading to or from the boilers, and the alcove may have been needed to accommodate a protruding stopcock or some other element of the boiler pipework which had to remain in place after the rest was removed. Further detailed examination of this building is certainly required, but such work lies beyond the scope of the present study.

The main building in this group, abutting the eastern end of the narrow range, remains in plan much as it was depicted on the 1859 plan - approximately 15m north to south and 5m east to west – although it has long since lost its roof. Except where patched or where openings have been blocked by the NCB, it is entirely composed of local un-frogged red brick, typical of the mid-19th century, laid in in English garden wall bond.

The west wall has a broadly central archway (now blocked) above a sleeper-like timber sill which is likely to have carried the steam pipes through from the boilers in the yard below. Above this, at first floor level, are the lower portions of three, perhaps four, tall window apertures, each splayed inward to maximise light within the building. Those to the south retain indications in the brick work of round-headed arches (Figure 59).

Fig 58. The south wall of the narrow passage-like building across the northern side of the former boiler yard. Note the springing for the yard archway, and the curious alcove at the base of the elevation. D Went, January 2017 © Historic England.

Fig 59. The interior west wall of the blowing engine house, J Rimmer, July 2017. © Historic England.

The south wall has a large doorway right of centre (viewed from within) with a rounded brick jamb, and a single large window aperture to its left. Both of these are blocked with modern NCB–era brickwork to prevent access (Figure 60). The doorway, like the pipe arch to the west, opened onto a first floor level, perhaps a mezzanine or gantry surrounding the engine. This level is marked around the walls by a slight set-back, capped by the remnants of an iron plate set into the brickwork. There are a number of joist-holes just below this level along the long east wall which forms a windowless revetment against the slope, some matching the few that survive in the west wall.

A short, stub-like return at the south end of the east wall indicates that there was a very large entrance through the south wall, with an arched head suggested by the angle of the upper brickwork and the presence of two stone segments from an arch ring lying on the ground nearby (Figure 61). The rest of this wall has been completely demolished, a process which might have begun with the removal of the internal machinery after the works were closed. The machinery would have been as described in the newspaper reports of *c*1870: a large horizontal steam engine operating an air cylinder, similar to that built for the Trent ironworks, which had a steam cylinder of 24 inches and an air cylinder of 50 inches.[292] Whatever remains of this equipment and its supporting structure is currently concealed beneath the deep accumulation of soil and rubble covering the floor of the building. A broad longitudinal hollow in this surface hints at the presence of a buried engine bed, but that, and other assumptions concerning the building, remain to be tested by excavation and more detailed research.

Fig 60. The interior of the blowing engine house facing south. Note, behind the trees, the blocked door (right) and window (left) apertures in the south wall. The declivity across the interior ground surface is also visible, J Rimmer, July 2017. © Historic England.

Fig 61. The south entrance to the blowing engine house viewed from within (P1000757). Note the short return with traces of the arch above, and the iron plate set within the lower brick courses, J Rimmer, July 2017. © Historic England.

The Overseer's House?

The final element of the ironworks, which has largely vanished since it was last mapped by the Ordnance Survey in 1965 and therefore merits mention here, is the house which stood just outside the works, to the south of the later boiler compound. This is shown on the lease plans of *c* 1849 and the 1855 OS map (Figures 40 and 41) at the junction on Forge Lane, attached to a wall running south from the works, and set within a small walled yard. The house lies on the margin of the 1859 works plan (Figure 42) and may have been omitted, although later sheds to the rear of the property are shown. The remains of this house can still be found in an area of scrub woodland, consisting of a rectangle of brick foundations, about 15m in length, and a series of low scarps defining the rear yard.

The estate's cropping book for Brampton identifies the buildings to the rear of the house, plot 609 on the 1867 township plan (Figure 43), as stables, 'on hand', in other words belonging to the Earl.[293] The adjacent plots, 640 and 642, were similarly 'on hand' and described as 'pt (of) Top House Close', with 641 described as an orchard.

The house was clearly associated with the works, uncomfortably so given the proximity of the later blowing engine and indeed the furnaces. However, it was not included in the Dawes' lease (the area coloured pink on the 1849 plan) and it was later clearly labelled as in the Earl's hand when adjacent plots (eg 610, the 'cooking ground' mentioned above) were held by Messrs Dawes. It is tempting to associate this house with that of the pre-Dawes manager, Henry Hartop, who might be imagined living close by the works, and indeed with the story that James Nasmyth, the famous inventor of steam hammers and ventilation fans, was benighted here in

1838, met Hartop's daughter and subsequently married her. However, in Nasmyth's own account of his decision to abandon his coach journey is quite explicit:

> As we approached Barnsley I observed in the remaining murky light of evening, the blaze of some ironwork furnaces near at hand. On inquiring whose works they were, I was informed that belonged to Earl Fitzwilliam, and that they were under the management of Mr Hartop. The mention of this name, coupled with the sight of the ironworks, brought to my recollection a kind invitation which Mr Hartop had given me while visiting my workshop in Manchester to order some machine tools, that if ever I happened to be in his neighbourhood, he would be most happy to show me anything that was interesting about the ironworks and colliery machinery under his management. I at once decided to terminate my dreary ride on top of the coach. I descended and with my small valise in hand trudged over some trackless snow-covered fields, and made my way by the shortest cut towards the blazing iron furnaces. On reaching them I was informed that Mr Hartop had gone to his house which was about a mile distant. I accordingly made my way thither the best I could through the deep snow. [294]

Hartop's residence was indeed about a mile distant, at Hoyland Hall. The occupant of Top House beside the furnaces may have been another ironworks employee however, perhaps an overseer with constant duties. Nasmyth did meet Anne, Hartop's daughter, that night. They were married at Wentworth two years later.[295]

Elsecar Ironworks – the remaining buildings

The majority of the Elsecar Ironworks complex was demolished when the site was closed in the 1880s. The surviving buildings include the rolling mill (Figure 62: Building 20a and 21), a building of unknown use which adjoined it at the south-west end (Building 19), the cottages 2 and 4 Forge Lane, the entrance building (Building 3), and a possible casting shed (Building 1). These buildings relate to two separate phases of development in the history of the site. The rolling mill (Building 20a and 21), the building at the south-west end (Building 19) and the Forge Lane cottages were first shown on the plan of 1859 (*see* Figure 42), suggesting that they were constructed during the expansion of Elsecar Ironworks in the 1850s (*see* 'Historical Introduction'). The rolling mill (Building 20a and 21) was built in 1850. The new entranceway (Building 3) and the casting shed (Building 1) were constructed as part of a further phase of site extensions in the 1860s, when the area to the south of the rolling mill (Building 20a and 21) was reorganised. The 1867 map (*see* Figure 43) shows a new range of buildings along the south-west boundary of the site which included the existing structures of 2 and 4 Forge Lane, plus a new entrance building (Building 3), casting shed (Building 1) and interconnecting buildings. A suite of buildings butting up to the south end of the rolling mill shown on the 1859 plan was also demolished, and the rolling mill was extended southwards to meet the east corner of Building 19.

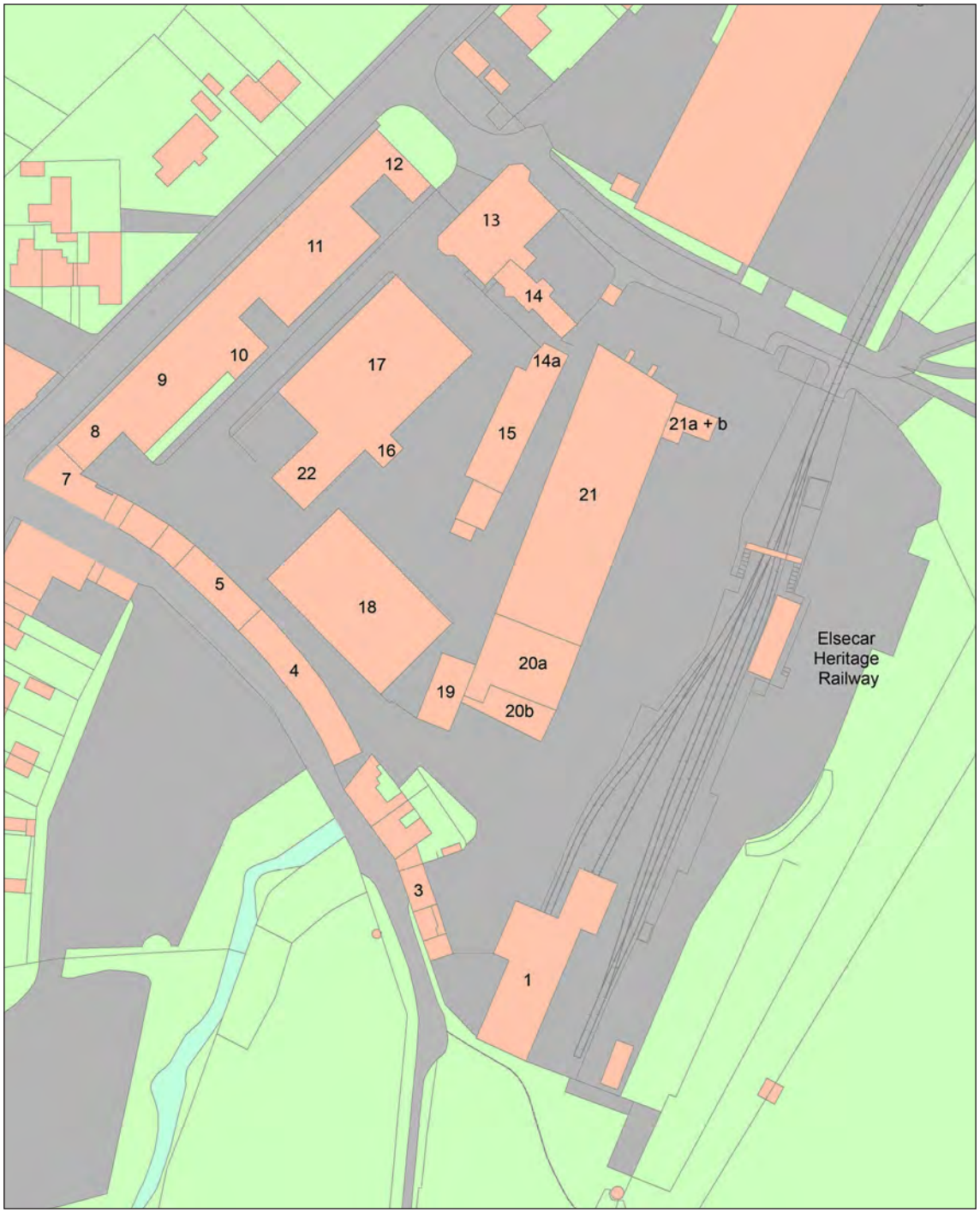


Fig 62. The workshops and surviving buildings of Elsecar Ironworks, numbered according to the system currently used by Elsecar Heritage Centre. © Historic England.

Building 19

Building 19 is the only surviving structure relating to a suite of buildings in a former courtyard to the south of the rolling mill which are shown on the 1855 OS map and the 1859 plan. It dates to the first half of the 19th century, pre-dating the construction of the rolling mill. A building to the north of Building 19, and a suite of buildings to the south of the rolling mill, were demolished in the 1860s when the rolling mill (built in the mid-19th century) was extended. Evidence for a former building directly to the north of Building 19 survives in a panel of infill brickwork to the north elevation. The building is now abutted at the south-west corner by the extended rolling mill. Its original use is unclear, though it may have functioned as a workshop.

Building 19 is grade II listed (NHLE No. 1191442). It is two-storey and has five bays, and is constructed out of coursed dressed sandstone (Figure 63a). It is partially obscured on the east side by Building 20b, a single-storey brick building constructed during the NCB occupation of the site. There are stone copings and kneelers to the gables and a stone band to the eaves. The east elevation has a taking-in door at first floor level with a stone surround with margined tooling (now blocked) (Figure 63b). The building is well-fenestrated, with regularly-spaced window openings to the east and west elevations. The first-floor windows to the west elevation have stone lintels and projecting sills, and the ground-floor windows have stone lintels and moulded brick sills. The building was originally open-fronted at ground floor level on the east side. A thin iron plate supported on iron columns extends across the length of the elevation, retaining the stonework at first floor level. There is no obvious sign of any form of heating. Whatever the original function, it required a lot of natural light and good access to both floors. The building is now open to the roof on the interior, though the joist holes are visible (now blocked). There is the scar of a flight of stairs (since removed) to the south wall. In the 1970s, when the NCB occupied the site, it was used as a garage for vehicle repairs.[296]

Fig 63. (a) above. Building 19, looking north-east, July 2019 © Barnsley Museums, T Roberts, and (b) 1980s photograph of Building 19. Reproduced with the kind permission of Barnsley Archives and Local Studies, Elsecar NCB workshops archive photo 16.

The rolling mill (Building 20a and 21)

The rolling mill is an iron-framed grade II listed (NHLE No. 1151097) building constructed in 1850. It was first shown on the 1859 plan (Figure 42), having been built on an available plot of land shown on the 1855 OS map to the north of the existing ironworks complex. The map evidence indicates that it was designed to sit hard up against the northern boundary of this plot, which is reflected in the skewed angle of the north elevation. The building was originally open-sided to its long east and west elevations (Figures 64a and b). There are thirteen round section cast iron columns with bases and capitals to each of these elevations, supporting a series of shallow arches with vertical struts in the spandrels. The columns also function as rainwater downpipes. There are thirteen trusses to the roof with timber principal rafters, wrought iron ties, and rolled iron T-section diagonal ties. The principal rafters are slotted into cast iron shoes at the top of each of the cast iron columns. The roof structure was later stabilised with a series of intermediate steel trusses. The north elevation is coursed stonework which wraps around the east and west elevations for stability, and forms an additional bay to the west elevation, compensating for the skew in the north boundary of the site. The north-east corner of the rolling mill, showing the stonework and window openings to the north elevation (now blocked) and the ironwork frame to the east, can be seen in the *c* 1870s photograph of Elsecar Ironworks (*see* Figure 46).

The building was extended in the 1860s, when two additional bays were added at the southern end. This extension is delineated in the portion of the building identified as 20a, which is divided internally from the rest of the building known as Building 21 by a brick partition wall. There is no clear distinction in the cast iron framing between the original structure and the additional bays, which suggests that these components were easily replicated in the Ironworks' casting house. Further evidence for this extension is visible at the south-west corner of Building 20a where, rather than being supported on a column, the iron arch of the final bay is embedded in, and supported on, the corner of Building 19. The south elevation is coursed stonework and has five semi-circular arched windows (now blocked).

In the early 20th century, the main body of the rolling mill was divided width-ways into two separate areas, as shown on the 1930 25-inch OS map. The iron frame was infilled with brick and stone panelling, and the building was fully enclosed. The northern half of the building was enclosed in the first half of the century. The six northern bays of the west elevation were infilled with pier and panel brickwork, and the six northern bays of the east elevation were infilled with stonework and brick upper sections. The brickwork, segmental-arched window openings, and metal-framed windows to both elevations are similar in style, suggesting that they were infilled at a similar time. The southern half of the building was probably enclosed in the second half of the century. The stone and brick panels to the east and west elevations are much more utilitarian, and the window openings are taller, with concrete lintels.

Fig 64. (a) above: Building 21, east elevation and (b) below: west elevation. L Jessop, June 2017. © Historic England.

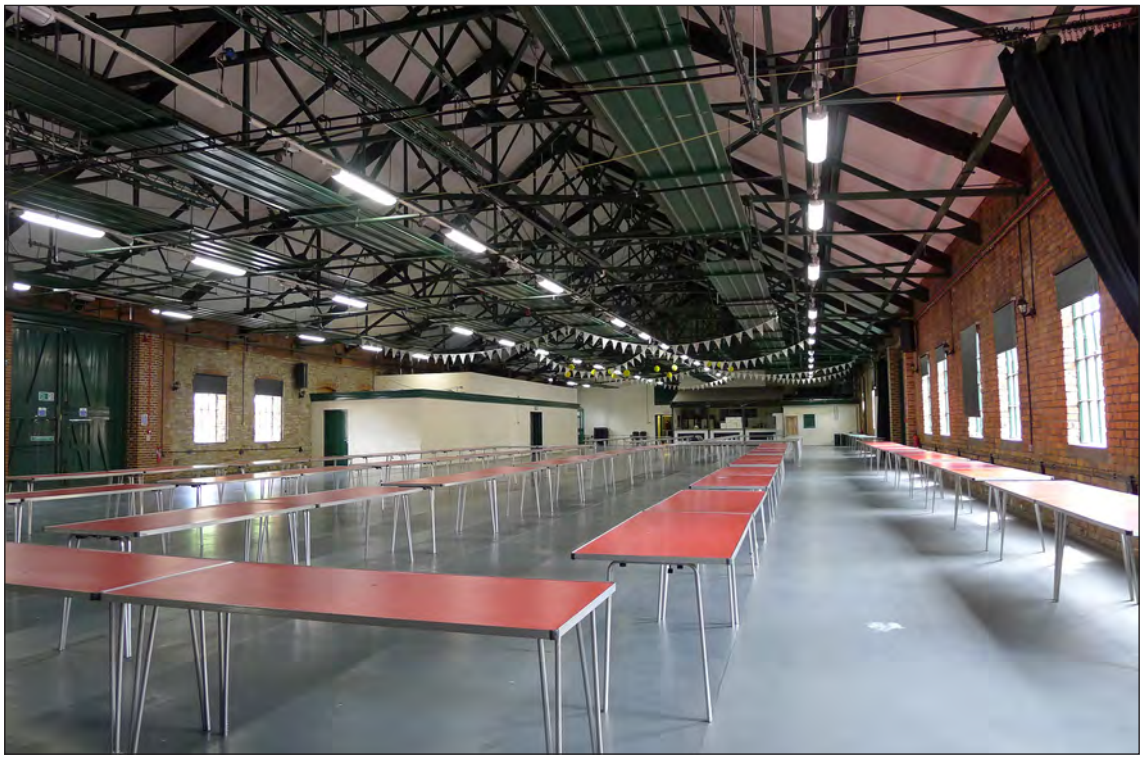


Fig 65.(a) above: Building 21, interior looking north and (b) below: Building 20a, interior looking south. L Jessop, June 2017. © Historic England.

Building 21 was enclosed long after it ceased to function as a rolling mill, when it appears to have been repurposed as workshops - initially as part of the workshops and latterly for the NCB. A large opening was inserted into the north elevation (now blocked) and, by 1930, a branch line had been extended into the building though this entranceway, as shown on the 25-inch OS map. The opening was reinforced with an I-beam, which is still embedded in the interior north wall. A former apprentice working for the NCB in the 1950s revealed that steam locomotives were brought in through this door for the apprentices to strip and refit.[297] By the 1970s, the northern half of the building was used as stores, and the southern half of the building was used a machine and fitting shop.[298] Building 20b, a brick single-storey structure with an asbestos roof, was built up against the south elevation by the NCB and functioned as the valve shop for the powered roof supports.[299] An additional brick single-storey building (21a and b) was built up against the east elevation. A number of the infill panels to the west elevation were re-built during the conservation work of the 1990s. A series of roof lights linked by a balustraded walkway mentioned in the listing description were removed.

Forge Lane Cottages

Nos. 2 and 4 Forge Lane, listed grade II (NHLE No. 1151096; Figure 66), date to the mid-19th century and were built around the same time as the rolling mill. They were first shown on the 1859 plan (Figure 42). The cottages are a pair of unequally-sized, double-fronted cottages with stone front elevations and brick rear elevations. No. 2 Forge Lane is the largest and has a central doorway with a panelled door and fanlight beneath a round arch with a keystone and slim imposts. The flanking windows and three windows to the first floor have stone lintels and projecting stone sills. No. 4 Forge Lane has a plain central doorway with a stone lintel and a rectangular-shaped fanlight. The flanking windows, and the two windows to the first floor, have stone lintels and stone sills. The ground-floor windows are fitted with four-pane sash windows. Ground-floor window shutters to the front elevation survive in both cottages. To the rear are a series of original sash windows which also have pivot openings. There is a large cellar beneath 4 Forge Lane which has a brick-built jack arch roof supported on iron plates. There are three chimneystacks: a central stone stack, a brick stack to the west gable, and a further internal stack to 4 Forge Lane. There are yards to both cottages as well as a larger yard for industrial use to the rear of 4 Forge Lane, accessed from an entranceway in Building 3.

The entranceway to the ironworks (Building 3)

Building 3, listed grade II (NHLE No. 1151096), was built as part of the reordering of the southern end of the ironworks site in the 1860s, and was first shown on the 1867 plan. It is a two-storey building incorporating an entranceway into the ironworks complex at ground-floor level (Figure 67). The south-west elevation is coursed sandstone blocks, matching in with 2-4 Forge Lane and the buildings of the Central Workshop, and the north-east elevation is brick laid in English bond (5 courses of stretchers, one course of headers). Access into the ironworks would have been through a wide, offset arched opening which was supported by an impressive moulded iron plate and two courses of header bricks. Large stone jambs, chamfered

Fig 66. Nos. 2 and 4 Forge Lane, Alun Bull,October 2017. © Historic England.

and stopped on the outer edge, flanked the entranceway on the south-west elevation. This impressive opening functioned as an advertisement for the workmanship produced at the Dawes' works, as well as controlling access in and out of the site. A smaller pedestrian entrance supported by an iron plate and stone lintel is positioned to the north-west of this opening. The building has six bays, marked out by a series of arched windows to the ground and first floors. The window openings to the south-west elevation have stone surrounds and lintels. To the north-east elevation the arches are formed out of distinctive yellow bricks. There is a brick chimneystack towards the south-west end of the building; a small stack and flue can be seen on the interior.

Building 3 was built up against the existing cottages nos. 2 and 4 Forge Lane at the north-west end. The north-west bay has a carriage entranceway which would have provided access into the yard beside no. 4 Forge Lane. The south-west end of Building 3 would have originally extended right up to Building 1 (*see* Figure 43). The lower part of the south-west elevation of this linking building, coursed through to Building 1, still survives (Figure 68). Rebuilding to the south-west wall of Building 3 and the south-west corner of Building 1 also indicates the demolition of a structure in between these two elements of the range.

As with the other buildings across the site, Building 3 has been the subject of numerous alterations and modifications over time. It has recently been renovated to bring it back into use, and the former entranceway into the ironworks site has been blocked to create a useable internal space. The metal-framed windows to the north-east elevation are replacements, though they could be replicas of original designs.

Fig 67. (a) above: Building 3, former ironworks building, from Forge Lane, Alun Bull, November 2017; and (b) below: from within the former ironworks site, L Jessop, June 2017. © Historic England.

Fig 68. Remains of the now-demolished section of the south-west range of the ironworks between Buildings 1 and 3, L Jessop, June 2017. © Historic England.

The casting shed (Building 1)

Building 1 is a large, rectangular-shaped brick-built structure with a gable roof. It is not listed, though this is now being reconsidered as it is an important survivor of the Elsecar Ironworks complex. It was also built as part of the reordering of the southern end of the ironworks site in the 1860s, and was first shown on the 1867 plan (Figure 43). It was built hard up against the massive retaining stone wall to the south of the ironworks complex, which also functions as the lower part of the south wall of the building. The apertures across the building take the form of wide arched openings, tall arched windows and smaller semi-circular arched windows, a design which has similarities with the casting sheds at Blaenavon Ironworks. There are a series of arched openings to the long east and west elevations of Building 1, indicating that it was originally accessed from the sides, rather than the ends. The pattern of these openings, together with the remains of a subdividing wall on the interior of the building, suggest that it was once divided internally (widthways) into two separate areas. At the northern end there is a large arched opening to the west elevation, and a series of tall arched windows to the east elevation. At the southern end there is a low arched opening to the west elevation and two low arched openings to the east elevation. The north elevation is shown on a *c* 1870 photograph of the ironworks complex shown above (*see* Figure 44) which can be compared with the same elevation today (Figure 69).

Fig 69. Building 1, former Elsecar Ironworkslooking south-east, L Jessop, June 2017. © Historic England.

The blocked up openings, later insertions and re-built areas of brickwork are evidence of several phases of change and alteration. In the northern part of the building for example, are two curved recessed which sit high up in the east and west elevations on the interior. They appear to have been created to provide space for a particularly large, or circular-shaped, object. The recesses sit crudely above the arched openings, suggesting that they are later insertions. In addition to any modifications that were made during its use as an ironworks casting shed, the building was later repurposed for use as part of the Central Workshop complex following the closure of the ironworks in 1885, and subsequently when the NCB took over the site in 1947. The 1930 OS 25-inch map shows that, by the early 20th century, a branch of the sidings railway ran directly into Building 1. The extension at the north end of the west elevation was first shown on the 1956 OS map and was probably constructed by the NCB. In the 1970s, Building 1 was used for powered roof support shotblast and fabrication repairs.[300] The modern locomotive shed at the north-east corner is shown on photographs of the building taken in the late 1980s, and was probably built shortly before this.[301]

The original canal basin

When the Dearne and Dove Canal was brought to Elsecar in 1794 it was driven as far as the New Colliery where it formed a wharf and terminated in a small spur for turning barges, as depicted in the solicitor's sketch of 1814 (*see* Figure 38). The OS map of 1855 (Figure 40) shows it almost unchanged more than half a century later, and it remained so in 1859 when it was shown on a railway sidings plan (Figure 42). By 1867, however, when the tithe map for Brampton Bierlow was produced (Figure 43), the final length of the canal alongside the railway had been detached by a causeway, and acquired from Earl Fitzwilliam by the South Yorkshire Railway (Figure 70).

A new wharf was established some 130m to the north-east (see Character Area 2) and the length of the old basin was filled in to allow the further expansion of railway sidings, as shown on the Ordnance Survey plan of 1892 (Figure 71) .

Most of the railway tracks leading to Elsecar were removed in the 1960s leaving a single line in place to the Elsecar Goods Station until the early 1970s.[302] The area of the former canal, stripped of rails, became an open space known locally as the Greenway, between the restored Heritage Railway line to the south and the (now demolished) 1980 former NCB steel framed warehouse, recently vacated by Dawson's MMP Ltd, to the north. It forms part of the Trans Pennine Trail and is an important walking and cycling route between the Heritage Centre and Hemingfield Colliery.

Fig 70. '*M.S.L.R Elsecar. Plan of Land Required from Earl Fitzwilliam*'. The plan is signed 1876 under the title, but the annotation on the reverse states that this was under an agreement of 1867. Note the old canal basined marked as 'Filled up.' Reproduced by kind permission of Barnsley Archives and Local Studies NBC 460b.

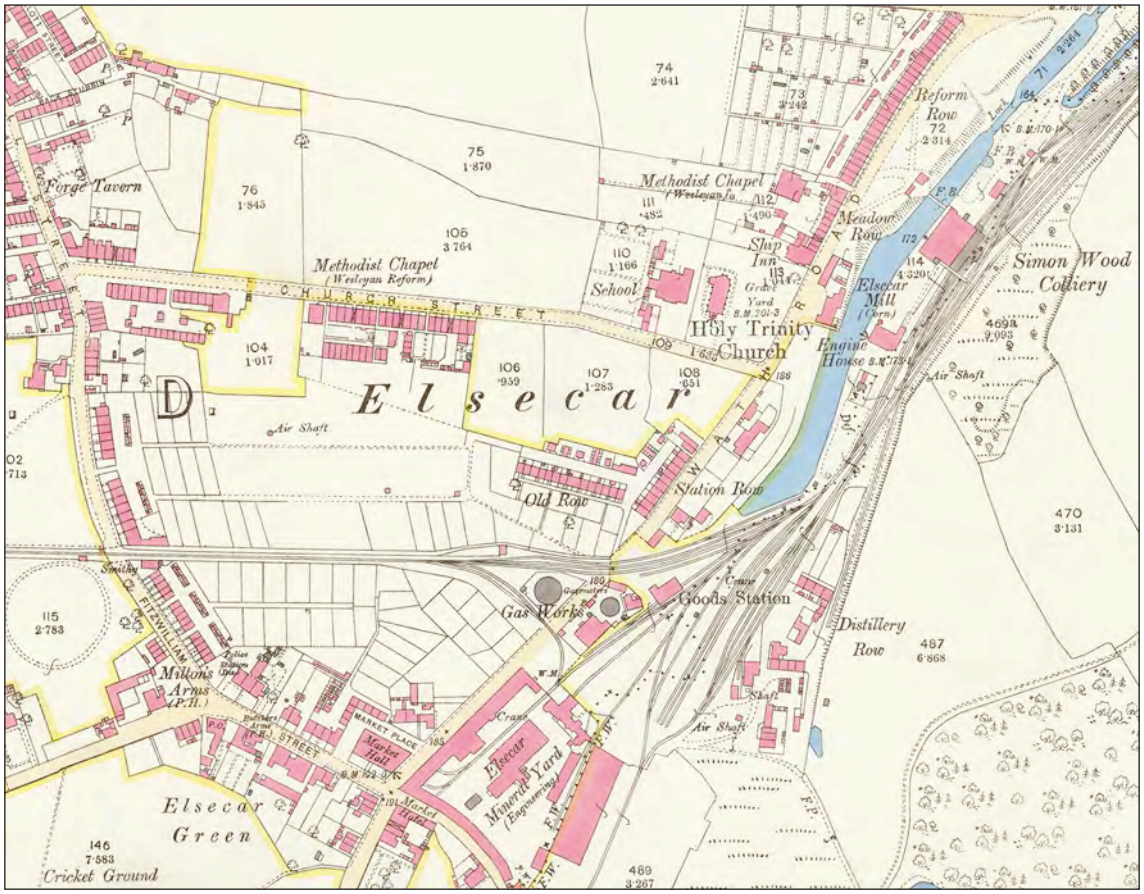


Fig 71. Extract from the Ordnance Survey 25 inch map, Yorkshire West Riding sheet 253. Surveyed 1890, published 1892. Reproduced by permission of the National Library of Scotland.

In May 2017 Historic England's Geophysics Team deployed ground penetrating radar along the Greenway to assess the position and condition of the buried canal. This met with virtually no success, the lack of a distinct signature perhaps masked by the material used to in-fill the cut.[303] In order to explore this situation further Historic England commissioned a bore-hole survey in October 2017, placing two transects, guided by historical maps, across the likely width of the basin and the end spur.[304] The transects demonstrated that the base of the canal lies some 5m-6m below the present ground surface. To judge from the height of the later wharf to the north-east, a further 2m or so of made up ground, including brick and rubble, had been spread over the in-filled canal to provide the level for the sidings. This extra made-up ground may well account for the limited effectiveness of the radar survey.

The bulk of the fill within the canal was composed of industrial waste including clinker, slag, ash and a silicate material recognised as blast furnace lining, the latter so resilient that it prevented drilling in some places and damaged the equipment. A conservative estimate of the amount of material required to fill the entire basin would be in the order of 4,000m^3. That such a massive supply of colliery and ironworks waste was readily available in the late 1860s speaks volumes about the appearance of the surrounding area at the time.

Fig 72. Quaternary Scientific (Reading University) staff engaged in the bore-hole survey, October 2018. © Barnsley Museums, T Roberts.

The canal itself, anything up to 3m in depth, was cut through the natural alluvium of the former beck and into the natural bedrock below. It appears to have been sealed with a substantial lining of puddled clay, samples of which, measuring between 0.05m and 0.9m thick, were found in some of the bore-holes.[305] The samples showed no accumulation of debris and organic residue above this lining, which suggests that the basin had been dredged shortly before the decision was taken to fill it in.

The bore hole survey demonstrated that the projected position of the canal basin (Figure 73) was slightly adrift from reality. Bores 5, 7 8 and 9 plumbed the body of the canal which is therefore wider than expected: the northern edge lying closer to the wall of the former Dawson's building and the spur extending some distance beneath it. Given the depth and composition of the material in and above the canal there is no realistic prospect that it could be excavated archaeologically, let alone reinstated. However, with the information now available it would be possible to mark out the position of the canal on the ground surface, or to depict its extent on an information board with some degree of certainty.

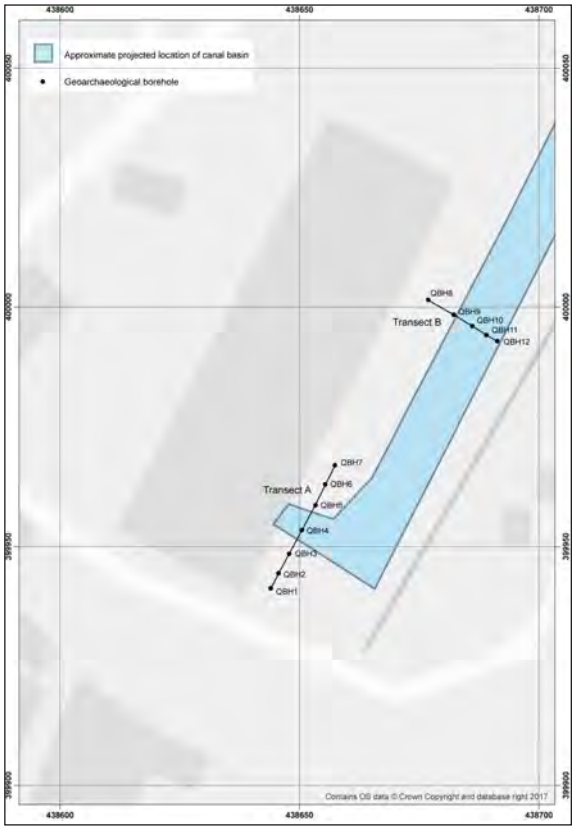


Fig 73. Location of the geoarchaeological boreholes (Transects A and B) and the projected location of the canal basin (Young 2018, Figure 3), reproduced with permission by Quaternary Scientific/Reading University. The large grey shaded area in the centre is the 1980s former NCB warehouse (recently occupied by Dawson's, now demolished).

The Workshops

The 'Central Establishment' of workshops, located to the corner of Wath Road and Forge Lane, now forms part of the Elsecar Heritage Centre. The complex is grade II listed, with the exception of the cottages (Building 14 and 14b). The original workshops, built in the 1850s, included two long, continuous ranges to Wath Road (Figure 62: Buildings 7 to 12) and Forge Lane (Buildings 4 to 5), and a shorter range to the eastern boundary (Buildings 14 and 15). The northern part of the Wath Road range (Building 11) housed the blacksmith's workshop, while the other buildings probably functioned as stores. A suite of buildings at the centre of the complex originally housed the fitting shop and joiner's shop (Buildings 17, 22 and 16b). An existing row of cottages dating to the early 19th century and located to the north-east of the site was the only building to be retained as part of the new development. In 1870, part of this row was rebuilt as Earl Fitzwilliam's private railway station. The workshops were all constructed out of coursed sandstone dressed with deep horizontal tooling, often with margins. The fitting shop (Building 17) and the joiner's shop and engine house (Building 22) were lined with brick on the interior. The original windows, a number of which are still present in the Wath Road range (Buildings 8 and 10) take the form of leaded lattices with central pivot openings. The Heritage Centre was opened in the 1990s following an extensive renovation project which involved the partial rebuilding of structures, the replacement of windows and other features, and the remodelling of interiors to create new, useable spaces. A number of NCB buildings were also demolished.

The cottages (Building 14 and 14b)

The two cottages to the north-east boundary of the site are the oldest buildings in the Central Workshop complex (Figure 74). They were built in the early 19th century and are shown on the 1849 plan and the 1855 OS map (*see* Figures 40 and 41). The cottage to the west is a double-fronted dwelling with a central triangular-shaped external porch, and the cottage to the east is an (unevenly-spaced) two-bay dwelling. A single-storey structure at the east end (Building 14b) is a former outhouse. The double-fronted cottage has a chimneystack to the north-west and north-east gables, though the chimney to the north-west gable has been removed. The two-bay range is set back from the double-fronted cottage and has a square-shaped porch and a chimneystack to the north-east gable. The outhouse has a chimneystack with a large, monolithic stone fireplace opening. In the 1970s part of the building was used by the NCB as the transport office.[306] The cottages have undergone many internal modifications: the staircase has been removed from the double-fronted cottage and the sash windows to both cottages are replacements, having been fitted during the 1990s renovations. The former station building (Building 13) butts up to the double-fronted cottage to the north-west. The cottages are not currently included in the listing for the workshops.

Fig 74. The cottages to the north-east of the workshops, L Jessop, June 2017. © Historic England.

The fitting shop (Building 17)

The fitting shop (NHLE No. 1287085), also described later as the engine and boiler repair shop, and the machine shop, is the most visually striking building in the complex (Figure 75). It is a large, rectangular-shaped building with a double-height central section and single-storey lean-to aisles. The building is coursed stonework on the exterior and brick on the interior, with a slate roof. The central section is supported internally on an arcade of cast iron columns and brick arches, much in the same way as a church. The cast iron columns have capitals and bases. The south-east aisle is shorter than the other, allowing room for the engine house (Building 22), chimney, and boiler house (Building 16B – now rebuilt). The aisles have regularly-spaced, recessed, semi-circular arched windows and stone sills. A string course runs along the length of the aisles at impost height. The upper part of the double-height central section is windowless, and divided by a series of projecting stone strips. The height of this building would have lent itself particularly well to the repair of engines and other large machinery.

In the early decades of the 20th century Building 17 became linked to Building 13 by a railway track. The track was first shown on the 1930 25-inch OS map. The introduction of this line would have allowed engines to be moved directly from the main line to this building for repair work. The NCB constructed a large building up against the south-west elevation and a long, single-storey extension along the south-east aisle. In the 1970s, this complex was used as the annealing shop, the coal cutter repair shop and the plating shop.[307] The Union office was situated at the south end of the north-west aisle, opposite Building 10.

The north-east and south-west elevations were largely re-built in the 1990s. A photograph of the north-east elevation taken in 1988 shows that the façade was much plainer, with a large central opening, projecting jamb stones and quoins to the corners of the aisles (Figure 76). The north-east elevation was altered to include the present arched doorway with voussoirs, quoins to the upper sections, stone bargeboards, an oculus window with a stone surround, and two newly-carved stone panels. One of the stone panels bears the date '1850' and the other is carved with the proverb 'A stitch in time saves nine'. The south-west elevation was also rebuilt to a similar design following the demolition of the large NCB building at south-west end. The stone panels to the south-west elevation include a datestone and the proverb 'A place for everything and everything in its place'. A photograph pre-dating the NCB alterations indicates that the panels to the south-west elevation are replicas of earlier designs (Figure 77).[308]

The joiner's shop and engine house (Building 22)

Building 22 (NHLE No. 1315025) is a two-storey building with seven bays and a hipped roof (Figure 78). There is a stone band under the eaves and a string course at first floor level. The building was originally divided into two areas, as indicated on the 1859 plan. The internal dividing wall is located between the first and second bays at the north end of the building. The southern part of the building housed the joiner's shop at ground floor level and the saddler's shop at first floor level. The northern end is open across two storeys and would have accommodated the steam

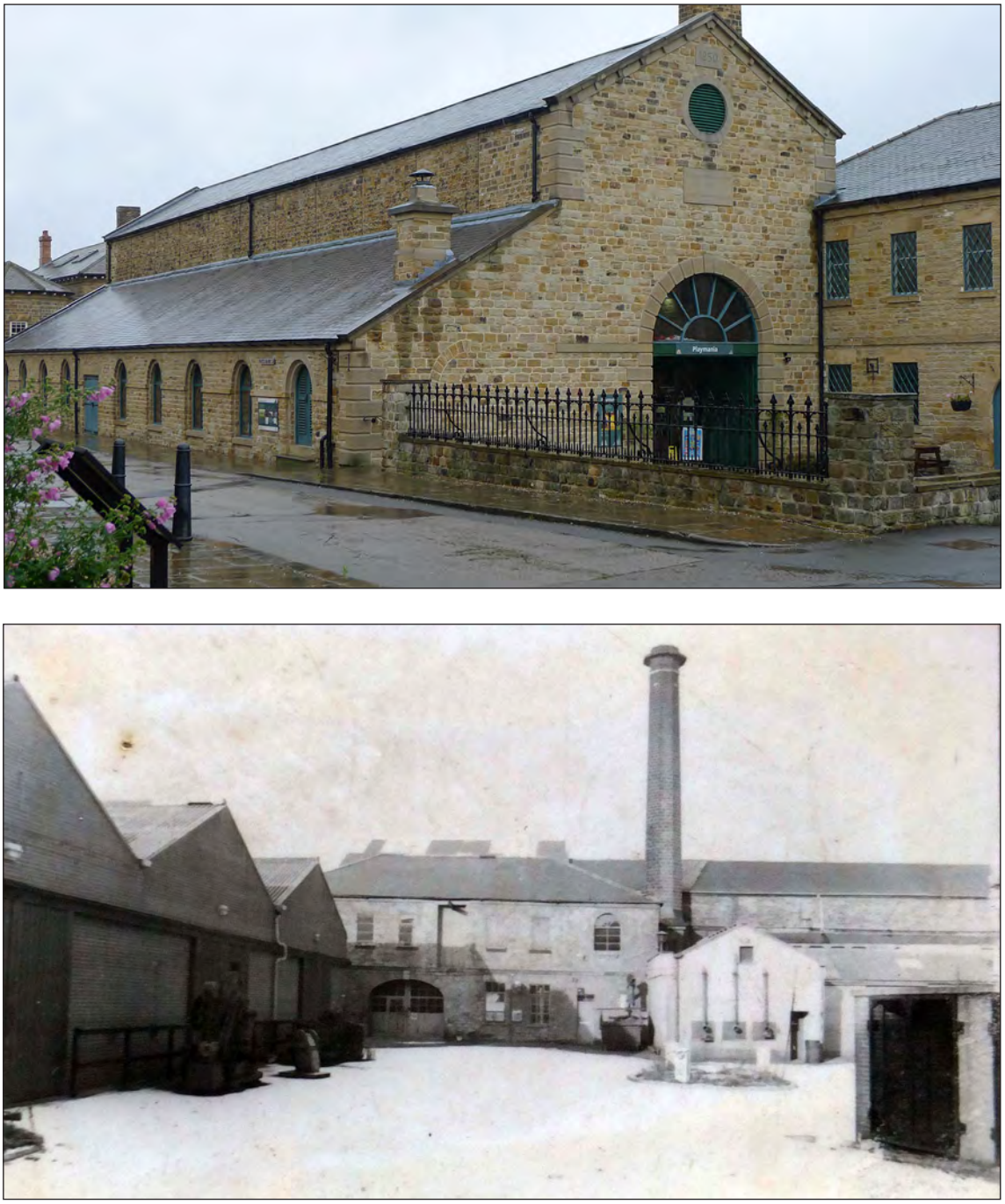
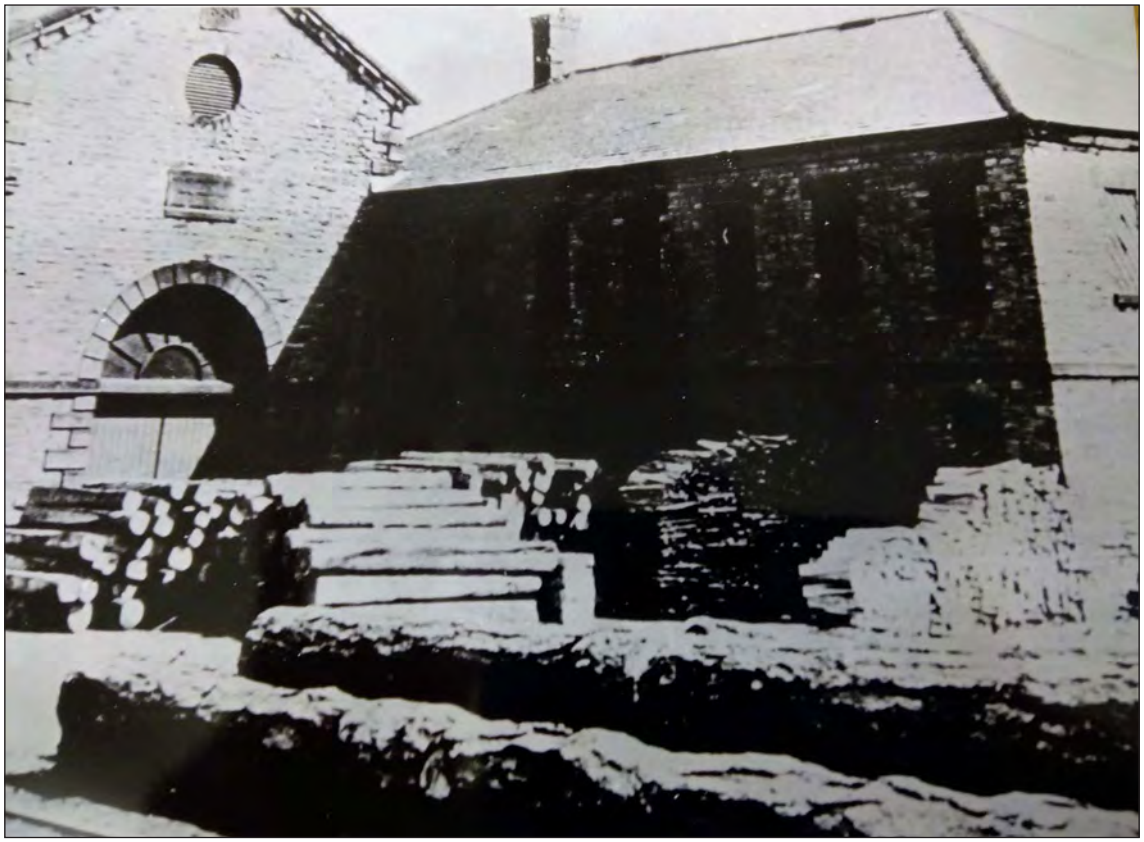


Fig 75. Building 17, (a) Looking north-east, L Jessop, June 2017, © Historic England and (b) 1980s photograph looking north-west towards the chimney and boiler house, reproduced with kind permission of Barnsley Archives and Local Studies, NCB workshops archive photo 32.

Fig 76. Building 17 from the north-west, October 1988. RCHME © Historic England Archives.

engine that powered the equipment in the joiner's shop and fitting shop (Building 17). A split-level inspection window in the dividing wall provided a line of sight across the two areas. The window opening has a rounded head and margined and tooled stone surround. Opposing cart entranceways to both the south-east and north-west elevations with jamb stones, voussoirs and keystones, provided access into the joiner's workshop. The saddler's shop was entered through a first-floor doorway to the south-west elevation with an external flight of cantilevered stone steps. The northern part of the building was also accessed separately through a first-floor semi-circular arched doorway to the south-east elevation. An external staircase up to the doorway is shown on the 1859 plan. A doorway at this level suggests that there would have been a platform or internal walkway providing access to the engine. The building is well-fenestrated, with windows to each of the bays at ground and first floor level.

The floor joists in the southern part of the building are exposed in the former joiner's shop (Figure 79 a). The joist that runs between the opposing cart entranceways is supported at each end by an iron shoe which is also fixed around the keystones. Fitted to the underside of each of the floor joists are a set of iron attachments which are linked to each other (as well as the outside walls of the building) by a series of iron bars. This may have originally formed part of a hoist system operating within the joiner's workshop. At first floor level a probable clutch mechanism is embedded in the dividing wall (Figure 79 b). A number of large wooden hooks, presumably used for storing saddles and other leather items, still hang from the roof joists. A series of smaller iron hooks are set into the walls.



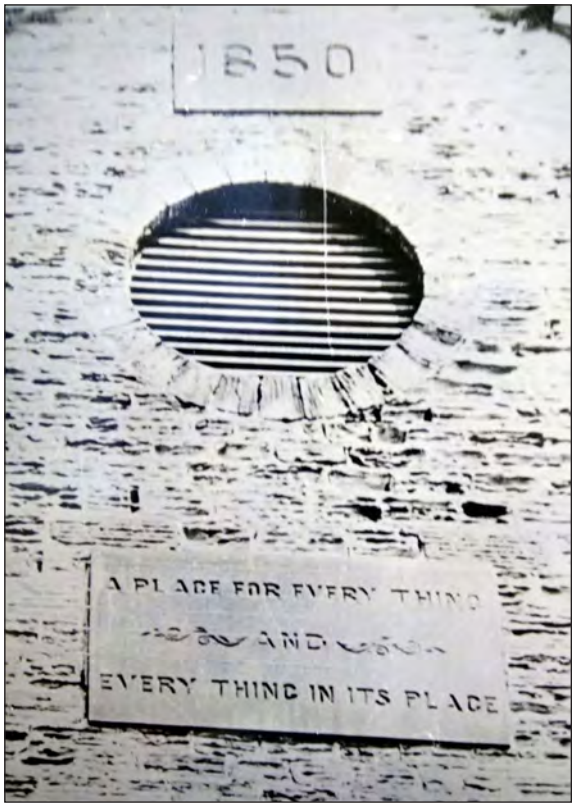
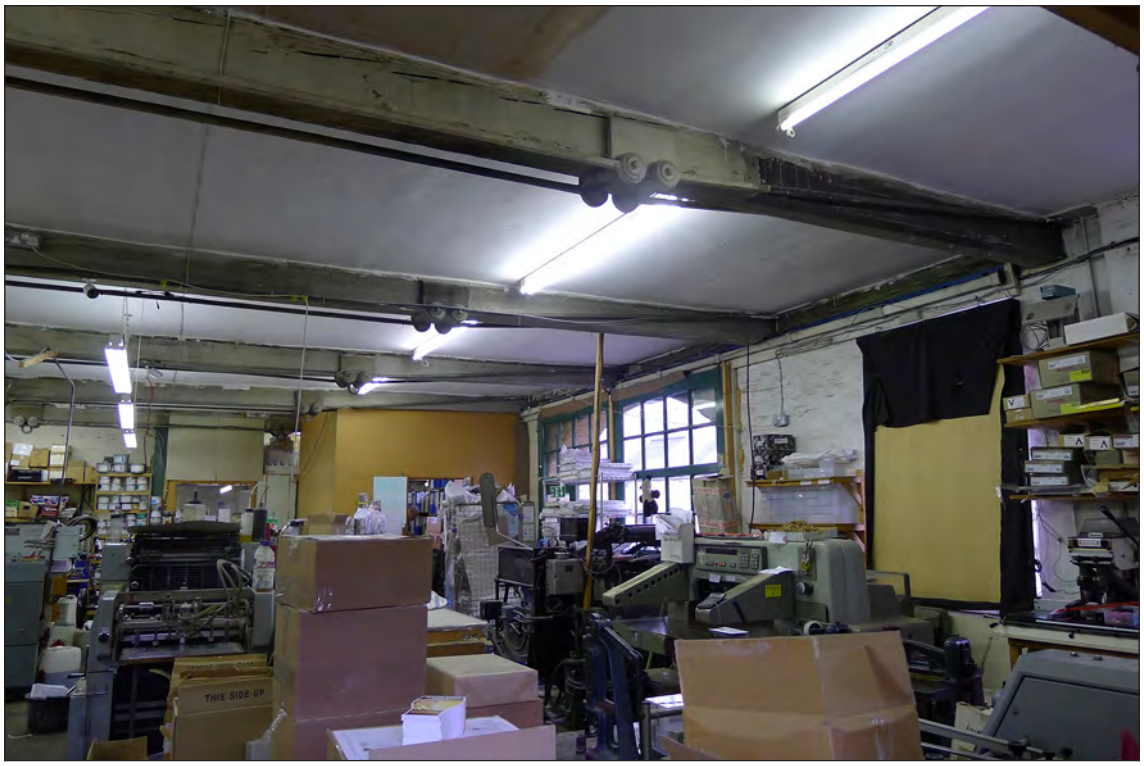


Fig 77. Building 17 (a) the south-west elevation of Building 17, and (b) detail of the panels to the south-west elevation, both undated (pre-1960). John Hislop Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies.

Fig 78. Building 22 looking north-west, Alun Bull © Historic England.

Building 22 has been the subject of a number of modifications. A hoist door was inserted in the south-west elevation of the saddler's shop. The first-floor doorway to the south-west elevation of the engine house was converted into a window, and the external staircase was removed. A new entrance was created below this opening at ground floor level. This alteration probably took place during the NCB occupation of the site, either when the steam engine was replaced with electric power, or when the building was repurposed for other functions. During the 1970s the ground floor was used as the compressor house, and the first floor as the saddler's shop.[309] In the 1990s the north-west elevation was rebuilt following the demolition of a large brick NCB building at southern end of Building 17.

The boiler house and the chimney were located at the north-east end of the engine house (Building 12). The chimney was originally a stand-alone structure and the 1859 plan (Figure 42) shows a small open space to the south-west of the boiler house where the chimney, boiler house and fitting shop (Building 17) all came together. The chimney has a square base and an octagonal-shaped shaft, with a cornice to the top. There is an opening with a brick surround to the north-east side, which would originally have been accessible from the open space between the buildings. The boiler house was demolished as part of the renovation project in the 1990s, and a new toilet block (Building 16b) was erected in its place. The boiler house was originally a longer building, and appears from photographs dating to the 1980s to have housed boilers for engines even during the NCB ownership of the site.[310]



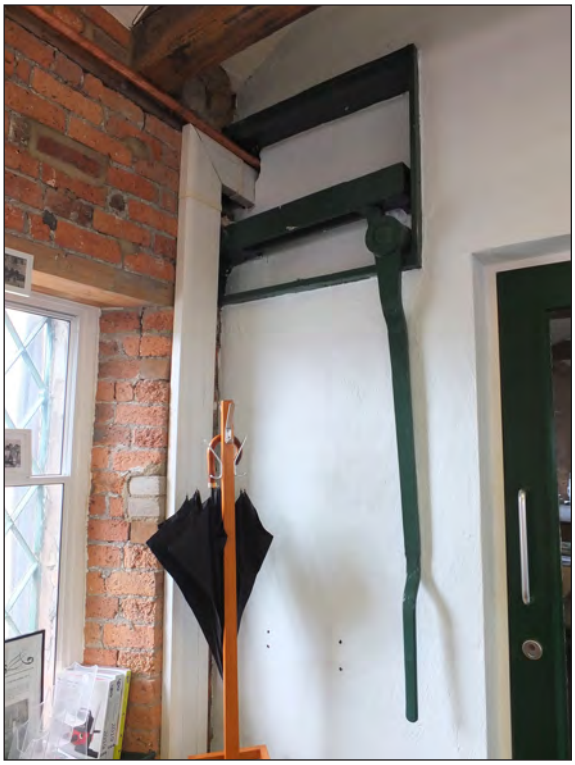


Fig 79. (a) Building 22, ground floor looking north-east, L Jessop, June 2017. © Historic England and (b) clutch mechanism embedded in the dividing wall (first floor level) between the former saddler's workshop and engine room, T Roberts, July 2019. © Barnsley Museums.

Stores

The listing for the Wath Road and Forge Lane ranges are included in the same list entry as the nos. 2 and 4 Forge Lane and Building 3 (NHLE No. 1315025). The range to Wath Road (Buildings 7 to 12) was shown on the 1859 sidings plan as an elongated E-shaped structure. The range is divided into three main parts: the north-east section (Buildings 11 and 12), the central section (Building 10) and the south-west section (Buildings 8 and 9) (Figure 80).

Building 10 is the only two-storey structure (Figure 81). It is aligned at right angles to the rest of the range and projects beyond the building line into the Workshop complex to the east, and very slightly out to Wath Road to the west. It appears to have been constructed in two phases. The original building only extended out as far as the south-east elevations of Buildings 8-9 and 11. This is best seen at first floor level on the interior, where the original external wall is clearly visible. It has a doorway with an oculus window above, and two flanking windows. The extension to Building 10 is present on the 1859 plan, suggesting that this alteration took place very soon after it was constructed. The south-east elevation of the extended building has a stone cornice and copings at eaves level. At first floor level is a central doorway with an oculus window above, flanked by two windows, much in the same way as the original, shorter building. The lattice windows have central pivot openings and are original. The west gable, which faces out onto Wath Road, has stone copings and cornices, and a string course at first floor level. There is an oculus window with a stone surround and iron glazing bars set within the gable, and two windows to the ground and first floor. The central taking-in door on this side appears to be a later addition. This building has prominence over the other buildings in the range. There is a good view out over the workshops from the first floor, and this area is said to have originally housed the manager's office, though there is no direct evidence of this.

Building 11 originally housed the blacksmith's workshop. Although the chimneys for the blacksmith's hearths identified in historic photographs (*see* Figure 18) have been removed, a series of iron ventilation grilles with stone lintels embedded in the lower section of the north-west elevation, coupled with patches of sooting, indicate the position of hearths (Figure 82). The south-east elevation now bears little resemblance to the blacksmith's workshop shown during the King's visit, which is largely a result of later alterations to the building. A series of louvres to the roof, a number of which are original, also suggest functions requiring ventilation. The elevations facing into the workshops were originally partially open-fronted at ground-floor level, suggesting that they were used as stores. The evidence for this survives in the form of long iron lintels set into the walls and supported on iron columns. They are present in the south-west elevation of Building 12, the north-east and south-west elevations of Building 10, and the south-east elevation of Building 8. The upper pad of an iron column is visible to the underside of the iron lintel embedded in Building 12 and the north-east elevation of Building 10. These openings have since been infilled with stonework and inserted doorway and window openings.

Fig 80. Wath Road range, looking north, L Jessop, June 2017. © Historic England.

Fig 81. Building 10 looking west, L Jessop, June 2017. © Historic England.

Fig 82. Wath Road range, showing sooting (far left of frame) and ventilation grilles (at ground level) to Building 11, J Rimmer, December 2018. © Historic England.

A number of extensions were added to the Wath Road range over time. In the second half of the 19th century a stone range was built in the angle between Buildings 9 and 10, as shown on the OS 25-inch map of 1892. This was subsequently extended in the mid-20th century, appearing on the 1957 1:2,500 OS map. A brick structure was also built alongside the Blacksmith's Shop (Building 11) during the NCB reordering of the site (*see* 'Historical Introduction').

The range to Forge Lane (Buildings 4 to 5) skirts the south-eastern boundary of the Workshop complex (Figure 83a). It is a distinctive building in both its size and form: the long length of the range and its curved shape can be fully appreciated from Forge Lane, where the south wall of the building forms a blank outer boundary wall to the site (Figure 83b). The range was constructed in two phases. The north-west portion was built in the 1850s along with the main buildings of the workshop complex, and as shown on the 1859 plan. The south-east portion was constructed in the second half of the 19th century and is shown on the 1892 OS map. The division between these two elements can be seen in the fabric of the building in the form of a straight joint and a patch of irregular stonework to the north-east elevation of Building 5. The construction of the south-east range involved the integration of a boundary wall which extended from the end of the north-west range to the south-east corner of the workshop complex (*see* 1859 plan). This can be seen in the south-west elevation, where the stonework to the upper section of the wall is much darker in appearance than the rest of the range, suggesting that it has been heightened. The outer elevations of the south-east range are also held together with iron ties for additional stability. The range is constructed on an incline, and is single-storey at the north-west end and two-storey across the centre and south-east end. There are two cross-gables which break up the long, linear façade. Part of the ground-floor north-

west elevation was open fronted and supported on iron plates and iron columns (Figure 84). These openings have since been infilled with brick walls, boarding, and additional brick columns. It is probable that these areas were used for storage.

During the 1970s the Stores had a variety of functions.[311] The security office and inspection department were housed in Building 12. Building 9 was the joiner's shop, and Building 8 was the paint shop. Building 10 was the medical centre and electrician's shop. The Forge Lane range was utilised as the time office (current entrance to the Heritage Centre), canteen (first floor), motorcycle and bicycle storage, a fire station and for storage. Windows were inserted along the south-west elevation. The upper rooms in Building 5 still retain the tiling and pipework of former showers.

Fig 83. (a) above: Building 4-7A, north-east elevation, L Jessop, June 2017 and (b) below: Building 4 and 5 from Forge Lane, Alun Bull, October 2017. © Historic England.

Fig 84. (a) Building 5, north-east elevation ground-floor openings supported on iron columns and plates (now blocked), L Jessop, June 2017. © Historic England; (b) 1980s photograph of the Forge Lane range, reproduced with kind permission of Barnsley Archives and Local Studies, NCB workshops archive photo 8.

The Earl's railway station (Building 13)

The building identified as the former Earl's railway station with attached gate piers (Building 13) is located at the west end of the row of cottages (Buildings 14 and 14b) on the north/north-east boundary of the workshops (NHLE No. 1191337). It is a complicated, multi-phased structure which was extended on several occasions across the 19th and early 20th centuries, and was remodelled as the Earl's private railway station in 1870. The interior, especially, would benefit from further analysis and investigation. There are three principal components: a roughly square-shaped two-storey range with a projecting three-sided bay facing into the workshop complex to the south-west; a long, rectangular-shaped two-storey range with opposing carriage entranceways to the south-east which housed the station platform and waiting rooms; and a two-storey range with a projecting three-sided bay facing out of the workshop complex towards the former railway yards to the north-west (*see* Figures 85 a-c). The ground floor of the south-west range and the adjacent gate piers are the earliest part of the building, constructed in the 1850s. The stonework to the ground floor of the south-west range is different in appearance to the first floor, suggesting that it was either originally a single-storey building, or that the first floor was rebuilt at a later date. This may have originally functioned as a gatehouse at the entrance to the workshops. The south-east range, and the first floor of the south-west range, was built in the 1870s. The north-west range, which was used as offices, was added to the complex in the early 20th century.

A photograph of the Earl's station taken in 1912 during the Royal visit, shows the building before the north-west range was constructed (*see* Figure 19). A wide arched entranceway can be seen in the north-west elevation of the south-east range, which still survives on the interior. A Venetian window to the first floor of the north-east elevation of the south-west range was probably moved to the first floor of the north-east elevation of the south-west range when the north-west range was constructed.

The railway platform has been removed; though the south-east range retains some of its interior features, most notably a handsome panelled staircase in the hall in the south-east range which would have provided access from the platform to the first-floor offices or waiting rooms (Figure 86). The staircase has a turned banister, balustrade, open treads and moulded fretted panels. There is also a triangular-headed niche with a projecting shelf below. The under stairs takes the form of a shallow basement accessed via stone steps, with shelves and storage bays for wine, or other alcoholic beverages, which were presumably for entertaining Earl Fitzwilliam and his guests while they waited for their trains. The doorways in the staircase hall have deep panelled doorcases, and there are two wall niches, one of which has a concealed radiator hidden behind an intricate ironwork grill. There are two cellars beneath the building. The cellar below the south-east range has a jack arch roof constructed out of brick and supported on iron plates embedded into the main walls. During the 1970s the building housed the manager's office, inspection department, and general offices.[312]

Fig 85. Building 13 (a) above: from the front (Elsecar Heritage Centre): south-west range (1850s and later) to the left and south-east range (1870s) to the right; (b) bottom left: from the rear (Distillery Side): south-east range to the left and north-west range (early 20th century) to the right and (c) bottom right: from the side: the north-west range looking south-east, L Jessop, June 2017. © Historic England.

Fig 86. Building 13: internal staircase with niche, L Jessop, October 2017. © Historic England.

The Gasworks

The former gasworks site on the south-east side of Wath Road has largely been demolished, though two buildings, no. 3 and no. 5 Wath Road, have survived. No.5, orientated at an angle to Wath Road at the north-east end of the gasworks complex, served as the manager's house. This double-fronted detached stone house has a central projecting bay, stone copings and brick chimneystacks. It was first shown on the 1892 OS map, and could have been constructed as part of the original gasworks site of 1857. No. 3 originally functioned as the main office. It was built during a reordering of the complex in the early 20th century, and is shown on the OS map of 1930. It is a two-storey brick structure which originally faced into a yard to the south-west of the site. A section of the brick-laid yard surface also survives. A plan of the gasworks dating to 1949 also shows that there was a weigh bridge outside of the front entrance. The site has been recently redeveloped, and two modern detached houses now occupy the central part of the site to the south-east of Wath Road.

Distillery Side

Nos. 1-3, 4-8 and 9-12 Distillery Side are three rows of cottages which together form a group of domestic buildings to the north and east of the Newcomen Engine. Nos. 1-3 and 4-8 are listed grade II (NHLE Nos. 1151089 and 1151090). The buildings take their name from a short-lived tar distillery which operated in this area between 1814 and 1818 (*see* Figure 38).[313] They were built over the course of the first half of the 19th century, and relate to the expansion of the village and community provision in Elsecar following the opening of Elsecar New Colliery.

Nos. 4-8 Distillery Side (Figure 87) is a stone-built, L-shaped complex of five cottages. Four of the cottages are positioned at right-angles to Wath Road (4-7 Distillery Side), and a further single-storey cottage is aligned parallel with Wath Road (8 Distillery Side). Nos. 4-7 Distillery Side comprises two double-fronted dwellings, one at each end of the row, and two single-fronted central cottages. There is one stone and one brick stack to the roof. The window and doorway openings have stone lintels and sills, several of which appear to be original. In a similar manner to the Newcomen engine, the monolithic stone lintels are scored to appear as though they are formed out of individual blocks. It is possible that the row was constructed around the same time as the Newcomen engine. A rectangular-shaped building at right angles to Wath Road, directly to the south of the 'intended Coal Tar Works' and roughly in the same position as these cottages, is shown on the sketch plan of 1814 (*see* Figure 38).

The NHLE identifies a blocked 'basket archway' to the rear elevation, although there was no visible evidence of this on the exterior. It is possible that it is now hidden by modern extensions and outshuts to the rear of the row. No. 8 Distillery Side is of a separate building phase to nos. 4-7 (Figure 88). It takes the form of a T-shaped structure. At the south end of the west elevation is a former opening with tooled and margined lintel and jamb stones. To the centre and north end of the elevation are a further two lintels with similar tooling. These could have related to former window or pedestrian doorway openings. The structure is well-built, with a partial stone plinth to the base. A low-set window to the north gable suggests that there is a semi-sunken cellar at this end. These features suggest that it originally functioned as outhouses or workshops, either related to the work of the colliery or perhaps even the former tar distillery near to this site, thought there is no direct evidence to prove this. It is, however, identified in the Brampton Bierlow Cropping Book of 1871-1882 as a house.[314]

Nos. 9-12 Distillery Side is a further row of four cottages with stone south elevations and brick north elevations (Figure 89). The cottages have stone slate roofs with some replacement imitation slates to the rear. To the north elevation several windows and doorways also have scored stone lintels to appear as though they were formed out of individual blocks. To the south elevation are a series of smaller window openings with disproportionately large stone sills and lintels, some of which have margined tooling. The cottages are shown on the OS map of 1855 and date to the first half of the 19th century, having been constructed after the closure of the tar works in 1818.

At the south-east end of the building is a range of single-storey outhouses. The yards to the south of the cottages also once contained outhouses, as shown on the 1892 OS map. The boundary walls to the yards are very well built, with substantial stone copings, and gateposts formed out of large monolithic stone blocks. These were probably re-built when the outhouses were demolished.

Nos. 1-3 Distillery Side is a stone-built row of three cottages with a stone slate roof and three stone chimney stacks (Figure 90). The NHLE identifies that it was constructed in 1836 for the Fitzwilliam Estate, and was apparently used as a school until the introduction of the railway line which cut off access from the village to this site. A new school was built next to the Church of Holy Trinity in 1852.[315] The Brampton Bierlow Cropping Book of 1871-1882 identifies it as a row of three cottages.[316] The row was built into the slope of the land in such a way that there is a basement level at the north-west end of the building. This has been converted into a further self-contained dwelling known as The Forge.

The row is identified on the 1855 OS map as the National School. The 1859 plan indicates that the building formed part of a complex of structures which originally included a long building extending from its north elevation and an enclosed courtyard to the east and south. The rear wall of the long building may well be preserved as the rear wall of the modern garages to the north of nos. 1-3 Distillery Side. The original fenestration scheme to the west (front) elevation suggests that the building comprises three unequal-sized bays, each with window openings with stone lintels and sills. This internal arrangement is also indicated on the 1859 plan. The original window panes have been replaced and several new smaller windows have been inserted into the elevation. A window opening in the south bay has been converted into a doorway. To the east (rear) elevation are a series of original doorway and window openings with original stone lintels.

It is unclear how nos. 1-3 Distillery Side would have been arranged internally when it was occupied as a school. Early school buildings did not necessarily conform to a regular plan, or incorporate common architectural features, making comparisons with other buildings elsewhere problematical.[317] The courtyard to the west of the building shown on the 1855 OS map and 1859 plan may tentatively be interpreted as an outside playing area. The Forge has a jack arch ceiling. The vault would have provided stability and fireproofing for the basement level, as also seen in the basement of Building 13 and 2-4 Forge Lane. There are no further visible features to indicate that this part of the building was used as a smithy.

Fig 87. Nos. 4-8 Distillery Side from the front, L Jessop, June 2017. © Historic England.

Fig 88. Nos. 7 and 8 Distillery Side, L Jessop, June 2017. © Historic England.

Fig 89. (a) above: Nos. 9-11 Distillery Side from the front and (b) below: 11 Distillery Side from the rear, L Jessop, June 2017. © Historic England.

Fig 90. Nos. 1-3 Distillery Side, L Jessop, June 2017. © Historic England.

Summary of significance

Character Area 1 represents the heart of the Fitzwilliams' industrial enterprises at Elsecar. Much of the evidence for this can be appreciated in the complex of buildings and structures carefully restored since the 1990s to serve as the Elsecar Heritage Centre. The jewels in this crown are the Newcomen Engine which, together with the adjacent pit gear and fan house, is the last visible (above-ground) element of the 4th Earl's 'New Colliery' begun in 1795. These are accompanied by the extensive range of workshops and stores arranged around a cluster of buildings which included the former 'Engine and Boiler Repair Workshop', which supplied the needs of the Earl's collieries from 1850 onward, and the station building added in the 1870s as both a practical means of transport, and as a means to display his industrial interests to a wider world (including all guests to Wentworth Woodhouse arriving or departing by rail). The architectural features of these buildings, which include deeply-chiselled sandstone walls, tooled and margined quoins, and scored lintels, replicate the common building materials and design motifs used in estate-commissioned buildings across Elsecar. The workshops are listed, though a comprehensive listing revision will be carried out by Historic England as the current spot locations and listing descriptions do not provide adequate explanations for each of the individual structures, or the history or development of the site as a whole. Building 14 and 14b will also be considered for listing along with the other buildings of the workshops because of their group value. In future, the buildings of the workshop complex would benefit from further architectural investigation to fully understand their original functions, and how they have been changed and modified over time.

The canal basin, the arrival of which spurred the development of Elsecar's industry around 1800, is less than evident, having been buried in the later 19th century to make way for the expansion of railway sidings. Its location is known, however, and it is still capable of being presented in a manner which would inform visitors of its pivotal role in the emergence of Elsecar. The remains of Elsecar Ironworks, supported by the Fitzwilliams from its inception and managed directly by the estate for more than 20 years, are central to the understanding of the overall industrial enterprise, involving raw materials from the estate as well as considerable investment by the Fitzwilliams in pursuit of both economic and paternalistic goals. The former rolling mill, which was incorporated into the workshops following the ironwork's closure, is a magnificent example of its kind and under the Dawes' management housed some of the most advanced mill equipment of its age. Of the remainder of the works a two-storey workshop building (Building 19), the casting house (Building 1), and the grand entrance building to Forge Lane (Building 3), have also survived. As with the workshops, a comprehensive listing revision will be carried out for the former Ironworks complex and, as part of this; Building 1 will be considered for listing. The understanding and interpretation of these buildings would also benefit from further architectural investigation.

Research into the history of the Ironworks' site for this report has demonstrated the importance of the visible and buried remains of the blowing engine house, charge yard and blast furnace structures still present in and beyond the wooded bank to the rear of the workshop yard. It is to be hoped that recent clearance work undertaken by Barnsley Council will be followed by further, more detailed investigations so that this part of the site can form a more accessible part of the visitor experience. The importance these remain, and those of the ironworks now buried beneath the later NCB yard, is considered sufficient to merit statutory protection as a scheduled monument - a matter which is being considered by Historic England's Listing Team at the time of writing.

Character Area 2: East of Elsecar

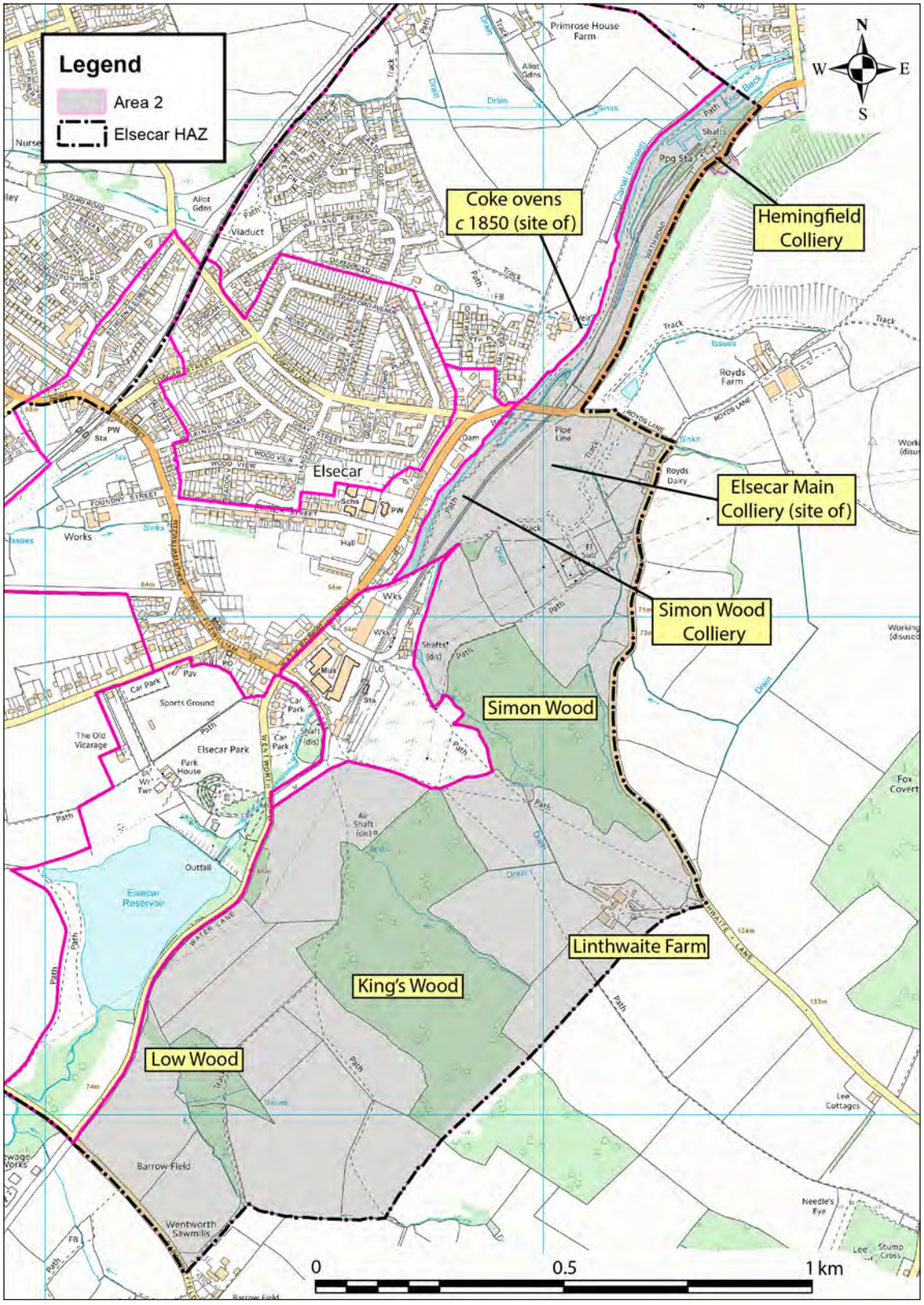


Fig 91. Detail from Figure 201 showing the extent of Character Area 2. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

Character Area 2, to the east of Elsecar, combines a landscape of fields and woodland with the remains of coal mining. The land rises steeply to the south east of the Knoll Beck, the stream replaced in the late 18th century by the Elsecar branch of the Dearne and Dove Canal. Much of the land comes today under the farms of Royds and Linthwaite. Royds lies to the north of this character area and is outside the boundary of the HAZ although Royds Dairy and associated buildings fall within it; Linthwaite is to the south-east and is still a tenancy of the estate. The former site of Elsecar Main Colliery, now largely re-claimed by nature, also lies within this area.

The area is sparsely populated and contains few buildings. The two 19th-century houses on the corner of Royds and Linthwaite Lanes are built of local sandstone, which is mimicked by the cladding of the late 20th-century bungalow nearby. The two-storey Royds Dairy and Cottage were both built by the time the first OS 6-inch map was surveyed in 1849-50. Royds Dairy is the earlier of the two: with its notched and chamfered window lintels and bracketed eaves, it may date from the 1820s or 30s. Royds Cottage may be a little later with its simpler lintels, some of which have been replaced, but both houses are much extended and the outbuildings of Royds Dairy have also been much altered.

Linthwaite, on the other hand, is a farmstead of considerable antiquity although this is belied by its present appearance. It now consists of a loose courtyard of farm buildings with a sandstone farmhouse (now partially rendered) of 17th- or early 18th-century appearance, extended in several directions. However, the stone exterior of the taller part of the house anecdotally hides a timber frame, which suggests that the house may have late medieval origins as a two-storey, two-bay structure; its proportions, with a tall roof and low ceiling heights, correspond with this idea. The house was completely refenestrated in the mid-20th century; the chimney stacks have also been rebuilt several times.

Most of the traditional farm buildings shown on 19th-century OS maps were demolished in the second half of the 20th century. The main losses were the stone barn that adjoined the house and the very substantial north-western range of the courtyard. The surviving historic farm buildings lie opposite the house and date from the second half of the 19th century. These are a small split-level rubble building built on the south-eastern corner of the yard and the once entirely open-fronted stable of perhaps the 1870s or 80s which was added to it. The stable has an interesting combination of wooden roof trusses with cast-iron columns, not dissimilar to the workshop ranges of the ironworks in the valley below (*see* Area 1). Most of the other farm buildings are not of historic interest.

Early coal mining traces in the woodland

Small wooded areas may have long existed along the narrow streams cut into the hillside to the south-east of Water Lane, but the spread of what are now mature woods of sycamore, beech and oak clearly post-date a period of industrial activity, mostly mining, which left parts of the hillside useless for cultivation or pasture.

The two main woodlands which are such a distinctive feature of the south side of the valley - Simon Wood to the north of Linthwaite, and King's Wood to the south - were certainly in existence in 1773 when they were mapped as part of Brampton Township. At that time King's Wood and Low Wood formed a single block (all called Low Wood), separated from Simon Wood by a broad swathe of pastures (Horse Close, Ox Close, Bacon Close) to the north-west of Linthwaite.[318]

The northern boundary of King's/Low Wood is defined by a stream, deeply incised, which formed the boundary between the Brampton and Wentworth townships, as depicted on the 1855 OS map (Figure 92). Within the upper part of the wood this boundary departs from the stream to follow a bank and ditch (marked 'old ditch' in 1855) which appears to preserve the outline of a former close, suggesting that the Linthwaite holdings were well established, and respected, when the township boundary was formalised. Alongside this artificial boundary, near the top of the slope and mostly on the Wentworth side, lies a series of irregular hollows and terraces, smoothed and eroded by time, which suggest even earlier efforts to mine coal from shallow exposures (*see* Figure 5). The terraces could indicate a campaign of extraction, or more prolonged and less organised work - perhaps that of local people gathering accessible coal for their own use from the margins of the township. The coal is unlikely to have been of good quality, and there is some indication that the nearby springs were channelled to create at least one pond where poor coal might have been washed before it was carried away. These working are impossible to date, but they may be the earliest visible evidence of coal extraction in the area, pre-dating the deeper and more systematic mining practices, and their remains would repay further archaeological investigation.

Shaft mounds – circular hollows indicating infilled or capped mine shafts, surrounded by partial or complete banks of upcast - are common within Simon and King's Woods. They probabaly reflect, for the most part, methods of mining the relatively shallow Kent's Thick Coal which pre-date the development of deeper levels in the latter part of the 18th century. The extent of Simon Wood is largely dictated by the grid-like formation of such mounds lying approximately 40m apart, clearly visible on the lidar plot (Figure 5). This indicates either the reach of the chambers extending from the base of each shaft, or the development of a more systematic pillar and stall pattern. Between 1855 and 1867 the lower part of Simon Wood was cleared to reinstate a run of fields above Distillery Row,[319] but the return was clearly not worth the investment of effort needed to pursue this clearance any further uphill. Even today the rough pasture below the wood is peppered with undulations which show the pattern of infilled shafts.

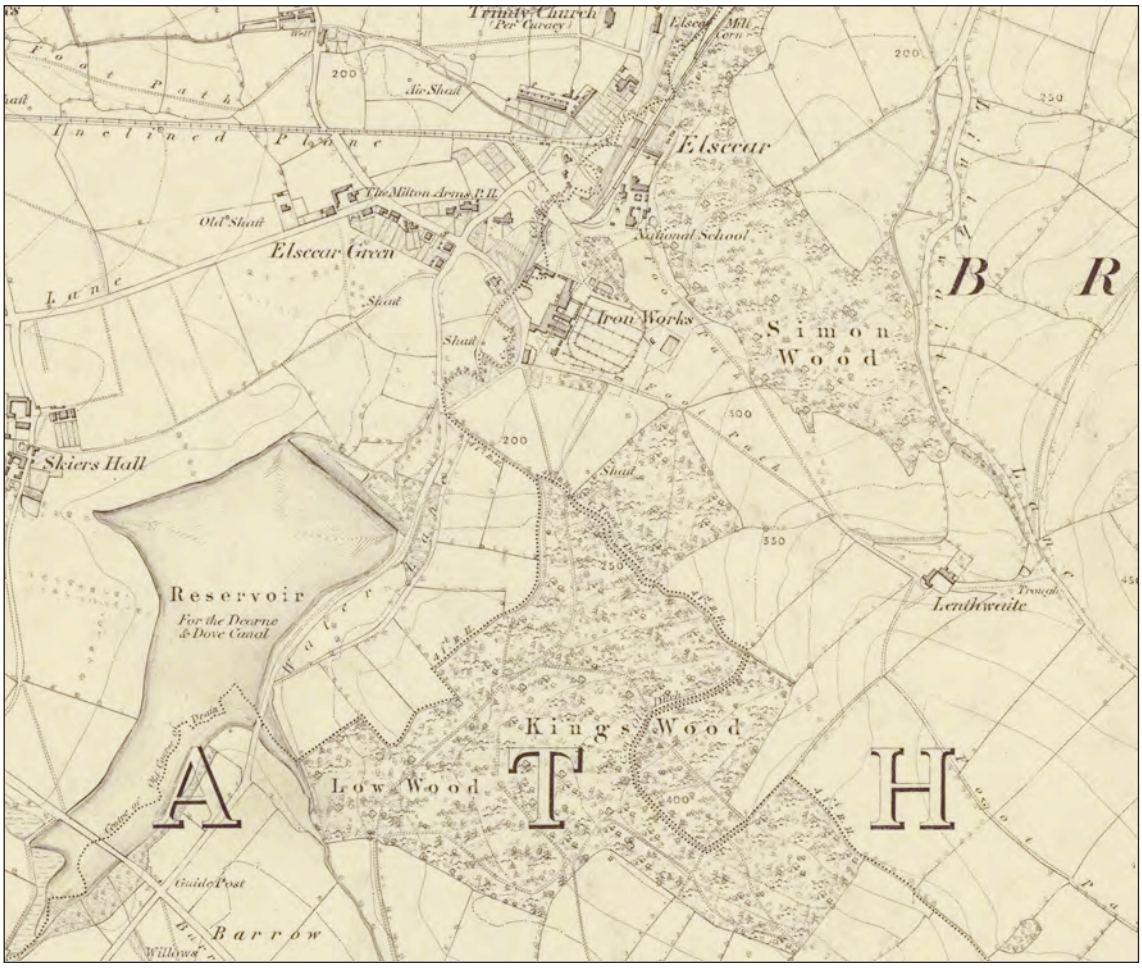


Fig 92. Extract from the Ordnance Survey first edition 6-inch map, Yorkshire 283. Surveyed 1849-50, published 1855. Reproduced by permission of the National Library of Scotland.

The shaft mounds in King's Wood, almost certainly related to the early working of the Barnsley Coal, are fewer and less regularly spaced. It is possible that some were dug in the later 18th or early 19th century to provide ventilation for levels in the Low Wood mine. One large shaft on the north side of the stream certainly lies close to the line of the level as drawn on the 1773 map. This has a well-defined halo of upcast material suggesting several phases of work. Another shaft is cut through the bank of one of the terraced extraction areas mentioned above, providing some evidence of their relative dates. Both shaft-tops could repay detailed archaeological survey.

At the lower, south-western end of King's Wood are two quarries, one a bowl-like depression some 8m deep with a level cart track exiting to the north-west, the other a more ragged and superficial hollow. The purpose of both remains obscure. There is no obvious exposure of coal at this level, and it is possible that they were cut to extract ironstone, or brick-making shale which is exposed in the side of the larger pit.

The extent of early mining to the south of King's Wood can only be guessed at now, since a broad swathe of woodland in Wentworth township, linking King's Wood and the present Low Wood, was completely removed by open cast mining in 1948

(*see* Figure 2, and note the expanse of blue [1948 mining] separating King's Wood from Low Wood). The fields which occupy this area today are modern, including those which lie beyond the wood to the north, alongside Water Lane, reinstated with different boundaries following extraction.

The detached fragment of Low Wood to the south of the former open-cast area, in the southern corner of the assessment area, contains no obvious mining remains, but is bordered and intersected by stream channels which may have precluded any other use. Water was clearly an important feature of all these woodlands in the period of industrial expansion. Streams in Low Wood and King's Wood led down to the Harley Dike and either fed the reservoir or supplemented the Knoll Beck as it flowed toward the Elsecar Ironworks and the canal. On the south side of Simon Wood the natural stream channel was augmented with a straighter 'v' shaped ditch to supply a large rectangular pond (now in-filled) immediately above the Elsecar Ironworks, shown to the north of the winding engine pond on the 1867 tithe map (*see* Figure 43). The same map shows, for the first time, a reservoir in the southern tip of Simon Wood fed from a smaller pond in the angle between Linthwaite Lane and the approach to Linthwaite farm. Both features survive as shallow earthworks. The 1867 tithe map shows the principal drain from the reservoir then, as now, following Linthwaite Lane toward Royds; but an inspection hatch on the reservoir's flank indicates buried pipes which, in the early 20th century if not before, may have carried water from Linthwaite in other directions, notably towards Elsecar.

Fig 93. The culvert forming the main sluice from the Linthwaite reservoir – a tunnel of un-frogged brick, typical of the late 19th century, faced with a sandstone arch, D Went, June 2017. © Historic England.

The character of the agricultural land

Evidence of pre-mining land use within the woodland is sparse. It is likely, however, that it previously formed part of the pattern of old enclosures associated with Linthwaite, not unlike those shown between the woods on the 1773 draft township plan. As mentioned above, one such close still remains visible within the King's Wood where the bank and ditch marks the division of the Brampton and Wentworth townships. The northern extension to King's Wood, a close named Rowing Spring in 1773, contains some evidence of earlier use in the form of narrow-ridged ploughing across the centre (*see* Figure 5). However, a note on the 1773 plan states that this area was 'planted with young trees', which might suggest that the area was ploughed to establish the new plantation.[320] In Simon Wood a three-sided enclosure, visible from lidar and defined by low banks alongside the southern stream, appears to be a small stock pen, itself a probable indication of a formerly open landscape. Perhaps of medieval origin, it may have been long abandoned when the mining started and a shaft was sunk through its northern corner.

The most consistent survival of old fields and field boundaries occurs, rather surprisingly, between Simon Wood and Royds Dairy in the north eastern corner of Area 2. To the north of the path from Linthwaite Lane to the foot of Simon Wood (formerly Simon Wood Lane) some of the parallel field boundaries follow a pattern which is visible on the 1773 draft township plan, and again, somewhat rationalised, on the 1855 OS map. The northern part of these closes, next to the canal, was of course completely obliterated by the development of Elsecar Main Colliery in the early 20th century, but the mine's closure in 1983 followed by demolition has returned this area to something of its former rural appearance. The concrete basin of the spray pond, used to dispel heat from the steam turbine power house, is the last truly visible element of Elsecar Main, set within one of these earlier close boundaries (Figure 94).

The Canal

The construction of the Elsecar branch of the Dearne and Dove canal in the late 1790s brought considerable change to this area, not least as a means of transportation for coal and for the products of Milton and Elsecar ironworks. This area contains the first surviving stretch of the canal proper which is fed by the reservoir in Area 3. The route of the canal is extremely assessable, followed as it is by a footpath cum cycletrack forming part of the Trans Pennine Trail and linking the major heritage assets at the Earls' Workshops and Hemingfield Colliery.

The canal broadly follows the natural course of the Knoll Beck, whose sinuous line was perpetuated as the boundary between the townships of Hoyland, Brampton Bierlow and Wombwell on 19th-century OS maps, long after the actual stream had been incorporated, buried or pushed aside (ie. Figures 92, 202 and 203).

Fig 94. The former site of Elsecar Main Colliery from the air. Note the grey area of the former spray pond (bottom right) set within a pattern of narrow NE-SE oriented fields of 18th-century or earlier origin. Images supplied to Historic England through the APGB agreement by Next Perspectives. SU1455 01-JUN-2006 + RGB Aerial Photography – ©Bluesky International/Getmapping PLC.

The present Elsecar canal terminal dates from the later 19th century. The canal formerly extended some 130m further south-west, toward the New Colliery (*see* Area 1), but the expansion of the railway sidings, anticipated in 1859 and agreed in 1867, required this section to be buried and the wharf relocated.[321] The partial separation of the old terminal from the new wharf was captured on the 1867 map of Nether Hoyland (*see* Figure 43),[322] but the final alteration is most clearly depicted on a railway plan of *c*1876 (*see* Figure 70). The later wharf remains largely unchanged from its depiction on this map and a photograph of the same era (Figure 95), complete with the flagstones and stonework of the basin edge.

Fig 95. Elsecar's canal basin in the late 19th century. Note the unladen barge riding high, up to the level of the wharf, and the railway track (no longer present) alongside. Reproduced with the kind permission of Barnsley Archives and Local Studies A/3133/Z/1-2.

Considerable work was undertaken by the Barnsley Canal Group to conserve the Elsecar branch in the early 1990s, and a significant portion of the canal's length through Area 2, although no longer navigable, owes its restoration to the efforts of those volunteers. Between the wharf and the highest lock, 300m to the north-east, the canal is fully open and water-filled, with indications of the tow path still visible on its southern side. Mid-way along this section a particularly well-preserved landing of massive stone blocks held together with iron staples forms the canal side at the site of the Simon Wood Colliery. This lies opposite the remnant of a footbridge shown on the 1892 OS map connecting the colliery with Wath Road, and also seen in the background of Figure 95. The bridge was removed before 1930 and all that now remains is a semi-hexagonal brick abutment with flanking buttresses (Figure 96). There are no mapped or physical indications of a tow path on the north-west side of the canal, which generally follows the foot of a fairly steep slope descending 3m in places from the properties on Wath Road.

The highest lock has been fitted with restored upper gates to retain the water level back to the wharf. The stonework of the visible parts of the chamber is original, as is that of the spillway a short distance to the south (mapped by the OS in 1892). The lower gate has not been replaced. Water taken from the spillway emerges in an open channel which runs parallel to the canal on the south side, as shown on the OS map of 1855, when it was still connected to a surviving portion of the natural Knoll Beck. By time the next edition was published in 1892 the beck had been entirely replaced by this and other straight channels to make room for the railway sidings to Simon Wood Colliery. The second (Cobcar) lock lies beneath the Wath Road Bridge.

Fig 96. Simon Wood footbridge abutment and the masonry landing, D Went, October 2017. © Historic England.

The gates have been removed, but the stonework of the south-western entrance and much of the chamber was fully revealed by volunteers in 1995 when this section of the canal was re-excavated. A modern weir set between the chamber walls maintains the water level to the south as well as the canal's overall character.

To the north of the Wath Road bridge the canal has seen limited restoration. Water levels are retained by a modern dam over a distance of some 80m beyond the bridge, after which large segments are silted up and reduced to 'natural' drainage channels running through reeds and marshy ground. This includes the area of the third lock and wharf at the foot of the Jump incline from the Hoyland Silkstone Colliery (*see* Area 8), little of which remains visible apart from a revetment wall which might be a remnant of the coal drops on the north-west side of the canal.

To the north of the Jump wharf the canal resumes something of its original appearance, albeit somewhat narrowed and heavily overgrown. Water levels here are maintained by a modern dam set across the upper end of the fourth and final lock, just south-west of Tingle Bridge. The lock entrance has been rebuilt with raised walls, which match those of another modern sluice set about 115m to the south-west, but the masonry around the upper pound and of the lock chamber itself appears to be substantially unaltered.

Perhaps the most significant feature of the canal between Elsecar and Tingle Bridge is the canal basin for Hemingfield Colliery. The basin itself, a Grade II listed structure,[323] is no different in shape now from its depiction on the 1892 OS 25-inch map (Figure 97), its function illustrated quite clearly by the sketch reproduced here as Figure 14.

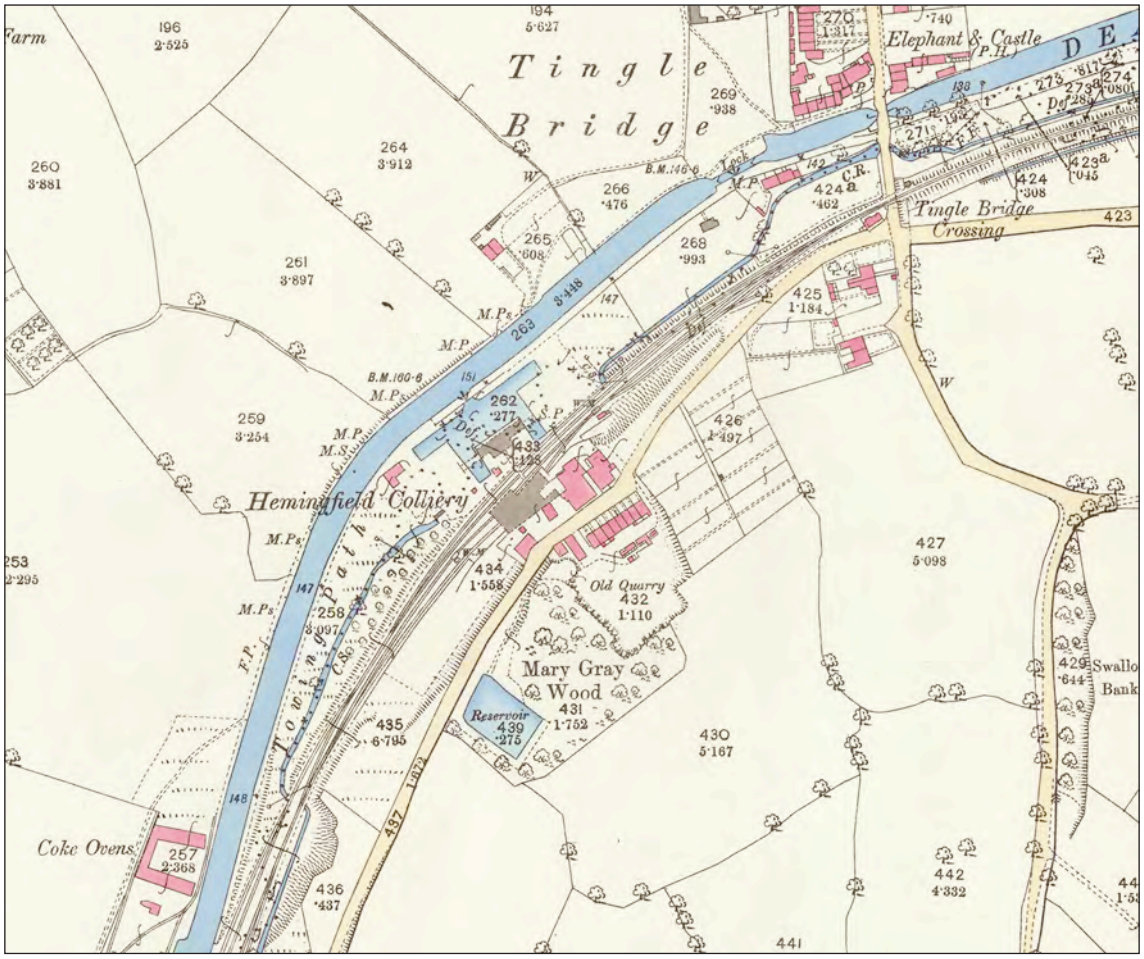


Fig 97. Extract from the Ordnance Survey 25 inch map, Yorkshire West Riding sheet 253. Surveyed 1890, published 1892. Reproduced by permission of the National Library of Scotland.

It was constructed around 1840 between the canal (to which it was linked by a narrow channel now overlain by the Trans Pennine Trail) and the Earl's newly established colliery to the south-east (*see below*). The basin is built in massive coursed blocks with rounded coping stones forming the rim. It was surrounded by iron railings set back from the edge, some sections of which remain while others have been sawn off leaving only their stumps in leaded sockets. The body of the basin lies parallel to the canal, with space for barges to wait in the arms extending to the south-west and north-east. Further arms to the south-east led toward the colliery and allowed barges to stand beneath the loading gantry shown on the 1892 map. The ends of these two arms contain paired overflow channels set below the coping, and rectangular sluices (gates and winding gear removed) at a lower level. These channels and sluices emptied into the canalised Knoll Beck, which runs in a stone lined culvert behind the basin, the two ends marked by segmental archways with stone-faced voussoirs and parapets. Elsewhere, between the Tingle and Wath Road bridges, the Knoll Beck mostly runs on the surface, except where it passes twice beneath the railway to allow the rails to run close to the canal opposite the bottom of the Jump incline.

Hemingfield Colliery

The 5th Earl Fitzwilliam decided to sink a new coal pit around 1840 on the opposite side of the canal from the hamlet of Hemingfield, which lies to the north of the HAZ boundary outside Area 8.[324] This colliery was initially called Low Elsecar before becoming known as Hemingfield, as it is today. This is the best surviving of all the collieries in Elsecar; it is located to the east of the canal, south-west of Tingle Bridge and on the northern edge of Mary Gray Wood. The large canal basin was dug to serve the new pit and by 1850 the Elsecar branch of the South Yorkshire Railway bisected the area between the colliery and the basin. The pit remained operational until 1920, after which it was used as a pumping station until 1989.[325] The three surviving buildings are the engine house, the pump house and the ruinous fan house, and there are other related structures, such as the vast retaining wall between the colliery and the railway and the cottages opposite the colliery known as Pit Row.

The engine house (Figure 98) is multiphased, with the first portion – the tall, slender gabled building – dating from the opening of the colliery in the late 1840s; it is constructed from finely tooled sandstone. The arched opening to the south-west was for the engine, the keystones of the arch unusually abutting what was once the corner of the building. The internal chamfer of this opening shows how the engine must have been inserted into the building. The south-eastern wall has a slender blocked window and two square blocked openings through which the great cast-iron beams visible in the interior were inserted. One of these beams has been given a classical treatment: the two capitals displaying the triglyphs and guttae of the Doric order (Figure 99) would once have formed an entablature over two cast-iron columns. The north-eastern gable wall contains two arched openings: the original doorway and a tall window set high up.

Fig 98. Engine House at Hemingfield Colliery, L Jessop, December 2017. © Historic England.

The pump house to the north-east is of a similar date and is constructed of the same finely-tooled sandstone, although the south-western end of it is built with far larger blocks of stone and acted as a bob wall (Figure 100). This part of the building housed the pivot for the colliery's beam engine for pumping (in the manner of the Newcomen engine in Area 1), and thus its masonry required the greatest strength and stability. Many of the original openings have been blocked or replaced in the conversion of the pump house for domestic use, particularly those to the north-west and north-east. A particularly significant feature is the curved wall in front of the building fronting the shaft through which the pump plunger operated; this wall now partially supports a frame for the later head gear.

The colliery expanded considerably in the later 19th century. The roof scars of a now-removed but substantial addition can be seen on the elevations of the engine house described above; a further extension to the north-west mostly survives. This was built with stone facing where it joined to the south-western elevation but brick was largely used elsewhere. This addition obscures the north-western wall of the engine house, with its two vast segmental-headed openings (now blocked); two doorways have been cut through to allow access between the two parts of the building. Externally, part of the extension sits on a podium of vast ashlar stones, suggesting the need for considerable support on this side of the structure, perhaps due to the movement of heavy machinery within. Large arched windows with double brick headers once lit the interior but now they are all blocked. The north-eastern gable wall was rebuilt in the early 20th century.

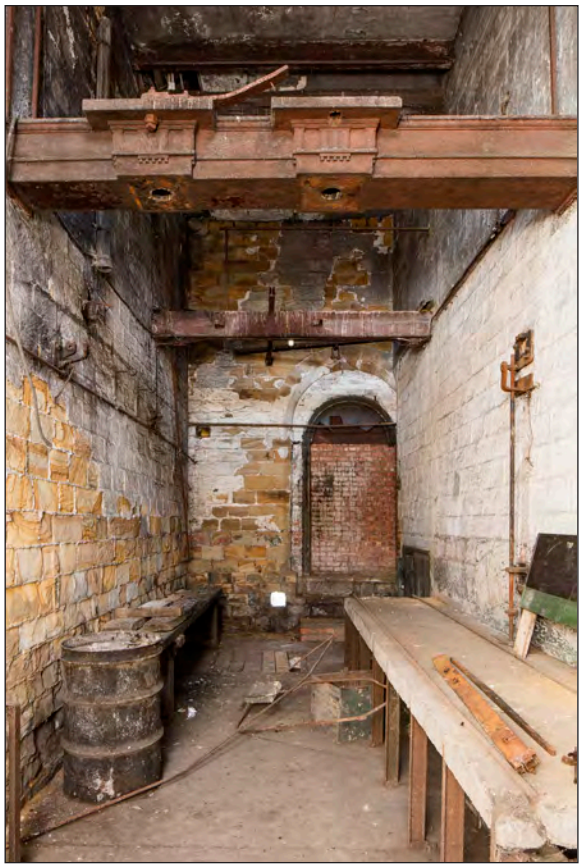


Fig 99. Cast-iron beam to interior of Engine House at Hemingfield Colliery, L Jessop, December 2017. © Historic England.

Fig 100. Pump House at Hemingfield Colliery, L Jessop, December 2017. © Historic England.

The final structure surviving from the expansion of the colliery is the fan house (Figure 101), the earliest surviving portion of which was constructed in brick at the end of the 19th century near the site's perimeter wall. The second edition OS map (revised 1901, published 1905) shows that this was once part of a large building – since demolished – which fronted the railway; it had a bridge over the tracks which allowed a further connection with the canal basin. The brickwork of the fan house is laid in English garden wall bond with stone used for the kneelers, coping, impost blocks and lintels; a roundel facing the road once provided lighting for the room behind. The north-eastern wall has two sections of inset panels, similar to those seen on some of the infilled walls of the former Rolling Mill (Building 21) in Area 1. The south-western part of the building was used as open-fronted but roofed storage, perhaps for stabling at some point, with one bay later enclosed. The north-western area was rebuilt in the mid-20th century, perhaps when the adjoining structure was demolished; it subsequently appears to have been used as an ablution block, with the installation of white glazed tiles and showers.

Fig 101. Fan House at Hemingfield Colliery, Alun Bull, December 2017. © Historic England.

Other historic fabric remains in the retaining wall between the surviving colliery buildings and the railway (Figure 102), particularly its lower part constructed in stone, but the most important survival are the row of sandstone cottages, known as Pit Row, which lie opposite the former pit (Figure 103). It was built as a single-storey range of pit workshops, probably at a similar date to the earliest 1840s phase of the colliery, and later converted into eight two-storey cottages.[326] It is shown as a row of cottages with outbuildings to the rear on the 25-inch OS map of 1892. The outer cottages are considerably wider than the inner ones, perhaps denoting the relative status of the original occupants, but they all appear to have a two-up, two-down plan. The dormer windows facing Wath Road appear to replace smaller windows under the eaves; similar windows survive on the rear elevation. As with the rows of cottages in Elsecar, this group in Hemingfield would have housed some of the workforce for the new colliery, close to their place of work.

Other colliery and industrial sites

The strip of land between the canal and the main road from Hemingfield Colliery to the Wath Road bridge contains evidence for a number of major industrial enterprises, although all of the main structures have been demolished and their remains largely buried and covered by dense scrub woodland. The single permanent way of the restored Heritage Railway is shorn of numerous parallel lines and sidings which served Hemingfield and the coal drops at the foot of the Jump incline, although a fragment of the cutting to Hemingfield's detached engine and fan house, just north of the Wath Road Bridge, can still be found. The remains of the engine house were finally demolished before the Second World War and buried by subsequent earthmoving, according to the Ordnance Survey maps.

Fig 102. Retaining wall between Hemingfield Colliery and the Railway, L Jessop, December 2017. © Historic England.

Fig 103. 'Pit Row', Hemingfield Colliery, L Jessop, December 2017. © Historic England.

The 1855 OS map shows a string of small structures labelled as 'Coke Kilns' opposite the base of the Jump incline to the east of the railway line (Figure 202). These may be a less accurate depiction of the coke oven yard depicted in the same place on an undated map of the proposed route of the South Yorkshire Railway, which must have been drawn up only a few years before (Figure 104).

The features structures marked in brown to south of the lock and bridge all relate to coke making: 10d and 11d were banks of 15 coke ovens apiece, 79e marks a further 6 ovens. The whole area, referred to in the key as Low Close (New Coke Yard), was then in the Earl's hand, scheduled for clearance to allow the passage of the railway. Nothing remains visible on the ground there today. The OS map of 1892 shows the coke ovens transferred to the opposite side of the canal, served by spurs from the Jump incline (*see* Area 8).

Moving south of the Wath Road Bridge the main industrial feature was Simon Wood Colliery, which took over from Elsecar New Colliery shortly after the railway opened, and straddled the space between it and the canal as shown in Figure 105.

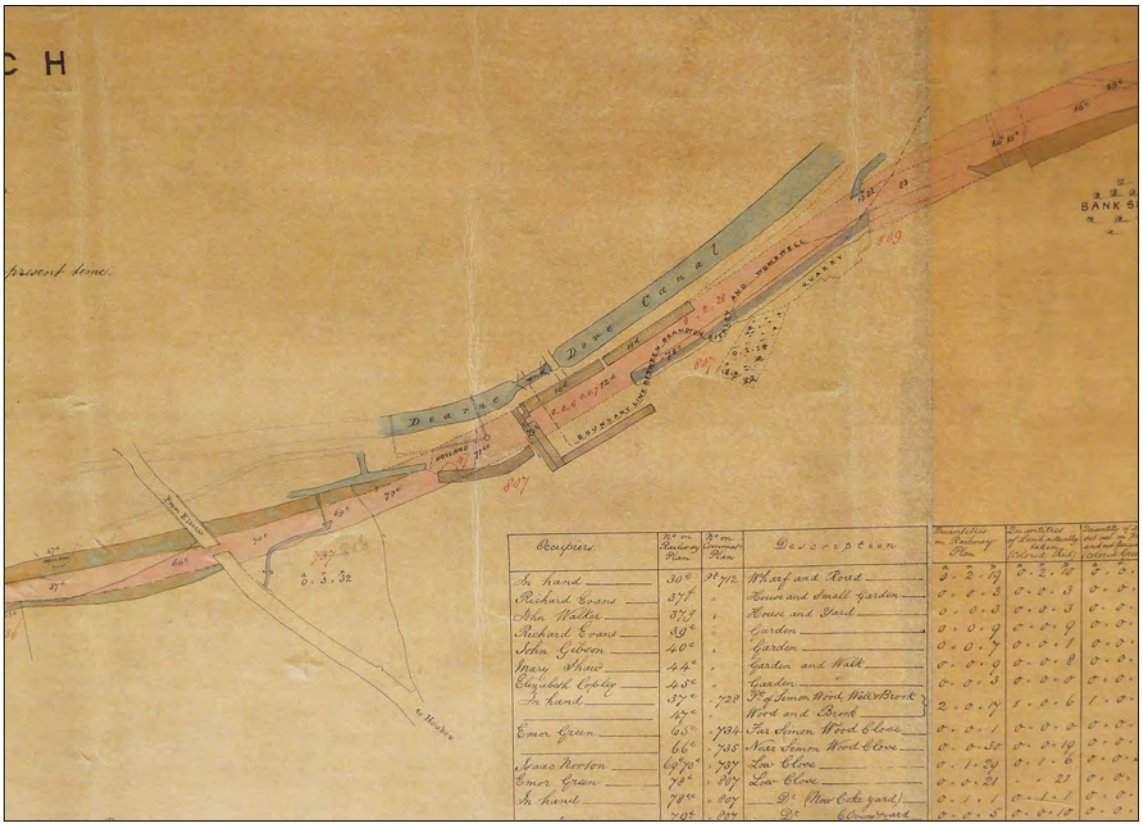


Fig 104. Extract from a plan of the proposed South Yorkshire Railway through Wombwell and Brampton to Elsecar, with tables indicating the properties (including houses and coke ovens) to be taken down. Undated, but presumably drawn up around 1850. Marginalia includes 'S.Y.R & River Dun Co: Earl Fitzwilliam's Estate Newman & Sons' and 'Earl Fitzwilliam & S Y R Elsecar Branch'. Uncatalogued. Reproduced with the kind permission of Barnsley Archives and Local Studies.

The main works are depicted in some detail on the sketches and photographs shown earlier in this report (*see* Figures 16 and 25). The larger structure on the map included the winding gear for two shafts and the loading gantry straddling the railway, while to the south lay the engine house and further south again Benjamin Biram's fan house sat atop the third shaft. The fan house is shown particularly well in the historic photograph of the colliery (Figure 25) as well as in the background of the wharf photograph (Figure 95). Simon Wood closed in 1903, replaced by Elsecar Main to the south of the railway and, following what appears to be the Fitzwilliams' normal practice, the redundant colliery buildings were demolished and removed shortly afterwards, leaving only the capped shafts and a small pump house where the footbridge had crossed the canal.[327]

Today there is little to see of Simon Wood Colliery. Small undulations and outcrops of brick and worked stone hint at the locations of buildings, or at least their demolished remains, but even these are complicated by subsequent soil dumps, including material spread during the canal restoration work in the 1990s. The area of the pit head buildings and engine house is now quite inaccessible due to the growth of scrub woodland, the only visible feature being a surface of stone setts running into the undergrowth from the canal landing. To the south, the position of the fan house

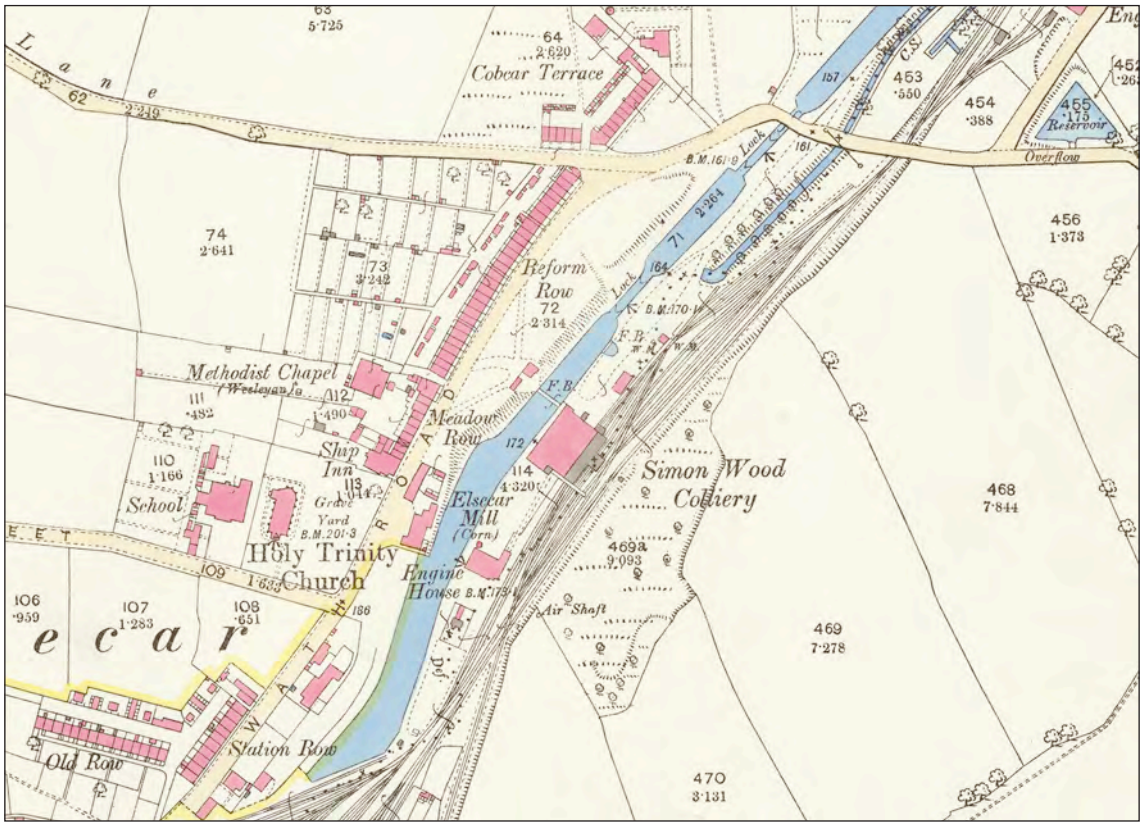


Fig 105. Extract from the Ordnance Survey 25 inch map, Yorkshire West Riding sheet 253. Surveyed 1890, published 1892. Reproduced by permission of the National Library of Scotland.

is just perceptible as a minor earthwork amidst rough grass and brambles. It was chosen for a small geophysical survey in 2017 to establish whether it might merit further archaeological investigation. The results, although far from conclusive, did point to the existence of buried structural remains corresponding to the mapped position of the fan building, [328] and subject to health and safety concerns (there is a capped shaft below the fan house) the site may be the focus of a future excavation involving local volunteers.

When Elsecar Main Colliery closed in 1983, the colliery buildings were largely demolished and the two shafts were capped with concrete. The former colliery site is located in what is now a vacant plot of land to the northern part of Character Area 2, to the north and north-east of the Electrical Sub Station. The site is largely overgrown, although parts of it are accessible from a public footpath/road leading from Royds Lane down to the Heritage Railway line (Character Area 1), which winds its way around what was the east and south-east side of the complex. The northern part of this route is a concreted roadway which formed the main road into the complex (Figure 106); historic aerial photography suggests that this was introduced by 1962.[329] It has become a popular place for dog walkers. The vegetation across the site is particularly dense along the former west/north-west boundary and at south-west end, though pockets of demolition material, external concrete surfaces, internal floor surfaces, and other concrete structures which were not completely cleared away, can still be identified. This is best seen on recent aerial photography which shows an area of hard standing to the north of the complex, and track beds for multiple railway lines that ran through the colliery along the west/north west side (Figure 93). At the southern end are the remains of the tiled floor surfaces of the pit head baths and, to the south and south-east, the spray pond and further areas of hard standing. One area of the site has been utilised as a skate park in recent times.

The Electrical Sub Station, which sits within the boundary of a former field to the north of Simon Wood is accessed from a concreted roadway leading from the main road running through the former site of Elsecar Main Colliery. It is a large complex surrounded by a fenced enclosure. At the north end, a single-storey, flat-roofed structure constructed out of yellow brick with a pebble-dashed concrete panel to the front elevation, dates from the mid-20th century. A moulded concrete plaque bearing the logo 'YEB' identifies that it was built by the Yorkshire Electricity Board, which was established in 1948.

Summary of Significance

Area 2 has a largely rural character today, in many ways reflecting a post–medieval and perhaps earlier landscape of fields attached to the farming centres at Linthwaite and Royds, set alongside the ancient township boundaries separating Brampton Bierlow and Wentworth. This is only a part of the story however, for beneath and alongside these fields and wood are both traces and clear evidence of industrial enterprises instigated by the Earls and others before them. These include the enigmatic terraces cut into the upper slopes within Kings Wood, and the patterns of shafts and shaft mounds found both here and within Simon Wood: some used for ventilation and access to Low Wood Colliery, but most suggesting a history of earlier

Fig 106. The former main entrance into Elsecar Main Colliery on Royds Lane, looking north, L Jessop, July 2017. Note the mid- to late 20th century concrete lamp post with lantern to the right. © Historic England.

and less advanced mining stretching back to the 17th or even 16th century. There is considerable scope for further study of some of these remains within the woods, as well as those of the water catchment systems (in Simon Wood) which served the engines at the Elsecar Ironworks. Later mining is more notable today for its apparent absence in the landscape following the obliteration of Elsecar Main (from sight if not from memory), and the restitution of lands scoured by open cast works for political as well as practical purposes in the years after the Second World War. These areas lend themselves to walks which, if accompanied by some knowledge of these historical changes, encourage considerable reflection on the processes which have shaped this landscape. One such walk provides the most direct line of travel between Elsecar and Wentworth, emphasising the close proximity and interconnected nature of these two arms of the Fitzwilliams' estate.

At the base of the valley lies the Elsecar branch of the Dearne and Dove Canal, rescued from its abandoned state by volunteers in the 1990s and now accompanied by a stretch of the Trans Pennine Trail which links the sites of the New Colliery, Simon Wood Colliery and Hemingfield Colliery – all key elements of the Elsecar story. The Hemingfield canal basin is an impressive and important structure, recognised by its current Listed status. The colliery which it served is the most complete of all of the Earls' collieries at Elsecar, and promises to be an important and informative addition to the area's visitor experience, if the ambitions of the Friends of Hemingfield Colliery and the Heritage Railway are realised over time. The engine house and other structures here are currently under consideration for Listing. The entire canal and railway corridor stretching north from the Wath Road bridge to Hemingfield merits consideration as an extension to the present Elsecar Conservation Area.

Character Area 3: Elsecar Park, Reservoir and Cricket Ground

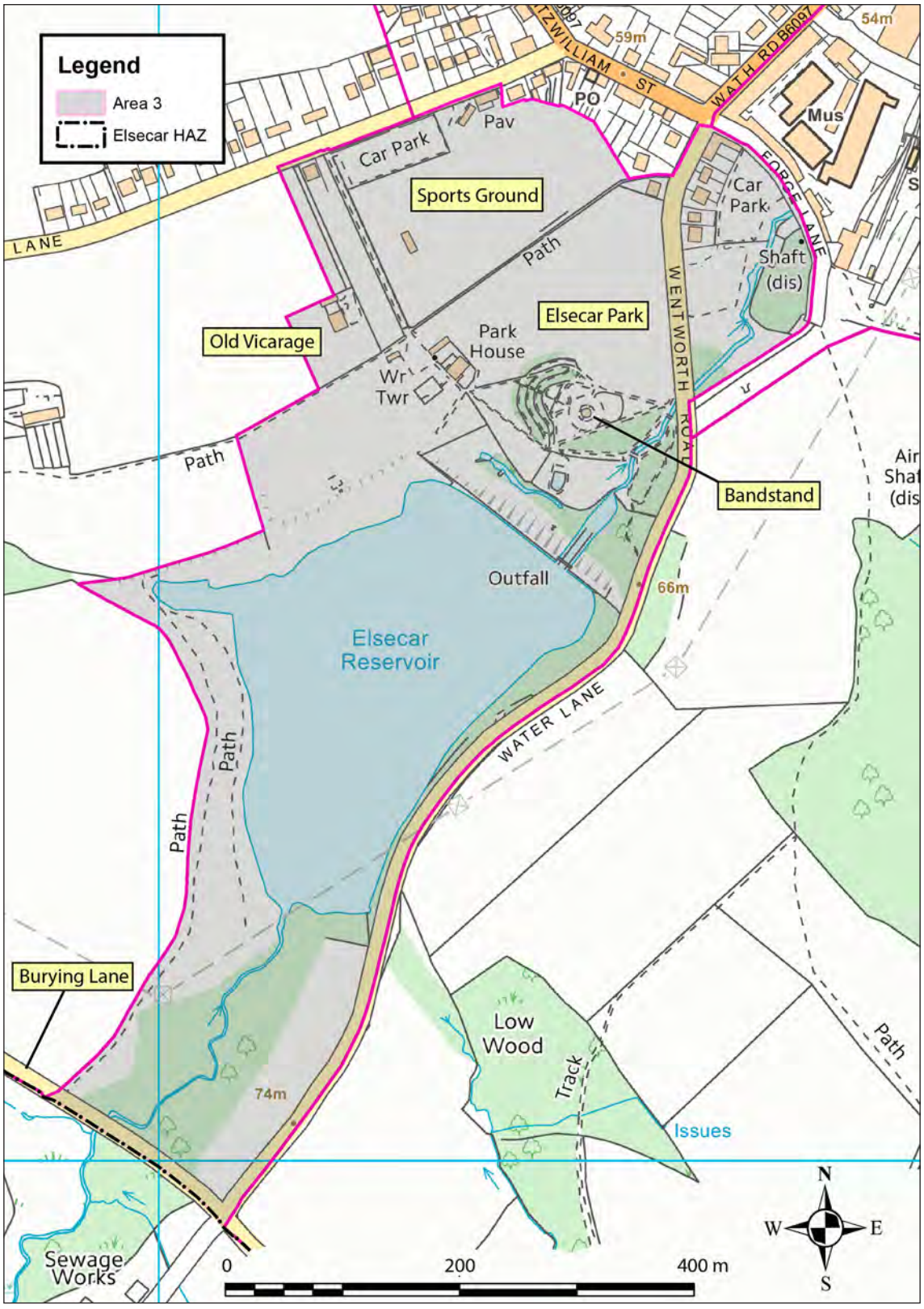


Fig 107. Detail from Figure 201 showing the extent of Character Area 3. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

Character Area 3 is largely an open landscape bounded by Armroyd Lane to the north, Water Lane to the east and Burying Lane to the south. It includes the Harley Dike and Elsecar Reservoir, Elsecar Park and the Sports Ground. The Old Vicarage sits in a plot of land to the west/south-west of the Sports Ground and is accessed from a long track from Armroyd Lane. At the village crossroads is the Market pub. The car parks for Elsecar Heritage Centre, and a row of infill bungalows, stand to the east side of Wentworth Road at the north/north-east. The OS maps indicate a shaft to the east of Wentworth Road and another to the south of the Sports Ground, though there is now no visible evidence for these on the ground.

The Harley Dike meanders its way across Area 3 from beneath the bridge on Burying Lane and through a wooded area towards Elsecar Reservoir. From there, it passes through the landscaped gardens of Elsecar Park, beneath Wentworth Road and through a further area of woodland to the east of the Elsecar Heritage Centre car park, before disappearing beneath Forge Lane. The Dike was diverted underground beneath no.2 Forge Lane and the workshops (Elsecar Heritage Centre) in the late 19th century. There are three road bridges over the Dike in Character Area 3 to Burying Lane, Wentworth Lane and Forge Lane. The single-arched bridge to Forge Lane is constructed out of coursed sandstone finished with deep, horizontal tooling to the larger blocks. There is a parapet to the south-west side only, with triangular-section copings. It was probably built in the late 18th or early 19th century when the village of Elsecar began to develop. The single-arched bridge to Wentworth Road is also constructed out of coursed sandstone with rough tooling to the lower blocks (Figure 108). It has a voussoired arch, square piers and a string course. The parapet to the west side of the road now forms part of the stone boundary wall to Elsecar Park.

Fig 108. Road bridge over the Harley Dike, Wentworth Road, L Jessop, July 2017 (P1240157). © Historic England.

Elsecar Reservoir lies to the north-west of Water Lane. It was created at the end of the 18th century to provide a head of water for the Elsecar Branch of the Dearne and Dove canal, which was completed by 1798. The reservoir was formed by damming the Harley Dike and flooding an area of fields in the valley bottom, as shown on a plan dating to 1796 (Figure 109). It originally covered a wider area of land than it does now, extending beyond Burying Lane (which was straightened and provided with a new bridge and causeway, as shown on the plan) to the south-west and across Water Lane to the east. This bridge retains its original lower masonry although the arch was subsequently replaced, perhaps with girders, to provide a level deck indicated by the present string course. This course and parapet above was reset when a concrete road deck was inserted in the mid-20th century. A reservoir keeper's house was constructed at the northern tip of the reservoir by the turn of the 20th century (*see* Figure 112a).[330] This building was subsequently demolished in the 1980s.[331]

The reservoir contracted in size as the Dearne and Dove Canal fell into disuse. The current expanse of water is surrounded by marshy and grassy areas, and areas of woodland, particularly at the west and south (Figure 110). It was identified as a Local Nature Reserve by Barnsley Council in May 1996.[332] There are a number of wooden fishing platforms to the south-east of the Reservoir and a bird watching hut to the north, and footpaths and tracks surrounding the bank. It is a popular location for anglers, bird watchers and walkers. The dam is located at the north-east side of the reservoir. The south-west wall is constructed out of huge coursed sandstone blocks and battered to provide structural strength. It has, however, slumped towards the centre, which is thought to have been caused by subsidence.[333] The dam has been built up along its length to create a level, pedestrian walk way across the top of the bank, and a concrete skirt has been added at the bottom of the wall. The concrete outfall was constructed in 1985 and a timber pedestrian bridge was erected to span the gap in the dam.[334] The barriers to the walkway across the top of the dam also date to this period.

The north-east side of the dam is a built-up grassy bank, with a flight of stairs leading down to Elsecar Park. The park is accessed from Wentworth Road and a side road leading from Armroyd Lane. It is loosely divided into two areas: the top park and the bottom park.[335] The top park is the area immediately adjacent to the reservoir and is an open grassed space with fixed play equipment and sports courts (Figure 111a). It is sometimes used for galas and fun fairs. The bottom park is a formal garden laid out with terraced gardens, footpaths, flower beds and herbaceous borders (Figure 111b). The bandstand, children's sand pit and picnic area is also located here. A refreshment café known as the Park House and a toilet block is located to the west/north-west of the park. To the north is a pitch and putt course.

The café is the oldest surviving structure in the park, having been constructed soon after the reservoir became a popular place for visitors in *c* 1910. It is a plain, single-storey brick structure with a hipped slate roof to the north-east end and a gable at the south-west end. A veranda with a slate roof extends across the south-west elevation and wraps around the north-west and south-east elevations. This has now been fully enclosed with timber panelled and incorporated into the main body of the building.

Fig 109. Elsecar Reservoir 1796, with later annotations of 1801. Reproduced with permission from Sheffield City Archives FC/P/ECa/12S.

Fig 110. Elsecar Reservoir looking north-west, with the dam to the right of the frame, L Jessop, July 2017. © Historic England.

Fig 111. Elsecar Park: (a) above: 'top park' with play equipment and café in the background and (b)below: 'bottom park' with bandstand, L Jessop, July 2017. © Historic England.

The bandstand was originally located in the top park, to the south-west of the café. Photographs from the *c* mid-20th century show that the bandstand and footbridge over the dike had matching timber barriers (Figure 112a and b). The bottom park was laid out with a diamond-shaped pathway, the south-west side of which was set out as a tree-lined avenue, which still exists (Figure 112c).

Historic map evidence indicates that the park was remodelled in the 1950s. The band stand, which originally stood near to the refreshment room, was moved to the bottom park by 1956 and established in a newly-laid out garden created within the existing diamond-shaped pathway. The new bandstand sits on a painted stone base and is of an art nouveau design, manufactured by ironfounders Yates, Hayward and Co. in Rotherham. The toilet block also appears to have been constructed as part of the 1950s remodelling of the park (Figure 113a). It is a single-storey brick structure with a flat roof, plinth and string course, and separate male and female entrances. A lead-lined paddling pool for children, now used as a sand pit, was also introduced at this time (Figure 113b).[336] At a similar date, a small area of land to the north-east was separated off from the park to create a separate plot for the construction of a bungalow. The bungalow faces Wentworth Road and is a brick building with two gables to the front (each with bay windows below) flanking a central entranceway (Figure 113c). It is possible that this dwelling originally functioned as a park-keeper's cottage, though this is speculation. The metal fencing, bridge barriers and seating now positioned with the park are relatively recent replacements.

The area to the south of the public footpath dividing Elsecar Park from the Sports Ground is laid out as a pitch and putt golf course. It is a gently-undulating open green screened from the road by trees and a low sandstone boundary wall. A concrete-capped shaft in the golf course is the only above-ground mining feature within the park, and is an air shaft for the Thorncliffe-Elsecar Drift.[337] However, the sub-surface mining remains, particularly to the north and north-east of the Character Area where Elsecar (Old) Colliery was active, are undoubtedly much more extensive. The Coal Authority has recorded ten mine shafts and one adit within the area of the park, mainly to the north-east, and there are probably shallow mine workings throughout.[338]

Fig 112. Elsecar Park (a) with the Reservoir Keeper's House in the background, mid-20th century from an undated photograph album (b) 'top park' bandstand, Keith Robinson Collection. Reproduced with the kind permission of Barnsley Archives and Local Studies; and (c) the 'bottom park' tree-lined avenue, L Jessop, July 2017. © Historic England.

Fig 113. Elsecar Park (a) toilet block; (b) 'bottom park' picnic area and former paddling pool, now used as a sandpit, and (c) bungalow on Wentworth Road, L Jessop, July 2017. © Historic England.

The Sports Ground contains a cricket pavilion backing onto Armroyd Lane, a cricket pitch and a football field with a small spectator stand. Historic maps show that, in the late 19th century, the site housed a cricket ground and a smaller pavilion (now demolished). A cricket pavilion on Armroyd Lane was first shown on the 25-inch OS map of 1930. The current building is a late 20th century replacement probably dating to the 1970s. It is a two-storey brick structure with timber cladding to the first floor and a flat roof, and tiered outdoor seating facing the cricket pitch (Figure 114a). A single-storey building to the west of the pavilion, also belonging to the cricket club, was also added to the site in the late 20th century, along with the car park. The football pitch, together with a small concrete stand, was also laid out around the same time. A public footpath extends along the southern boundary of the Sports Ground, dividing the site from Elsecar Park. It emerges by the toilet block and continues along the northern boundary of the top park towards Skiers Hall (Character Area 4), skirting the boundary of the Old Vicarage. The Old Vicarage sits in an isolated plot to the north/north-east of Elsecar Park and is accessed by a drive from Armroyd Lane. It was built in 1863 on land bequeathed by Earl Fitzwilliam to replace a former vicarage on Armroyd Lane.[339] It was constructed in a neo-Gothic style with stone walls and a slate roof. The present vicarage is located on Wath Road.[340] The tall stone boundary wall to the south of the site incorporates an entranceway into Elsecar Park which takes the form of a lychgate with a compact, tiled roof (Figure 114b).

Fig 114. (a) Elsecar cricket ground, (b) 'top park' with boundary wall and entranceway to the Old Vicarage in the background, L Jessop, July 2017. © Historic England.

Beyond the open area of Elsecar Park and the Sports Ground, the area to the east of Wentworth Road forms part of the development of the village extending along Wath Road and Fitzwilliam Street (*see* Character Area 6). The Market Hotel, standing at the corner of Wentworth Road and Forge Lane (Figure 115), first appears on the 1867 tithe map for Nether Hoyland and was built during a period of village expansion pursued by the Earls from the mid-1850s to the late 1860s (*see* Character Area 6). It is known locally as 'Thickett's' after a Mrs Thickett who ran it for a long period of time.[341] It is a two-storey stone building of seven bays with quoins at the corners, a string course and surviving stone chimneys. The central bay has a cart entranceway (now blocked). The northern portion of the building was occupied by the Market Hotel (now known as the Market), while the southern portion accommodated two shops, presumably with accommodation above. The windows and the doorways to the Market Hotel have stone surrounds, and the central doorway has a moulded doorhead with a keystone and imposts. There is a ghost sign to the string course which reads 'Licensed to Let Horse and Gig For Hire'. Beneath the modern signage is a black and white 'Wentworth Road' street name sign. The former shop entrances to the southern portion are less decorated. There is a pentice on brackets above the shop frontages and sunken apron panels below the windows. Jack-arched cellars supported on iron columns and plates, similar to those identified in buildings in Character Area 1, extend below the Market Hotel. This was the only building to occupy this corner until two pairs of semi-detached houses and two bungalows were constructed on open ground to the south in the late 20th century. The area behind and to the south of these buildings retains no visible evidence for the two mills shown here on the 1757 collieries map (*see* Figure 3) or the dams which this map implies. It is now used as car parking for Elsecar Heritage Centre.

Summary of significance

Area 3 draws together the elements of Elsecar village which were the focus for the industrial community's outdoor leisure pursuits. The reservoir, Elsecar Park and the Sports Ground tell a story of how miners and other industrial employees, together with their friends and families, would have entertained themselves during their limited holiday and leisure time. It also serves to highlight how Elsecar somewhat unexpectedly became a tourist destination, enticing visitors to 'Elsecar-by-the-Sea' to take advantage of the village's open spaces, much in the same way that the park and the nature reserve attract visitors to Elsecar today. The reservoir also provides an intrinsic connection with the above-ground industrial remains of Area 1, having originally been flooded to provide a head of water for the Elsecar Branch of the Dearne and Dove canal. Below ground, particularly towards the north-east of Area 3, the early mining remains associated with Elsecar (Old) Colliery are likely to be considerable, including both mine shafts and sub-surface workings. Because of its special historic interest, there is a convincing argument that this part of the village should be considered for inclusion in the conservation area in any future review of the boundary.

Fig 115. (a) The Market Hotel, Wentworth Road, L Jessop, July 2017. © Historic England; (b) late 19th-century photograph of the Market Hotel, reproduced with the kind permission of Barnsley Archives and Local Studies.

Character Area 4: Skiers, Alderthwaite and Milton House

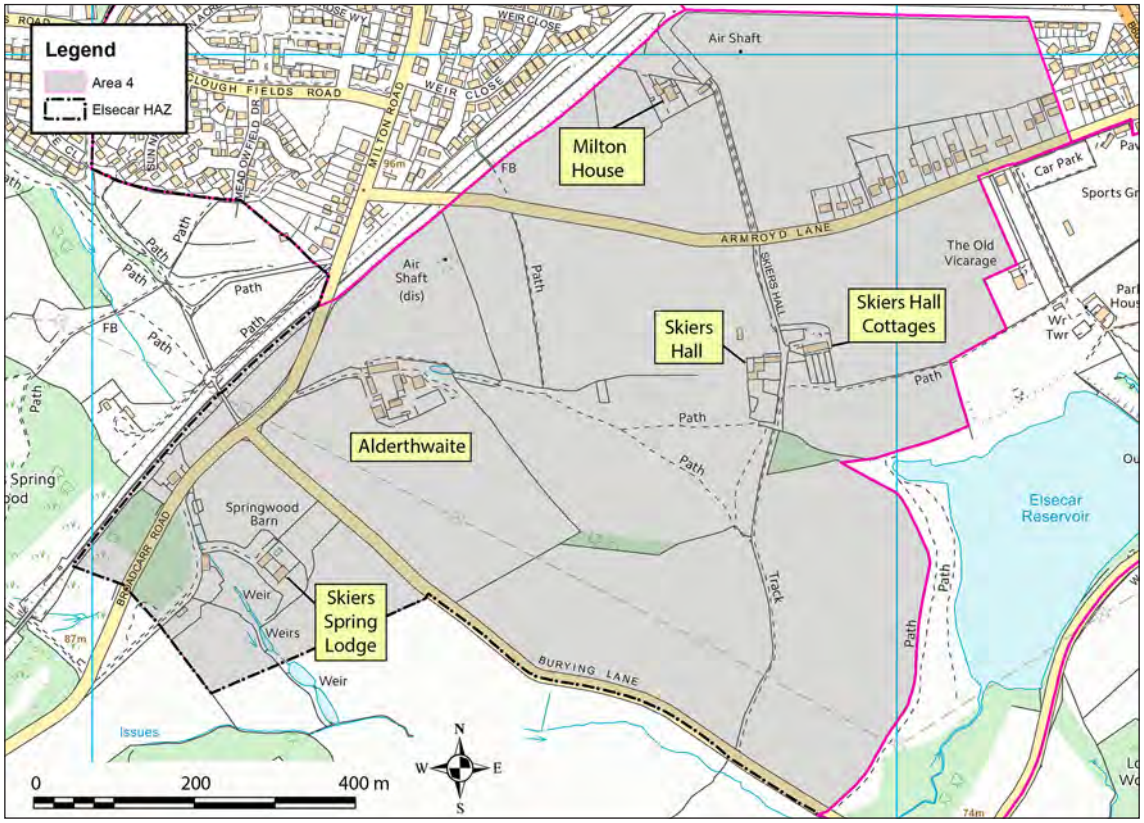


Fig 116. Detail from Figure 201 showing the extent of Character Area 4. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

Character Area 4 contains ancient estates and farmsteads, particularly Alderthwaite and Skiers Hall, interestingly mixed with domestic buildings constructed between the 1790s and 1840s to house those who ran the principal industrial concerns of the Earls Fitzwilliam. As we shall see, this has resulted in some housing of the highest quality, accommodating both the Fitzwilliams' managers as well as some of their lesser workers, surrounded by a landscape which reveals traces of both its manorial and coal-mining past.

The earliest known indication of settlement in the Elsecar area is to be found within this character area: a rectangular double-ditched enclosure with at least two internal divisions recorded from cropmarks in the field between the Skiers Hall Cottages and the Old Vicarage. This has been dated on morphological grounds to the Iron Age or Roman period.[342] Its survival is in no small part due to the lack of development to the west of Elsecar; indeed the open agrarian aspect of this area is largely unchanged from its depiction on the draft enclosure map of Hoyland township of 1794 (Figure 117), reflecting as it does a much earlier landscape of enclosure across the medieval farming estates of Alderthwaite and Skiers. Open cast mining, which covered extensive areas to the east of Burying Lane and south of Water Lane after the Second World War, did reach into this area, but only within the fields to either side

of the track from Skiers Hall to Burying Lane – a place which had not already been extensively mined from below.[343] This did not affect the pattern of fields in this area, although post-war changes in agricultural practice have reduced the number of field boundaries compared those shown on the Township of Hoyland Plan from 1818 and the Township of Brampton plan of in 1842.[344] The older boundaries which remain - surrounding Alderthwaite, running east towards Skiers and extending from Skiers toward the Old Vicarage - are, however, little changed from 1794. Three of these fields - two immediately east of Skiers and one north of Alderthwaite - still retain traces of narrow, post-medieval ridge and furrow ploughing.[345]

Milton Road, created when the last common land in Hoyland was enclosed, originally formed an awkward junction with Broadcarr Road in the eastern corner of the Character Area, where the margins of Broadcar (or Hoyland) Common once skirted around several of Alderthwaite's fields on either side of Burying Lane.[346] The curved route of this old road survives as the access lane to Skiers Spring Lodge, now superseded by the more direct modern road. The southward course of Burying Lane to Water Lane and beyond (as Barrow Field Lane) to Wentworth remains little changed since 1771, when it was marked as 'Long Lane' on a plan of the manor of Hoyland, except that its passage across the Harley Dike was straightened and provided with a new bridge as part of the construction of the reservoir around 1796.[347]

Armroyd Lane runs roughly east to west through this Character Area, linking the hamlet of Elsecar Green with the southern fringes of Milton and the intersection of lanes leading to Skiers Hall and Milton House. It is present in its current form on the 1818 Township of Hoyland plan, though only the western Elsecar end, giving access to the field named the Great Arm Royd, is illustrated on the 1757 collieries map (*see* Figure 7) drawn by William Fairbank junior.[348] The western end of Armroyd Lane may have begun as a minor track shown on the 1771 map of Hoyland Manor, following a field boundary from Broadcar Common leading to the fields north of Skier's Hall. By 1794 this had become a more established lane linked to the northern approach to Skiers Hall, having assumed greater importance when the hall's former drive to the south was removed by the Elsecar Reservoir. The 1794 map shows the projected route of Armroyd Lane continuing through Earl Fitzwilliam's fields towards Elsecar, probably with the intention of improving access to the Earl's colliery on the hillside above. The un-metalled road which runs north from Armroyd Lane to Milton House is shown on the 1794 map, though the colliery marked in this location on William Fairbank's map of 1757 is not. Erosion along this track has exposed layers of slag and furnace waste which were doubtless supplied by the Milton Ironworks to strengthen the surface. It may have been used to transport castings from the ironworks prior to the development of the inclined plane in the 1830s (*see* Area 6), and remained in use afterwards to move unwieldy goods using of the 'remarkably strong, double-shafted and broad-wheeled carriage, capable of carrying 30 tons weight, built to carry large boilers, heavy girding or locomotive engines' recorded in the Milton ironworks' sale particulars of March 1849.[349] Armroyd Lane is thought to have operated as a toll road by 1840.[350]

Fig 117. Extract from the 1794 draft enclosure award for Hoyland. Skiers Hall is in the centre, Alderthwaite to the left. Reproduced with permission from Sheffield City Archives, FC Wath 14L.

As mentioned in the history section above, the area beneath these fields, largely to the north of Alderthwaite and Skiers Hall, was comprehensively mined for more than a century following the establishment the Old Colliery in the mid-18th century (*see* Figures 10 and 11, for example). The indications of that activity in relation to Milton House are discussed below. Further afield, clearly visible evidence of this mining in Area 4 is limited to two capped shafts: one approximately 90m north-east of Milton House, the other in an overgrown mound of upcast about 150m north-east of Alderthwaite. Minor depressions indicating further infilled shafts or areas of subsidence have been recognised in the lidar data straddling the lane to the south of Milton House and in the area south of Armroyd Lane between Skiers Hall and Alderthwaite.[351]

Alderthwaite

The earliest surviving building in Area 4 and within the boundaries of the Elsecar HAA as a whole is found at the farm of Alderthwaite, which is a significant diminution of what was once an important settlement (Figure 118). The barn on the eastern side of the farm's courtyard (NHLE 1151085, Grade II) contains a considerable amount of late medieval fabric in its internal timber frame, although the story of its development is more complex than its appearance first suggests. The external rubble stone walls (Figure 119a) are considerably later than the frame,

which appears to have extended further to the north than it does at present. The aisle on the eastern side of the barn is secondary, with its roof structure supported by lapped braces rather than being properly tenoned and morticed into the posts. The most complete of the three trusses is the central one, with both of its posts, its tie beam, principal rafters and lateral braces to the arcade plate still *in situ* (Figure 119b). Many of the timbers in the northerly truss have been reused, notably the tie-beam whose southern face has a complete row of small empty mortices towards its upper edge which must have had an earlier use as an external rail over a substantial row of small studs. Until its demolition in 1878, the core of the farm of Alderthwaite was an Elizabethan timber-framed manor house, from which this rail could have been derived.[352] This suggests that the barn's frame was considerably altered in the later 19th century, particularly in its remodelling towards the north; the building may also have had a later, if partial, domestic phase.

Fig 118. Alderthwaite and Skiers Spring Lodge shown on the 1867 map of the township of Nether Hoyland. Reproduced courtesy of Sheffield City Archives WWM/MP/123R (see note in Archival Sources).

Fig 119. Alderthwaite's timber-framed barn (a) viewed from the west; (b) internal view from the north, note the central truss, Alun Bull, July 2017. © Historic England.

In the earlier 18th century a free-standing stone cow house with hayloft over (Figure 120) was constructed on the western side of the farmyard, orientated roughly east to west (NHLE 1151086, Grade II). It has large herringbone-tooled quoins and walls of narrow, coursed rubble; the two simple principal-rafter roof trusses have cambered tie beams, with scarf-jointed purlins and some original rafters in the north-western corner. The hayloft floor has been removed so that the building is now open to the roof and the two rows of ventilation slits have been blocked.

The farmstead was expanded considerably in the 19th century. A row of tenements of *circa* 1800 was built parallel to the west range of the earlier house (*see* Figure 118), probably for miners or ironworkers as much as for agricultural workers; this row has since been pulled down. In the middle of the century, a long sandstone range was built onto the cow house's northern wall to close the western side of the farmyard. The southern part of it collapsed due to mining subsidence and only a portion of this was rebuilt by the Coal Board, allowing the earlier cow house to be free-standing once more.[353] The rest of the range is extant.

The northern side of the farmyard was also enclosed in the mid-19th century by the construction of a large building which is largely open-fronted on both its north and south sides (Figures 121a and b); it has partially collapsed to the north. A tall spine wall and two gable walls in stone were combined with two rows of cast-iron columns to support the timber roof structure. A first-floor doorway and a window in the west gable suggest that at least some part of the roof was used for storage. The use of cast iron in farm buildings, as also seen at Linthwaite (Area 2), is indicative of both farms' ownership at this date by the Earls Fitzwilliam, with products from their ironworks being used in construction. Its curious design, with little access through the spine wall between the northern and southern parts, suggests that the southern part was associated with storage for the farm while the northern may have been more related to something else, perhaps the mining activity taking place north-east of the farmstead in the vicinity of the capped air shaft.

Fig 120. Alderthwaite. 18th-century cow house and hayloft viewed from the east, D Went, November 2017. © Historic England.

Fig 121. Alderthwaite's northern farm building: (a) the spine-wall viewed from the north (note the remaining trusses on iron columns at the far end) and (b) iron columns supporting the better preserved south side, D Went, November 2017. © Historic England.

Fig 122. Extract from the Hoyland Township Plan of 1818 showing Alderthwaite (left) and Skiers Hall (right). Reproduced with the kind permission of Barnsley Archives and Local Studies, NBC 417R.

The present farmhouse of Alderthwaite appears to stand on or near the site of the substantial Elizabethan house illustrated on the 1818 Township of Hoyland map, most of which was still standing at the time of the 1855 OS map (Figures 122 and 202). The present stone farm house, which is now partially rendered, appears to have been built in the late 1870s or 1880s as a replacement for the timber-framed house. Its southern elevation looks out towards the village of Wentworth and the spire of Pearson's church, a deliberate piece of visual interplay between the estate village and this remodelled farmstead.

Skiers Hall

Skiers Hall is accessed from a track to the south of Armroyd Lane. To the west of the track is a row of cottages and a former farmhouse. To the east of the track is a row of four linked cottages (Skiers Hall cottages) attributed to the architect John Carr and constructed as workers' housing by Earl Fitzwilliam. Skiers Hall was first shown on the 1794 draft Nether Hoyland award map (Figures 117 and 123). The 'John Carr' cottages, which were constructed in the late 1790s, were later added to this map as a rough sketch. The 1794 map shows that the complex to the west of the track comprised three main buildings: an L-shaped farm building range to the north, a rectangular-shaped building to the centre, and an elongated C-shaped complex to the south. The L-shaped farm building range (itself later extended to form a C-shaped building around a courtyard) was demolished in the late 19th century. The southern C-shaped complex, which was the original Skiers Hall, was demolished in 1951.[354]

Skiers Hall, which was medieval in origin, is shown in a photograph dated to 1903 (Figure 124). It is very difficult to match the building shown in the photograph with those on the 1794 and later historic maps, though it could possibly relate to the west-facing front of the west range. [355] The photograph shows a possible early timber-framed bay window at the core of the building. The Hall underwent substantial changes in the late 17th century when it was enlarged and improved by Sir William Rokeby and was divided into tenement cottages in the 19th century.

The row of stone cottages to the west of the track is roughly in the same position as the rectangular-shaped building shown on the 1794 map. The cottages have a stone slate roof and brick chimneys. The stonework to the north elevation is rough, and semi-dressed with patches of brickwork infill, suggesting that it has been built in several phases, and seen many alterations as regards windows and doorways. The south elevation is much higher quality coursed stonework and, although there is evidence for blocked openings, is much more coherent in its appearance. The

Fig 123. Detail from the 1794 draft Nether Hoyland award map, Reproduced with permission from Sheffield City Archives, FC Wath 14L.

monolithic window lintels are scored to appear as though they were formed out of a series of individual blocks. Anecdotal evidence suggests that this row of cottages was once a stable block. Although there is no direct architectural evidence to prove this, it is possible that the building was rebuilt as a row of cottages when the present farmhouse was built in the late 19th century. The 1892 OS map shows a toilet block to the north, indicating that the row was in domestic use at this point in time, and the 1903 OS map shows the building divided into three units with a yard space to the north. The farmhouse was also first shown on the 1892 OS map. It was originally an L-shaped building, though it has been extended and added to it over time. It is constructed out of rubble stonework with brick chimneys and slate roofs.

Skiers Hall cottages are highly significant as the first planned workers' housing constructed by Earl Fitzwilliam in Elsecar, playing an integral role in the understanding of the development of the village, and the Earl's involvement in the construction of housing for his workforce.[356] John Carr, who had worked previously on Wentworth Woodhouse and was paid an annual retainer by the estate, was commissioned by the 4th Earl Fitzwilliam in 1796 to draw up a set of building plans for a number of 'Lodges and Cottages'. These are preserved in the Sheffield City Archives along with a handwritten note on the costs for constructing a row of ten houses (Figure 126). Although the four linked cottages at Skiers Hall are not depicted in these plans, they are similar in the respect that they have hipped roofs and are designed to incorporate a series of linking one- and two-storey units, suggesting that a variation on the initial designs was decided on for Skiers Hall. The cottages each have a long garden to the south side, and were deliberately orientated with a view out across the newly-created reservoir towards Wentworth.

The cottages are stone-built with hipped roofs and scored stone lintels. The two outer cottages are linked to the two inner cottages by single-storey units. Each cottage is two-up, two-down with a central chimneystack serving all four of the rooms. The two single-storey linking units have been altered and extended, and are shown on the 1893 OS map as being T-shaped, though they may originally have been rectangular-shaped as shown on the 1794 map. Each of the four cottages had access to half of these linking units, which are said to have originally functioned (or in part functioned) as pig sties. An inspection of the interior of no.12 also indicates that original features survive within the cottages. The original ground-floor fireplace openings with monolithic sandstone surrounds are present in the north and south rooms, along with flanking built-in cupboards in the south room. The window openings to both rooms are panelled, and there is a stone staircase up to the first floor behind a partition in the north room. The historical and architectural significance of the Skiers Hall cottages, which survive in a good state of preservation, means that they are highly worthy of consideration for listing.

Skiers Spring Lodge

The Earls Fitzwilliam were investing heavily in nearby Milton in the first half of the 19th century, assisting the lessees, establishing the inclined plane and either building, or supporting the construction of a number of houses for their workers (*see* Area 5). A particular expression of this involvement was the construction in 1834

Fig 124. Skiers Hall in 1903. From Clayton A K and Hopkinson, K 2003 *Steps in the Sands of Time: Hoyland Nether, a diary of a mining town* p. 163 (the image is from the Arthur Clayton Collection). Reproduced with permission from Keith Hopkinson.

Fig 125. Row of cottages at Skiers Hall with the farmhouse to left of photograph, J Rimmer, June 2018. © Historic England.

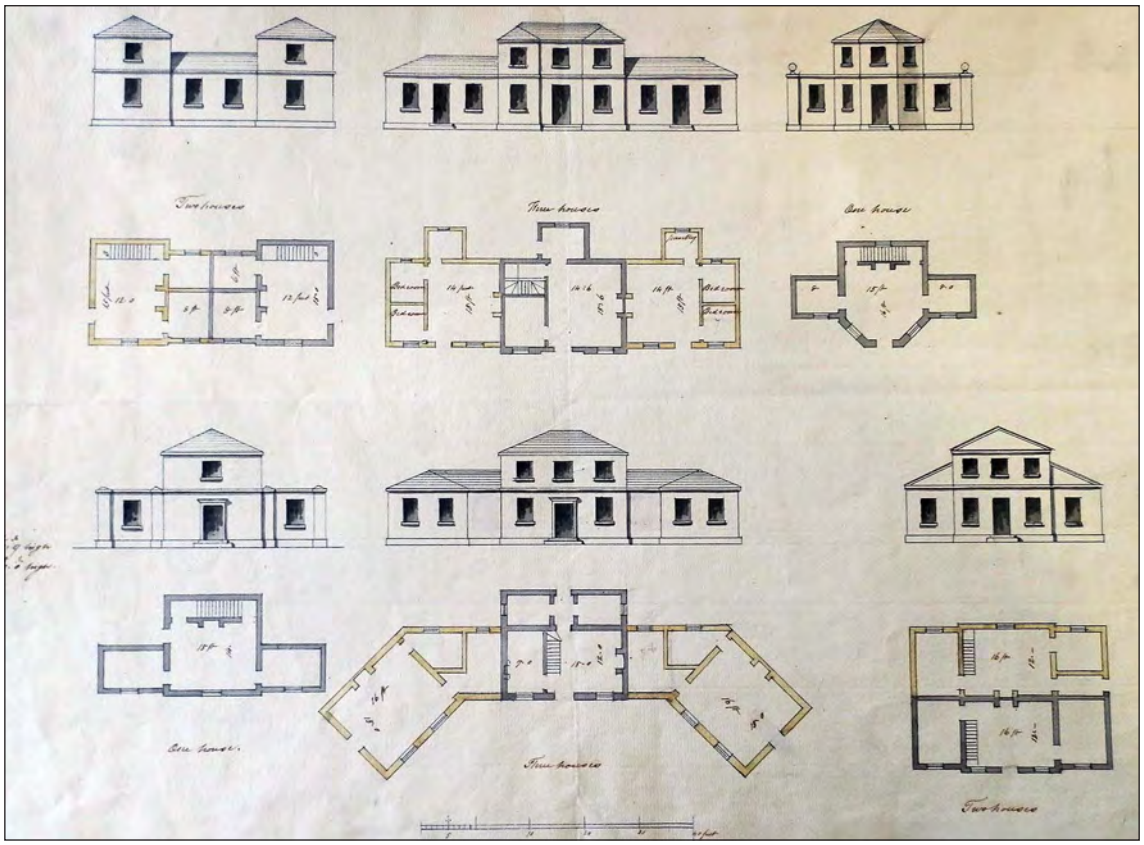


Fig 126. John Carr's designs for colliers' housing at Elsecar, 1796. Reproduced with permission from Sheffield City Archives WWM/MP/16/3 (see note in Archival Sources).

Fig 127. Aerial photograph of Skiers Hall Cottages, May 2017. © Historic England, 28940-021.

of a handsome villa, known today as Skiers Spring Lodge, to the east of Broadcarr Road (Figure 128).[357] This house, surrounded by hayfields and a small pleasure ground designed later in the century, appears to have been built by the estate specifically for William Graham of the Milton Ironworks. By the early 1850s it was occupied by George Dawes, ironmaster of both the Milton and Elsecar ironworks.[358] The house continued to be owned by the estate and occupied by senior management of the Fitzwilliams' industrial concerns into the middle of the 20th century.

The house was originally a squareish sandstone villa of two storeys over a barrel-vaulted cellar, with two bays to the south-east aligned with the old church at Wentworth on the crest of the hill and the pilastered entrance front on the south-west side. These entrance and garden fronts were clad with a cast-iron veranda, of which only the porch over the front door remains; the ironwork's design is reminiscent of the railings around the Fitzwilliam burial enclosure of 1824 in the old Wentworth churchyard, with its repeated diamond motifs (NHLE 1132793). A service range was built on the north-eastern side. The house has few surviving original fireplaces and windows, though it does have a good set of three-over-three panelled internal doors. It was extended towards the north-west early in its history, with a further addition to the north-east built about 1900 with the veranda either expanded to include it or added at this point. The house was split into two dwellings in the later 20th century and the surrounding buildings, such as the stable block and the later gate lodge, are now separate dwellings.

The gardens accompanying the house were suitably elaborate to reflect the occupier's status. By 1850 a simple stream to the west of the property had been dammed and excavated to form a chain of three ponds linked by channels, cascades and low waterfalls which extended to the Lodge's southern boundary.[359] This water garden still survives within a belt of scrub woodland, silted up and overgrown, and would certainly repay closer study. A good deal of the architecture in stone and brick remains, complete with evidence for mechanisms of the sluices. The planting scheme is now largely lost, although mature stands of lime on both sides of the garden may be original. The garden was contained to the west by an iron fence of rods and pierced posts, the remnants of which are distinct from the railings which separated the adjacent field. Both were presumably manufactured locally.

The gateway which gave access to the Lodge from the south is a more striking example of local ironwork (Figure 129). It was approached by a carriageway from Burying Lane (*see* Figure 118) which remains faintly visible in a few places across the field, and a causeway spanning the ha-ha which still defines the garden's southern boundary. Unusually, but entirely in keeping with the Lodge's location and former occupants, the lower outward face of the ha-ha is largely composed of large blocks of furnace slag.

Alongside the Earls Fitzwilliams' developing interests in the extraction of coal went the extraction of ironstone, which also lay under part of the estate; both products were then combined in the manufacturing of iron at Milton and Elsecar. A mine at Skiers Spring produced ironstone from about 1850;[360] it lay just outside Area 4 on the other side of the railway line. Footrill Cottage also appears to date from this time.

Fig 128. Skiers Spring Lodge viewed from the west. Note the remaining section of iron veranda serving as a porch, Alun Bull, January 2019. © Historic England.

Fig 129. The southern gates and ha-ha at Skiers Spring Lodge, D Went, November 2017. © Historic England.

Facing onto Broadcarr Road, it is a substantial sandstone house of three bays, one of which is gabled. Its stonework and form suggests a mid-19th-century date: the building certainly appears on the 1855 OS map (*see* Figure 202). It may have served as a colliery or ironworks overseer's house. The nearby footrill has a brick-lined adit and a recently-rebuilt square-shaped entrance, formed out of re-used tooled stonework which is of a similar sized to the house.

Milton House and the Old Colliery

Milton House is situated on an elevated site to the north of Armroyd Lane, to the north/north-west of Character Area 4, in an area that was intensively mined from the 18th century onwards (*see* 'The History of Elsecar'). By the late 18th century, the main winding pit for Elsecar Old Colliery was situated in a field adjacent to Milton House, which is shown on later plans as an 'air shaft'. A second pit, located in the yard of Milton House, is identified on mining plans held by the South Yorkshire Mines Advisory Service. The question has been raised as to whether any of the existing buildings within the complex relate to the former colliery.[361] Biram's 1793 plan and sections of Elsecar Old Colliery include sketches of the surface infrastructure (*see* Figure 11), showing horse-powered whim gins and single storey stone buildings with off-centre chimneystacks. It has been suggested that a former stone wash house to the north-east of the current Milton House complex is the building in the lower of these two images, with the gin positioned in the yard behind.[362]

Milton House is a multifaceted complex that was altered and extended over the course of the 19th century. Buildings on this site, along with the adjacent cottage, were first shown on maps dating to the 1840s, as well as the *c* 1848 plan of the Milton and Elsecar Ironworks. It was depicted in *c* 1848 as two square-shaped structures linked by a narrow central range. By the mid-19th century, the OS map of 1855 shows that several other structures had been added to the complex (*see* Figure 202). By the late 19th century, Milton House comprised a main house at the centre, with ancillary ranges to the north-east and south-west, similar to its current layout (Figure 130c). In the early 1840s it was leased to Graham and Company of the Milton Ironworks, and occupied by a John Hawthorn who was identified on the 1841 census as 'Engineer and Manager of the Milton Ironworks'.[363]

Of the surviving structures, the oldest buildings are the two stone cottages to the north of the main house (Figure 130a), the detached stone wash house to the north-east, and a narrower brick structure at the northern end of the cottages. These were all probably built in the first half of the 19th century, with the wash house serving the cottages, rather than being part of the colliery. In the second half of the 19th century a larger, double-fronted house was constructed at the southern end of the cottages (Figures 130b). At this time, a long brick-built stable block with a stone rear elevation was also built along the south-west boundary of the site.

The two-storey stone cottages face eastwards and were built in two separate phases. There is a straight joint between the two houses, and the northern cottage is narrower than the southern cottage. They both have similar horizontal tooling, stone lintels and sills, and stone doorway surrounds and plinths, suggesting that they are not dissimilar in age. It's probable that the northern cottage had a single-storey stone, or part-stone, outshot to the west side, as evidenced by a surviving section of stone walling in the (later) two-storey brick addition to the rear. The north cottage was probably built first, and may be the western-most building shown at Milton House on the *c* 1848 Ironworks plan. The single-storey stone wash house (Figure 131a) is positioned along the north-east boundary of the site, and is internally divided into two areas, used as a store and (formerly) as a wash house. A chimneystack is located on this dividing wall, which makes it similar in appearance to the buildings shown on the Biram plan. It has been altered over time, with a series of blocked up openings to the east elevation, though there is no firm evidence to suggest that it was used for anything other than domestic purposes relating to the Milton House complex. The narrower brick structure, which abuts the north elevation of the north cottage, was originally single storey and probably functioned as an outhouse or store (Figure 131b).

The later double-fronted house to the south of the complex is coursed stone with scored voussoired lintels. It is orientated, rather deliberately it would seem, to face outwards towards Wentworth, and there are clear views across the fields from Milton House to the Earls' estate village. When it was built, the southern cottage was incorporated into the main body of this new house, and the door to the south elevation was blocked. The long, brick-built stable block to the west boundary of the site bears some similarity with the architecture of the buildings of the former Elsecar Ironworks, with walls laid in English garden wall bond, semi-circular arched window openings with brick voussoirs, stone sills and iron windows (Figure 132). The central entranceway has a three-centred arch with brick voussoirs, and a stone keystone and imposts. Above this is a roundel window. On the interior, the scars of former horse stalls are evident in the plasterwork. The 1892 OS map shows that a number of additional outbuildings were also erected around the site.

In the late 19th century the narrower brick structure at the north end of the cottages was also heightened, and a semi-circular arched window opening with brick voussoirs and iron window was inserted into the north elevation (*see* Figure 130). A semi-circular arched doorway with moulded brick voussoirs, moulded brick jambs and asymmetrical stone imposts was also inserted on the west side. These new openings are very similar in style to the stable block.

During the early 20th century, brick-built second storeys were added to the stone outshot to the rear of the northern cottage and to the narrow brick structure at the north end of the cottages. At this point the northern cottage, along with these two extended components, was assimilated into the late 19th century double-fronted house (Figure 133).

Milton Cottage, to the east of Milton House, was also built in the early 19th century. It was originally an L-shaped stone building. A brick extension was added to it in the mid-19th century.[364]

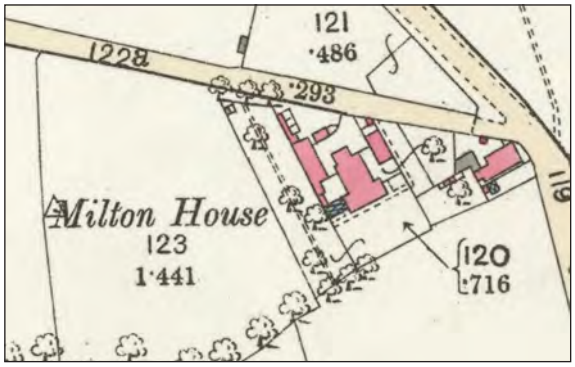


Fig 130. Milton House (a) top: looking west towards the early 19th century two stone cottages (b) looking north-west towards the late 19th century double-fronted house at the south of the complex, L Jessop, April 2017. © Historic England (c) extract from the Ordnance Survey first 25-inch edition, Yorkshire sheet CCLXXXIII.5. Surveyed in 1890, published in 1892. Reproduced courtesy of the National Library of Scotland.

Fig 131 (a) above: Milton House, wash house to north-east of the site, and (b) left: the narrower brick structure to the north of the cottages built in the early 19th century, extended upwards in the late 19th century, with an extra storey added in the early 20th century. L Jessop, April 2018. © Historic England.

Fig 132. Milton House, the stable block to the west of the site, L Jessop, April 2018. © Historic England.

Armroyd Lane

Only the Elsecar end of Armroyd Lane has been developed, initially the part which is close to its junction with the settlement of Elsecar Green and the Milton Arms public house on the corner (Area 6). However, the part of the lane lying within Area 4 was developed between the two World Wars, with a single run of houses constructed on the northern side of the road. These consist of detached or paired villas, some fronted in stone and others in brick, set back from the road and with views over the valley to Wentworth on the ridge. This land was owned and set out by the estate and, although many of the plots were sold on to private developers, builders and owners, some of the houses were directly commissioned on behalf of Earl Fitzwilliam. These include the two pairs of semi-detached brick houses with Welsh slate roofs (Figure 134) and projecting bays, designed by G Austin Dickie of Wentworth in 1924 presumably to accommodate senior or middle mine managers.[365] There has been some later 20th-century infill.

Summary of Significance

The open aspect of Area 4 embodies a sense of relative continuity stretching back to the pre-industrial origins of Elsecar, which preserves, even with later insertions, the essentially medieval pattern of small isolated settlements surrounded by fields. It is recognisably the same landscape as that which saw the 2nd Marquess of Rockingham begin the Fitzwilliams' direct involvement in mining in the 18th century, and in which key aspect of Elsecar's industrial enterprises were nurtured as an integral and visible part of the Fitzwilliam estate. Notable aspects of that industrial and pre-industrial heritage are represented in the three detached holdings: Skiers Hall, Skiers Spring Lodge and Alderthwaite, as well as at the location of the earliest of the estate's collieries around Milton House.

Crucially, this area forms the visible link between Wentworth and Elsecar – more specifically between the traditional estate village and the burgeoning industrial enterprises of the late 18th and early 19th century which were clearly intended to be viewed in a similar light. George Stubbs' painting of the liveried horseman at Elsecar Old Colliery *circa* 1760, is in itself an unequivocal indication of the Marquess' pride in his local investment in coal mining. It seems likely that a shaft located in the grounds of Milton House is that depicted on Biram's section and sketch of the Earl's colliery dated 1793. In 1797 the area nearby was chosen for the Milton Ironworks (Character Area 5), again within plain sight of Wentworth, when other more discrete locations were readily available.

Drawing on ArcHeritage's assessment of this area in 2017 the Inspector's report on the Barnsley Local Plan concluded that this area 'makes a significant contribution to the understanding of Elsecar as a planned industrial village within the wider Wentworth Estate and to the understanding of the early coal mining and iron working industry in the area'.[366] The subsequent adopted local plan identifies the whole undeveloped area between the inclined plane to the north and Burying Lane to the south-west as Green Belt land, to be kept mainly free from development.[367] In addition to a Listing recommendation for Skiers Hall Cottages and modifications to the existing Listings at Alderthwaite, both currently under consideration, it may be appropriate to review the current Conservation Area, given the evident historic significance of the open landscape on this side of the village.

Fig 133. Aerial photograph of Milton House from the south-west showing the brick extensions to the rear (left) of the double-fronted house, 2017. © Historic England. 28940-017.

Fig 134. 31-33 Armroyd Lane, one of two semi-detached pairs built for the Fitzwilliam estate in 1924, D Went, November 2017. © Historic England.

Character Area 5: Milton and Hoyland

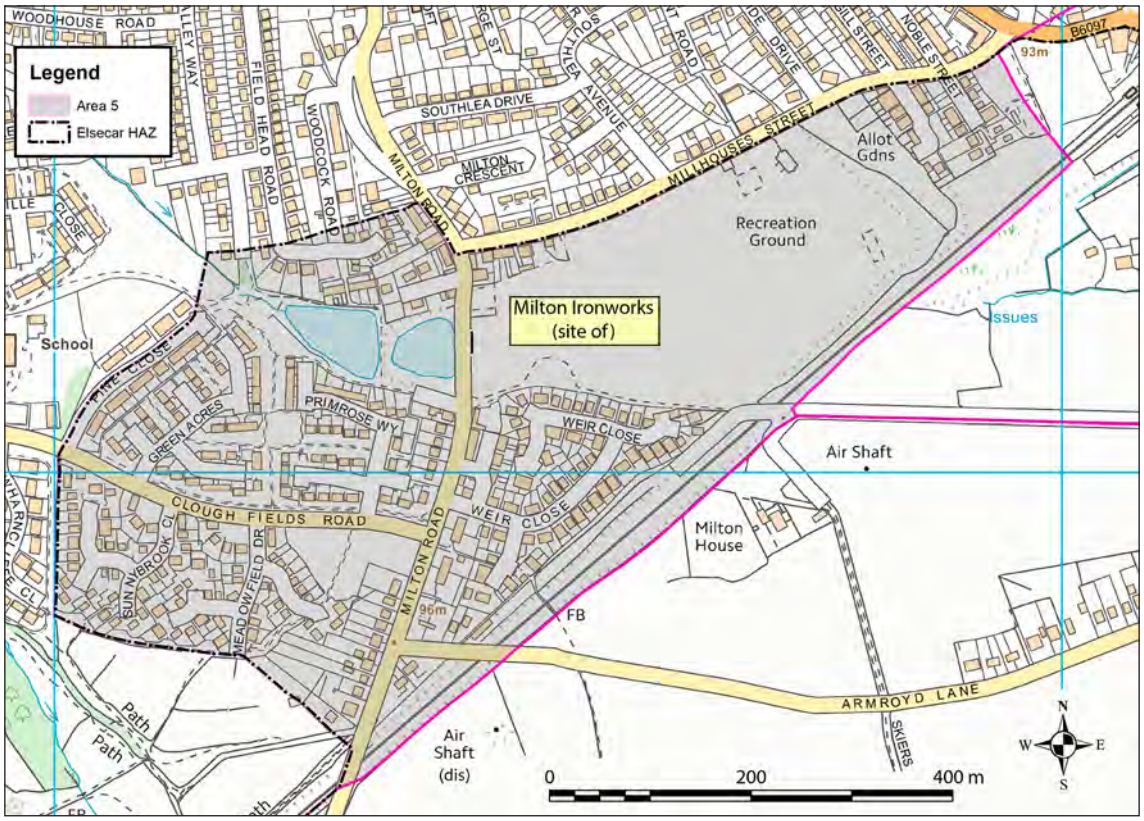


Fig 135. Detail from Figure 201 showing the extent of Character Area 5. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

Milton takes its name from the title of the heir to Earl Fitzwilliam, Viscount Milton. In turn, this reflects the name of the principal seat of the Earls Fitzwilliam before they inherited the Wentworth Woodhouse estate from the Marquesses of Rockingham in 1782: Milton Hall, Cambridgeshire, which is situated on the edge of the village of Bretton to the west of Peterborough. As a settlement, Milton was initially distinct from Nether Hoyland to the north, the former built to serve the Fitzwilliams' ironworks in the late 18th century; a century later the two places had joined together though they still maintain separate identities even today. Milton House (Area 4) is also closely related to the industrial activity of Milton, though now physically separated from it by the railway. Milton lies on a south east-facing hillside, looking across the valley to Wentworth on the opposite ridge; as it was a new settlement, its situation must have been a deliberate choice by the estate.

In the late 18th century the greater part of the character area around what is now Weir Close and Meadowfield was still an area of common known as the 'Broadcar', quite possibly a remnant of what had once been more extensive open commons belonging to the Hoyland township. There was one quite noticeable intake on this west side of the common, whose name, 'Marl Close', suggests the presence of pits providing marl for dressing local fields. The Hoyland township plan of 1771 shows

a number of enclosures along the north side of the common, approximately where Sunnybrook Close and Greenacres now branch from Clough Fields Road. These had names such as Clay Royd and Car Royd reflecting a much earlier process of clearance across damp and heavy ground.[368] The 1794 draft enclosure map for Hoyland marks the demise of the common land, by then allocated to several separate owners and bisected by a proposed lane which was to become Milton Road. Armroyd Lane had also come into being by this time, extending from Milton Road at least as far as Skiers Hall. In 1794 the area of the present recreation ground, which was shortly to be developed for the Milton ironworks, lay mainly within a group of four irregular old enclosures set alongside the natural stream line which flowed toward Elsecar. All of these were already assigned to Joshua Walker & Co. with the future works in mind. The works later extended northward across the southern margins of several small fields towards the line later marked by Millhouses Street. In 1794 these were allocated to Messrs Stenton, Hobson and Grey, although the Earl was evidently consolidating his hold on the area.[369] Millhouses Street itself does not appear until quite late in the story, some considerable time after the ironworks closed. It is not shown on the 1894 25-inch OS map, but it does appear as a footpath on the following edition of 1930, intersecting with Gill Street. The 6-inch map of 1938 shows it as a proper road.

Milton Ironworks

At the heart of the Milton character area is the site of the former ironworks, now largely levelled and buried beneath the Milton recreation ground between the railway cutting and Millhouses Street.

Map evidence

A detailed plan showing both Milton and Elsecar ironworks survives in two versions held in the Barnsley Archive, the one being a copy of the other, or both being copies of a third plan which is now lost.[370] One version is marked with 'ground occupied since 1849' and an annotation 'Dawes v Earl Fitzwilliam. This is the plan marked 'No1 referred to in the affidavit of John Hartop sworn before me this 3 day of July 1861',[371] which doubtless indicates a connection to the legal dispute of 1860 mentioned above. The plans, however, appear to show the two works as they appeared at the time the Dawes took the lease in 1849 rather than as they may have developed over the intervening period.

The plans (Figure 136) show an expanse of leased land (pink) encompassing the works, the junction of the Lidgett coal railway and the Elsecar incline wagon-way, and three of the four ponds which ultimately served the site. The bulk of the works lay between the central and eastern pond as shown. The use of individual buildings is difficult to determine given the absence of labels. Of the two blast furnaces operated by the Grahams only one is clearly evident as a 'K' shaped structure near the centre of the works, served by a railway spur across what must have been a raised platform to the west. This is likely to have been identical with the Milton furnace illustrated as a basic cross-section in a Royal Commission report of 1849. This shows a conical structure 40 ft in height and 28 ft across the base, with narrow

tuyères or air pipes entering on two sides below the lower part of the internal furnace chamber (the boshes) which measured 18 ft across the widest part. Hot blast was certainly employed here, at a pressure of 2 ¼ to 2 ½ lbs per square inch.[372] The second furnace, which is known to have been in operation by this time, is likely to have stood nearby if not directly alongside this one. No reason for its absence from the plan has been found in contemporary accounts.

The single furnace depicted here is more elaborate than that shown on Boulton and Watt's plan of 1798 (Figure 137), doubtless having been rebuilt, probably on more than one occasion, over a period of 50 years. The earlier plan shows a furnace with only two apertures: one containing a single tuyère from the adjacent blowing engine, the other presumably used to tap the furnace into the casting house. The engine represented on this plan may be the 20 horse power double-acting blowing engine, with 24 inch cylinder, 5 foot stroke and parallel motion which Boulton and Watt supplied, shown in greater detail in a subsequent plan (Figure 138) of 1799, by then equipped with a pair of boilers.[373] The relationship between this engine and the furnace is not depicted on the 1799 plan. By 1849, however, either this engine house, or its replacement, may be identified as the rectangular building immediately south-east of the furnace, powered by three boilers arranged side-by-side in the adjacent yard to the east, with a number of rail-fed coal drops nearby.

The boilers' chimney might have been attached to the engine house wall, or perhaps indicated by the detached circular structure to the south, although on the near contemporary 1855 OS map (Figure 139) this feature appears slightly larger and marked as a gasometer. A similar boiler-like array is contained within a yard on the northern side of the works, accompanied by a narrow building with four chambers which might be the coal store. The chimney in this case could be the square block incorporated in eastern wall of the yard, but the position of the engine house is less evident. It could be the building to the south which shares the alignment of the possible boiler yard. This is attached at an awkward angle to the west wall of a presumably later long range forming most of the northern side of the works. This might well have contained a variety of secondary forges and furnaces as well as the rolling and slitting mill mentioned in the 1848 advertisement.[374]

The location of the Grahams' puddling furnaces is again uncertain from this plan. They may have been accommodated within the long northern range, but some could be indicated by the characteristic bottle-shaped structures mapped to the north-west of the blast furnace.[375] These appear seemingly without the benefit of the lightweight sheds which were normally provided as protection from the weather, but the near contemporary 1855 OS map indicates that just such an expanse of sheds did exist, and was probably omitted from the plan, as indeed are all the roofs, in order to show some details of the operations contained within.

The string of round structures arranged in an incomplete oval circuit to the north west of the main works has also been suggested as Grahams' puddling furnaces.[376] However, aside from their curious shapes (flues perhaps?) it would surprising to find 29 furnaces at the Grahams' earlier works when there were only 25 present at the peak of Dawes' subsequent and larger operation. Furthermore, the distance

Fig 136. Extract from a plan of the Milton and Elsecar iron works (untitled) c 1849. Reproduced with the kind permission of Barnsley Archives and Local Studies, NBC 466 (R)/2. The extract is oriented with north to the top.

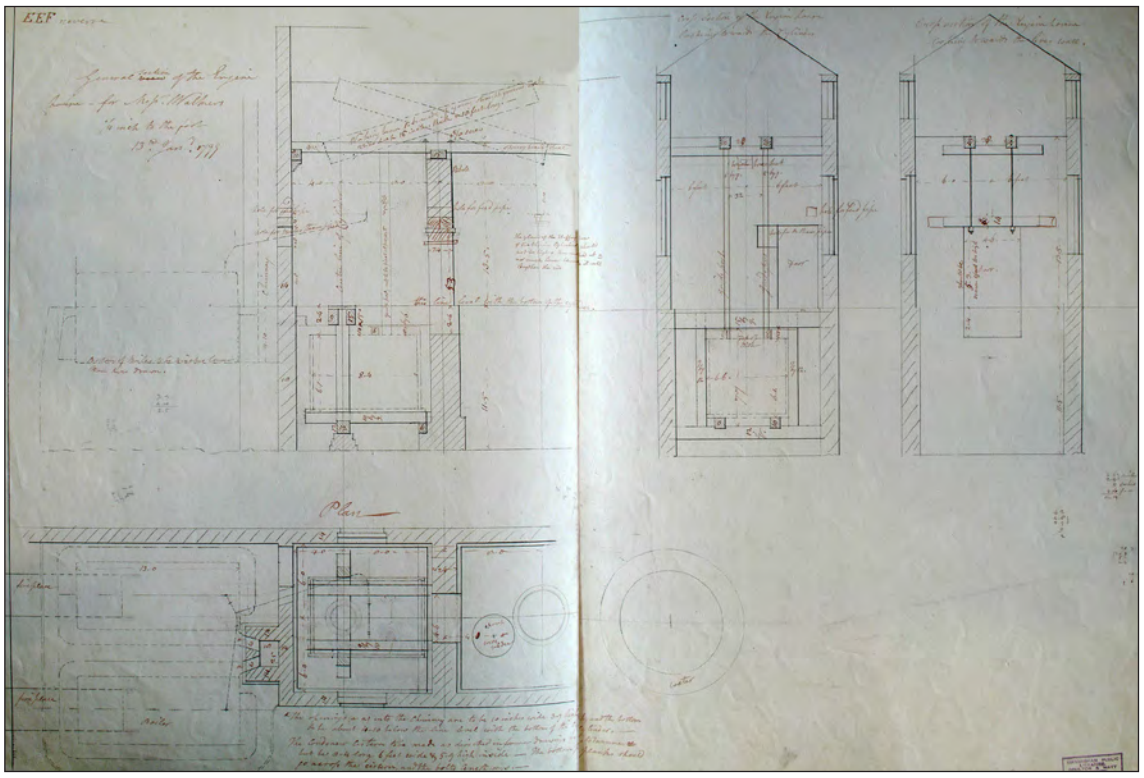


Fig 137. 'Plan of new furnace etc. for Messrs Walker'. 15 August 1798. Note the close arrangement of blowing engine and boiler house suited to a single furnace. This arrangement matches correspondence about Walker & Co's requirements mentioned in the history section above. Reproduced with the permission of the Library of Birmingham, MS 3147/5/688.

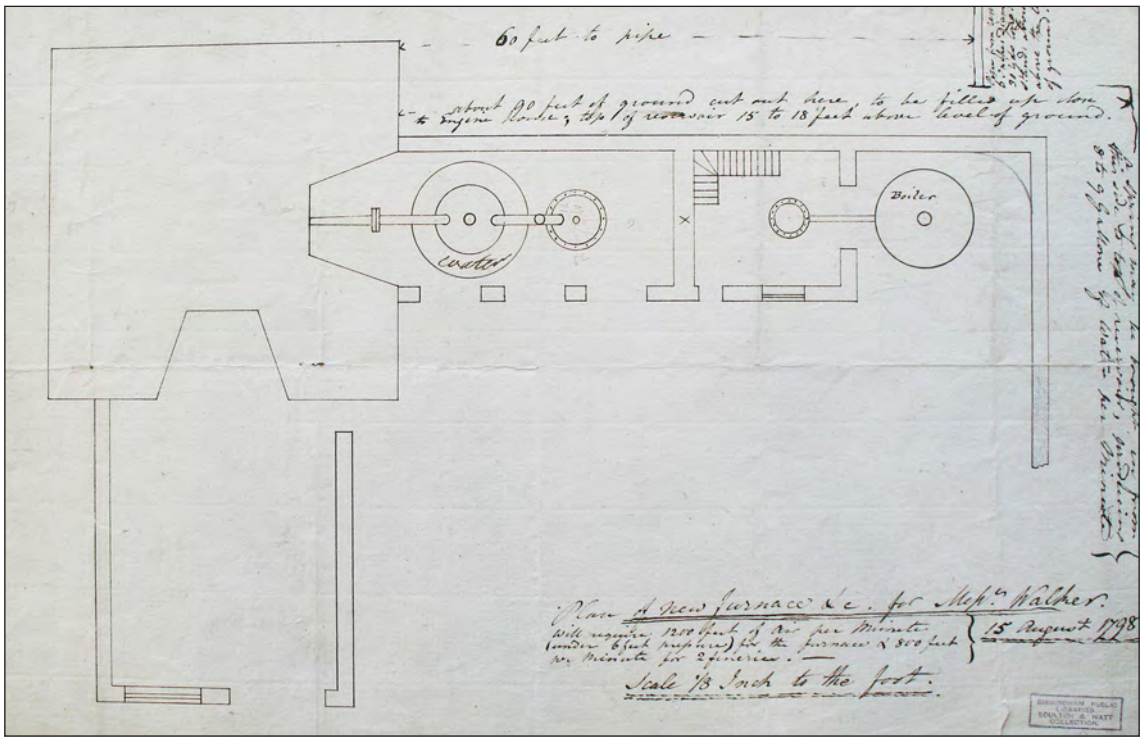


Fig 138. 'General section of the Engine house for Messrs Walkers, 1/4 inch to the foot, 13th January 1799'. Reproduced with the permission of the Library of Birmingham, MS 3147/5/688.

Fig 139. Combined extracts from the Ordnance Survey 6-inch, first edition maps, Yorkshire sheets 282 and 285, surveyed in 1849-50 and published in 1855. Reproduced courtesy of the National Library of Scotland.

between this array and any buildings large enough to house the slitting and rolling mills is simply too great to have operated effectively. A more probable explanation is that these were coke ovens, similar to others in the district marked in on the OS map of 1855.[377] The Grahams reportedly ceased involvement in coke production when their demands for fuel fell following the introduction of hot blast furnaces in the mid-1830s; but their on-going needs, together with their evident interest in new technology, might have led them establish a new coke works prior to 1849. Alternatively, they may have allowed another company to operate a coke works on their doorstep, since it was neither advertised as part of the lease nor included in the pink area subsequently let to Dawes. It was, however, linked to the light railway, indicating that the structures along its southern side probably include bunkers for the coal supply and for finished coke ready to be taken to the furnaces and elsewhere. A further possibility is that these were calcining ovens, used to prepare the ore prior to smelting. This is perhaps less likely, as ovens of this type were more often placed on the charging platform immediately above the furnaces, as at Blaenavon and Ynysfach in South Wales;[378] but if these ovens did form part of the ironstone supply rather than the works themselves, it might explain why they stood outside the area of the Dawes' lease.

The light railway or tramroad which supplied the both ironworks with ironstone from the Earl's pits in Tankersley Park, and later carried coal from Lidgett Pit, was laid in the mid-1840s. This was originally worked by horses on the level, and by stationary winding engines at the incline sections, including the slightly earlier incline to Elsecar,[379] of which more will be said below. The engine house for the Elsecar incline is shown on the 1849 plan, at the western terminal of the line just to the south-west of the Milton works, with a boiler on its south side and the winding house aligned on the rails. Immediately west stood a lime kiln, indicated by two small circles (charging holes) in a rectangular structure, and labelled as such on OS map of 1855. Since the OS did not apply a similar label to the oval arrangement of ovens to the north it seems less than likely that these too produced lime, especially as the OS did identify lime kilns elsewhere in the district, as for example opposite Reform Row in Elsecar village. Like the ovens, the lime kilns at the head of the inclined plane were linked to the network of internal rails serving the works, and must be assumed to have provided part of the charge for the blast furnaces.

The 1855 OS map shows the same three ponds, the western pair separated by the causeway and dam which still carries the Hoyland to Wentworth road. None of these ponds is marked on the 1818 Hoyland township plan, but then this plan fails to indicate anything at all of the Milton Ironworks, present since 1795, and can hardly be relied upon in this regard. By 1867 there were four large ponds, another having been cut to the west, higher up the shallow stream valley by which they were fed, and separated by another substantial dam (Figure 140). In the early stages of the work's development the ponds to the west may have provided water power to the forge and mills, although their later use and development is more likely to have ensured a constant water supply for the many steam boilers distributed around the site. Red lines on the 1849 plan show something of this distribution network. The lowest, eastern pond may have been used as a settling tank, or as a further reservoir from which water could be pumped at need.

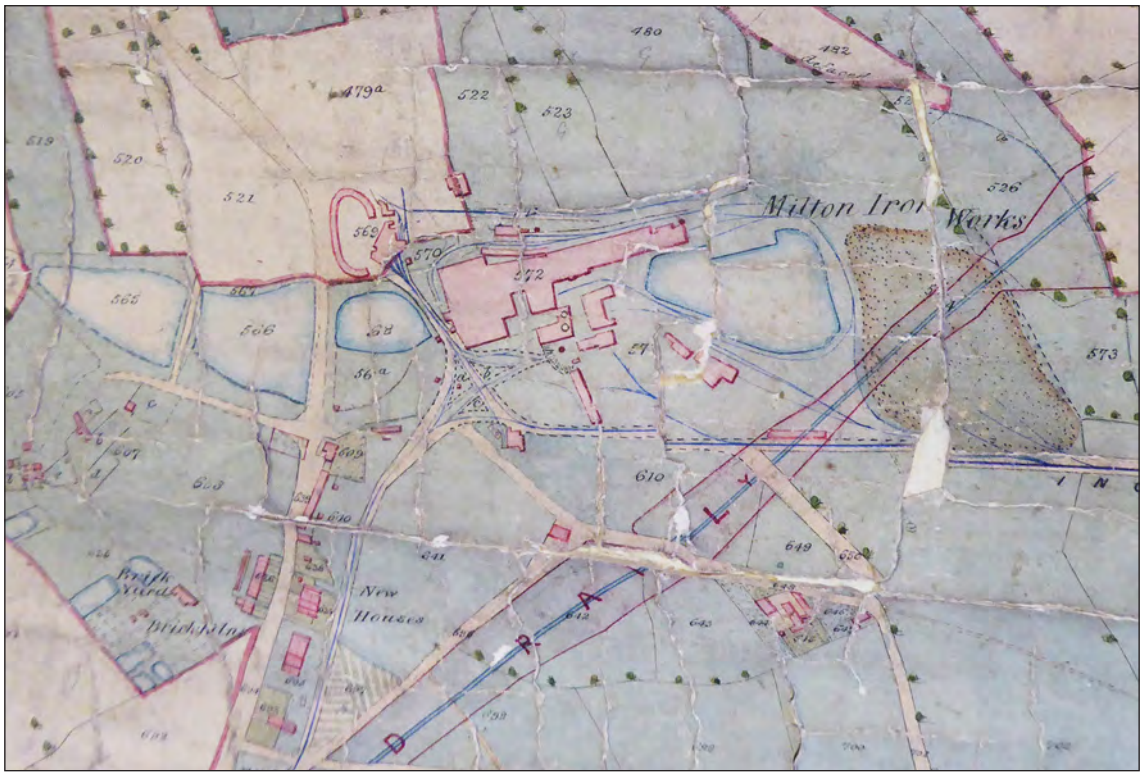


Fig 140. Extract from Map of the Township of Nether Hoyland 1867. Reproduced with permission from Sheffield City Archives WWM/MP/123R (see note in Archival Sources).

In other respects the 1867 plan adds little detail to the picture at Milton. The main works appear to have been consolidated into a single and more regular run of buildings across the north side of the site, and the covered area to the west appears to have over the area where the puddling furnaces may have been concentrated. Two blast furnaces are definitely shown where only one was depicted on the 1849/1861 plan, but the probable blowing engine house remains seemingly unchanged. The outlying workshops to the south east, alongside the southern edge of the eastern pond, also appear much as before, although a further range has been added between the furnaces and the inclined plane, possibly replacing some earlier structures marked on the 1855 OS map. The most striking change shown on this map is one added by a later hand - the imposing cutting for the Sheffield to Barnsley branch of the Midland Railway which opened in 1897.[380]

Leaving aside the branch railway, the Milton works had already changed considerably by 1890 when it was next mapped by the OS (Figure 141). The four ponds remained, but the bulk of the works had been removed leaving only the perimeter walls and the outlines of the furnaces. Three large roofed structures survived, one to the north of the large eastern pond and two to the south, presumably including some which were subsequently taken over by Ashforth's small iron and brass foundry. These were still linked by rail to the Elsecar incline. The incline and the railway to Lidgett Colliery and Tankersley, had been relaid to a standard gauge before 1885,[381] and by 1890 the westward railway was limited to a single line at the rear of the 'New Houses', while the more southerly tramroad had become part of the pattern of lanes surrounding Milton House.

The oval arrangement of ovens or kilns to the north of the works still stood, by now accompanied by a further small pond which suggests that it has been equipped with an engine after 1868, unless the engine had formerly been supplied from the old mill pond shown on the 1849 plan (Figure 136).

The 1903 OS 25-inch map shows a similar story, except that Ashforth's buildings south of the large pond were then marked 'Iron & Brass Foundry', the railway lines to the works had been much reduced and the western pond was marked as a 'Fish Pond'. By 1930 the foundry had been almost completely swept away and only a few perimeter walls remained around the former site of the Milton Works. The oval ovens had been replaced by houses at the junction of Milton Road and Millhouses Street, and following the closure of Lidgett Colliery in 1911, the rails from there to Elsecar had been taken up.[382]

Evidence from aerial photography, combined with later OS maps, has been used to chart the subsequent history of the Milton Works site.[383] In photographs from 1948 the area of the former blast furnaces has been cleared to leave a sunken terrace bounded by a steep scarp below the Milton Road pond, and another scarp to the south, seemingly supported by a revetment wall. Two structures, apparently remnants of the otherwise demolished Iron and Brass Foundry, remained standing to the south of the western pond in 1948. These included a small 'L' shaped building with a tall cylindrical chimney and, to the south-east, a larger rectangular building with a pitched roof. By 1953 the area to the north of these buildings, including the large pond, had been levelled for a recreation ground and football pitch. The small building with the chimney was demolished in 1954 and the larger building, shown on the OS 1956 map, had gone by the time that map was revised in 1969. This map shows the area as a recreation ground, much as it is today, with the smaller pond by Milton Road marked as a 'Refuse Tip', also in-filled by this time.

For a period after the Second World War the south side of Millhouses Street hosted a row of detached prefabricated homes constructed over the northern edge of the former works. These are shown when recently constructed on aerial photographs taken in May 1948, and depicted with gardens and street numbers from 37 to 53 on the 1969 OS map; but by the time this area was again photographed from the air in October 1971 they had all been removed.

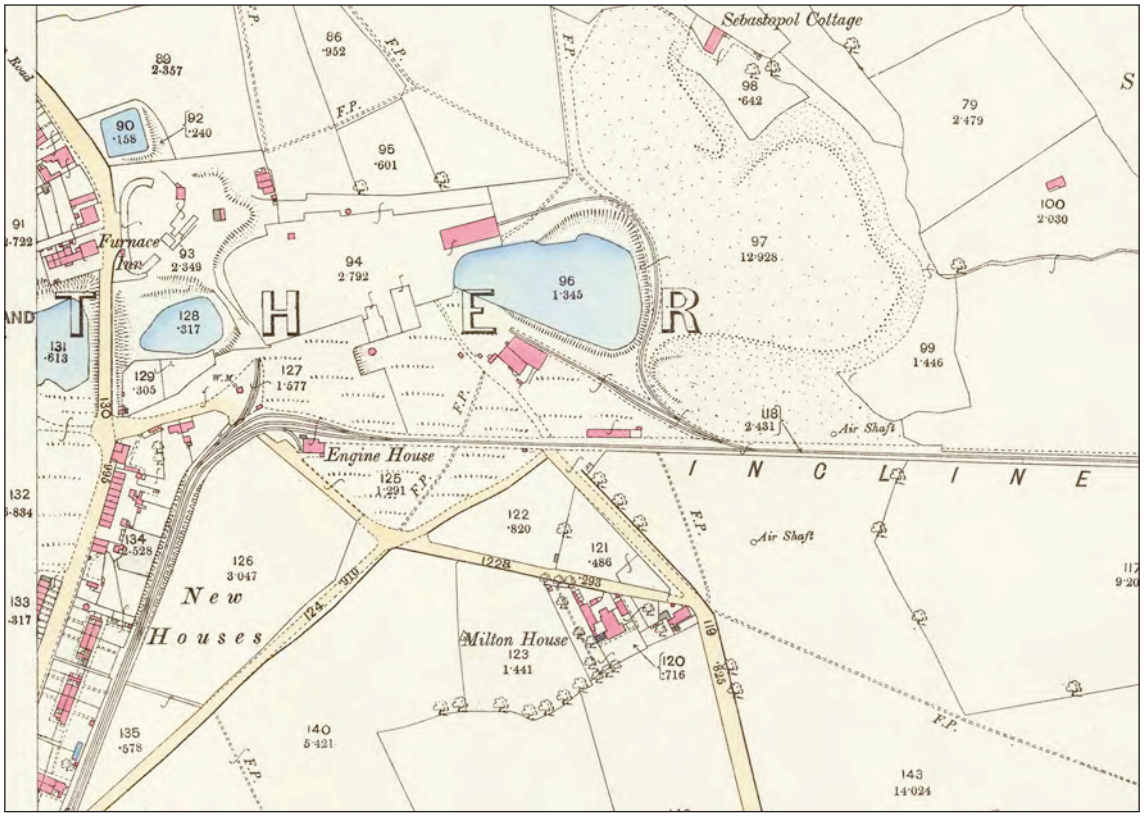


Fig 141. Extract from the Ordnance Survey first 25-inch edition, Yorkshire sheet 283.5. Surveyed in 1890, published in 1892. Reproduced courtesy of the National Library of Scotland.

The Milton Ironworks area today

The most striking visual reminder of the Milton Works today are the two stepped supply ponds set within the narrow valley to the west of Milton Road which have been retained for fishing and recreational purposes. The dam between the two ponds has been consolidated, as too the dam/causeway which carries Milton Road, but they remain essentially the same two ponds as shown on the earliest maps.

The recreation ground to the east of Milton Road retains almost no superficial signs of its industrial heritage. To the casual eye it is simply a large grassed area, divided into upper and lower parts by a broad scarp, the larger and lower eastern part levelled for playing fields. The southern end of that scarp, however, as shown on the 1892 and 1956 OS maps, is part of the stepped hillside employed by the ironworks to create a charging area immediately above the position of the blast furnaces to the north.

Another clue to the industrial past is the pattern of iron drain covers dotted across the recreation area. These give access to the system of pipes and conduits which replaced the natural stream in this area and now drain the remaining and buried ponds to take the water away from the recreation ground. The underground pipes disgorge through a conduit which spills into an open concrete channel alongside the railway embankment in the foot of the narrow clough on the eastern boundary of the park. At this point an enormous stalagmite has developed over the last few decades, formed from ferrous material in the water carried away from the former ironworks.

The line of the earlier tramroad to Tankersley, that which had been removed by 1890 and replaced by a lane, is still broadly followed by a footpath between the rear gardens on Weir Close and the railway cutting. The later, improved line to Lidgett Colliery is reflected faintly in the property boundaries behind Milton Road, but its route does not become very apparent until it converges with Broadcarr Road along the driveway to the rear of Lynton and Moss Lee, where local sources report that until quite recently the tops of rails could still be seen imbedded in the tarmac.[384] The continuation towards Lidgett Colliery to the west of Milton/ Broadcarr Road ran on a low embankment, occasionally contained by a low stone wall, which still exists in the scrub woodland on the north side of the branch line cutting. This section falls outside the boundary of the HAZ and is not open to public access.

Geophysical Survey

Historic England's geophysical team carried out an extensive survey of the Forge Playing Field in May 2017, quickly covering the entire area of the former Milton works with towed magnetometer and ground penetrating radar (GPR) arrays (Figure 142).[385]

Both sets of results chart the broad extent of the former works beneath the smooth landscaped surface. The GPR results are better for individual structures, showing a clear footprints for the late rectangular building shown along the north side of the largest pond on the 1892 OS map, and some parts of the iron and brass foundry to the south.

The blast furnaces themselves do not stand out in the GPR results. Nor are they readily apparent in the magnetometer responses, which is rather odd given that such intense heat would normally result in a strong magnetic signature. The furnaces may have comprehensively demolished, or their presence may be masked by the dense swathe of magnetic disturbance which covers the former works. These questions informed the siting of archaeological excavations carried out in the summer of 2018, described further below.

A line of strong responses within and behind the southern end of the broad scarp on the west side of the football field is thought to suggest 'magnetised remains likely to be associated with high temperature industrial processes consistent with intensely heated brick or ferrous materials'.[386] These, however, are set well apart from the location of the blast furnace shown on the *c* 1849 map, indicating either that the Dawes brothers subsequently moved the heart of the Milton operation or, more probably, that some other later operation was established here. A newspaper clipping in the John Goodchild collection at the Wakefield Archive dating from the 1870s, recalls that all the Tankersley Park ironstone, for both works, was then calcined at Milton in 'five huge kilns, each capable of containing about 150 tons'.[387] The position of these kilns was not specified in the newspaper report, but prior to the results of the excavations (see below) the geophysical results offered a possible location, one situated in a logical place beside the works' railway and adjacent to the Milton furnaces.

Fig 142. Historic England's geophysical team at work on Forge Playing Field, May 2017. © Historic England.

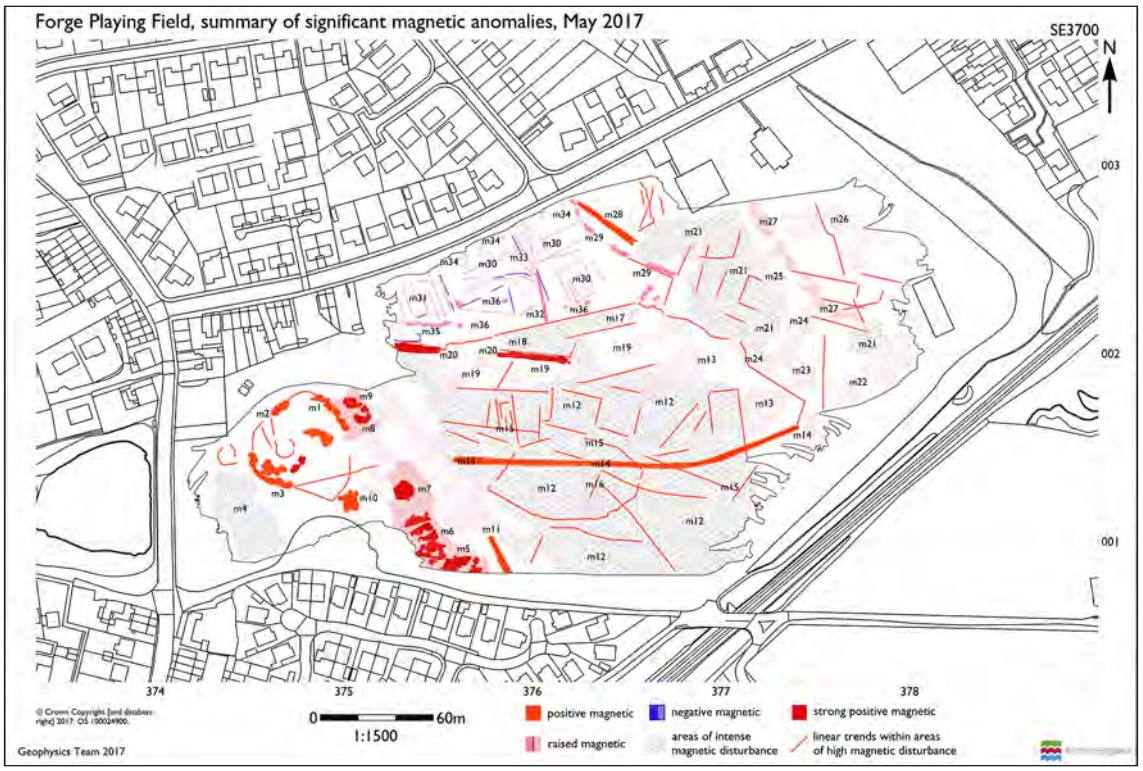


Fig 143. Forge Playing Field, summary of significant magnetic anomalies. May 2017 (Linford et al 2017) © Historic England.

The magnetometer results show areas of intense magnetic disturbance toward the western end of the works, where it is likely that both the Grahams and the Dawes operated a cluster of puddling furnaces, and may also reflect the position of the northern engine and boilers indicated on the Dawes' lease map (Figure 143). There is certainly a trend in the data that follows the general orientation of the Grahams/ Dawes workshops extending east toward the largest pond and marking the works' northernmost extent. Further north, alongside Millhouses Street, the latest and some of the most ephemeral structures here, the row of post war prefabs, were among the clearest geophysical results. The GPR mapped the outlines of individual plots and the magnetometer picked up a variety of minor drains, which relate either to these houses or to the fields that preceded them.

Elsewhere, the strongest magnetic signatures of all are those of drains, including the main pipe running under the recreation ground from the uppermost ponds, and others whose origins are less certain. It is certain, however, that the recreation ground still retains significant archaeological evidence for the Milton Ironworks. The geophysical survey was able to isolate a number of features which correlate with evidence from the historic maps. More features may yet survive in a readable form, only masked by the spread of ironworking and demolition waste.

Excavations 2018

The survival of buried archaeological remains was tested through excavation in the summer of 2018. Volunteers from the local area supervised and directed by professional archaeologists from ArcHeritage and Barnsley Museums Service, with support from the Heritage Lottery Fund and the Great Places Initiative, opened three trenches along the western side of the recreation area. The trenches were located over areas of significant magnetic anomalies (m5-m9 on Figure 143 above) along the top of the slope near the upper in-filled pond, with a one further trench located downslope to the east where the 1849 map indicated the position of the blast furnace. This latter trench, like the geophysical survey beforehand, proved inconclusive. It was dug by machine to the maximum safe depth of about 2.5m without encountering any structural evidence, suggesting that the historic map (or our efforts to project it to a modern scale) lacked accuracy, or that the remains lie so deep as to have evaded both geophysical survey and excavation.

A large trench placed on the top of the slope toward Millhouses Street also proved inconclusive due the depth of dumped landscaping material, but the third trench, placed close to the southern boundary (over feature m6), was much more revealing and became the main focus of the team's two-week excavation in June. Instead of discovering the massive 1870's calcining kilns mentioned above, which offered one possible explanation for this highly magnetised ground, the excavation revealed a single, rather small calcining kiln (Figure 144), albeit possibly one of a run of similar features indicated by the geophysical anomalies. Although absolute evidence is lacking this kiln evidently predates the 1849 plan. If, as has been suggested, it belongs to the earlier days of Walkers' operations, it could represent one of the earliest post-medieval calcining kilns presently known in the country.[388] The archaeological story of the Milton works is clearly far more complicated than the documentary history or the geophysical survey has yet indicated, and would clearly repay further investigation.

Fig 144. The stone-built foundations of the curved kiln and outer wall, surrounded by deposits of cinders and waste subsequently truncated by the landscaping of the recreation ground, June 2018. Reproduced with permission from Barnsley Museums (T Roberts).

Milton's growth in the 19th and 20th centuries

The ironworks was not the only source of employment in Milton in the early 19th century. The OS 1855 map shows Hoyland corn mill just to the north of the ironworks (Figure 139), while a brick yard with its kiln was depicted to the west of Milton Road, slightly north of its junction with Armroyd Lane. Neither of these remained operational by the time the OS 25-inch map was surveyed in 1890, though the mill building may still have survived at this time. The Fitzwilliam collieries and ironstone mines nearby also provided employment.

In the same way as it did at Elsecar (Area 6), the estate appears to have built houses in the first half of the 19th century for some of their workers at Milton. Some employees were distributed to nearby farmsteads, such as Skiers Hall and Alderthwaite (Area 4) as census returns from 1841 and 1851 demonstrate.[389] But possibly between 1820 and 1840 an interesting group of houses was constructed south of the ironworks, marked on the OS 1855 map as the 'New Houses'. The 'New Houses' consisted of a long row of houses on the west side of Milton Road and several further groups opposite on the Elsecar side of the road. The row, which appears to be similar to Old Row in Elsecar, survived into the second half of the 20th century but has since been demolished.

The principal survivors of this early 19th-century phase of domestic development in Milton are the three groups of stone back-to-back houses on the eastern side of Milton Road: Nos. 186-192 (Figure 145), 194-200 and 202-208. These are highly unusual rural examples of the building type, consisting of four two-storeyed cottages (plus attics) per block. In typical estate fashion, each house received a generously-sized garden, in stark contrast to most urban examples. Whether they were built by the estate when Milton ironworks was still in hand or by one of the Fitzwilliams' tenants there is a matter of debate, although the generosity and siting of the houses argues the former.[390] Most of these houses have since been extended and some heavily altered, though no. 200 gives a good idea of the quality of the estate's building at this period. Two of the three blocks face Milton Road, but the southernmost one is orientated to Armroyd Lane with its gable looking onto Milton Road.

This four-house design allowed for some side ventilation and lighting in addition to the fenestration on each long elevation, and all four houses shared a central chimney stack. The sandstone walling is finely tooled, with ashlar used for window lintels and door surrounds. There were also detached outhouses close to both gable ends of each block: these have not survived and have largely been replaced by outshots and extensions. Internally, based on evidence from no. 200, each house in the block of four originally consisted of two ground-floor rooms, into one of which the front doorway opens, with two rooms above and a further room or rooms in the attic, thus providing a minimum of three bedrooms. The staircase is located on the long spine wall, entered through what looks like a three-plank cupboard door in the former kitchen. The internal front door reveal is panelled, in good early 19th-century fashion.

It is interesting that the estate experimented with back-to-backs in Milton in the first half of the 19th century, something not seen elsewhere in Elsecar or Wentworth village where housing was generally provided in rows of various lengths. The building type is often thought to be a response to creating high-density housing on small urban sites in industrial towns, but this is not the case in Milton, with the large gardens and generous space between each block.[391] This confirms that the estate was concerned with the decent provision of accommodation for its workers, in a development that must have been designed to have been seen from the village of Wentworth. From a distance, these groups of stone houses would perhaps have looked like an agricultural settlement in the manner of Alderthwaite rather than industrial housing, making it an important and appropriate aesthetic design choice. Back-to-backs were built in other rural areas in the north of England, though the literature tends to discuss places where the textile industry was dominant, such as in Lancashire.[392]

The Furnace Inn (Figure 146) and a number of houses were built to the north and north-east of the ironworks site in the second half of the 19th century. This expanded the settlement northwards via Milton Road, even after the closure of the ironworks. The inn was well positioned close to the ironworks, and the later brass foundry on the site, serving the needs of workers, residents and passers-by alike. Built to the west of the road, the inn was constructed in stone overlooking the pond but the houses were mostly built of brick with stone facing to front the street (nos. 119-131). Sometimes brick was entirely used (nos. 73-93).

Fig 145. Back-to-back houses, Nos. 186-192 Milton Road, D Went, November 2017. © Historic England.

Fig 146. The Furnace Inn, Milton Road, D Went, November 2017. © Historic England.

A row of nine brick cottages were built to the south of the ironworks site and north of the back-to-backs on Milton Road (nos. 160-176) in the later 19th century (Figure 147). Like Cobcar Terrace in Elsecar (Area 6), these were transformed by later 20th-century brick extensions to the rear, adding additional space to what would have been very small houses. They lack the generosity of plan and outdoor space which characterises buildings created for the Earls Fitzwilliam, suggesting either a development by their tenants or as speculation to house those on lower incomes.

The development of the south side of Millhouses Street also occurred around 1900, a new road named for the former corn mill whose site it skirted. Here, two-storey houses were built as standard rows or pairs, often of brick but fronted towards the street in stone. More infill housing can be found on the western side of Milton Road north of the Furnace Inn, such as nos. 139-145 (Figure 148), built around 1910 in brick with moulded brick trimmings to the openings and string course. These three small houses and a former shop, perhaps, are similar in design to nos. 4-8 Cobcar Street, Elsecar (Area 6).

Milton expanded a little in the first half of the 20th century. The two blocks of Scholes View were built on the north side of the westernmost pond and overlooking it; the brick and render suggests that they were constructed around 1920. Otherwise there was some linear development on the western side of Broadcarr Road/Milton Road at the junction with Armroyd Lane, where a group of detached and paired houses were put up in the 1920s. This suggests that the 1920s and particularly the 1930s was not an economically successful period for Milton.

Post-war development, on the other hand, was on a much larger scale. An arrangement of brick bungalows and houses was built over what had been Primrose Hill, which appears to have been a late 19th-century farmstead and mineral extraction area to the south of the ponds. This consists of Green Acres and Primrose Way, built in the 1970s to a spacious layout of green spaces, pedestrian paths and cars largely kept to the rear of the properties. Pine Close (Figure 149a) was added to the western edge of this area with the construction of the McKay VC Memorial Cottages (opened in 1988), a group of brick bungalows built by the Forces Help Society and Lord Roberts Workshops to commemorate Sergeant Ian McKay VC who was killed in the Falklands War.[393]

The late 20th century saw a rapid expansion of Milton, particularly on land south of the ironworks site and next to the railway (the 1990s chalet bungalows of Weir and Roseberry Closes) as well as the development of a large pocket of land south of Green Acres and Clough Fields Road (Figure 149b). The latter was a new road driven through in the 1970s to link Milton with new developments built between Hoyland and Hoyland Common; to construct it, the row that had been part of the 'New Houses' on the western side of Milton Road had to be demolished. This led to the building of Meadowfield Drive, Church Lea and Sunnybrook Close in the late 1990s, consisting of houses and bungalows clad in stone, render and timber. A small area at the rear of Scholes View was infilled in the early 2000s by the brick houses of Field Head Road.

Fig 147. 160-176 Milton Road, D Went, November 2017. © Historic England.

Fig 148. Nos. 139-145 Milton Road, D Went, November 2017. © Historic England.

Fig 149 (a) above: Pine Close, McKay VC Memorial Cottages (b) below: bungalows to Clough Fields Road, D Went, November 2017. © Historic England.

Fig 150. View east across the upper Milton pond, D Went, November 2017. © Historic England.

Summary of Significance

The initial impetus to build at Milton had been the construction of the ironworks at the end of the 18th century, creating a zone of Fitzwilliam industry separate from that at Elsecar. But whereas Elsecar kept its own identity, Milton became physically joined to Hoyland, itself associated with the estate but further away from Wentworth and the seat of the family at Wentworth Woodhouse. The connection to the estate could not have been less obvious, however. Milton was laid out on the hillside directly opposite Wentworth, alongside the existing landscape feature that was the Old Colliery, and when the ironworks was fully operational it must have been a considerable sight at both day and night, clearly visible not only from Wentworth but from many parts of the estate.

Milton's industrial origins, unlike Elsecar's, are now mostly obscured by the demolition and landscaping of the ironwork's site, leaving only the furnace ponds (Figure 150),the back-to-backs and traces of the former Lidgett railway as visible reminders of this highly significant episode in the area's history in the midst of a great deal of later residential development. The buried remains of the Milton works are, however, of considerable significance. Geophysical survey and recent excavations have shown not only that structural remains and other forms of archaeological evidence survive, but also that these remains have the potential to reveal important aspects of the earliest works on the site, the pattern of which has not been particularly evident from documentary sources. Added to this, the excavations have clearly shown the extent of local interest in discoveries of this nature, and the commitment of local volunteers engaged in the process of quite literally unearthing Milton's past.

Character Area 6: The historic village of Elsecar

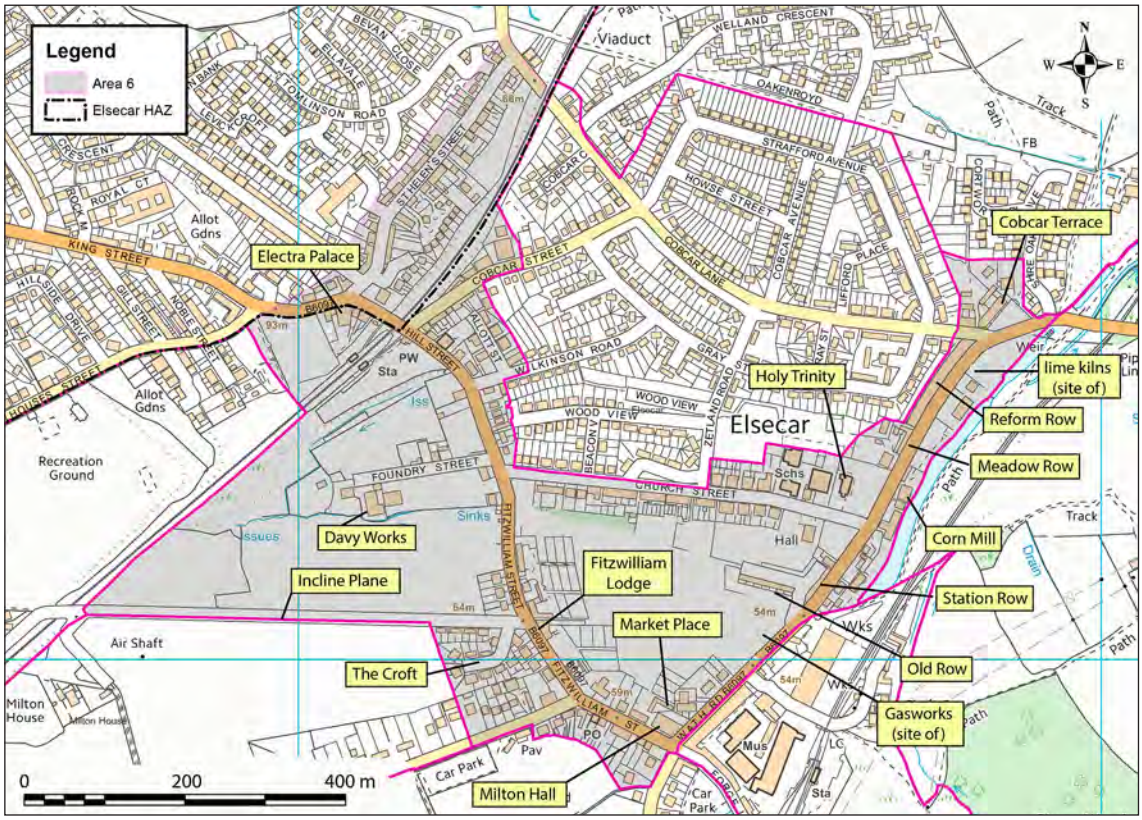


Fig 151. Detail from Figure 201 showing the extent of Character Area 6. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

Character Area 6 covers the historic settlements of Elsecar Green, the area to the east of the canal bank on Wath Road, Stubbin and Stubbin Bottom, and St. Helen's. Elsecar Green and the area to the east of the canal bank developed from the mid-18th century onwards, with intensive periods of development in the early-mid 19th century. St. Helen's became built up from the mid-19th century, and Stubbin and Stubbin Bottom from the late 19th century. The opening of the Sheffield-Chapeltown railway branch line to Barnsley in 1897 also precipitated new development at Stubbin in the early 20th century. The Character Area is dominated by village housing which would have accommodated the growing workforce of the Elsecar Collieries and Ironworks (Character Area 1), though commercial premises including shops and pubs, public amenities including a new school and a market hall, as well as above and below-ground remains of industrial features such as the inclined plane are still evident. There is a clear contrast between the often generously-sized estate housing of the late 18th-century/19th century built in sandstone with replicated architectural motifs such as tooled quoins and lintels, and the later, probably private and speculative developments, built predominantly out of brick, or brick with stone frontages.

The village development

The depiction of the hamlet of Elsecar Green in 1757 shows a roughly triangular open space with no more than nine buildings in its immediate vicinity (*see* Figure 3). The green depicted then and subsequently on the 1771 map of Hoyland manor, the 1794 draft enclosure plan for Hoyland and the 1818 map of the township (Figures 152 and 153) should not be confused with the large green space which is now such a prominent feature of the village. The early green extended southward from the present junction of Fitzwilliam Street and Wath Road, across the area now occupied by the Market Inn, bordered to the south by the closes next to the Harley Dike which contained the 'Old Mills' shown in 1757. These mills, as indicated above (*see* 'Medieval and early post-medieval Elsecar'), may have stood in the area of the present visitors' car park alongside Forge Lane, in Area 3. The only potential survival from the buildings surrounding the green is the cruciform structure shown on the north side of the triangle, which may partially equate to nos. 9 and 10, Market Place (*discussed below*). The footprint of these buildings is not identical to that shown on the 1757 map, though stylistically they date to this period.

The 1771 map records that in the mid-18th century Elsecar Green was surrounded on all sides by small and irregular enclosed fields, some termed 'croft', indicating a direct association with a dwelling, others marked with names ending with 'spring' or 'ing,' pointing to the low-lying and presumably once boggy nature of the land. The greatest concentration of such terms followed the natural stream course from Hoyland down to the Knoll Beck, a course which is still visible across the northern side of the present green, to the south of the properties on Church Street. The settlement at Stubbin at this time was just a small cluster of farm buildings located where this stream crossed Fitzwilliam Street (then just a minor lane or droveway extending south from Stubbin Green to Elsecar Green), and an isolated farm on the east side of Stubbin Green, which may have given the green its name. Stubbin Green, an area of about 3 hectares, was then linked by a short droveway to Cobcar Green to the north-east (Area 7), and by a much longer lane to Hoyland Green far to the north-west. It was partitioned through the final process of enclosure toward the end of the century, at which time the routes to Hoyland (later Hill Street) and Cobcar Green (later Cobcar Street) were formalised.[394] This is shown particularly well on the 1818 Hoyland Township Plan. The former common had begun to be colonised by houses in the angle of Hill Street (then Stubbin Lane) and Cobcar Street by the time the first edition OS 6-inch map was surveyed in 1849-50. It has since been overlain by developments along the western ends of Wilkinson Road and Wood View to the south of the railway cutting, and St Helen's Street to the north. One curious aspect of the mid-18th century landscape that has survived is part of a narrow band known as 'Stubbin Closes' which extended eastwards from Stubbings (farm) towards the valley floor. These closes are still reflected in the narrow band of green spaces comprised of Wood View, the northern part of the school playing field east of Zetland Road and the modern cemetery extension north of Holy Trinity Church.

Fig 152. Extract from the 1771 plan of the Manor of Hoyland showing the area of Elsecar Green, Reproduced with permission from Sheffield City Archives (FC/Wath/13L).

The large green space which now exists in the angle north of Fitzwilliam Street and Wath Road is an invention of the mid-19th century. On the township map of 1818 this area is shown divided into individual fields, much as it had been toward the close of the 18th century, except for the addition of Fitzwilliams' two recent cottage rows (now Old Row and New Row) on the eastern side. By the time of the 1855 OS map these rows (described further below) were accompanied by allotments which took up part of the present green, and the central fields had been split by the inclined plane from Milton. The OS 1892 25-inch edition (Figure 203) shows virtually all the available space to either side of the incline divided for allotments with the exception of the area of the gasworks alongside Wath Road, some extended yards or gardens south of the properties on Church Street and a group of small fields later taken up by 107-131 Church Street, the Church Hall and the cemetery on the corner with Wath Road. The creation of the new green space, which saw the reduction in the number of allotments to just a narrow fringe behind Fitzwilliam Street, took place in the 1970s, long after the removal of the inclined plane and following the more recent departure of the gasworks.[395]

Fig 153. Extract from the 1818 Hoyland township plan showing the development of Elsecar Green at that time and the recently enclosed area of Stubbin Green to the north. Reproduced with kind permission of Barnsley Archives and Local Studies, (NBC 417R).

The only other part of the landscape within Area 6 to retain a significant element of its pre- and early industrial rural appearance lies to the west of Fitzwilliam Street. This area is bracketed by the branch railway of 1895 to the north and by the inclined plane from Milton to the south (of which more will be said below). In the centre, the growth of Foundry Street and the Davy works in the 19th century made use of some marginal land alongside the Hoyland stream, and the small modern housing estate to the south of the station has done likewise, replacing small sidings and a single goods shed which stood on this embankment of cinders and colliery waste until the 1950s. Between these two developments, however, the remaining paddocks retain the last indications, in the form of narrow ridge and furrow, of the way in the fields around Elsecar were ploughed with heavy horses in the post-medieval period.[396]

18th century buildings: Elsecar Green and Wath Road

The earliest buildings in the village of Elsecar are nos. 9 and 10 Market Place, to the north of the former green (Figure 154). This pair of low, sandstone rubble cottages are listed grade II (NHLE No. 1191255) and have been dated to the mid- to late 18th century, though they are probably those identified on the 1757 map. They can also be seen on the 1771 plan of the manor of Hoyland to the east/north-east of Elsecar Green (Figure 152 *above*).[397] The cottages are double-fronted, with stocky margined lintels and herringbone-tooled quoins, and they each have rear wings. The chimneystacks have been rebuilt, several lintels have been replaced, and the slate roof is a substitution for a stone slate roof.[398]

Fig 154. Nos. 9 and 10 Market Place, D Went, November 2017. © Historic England.

Old Row and Station (originally Colliery) Row were built near to the canal bank at the end of the 18th century, on what later became known as Wath Road (Figure 155a & b). They are both listed grade II (NHLE Nos. 1151094 and 1191290) and were built by the 4th Earl to house the workers of Elsecar New Colliery and Elsecar Ironworks. Old Row is a terrace of 15, coursed rubble sandstone cottages which were built in an open plot of land to the east of the Dearne and Dove Canal, orientated to face southwards towards Elsecar Green and the Elsecar Ironworks. Each cottage is two-up-two-down with paired doorways and tooled lintels. There is a building break between nos. 10 and 11 suggesting that the row was built in two parts, though both sections are of the same date. As with nos. 9 and 10 Market Place, the slate roof and brick stacks are later replacements. There are small forecourts to the front with stone walls and heavy domed copings. The 1855 OS map shows that there were once detached outhouses in the rear yards, though these have now largely been replaced with larger structures. The outer wall of one of the original outhouses, complete with coal hole, survives to the rear of no. 2 Old Row. Each cottage had an allotment garden to the south of the row, now an open green space.

Station Row is very different in design to Old Row, and has been associated with the architect John Carr. It is one of two rows of houses attributed to him in Elsecar, the other being Skiers Hall Cottages (*see* Character Area 4). The symmetrically-planned rubble stone row comprises three, three-storey blocks and two, (set-back) two-storey blocks, and is divided into 10 individual dwellings. They were built to face eastwards, with views out across long garden allotments towards the canal and New Colliery. In this respect they bear some similarities with the Skiers Hall Cottages, which were built in a prominent position with views out towards Wentworth across long garden allotments. The Station Row cottages have been dated to the 1790s and may have been those envisaged in the costings for 10 cottages which survive among Carr's architects plans of 1796 (*see* Figure 126).[399] The use of hipped roofs, and combination of two and three-storey units, reflects the cottage designs in John Carr's architectural plans. The slate roofs are replacements. They are shown on the draft Nether Hoyland Award Map of 1794, having been sketched onto the original map at a later date.

Fig 155. (a) above: 1-15 Old Row, Wath Road and (b) below: Station Row, Wath Road, Alun Bull, November 2017. © Historic England.

Early 19th century housing and community amenities

Over the course of the first half of the 19th century, the 1855 OS map, surveyed from 1849 to 1850, (*see* Figure 202) shows that Elsecar Green was starting to develop as the village core, with the introduction of a public house – The Milton Arms – and the development of the plots to the south of the green, though these buildings were later replaced. The area to the west of the canal along Wath Road was also further developed with houses. This was also chosen as the site for the new Holy Trinity Church, and a corn mill was established on the bank of the canal. Stubbin and Stubbin Bottom were also becoming established, though the majority of the buildings shown here on the 1855 OS map, including the Independent Chapel, have since been replaced.

A couple of early 19th century buildings survive at Elsecar Green: the Milton Arms public house to the north of Armroyd Lane, and no.11 Armroyd Lane itself. The Milton Arms is a stone building (now rendered) with a stone slate roof and a (modified) former shop front to the east elevation. The original entrance faced out onto Armroyd Lane. During the late 19th and early 20th centuries the Milton Arms hosted the regular meetings of the Elsecar Cricket Club, as well as a number of official enquiries into local deaths and industrial accidents.[400] No. 11 Armroyd Lane ('Tollbar Cottage') is a probable stone double-pile house (now rendered) with sandstone lintels, perhaps linked in origin with the toll road which is reported to have operated here by 1840.

Overlooking the canal, Reform Row and Meadow Row were built to the north of Old Row and Station Row on Wath Road, increasing the availability of workers' housing in easy reach of the New Colliery and Ironworks. Reform Row is a long, rubble sandstone two-storey grade II listed row of 28 cottages with a slate roof (NHLE No. 1315024). There are three through passages including a central round-arched passage beneath an oval plaque inscribed 'Reform Row / 1837' (Figure 156). The cottages are two-up two-down with paired doorways and shared chimney stacks. There is a stone chimney stack to no.122 which may be original; the rest are brick. The end gables have kneelers and copings. The surviving original lintels above the doorways have distinctive horizontal tooling, a motif that is found across Elsecar, on domestic and industrial buildings alike. The window lintels, which would originally have had the same tooling, have been replaced. There are forecourts to the fronts of the houses with stone rubble walls and copings. The cottages originally had detached outhouses to the rear (*see* Figure 202); these were replaced in the 20th century by single-storey outshots. Each of the cottages originally had an allotment garden on a plot directly behind the row.

Fig 156. Reform Row, Wath Road. Central passage, D Went © Historic England.

Meadow Row is a truncated row of seven, coursed sandstone cottages with a slate roof (Figure 157a). The 1892 OS map shows that there was originally a further two cottages and a pub, the 'Ship Inn' at the southern end of the row. This is shown, along with a large cart entrance mid-way along the row, on a photograph taken during the Royal Visit in 1912 (Figure 157b). This portion of the row was demolished in the second half of the 20th century. A new Ship Inn was constructed on the site of the old pub and cottages in the 1930s.[401] The new pub was set back from the road and housed a large concert room, a private hall, a snug, and other rooms. It was converted to residential use in 2011. The north cottage of Meadow Row (no. 102) is double fronted and was built independently from the rest of the row. It appears to have accommodated a shop at ground floor level and had a small walled forecourt to the front. The other six cottages in the row are smaller, and probably two-up, two-down. There are straight joints between nos. 96 and 98, and 98 and 100, suggesting that the whole row was built in units, though they are all of the same date. Nos. 90-96 has paired doorways, with shared central stacks. No. 98 has scored monolithic stone lintels above the doorway and window openings to appear as though they were built as formed out of several individual blocks. This is a distinctive feature of the buildings of Elsecar.

Fig 157. (a) Meadow Row with Reform Row in the background, D Went, November 2017. © Historic England; (b) Reform Row/Meadow Row during the Royal Visit, July 1912, reproduced with the kind permission of Barnsley Archives and Local Studies; (c) Holy Trinity Church, Church Lane, Alun Bull, November 2017. © Historic England.

Holy Trinity Church was built in 1841-3 and is listed grade II (NHLE No. 1151087) (Figure 157c). It was built in the Early English Gothic Revival Style in coursed dressed sandstone ashlar with a slate roof. It has a five-bay nave with aisles, a tower at the south end and an apsidal chancel, and is orientated north-south. The 5th Earl Fitzwilliam laid the foundation stone on Whit Monday in 1841 and the church took two years to build, costing £2,500.[402] It opened on Whit Monday 1843. According to de Voil, a number of improvements were made to the church in 1870-71, including the construction of a small vestry and organ chamber on the side of the chancel, and gas lighting was introduced. In 1890 the old cast-iron windows were taken out and replaced with diamond panes. In 1908 land to the south side of Church Street, opposite the church, was aquired and consecrated for burials.[403] Both the original churchyard and the later churchyard extension are now closed to burials. To the north of the church is a cemetery operated by Barnsley Metropolitan Borough Council. To the west of the 1908 churchyard extension is the present parish hall – a single-storey brick structure constructed in 1962.[404]

Up until the mid-19th century the east side of Wath Road, lying between the Dearne and Dove Canal and Wath Road, was largely undeveloped. Elsecar Corn Mill was constructed adjacent to the canal in 1842.[405] The corn mill is a stone-built three-storey, six-bay gabled building with a slate roof and a basement (Figure 158). It is listed grade II (NHLE No. 1151087). The front elevation to Wath Road

has a timber gantry to the third floor, painted with the sign 'E.F.W. Stoneground Wholemeal Flour'. Below this on the second floor is a taking in door with a round arch and voussoirs. The windows have scored stone lintels and there is an original (truncated) stone chimney to the north gable. There has been some alteration to the building at the north end; historic maps suggest that there was a further bay, or an additional structure, at this end. The single-storey addition at the south end of the front elevation is also later. Each of the main floors is supported on iron columns, and has trap doors to allow bags of floor to be hoisted up through the storeys. A stone building with a hipped slate roof to Wath Road also formed part of the original complex.

At Stubbin Bottom the Crown Inn, to the west side of Hill Street, could also date to the early 19th century. It has been much altered, though it bears the features of an estate-designed building with coursed sandstone walls, scored lintels with central tooled keystones, and a string course. Two of the ground-floor windows also have sunken aprons. It was a public house from at least the mid-19th century.[406] Samuel D. Smith, who was landlord until 1941, also had a transport company which he operated from the pub, displaying vehicles on the large forecourt to the front.[407]

ig 158. Elsecar Corn Mill on Wath Road, Alun Bull, December 2017. © Historic England.

Mid-19th-century village expansion

Elsecar rapidly expanded from the mid-1850s to the late 1860s. The scale of change can be best appreciated by comparing the 1855 OS map (*see* Figure 202) with the 1867 map of the Township of Nether Hoyland (Figure 159). In just under twenty years, Elsecar Green had been transformed, with several rows of new workers' houses constructed to the north/north-west of Fitzwilliam Street, and the fields to the north of these staked out with allotments. The Fitzwilliam Lodge, built by the estate for unmarried miners, was also erected on Fitzwilliam Street in 1853. Wath Road was re-routed so that it ran more directly from Elsecar Green northwards, directly in front of the Station Row cottages, to the loss of their associated allotments. A school was erected next to Holy Trinity Church, and two further terraces were built to the north of Cobcar Lane. Church Street was introduced to link Wath Road with Fitzwilliam Street, and to open up a new street frontage for building plots In the late 1860s, not identified on the 1867 map, a long, linear plot to the corner of Hill Street and King Street was also intensively-developed with terraced housing, and a new road, St. Helen's Street, was created to link Hill Street with Cobcar Lane. A large proportion of the buildings constructed at this time still survive.

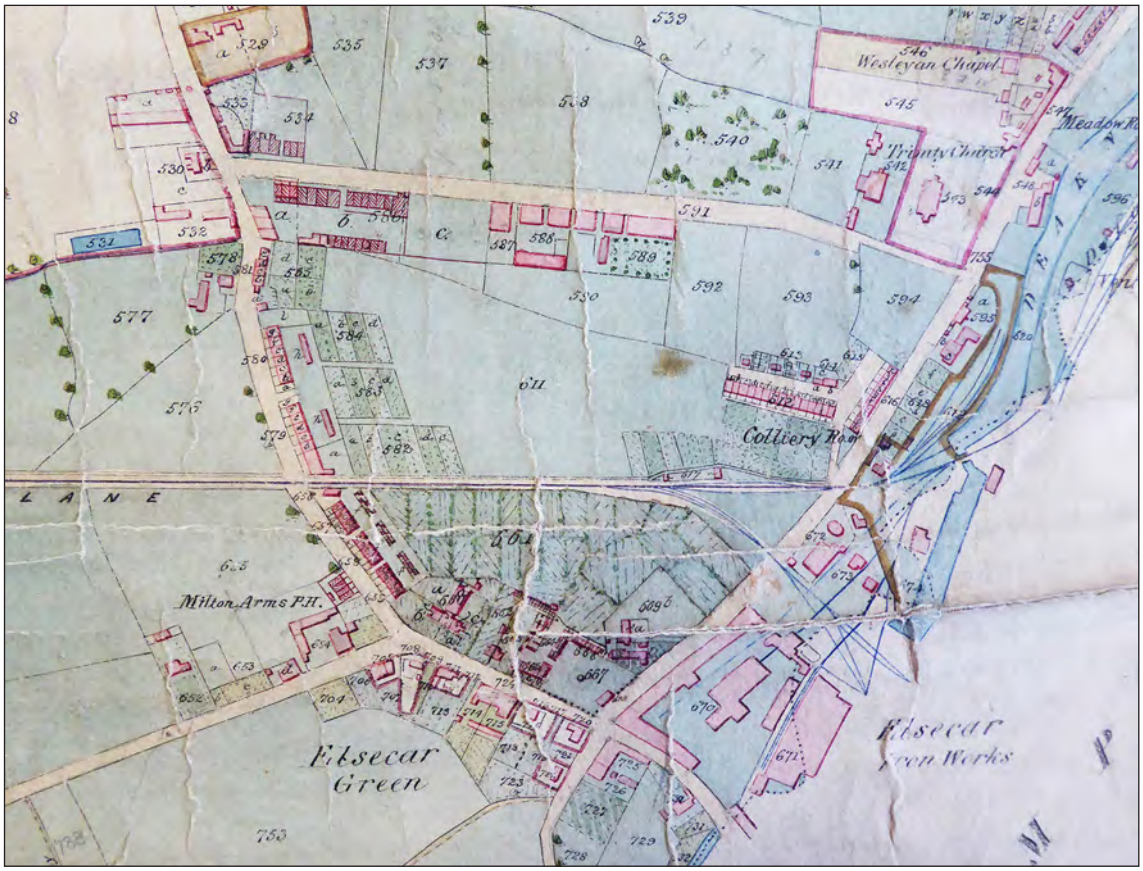


Fig 159. Extract from the 1867 Map of Nether Hoyland Township. Reproduced with permission from Sheffield City Archives WWM/MP/123/R (see note in Archival Sources).

In a highly prominent position in Elsecar Green, opposite the junction to Armroyd Lane, Earl Fitzwilliam commissioned the construction of a lodging house, known as Fitzwilliam Lodge, in 1853 (Figure 160). This large, imposing building was a practical response to an increasing number of single, unmarried men working at the colliery, and also a grand statement of the Earls' authority in the village.[408] Under the watchful eye of the lodging house keepers, the strict governance of the curfew, and other strict regulations such as a ban on alcohol and gambling, the Fitzwilliams set out to control the behaviour of this apparently unruly group of workers through this highly visible new building.[409] The Lodge is a three-storey building constructed out of coursed, horizontally-tooled sandstone with a slate roof and is listed grade II (NHLE No. 1151092). There is a two-storey wing to the rear. It is embellished with a central gabled projection with a pediment and glazed oculus, and a single set-back bay to the east. There is an eaves cornice, a first-floor plat band, first-floor sill band and sunken aprons to the ground-floor windows. The central door has a fanlight and radial glazing bars in a moulded ashlar surround. To the interior, the central entrance hall has a cantilevered stone staircase with an iron balustrade on the interior. A brass plaque on the main door identified that it was restored in 1982 by North Cheshire Housing Association, Sheffield. It has been converted into 14 dwellings.

Fig 160. Fitzwilliam Lodge, Fitzwilliam Street, D Went, February 2018. © Historic England.

A series of new terraced cottages were erected to the north-west of the Lodging House at Elsecar Green. The 1867 map shows three terraces of five houses between the Lodging House and the inclined plane (*see* Figure 159). An early 20th-century photograph indicates that these were all built to a similar design, with central gabled projections (Figure 161a). The central terrace and greater part of the northern terrace have since been demolished; subsidence due to coal mining resulted in the demolition of a number of houses along Fitzwilliam Street in the 20th century. Nos. 56-64 (Figure 161b), adjacent to Fitzwilliam Lodge, survives and is listed grade II (NHLE No. 1151091). It is a two-storey symmetrical row of five cottages with a central gabled projection, constructed of coursed, horizontally-tooled sandstone with stone chimneystacks and a slate roof. The central door has flanking windows and a bracketed hood. The original first-floor window above has a cavetto-moulded surround, plain lintel and bracketed projecting sill. There is a projecting eaves course with stone gutter brackets. As with the Lodging House, the architecture of this row distinguishes it as housing provided by the estate. The northern two cottages (nos. 36 and 38) of the northern terrace survive, and the adjoining cottage (no. 40) was rebuilt in the 1990s. The central terrace plot is currently being redeveloped.

Fig 161. Fitzwilliam Street (a) Early 20th century photograph showing Nos. 36 to 64, reproduced with permission from Barnsley Archives, A3568/Z/1 (b) Nos. 56-64 and (c) Nos. 4-8; (d) outhouses to the rear of nos. 4-14 Fitzwilliam Street D Went/Alun Bull, November 2017. © Historic England.

To the north of the former inclined plane is a series of more modest terraces. Nos. 4-14 Fitzwilliam Street (Figure 161c) is a complete terrace of coursed, horizontally-tooled sandstone cottages with segmental, scored lintels and stone chimneystacks. There is a projecting eaves course and stone copings to the gables. Nos. 20-22 Fitzwilliam Street and nos. 28-32 Fitzwilliam Street are similar in design, and once formed a complete terrace; the central two cottages have been demolished. Nos. 36-40 Fitzwilliam Street has plain lintels and stone gutter brackets. No. 36 has a single surviving square-headed sash window with integrated arches at first floor level. All of the terraces have forecourts with stone walls and copings, and rows of single-storey brick outhouses still survive to the rear. The outhouses behind nos. 4-14 Fitzwilliam Street (Figure 161d) appear to have had toilets at the front, with washhouses behind and animal shelters (possibly for pigs) at the back.[410] The 1867 map shows that, typical for the workers' housing provided by the Fitzwilliam Estate, each of the cottages in these rows would have also had allotments. The 1867 map also shows that there was one, possibly two further rows of houses between nos. 4-14 Fitzwilliam Street and Church Street, though these have since been demolished and the land is now open green space.

At the east end of Elsecar Green, a series of buildings were erected around the market place - an open, square-shaped area to the junction of Wath Road and Elsecar Green which was used for outdoor commercial sales. Nos. 1-4 Market Place (Figure 162a) is an L-shaped stone row of four houses. There is a straight joint between nos. 3 and 4 suggesting that they were built in pairs, though they are of the same date. The segmental lintels are scored, similar to other estate houses, and blind windows have been used to balance the symmetry of the building. Each house would have been two-up-two-down, with alternative doorways to the back and the front. Nos. 88-94 Fitzwilliam Street (Figure 162b) is a similar sandstone row, though no. 94 was originally used as a shop, and has consoled canopies above the windows to the front and side.

To the south side of Elsecar Green, nos. 83 and 85 (Figure 163) - a two-storey stone row with two, three-bay ranges linked by a central one-bay recessed range - replaced a complex of buildings on this plot. There is a string course at first floor level and stone lintels and sills. The design of this building bears similarities with the

Fig 162 (a) left: nos. 1-4 Market Place and (b) right: nos. 88-94 Fitzwilliam Street, D Went, October 2018. © Historic England.

rows attributed to John Carr, with a symmetrical plan, hipped roofs, and recessed elements, though it has not been associated with this architect. No. 85 incorporates a shop front which, together with the shop at no. 94 Fitzwilliam Street, suggests that the commercial premises were being improved in Elsecar Green at this time.

In 1870, a new, purpose-built market hall was constructed on the site of the open-air market place.[411] It is listed grade II (NHLE No. 1293411). In 1931 this building, which had lately been used as a village hall, was reconstructed as a concert hall with rooms for various social functions to mark Lord Milton's 21st Birthday, and became known as Milton Hall (Figure 164).[412] The former market hall was built by the Fitzwilliams as a statement community building, augmenting and solidifying Elsecar Green as the commercial centre of the village. It is a single-storey, rock-faced ashlar building with a pedimented doorway and arched windows to Fitzwilliam Street. It sits on a prominent corner site, and there is a further pedimented entrance to Wath Road. It has chamfered plinths, margined keystones and an impost band and eaves course in good ashlar.

The Fitzwilliams also continued to increase the housing provision to the west of the canal. Two ornate terraces - Cobcar Terrace (Figure 165) and nos. 1-9 Cobcar Lane (Figure 166) - were constructed at the corner of Wath Road and Cobcar Lane, north of Reform Row. They are both listed grade II (NHLE Nos. 1191318 and 1151088). Cobcar Terrace is a two-storey coursed, dressed sandstone symmetrical row of 10 houses with a slate roof and stone chimneystacks. It has two gabled projections to the front elevation with oculus windows. To the centre of the row is a set of paired doorways with connected peaked hoods. These two doors have fanlights with radial glazing bars; the other doors in the row have overlights with crossed glazing bars. A blind window is positioned above the paired doorways at first floor level. The end gables have stone kneelers and copings, and there are stone brackets to the gutters and a plat band at first floor level. The lintels are scored to appear as voussoirs, as is common in Elsecar, and the ground-floor windows have sunken aprons. Nos. 1-9 Cobcar Lane is a shorter row of five coursed dressed sandstone houses similar in design to Cobcar Terrace, with a central gabled projection, doorways with overlights and crossed glazing bars, tooled voussoirs and sunken stone window aprons.

Church Street, the new road linking Wath Road with Fitzwilliam Street, also offered new opportunities for development. The school was built in 1852 by Earl Fitzwilliam to the north side of Church Street, on land adjacent to the church (Figure 167a).[413] These two buildings ensured that the religious and educational instruction of the growing population of the village was adequately met. Pre-dating the 1870 Education Act which permitted school boards within local authorities to finance school buildings from a local rate, it is an important example of an early privately-funded school. It has a long central range orientated east-west with three cross gables to the north and three to the south. The cross gables each have tall window openings with traceried bull's-eye windows above. The central windows have mullions, transoms and drip moulds. The slate roof is laid in a fish-scale pattern and the gables are fitted with decorated barge boards. At right-angles to the school is the former headmaster's house, a two-storey T-shaped stone building which also has a fish-scale slate roof (Figure 167b). The windows are mullioned and transomed, and the gable bargeboards are decorated, though with a different design from the school.

Fig 163. Nos. 83-85 Fitzwilliam Street, D Went, November 2017. © Historic England.

Fig 164. Milton Hall, Alun Bull, November 2017. © Historic England.

Fig 165. Cobcar Terrace, D Went, February 2018. © Historic England.

Fig 166. Nos. 1-9 Cobcar Lane, D Went, November 2017. © Historic England.

Both buildings have stone chimneystacks. The school was extended in 1870 with the addition of a new hall and classrooms. A new school for boys was constructed in red brick in 1893 on a plot to the east of the site (Figure 167c). It underwent extensive rebuilding and repair in 1943 due to problems with subsidence.[414]

Houses were also constructed to the south side of Church Street. Nos. 71-81 and nos. 83-93 Church Street were built as two substantial rows of three storey back-to-back houses (Figure 168). A third row, nos. 95-105 Church Street, was demolished in the late 20th century and replaced with a row of two-storey stone-clad houses.[415] A central, three-centred arched entranceway provided access to the cottages at the rear; these courts were known as 'Solomons Square', 'Popular Place' and 'Ebenezer Place'. The gable ends and rear elevations are brick, while the front walls are coursed, horizontally-tooled stone. The size and style of these buildings, coupled with the increased use of brick, are a departure from the rows of houses erected by the estate in Wath Road and Fitzwilliam Street, suggesting that these were built speculatively by local builders, rather than directly by the Fitzwilliams.

Fig 167. (a) top: Elsecar School, Church Street, D Went, April 2019 (b) left: Headmaster's House, D Went, April 2019 and (c) right: the Boy's School, Church Street, D Went, November 2017. © Historic England.

Fig 168. Nos. 83-93 Church Street, D Went, November 2017. © Historic England.

Fig 169 (a) top left: nos. 16-18 Hill Street (b) top right: 'St Helens Terrace' 66-70 St Helen's Street and (c) below: no. 63 St Helen's Street, detail of doorway, D Went, November 2017. © Historic England.

To the north of Stubbin, St Helen's Street and Cherry Tree Street were laid out in the late 1860s, and area which came to be known as St. Helen's. This new housing development, with its dense rows of terraced houses, limited outside space and combination of stone, stone and brick, and brick materials, is a further departure from the stone-built rows of terraced housing built by the estate (Figures 169). Like those to the south of Church Street, it is highly probable that this area was built speculatively by local builders, rather than directly by the estate. In the main, the terraces are orientated in parallel with the street frontage, though two rows to the east side are set at right angles to it. There has been some loss, particularly at the north-east end, though there is good survival of houses of this period along the length of the street. Nos. 59-65 have a datestone of 'A.D. 1868' and nos. 83 and 85 have a datestone which reads 'Valley View 1869'. Generally speaking, the cottages are modest in detail, with plain, chamfered lintels to the doorways and window openings. Some also have gutter brackets. Nos. 58-64, a brick terrace with brick forecourt walls, have a moulded dogtooth band above the ground-floor lintels and at eaves level. 'St Helen's Terrace, nos. 66-70, has dogtooth and roundel moulded bands above the lintels and at eaves level. No. 63 is a former pub. The inserted, arched stone doorway has a glass panel etched with 'Warncliffe Arms Inn'.

Hawthorn Villa (Figure 170) is the stand-out exception to the terraced housing, and is situated on the north-west side of the street and faces down the hill towards Cobcar Lane. This two storey pair of semi-detached stone houses has four bays. There are bay windows to the ground floor, projecting door surrounds and a string course with consoles to the first floor. The lintels above all of the windows have distinctive tooled keystones and recesses. The expansion of the village north-westwards into the St Helen's area, along with the cottages built by the estate elsewhere in the village, stands as testament to the rising population of Elsecar in the mid-19th century.

Fig 170. Hawthorne Villa, St Helen's Street, D Went, November 2017. © Historic England.

The late 19th-century development of Stubbin and Stubbin Bottom

At the end of the 19th century, the 1892 OS map (*see* Figure 203) shows that the main areas of new development were Stubbin and Stubbin Bottom, which, by this stage, had evolved into sizable settlements of their own. The opening of Davy Iron Foundry on Foundry Street, which operated from 1869-1980 (*see* Historical Introduction) contributed to this, opening up new opportunities for work, and a demand for housing. The west side of Hill Street became built up with rows of cottages, though there has been considerable loss in this area since, due to subsidence. To the east side of Hill Street, the plots of land between Church Street and Cobcar Street were also developed with housing which still stands, and buildings also appeared at the west end of Church Street, and at the top of Hill Street, including St Helen's Roman Catholic Chapel (since demolished) and presbytery. There were some infill developments at Elsecar Green and on Wath Road, but not to the same extent as earlier periods.

A complex of buildings relating to the former Davy iron foundry on Foundry Street survives in a derelict condition at the west end (south side). The earliest buildings include a two-storey, partially-rendered brick structure with semi-circular openings (Figure 171a) to Foundry Street; a single-storey pier and panel brick range with brick buttresses at right angles to the street frontage (Figure 171b), which was later enlarged and extended to the east and south; and a double-pile single-storey range (also later enlarged and extended), which is now hidden in vegetation. The complex operated on much smaller scale than other enterprises in Elsecar, such as the Milton and Elsecar ironworks. The buildings were erected by the Davy foundry, as were the cottages that developed alongside it (now demolished). No. 7 is identified as a (Primitive) Methodist chapel on the 1892 OS map, though the building has a quintessentially domestic appearance from the front. It takes the form of a double-fronted stone house with stone chimney stacks. There are small, arched windows to the attic. A small alleyway shown on the 1892 map suggests that it may originally have been accessed from the rear.

Fig 171. Foundry Street (a) two-storey building, D Went, November 2017 and (b) single-storey range, Alun Bull, December 2018; both part of former Davy foundry. © Historic England.

To the west side of Hill Street, 'The Fitzwilliam Arms' is one of two public houses that once stood to the north of Forge Lane. It was once part of the development of buildings north of Foundry Street that have since been demolished. The pub is a three-bay brick building with tooled voussoired lintels and a central doorway with a simple Tuscan-style door surround. The interior was updated and improved in the 1960s, when a women's toilet was introduced and a new central bar was created between the smoke and tap rooms.[416] This arrangement still survives today.

To the east side of Hill Street is a series of stone and stone-fronted detached houses and former rows. The variation in the different styles and sizes suggest that they were built by, or for, private investors, rather than by the estate themselves. Nos. 31, 35, 37 and 39 were all built in the late 19th century, and post-date the 1867 map. No. 31 is a three-bay stone house which was once part of a row of houses (Figure 172a). The central doorway has a plain stone lintel and jambs, and the original window openings have tooled voussoired lintels, much in the same way as the earlier estate housing. The house is sizeable, having four rooms to each floor and a semi-sunken basement at the south end. It was once a public house called 'The Royal Oak Inn', better known locally as 'Tommy Up Steps'.[417] The southern ground-floor window opening was once larger, perhaps also indicating a former commercial shop front. This building was badly damaged by a fire in January 2019. On the north elevation is a tiled street sign indicating 'Parkins Yard'.

Nos. 35 and 37 Hill Street are a pair of semi-detached, two-bay houses with a stone frontage and brick rear and side walls. The original windows have tooled voussoired lintels and there is a string course with consoles at first floor level, and a pair of recessed semi-circular arched doorways with hood moulds. These properties had shop fronts to the ground floor and were formerly in commercial use. No. 39 is a large, three-bay double-pile house to the corner of Hill Street and Cobcar Street (Figure 172b). It is set back from the street and has a front garden with a tall stone wall with rounded copings. The central doorway has an imposing Greek Doric style classical stone surround. The window lintels have moulded keystones, there is a string course with consoles at first floor level, and moulded terracotta gutter brackets to the roof. The former congregational chapel on Hill Street has since been

Fig 172. Hill Street (a) left: no. 31, before the recent fire and (b) right: no.39, D Went, October 2018. © Historic England.

demolished, though the burial ground behind it remains, and the building has since been replaced by the Elsecar Wesleyan Reform Church, which was moved to this site in 2004.

Behind these buildings to the west of Hill Street, a small development of terraced housing was built on Allott Street/Back Stubbin (now the south end of Wilkinson Road) and along the south side of Cobcar Street. Nos. 16-26 Wilkinson Road form a terrace of six two-up-two-down stone cottages with plain lintels. There are long, forecourt gardens at the front of the terrace. Nos. 6-14 Wilkinson Street is a similar terrace of five cottages with basements at the west end. To the south of Cobcar Street nos. 1-11 and nos. 19-25 (Figure 173a) are two terraces of two-up-two-down cottages. Nos. 1-11 has stone gutter brackets and no. 23 has a doorway with a stone lintel and jambs. There is a row of stone piggeries with a stone slate roof at the east end of nos. 19-25 Cobcar Street (Figure 173b). No. 17 Cobcar Street is a large, three-bay house with a stone surround to the central entranceway, a string course and a row of corbels beneath the eaves. As with the terraced development at St Helen's, it is probable that this concentrated development of housing was built by speculation, rather than by the estate.

At the top of Hill Street, the former presbytery for St Helen's R.C. Chapel (now demolished) and The Clothier's Arms on St. Helen's Street were also built during this period (Figures 174a and b). The presbytery sits within a generous plot and takes the form of a large, C-shaped single-storey half-timbered bungalow with a porch to the front and a bay to the south-east side. It has a neatly-coursed stone boundary wall to Hill Street, with stone gate piers.

The Clothier's Arms is a wide, three-bay coursed stone building with a plinth. The central entranceway has a pedimented surround. The first-floor segmental windows have stone voussoirs and keystones, and there is a string course at first floor level. The ground-floor windows have stone mullions. Though it has some architectural pretention, and bears similarities with estate buildings, it could, like other buildings in this area, have been built by a private investor.

Fig 173. Cobcar Street (a) Nos. 19-25 and (b) piggeries at the east end of nos. 19-25 Cobcar Street, D Went, November 2017. © Historic England.

Fig 174. Hill Street (a) above: The Clothier's Arms and (b) below: former presbytery, No. 41, D Went, November 2017. © Historic England.

In addition to the shops and pubs that were built among the housing at Stubbin and Stubbin Bottom, a Co-operative was established on Church Street. Nos. 47-51 Church Street (Figure 175) is a row which incorporates a former shop orientated gable-end onto the street and two, two-storey cottages. As with the other rows, the front elevation is stone and the rear and side walls are brick. There is a date stone to the corner of the building which was laid by Edwin Haywood on 29th October 1892, and lists a number of Directors. Edwin Haywood was the Director of the Barnsley British Co-operative Society from 1883.[418] There is a large shop front to the ground floor of no. 51 and a pair of windows with decorated ogee lintels. The gables have stone copings and kneelers, and the cottages have stone gutter brackets. The remnant of a tiled sign, possibly for Backhouses Yard, is positioned on the west elevation, suggesting an earlier passageway to the rear of the building.

Shortly afterwards nos. 55-65 Church Street (Figure 176), a row of two-storey one-up-one-down cottages, were built next to the Co-op. This building first appears on the 1903 25-inch OS map, and has stone front elevations, stone chimneystacks and brick rear and end walls. The lintels to the eastern cottages have incised ogee mouldings and stone gutter brackets. There are forecourts to the front of the cottages enclosed with stone walls.

Fig 175. 47-51 Church Street, D Went, November 2017. © Historic England.

At Elsecar Green, a series of terraces, some of which incorporated commercial uses, replaced older buildings to the south side of Fitzwilliam Street. Nos. 2, 6 and 8 Armroyd Lane (Figure 177) are a late 19th-century stone-fronted terrace of three, originally four, two-storey cottages with plain stone sills and stone stacks. Nos. 67 and 69-69a are similar, four-bay stone terraces, though they also have the remains of shop fronts at ground-floor level. The OS map of 1892 identifies that 69-69a once accommodated a pub known as the 'Butchers Arms'. Both terraces have late, double-pile additions to the rear - no. 67 in stone and nos. 69-69a in brick. To the rear of no. 67 is a large, three-storey, three-bay terrace (no. 65a) aligned at right-angles to the street, with a string course and plain lintels.

On Wath Road, the plots to the north of the gasworks (*see* Character Area 1) were also gradually developed with housing in the late 19th century. Two of these structures, now heavily altered, are no. 9 and no. 23 Wath Road (the Three Chimneys). No. 9 is a rendered double fronted detached dwelling with brick chimneys, a slate roof and an outshut to the rear. No. 23 is set back from the road and faces eastwards towards the canal. It is also rendered with brick stacks, and may originally have been two cottages. The 20th-century structures include light industrial workshops, such as a timber chalet-style warehouse and stone clad dwellings matching in with the local building scheme. A small, brick-built structure in the coach park was built in 1927 as a store for 'Ambulance Requisites' for Elsecar Main Colliery.[419]

20th-century and later developments

The opening of the Midland Railway's extension of its Sheffield–Chapeltown branch to Barnsley led to further development in the Stubbin and St. Helen's area. Construction began in 1894, and the line was opened in 1897.[420] The 1930s OS map shows the route running north/east-south-west between Stubbin and St. Helen's. The station building is situated at the top of Hill Street, on the west side (Figure 178). It is an L-shaped brick structure with a slate roof and plain timber bargeboards on brackets to the gables. The window openings have stone sills, and the doorway and window openings have contrasting bright red segmental-arched brick lintels. Bands of bright red brick run around the building at sill and lintel level. A stepped, red-brick boundary wall leads up to the station building on the south side; a short section of the wall is built in the same style as the station building. The railway bridge is a late 20th-century replacement with grey engineering brick piers and wing walls.

A suite of buildings to the north and south corner of King Street and Hill Street, and to the north of Cobcar Street, were erected shortly after the railway was completed. The diversity in style again suggests that they were developed by private investors and speculative builders, rather than directly by the estate. Nos. 198-202 King Street (Figure 179) stands to the north of the street as is a row of three, coursed stone cottages with ornamental brick chimneys and bay windows to the ground floor, and semi-sunken cellars. There are stone steps up to the doorways, and a continuous roof supported on timber brackets above the doorways and bay windows. The houses are set back behind the street frontage with small forecourt gardens and stone boundary walls. 'Vernon Villa', no. 196 King Street, was also constructed in the first decades of the 20th century.

Fig 176. Nos. 55-65 Church Street, with detail of window lintels with ogee mouldings, D Went, November 2017. © Historic England.

Fig 177. Nos. 2, 6 & 8 Armroyd Lane, D Went, November 2017. © Historic England.

Fig 178. Hill Street, Railway Station, D Went, November 2017. © Historic England.

Fig 179. Nos. 198-202 King Street, D Went, November 2017. © Historic England.

To the south corner of King Street/Hill Street is a group of buildings which incorporated the former Electra Palace, identified as a 'Picture Theatre' on the 1930s OS map. The Electra Palace was opened on 27th August 1912, seating 600 people on a single sloping floor (Figure 180).[421] In 1938 it became known as the Palace Cinema, and then, from later that year until its closure in 1985, the Futurist Cinema. It was designed by T Menson Robinson and Percy Roberts, and built by Messrs Longden & Son of Sheffield. The front elevation originally had a wide central entranceway flanked by two sets of windows and a further two doorways with stone keystones. The windows at ground floor level have since been removed. The sign 'Electra Palace' in mosaic tiles is situated above the openings. The other buildings in the row include a mix of stone-built and brick structures.

Fig 180. Hill Street: the Electra Palace, Alun Bull, May 2018. © Historic England.

A series of terraced cottages were also constructed on the north side of Cobcar Street along the boundary of the new railway cutting. Nos. 4-8 'Percy Place', dated 1910, is a brick terrace with stone fronts and chimneystacks (Figure 181a). There are brick and stone lintels, and rusticated brick surrounds to the windows and doorways, similar to 1 Cherry Street and nos. 6-8 St Helen's Street (*described below*). Nos. 10 and 12 'The Mount' was probably erected around the same time. Nos. 14 and 16 'Hoober View' was built in 1911. There is a central vehicular entranceway, and a large basement at the east end. These terraces are also brick with stone fronts, and have stone details. To the east of this row of cottages is the Cobcar Sports and Social Club, which is a cross-shaped building with an additional bay to the south-east (Figure 181b). A series of plaques identify that the foundation stones were laid by T. Playford Hague, builder and William Allen, architect (among others) on 12th September 1914. It is brick with one half-timbered gable to the front.

A number of additional buildings were also erected on St Helen's Street/Cherry Street. No. 1 Cherry Street and nos. 6-8 St Helen's Street (Figure 182) is a row of three brick cottages with stone lintels set behind a short forecourt and brick boundary walls. No. 1 is larger than the other two, with three bays facing out on to Cherry Street. The gable has decorated bargeboards and a finial. There is a terracotta string course, ridge tiles and rusticated brickwork around the openings.

Additional housing was also built towards the east end of Church Street and to the west side of Fitzwilliam Street by private investors. To the north side are four stone terraces each with three cottages and slate roofs. 'Santa Row', nos. 118-122 are dated to 1907. To the south side, nos. 127-131 (Figure 183a) and 121-125 are two rows of stone cottages with hipped slate roofs and an attic window. These are larger houses, with a doorway at the front for the central house, and side entrances for the other two. Nos. 115-119 'Burtville' and nos. 107-113 'Ash Grove' are stone with gable roofs, and were built in 1907. Nos. 107-113 has a continuous roof over the ground-floor bay windows and doorways. Plans for these houses survive among the Hoyland Urban District Council Building Control Plans (Figure 183b). The houses were designed by Atkinson & Proude, Architects and Surveyors of Rotherham, for T S Portman Esq, and were approved in 1909. They show that the houses had a parlour, living room, scullery and internal hallway, as well as two bedrooms and an attic room.

'The Croft', to the west side of Fitzwilliam Street is a cul-de-sac development of typical 1930s semi-detached brick houses with hipped pantile roofs.[422] The majority of the houses face into a cul-de-sac, while four pairs of houses face onto the inclined plane, and three pairs of houses face onto Fitzwilliam Street. Each house has a canted bay window with hung tiles. No. 4 has its original sunburst windows (Figure 184a). The original plans for these houses, approved in 1938 by Hoyland Urban District Council, were drawn up for a Mr W Chadwick (Figure 184b).[423] They show three types of houses: Type A with a sitting room, living room, kitchen and hallway to the ground floor and three bedrooms and a bathroom to the first floor, with an external toilet and a coal store. Types B and C were variations on this design, with one main living room to the ground floor.

Fig 181. Cobcar Street: (a) 'Percy Place' 4-8 and (b) Cobcar Sports and Social Club, D Went, November 2017. © Historic England.

Fig 182. No. 1 Cherry Street, D Went, November 2017. © Historic England.

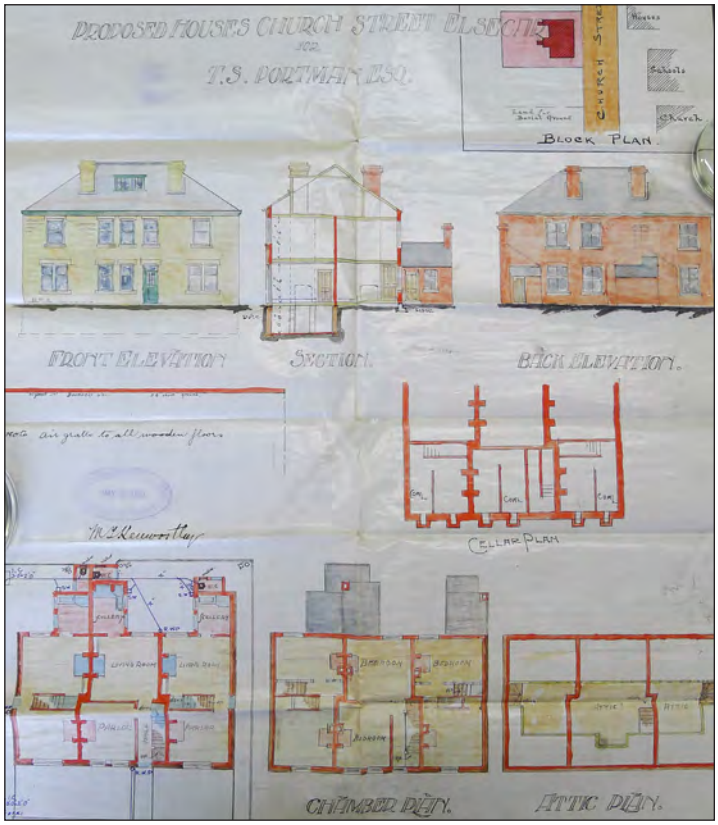


Fig 183: Church Street: (a) Nos. 127-131, D Went, November 2017, © Historic England and (b) proposed houses, probably Nos. 127-131 although the front elevations are different to those shown on plan. Reproduced with kind permission of Barnsley Archives and Local Studies (Hoyland District Council Building Control Plan 671).

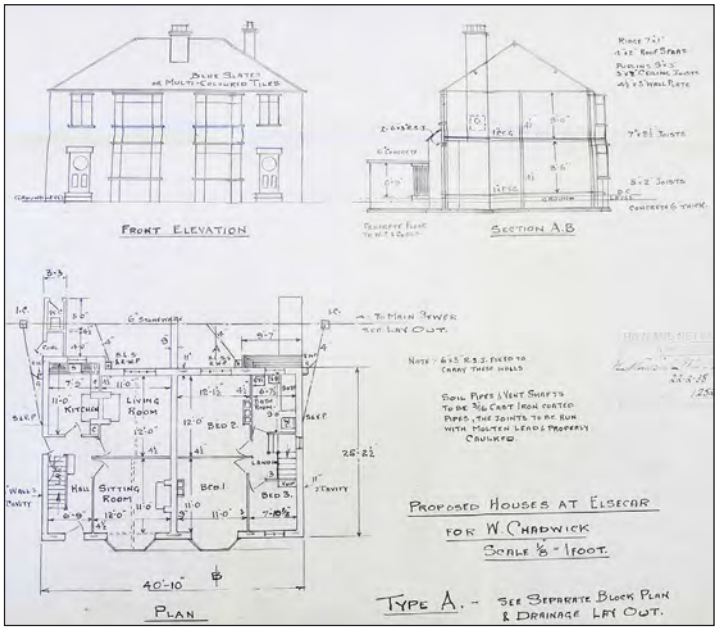


Fig 184. The Croft (a) No. 4, D Went. © Historic England and (b) Proposed Houses at Elsecar for W Chadwick, approved 22.2.1938. Reproduced with kind permission of Barnsley Archives and Local Studies (Hoyland Urban District Council Building Control Plan 1252).

There are pockets of mid-late 20th-century housing, such as to the west side of Fitzwilliam Street north of The Croft and at the west end of Church Street (south side). Further infill housing, or new housing replacing demolished buildings, has also occurred around Elsecar Green at the south end of Wath Road (west side) and Fitzwilliam Street (north side). At the time of writing (April 2019), a new row of houses was being constructed to the north side of Elsecar Green, between nos. 42 and 54. The row is stone to the exterior, and has a series of projecting gabled bays, mirroring the architecture of the estate housing constructed by the Fitzwilliams over the course of the 19th century. The more recent building initiatives are present, but do not dominate the Character Area, which was principally developed over the course of the mid-18th century to early 20th century.

The Inclined Plane

The inclined plane and railway, the route of which now marks part of the southern boundary of Area 6, was created in the late 1830s. Unless some earlier unrecorded path existed along this route, it would appear that for the previous 40 years the products of the Milton ironworks were transported down the hillside south of the works and then along Armroyd Lane in order to reach the Elsecar canal basin.[424] The Grahams pressed to have the incline built, but the Earl paid for it and subsequently charged for its use. The rails for the incline were produced at the Milton works in 1837. [425] A note from the Earl regarding payment to the stonemason Martin Guest in the same year mentions 1,335 sleeper stones at £66:15 for the line of rail road from Milton to Elsecar.[426]

The incline carried products from Milton, but more importantly it transported both coal and ironstone from the mines and quarries further to the west. Coal traffic continued long after the Milton works closed in 1884. The wagons were initially horse-drawn along the line to Milton from Lidgett Colliery and beyond. In 1878 a steam locomotive 'Success' was acquired from Rugeley Colliery in Staffordshire to operate on this section of the line, as a consequence of which the track was re-laid to a standard gauge. The non-standard incline was also re-laid so that the same wagons could continue on to the branch line at Elsecar. The arrival of the Midland Railway through Skiers Spring and Milton in 1895 resulted in arrangements to take Lidgett coal from new sidings at the adjacent Skiers Spring brickworks, reducing the colliery's over-dependence on the outmoded and inefficient single-track incline to Elsecar. The incline route had four un-gated road crossings all, apart from Broadcarr Road, controlled by flagmen. The wagons had to be shunted into position at the head of gradient, approximately where Weir Close backs on to the southern edge of the Milton recreation ground (Areas 5). Here they were attached to the incline cable in sets of two or three, and then lowered by a stationary engine - quite ancient by 1895 - known after its operator as 'Old Ned Green's Bobbin Engine'. At the foot of the incline, just west of Fitzwilliam Street, the wagons were detached and drawn by horses across the very gentle slope to the Elsecar yard. The process was then reversed for the empty wagons. By the turn of the century the incline was dealing with some 50 full and 50 empty 8- to 10-ton wagons every day, which was slow going on a single line, and required operations to start at 6am each working day. An attempt was made to speed up the process by operating 'Success' on the incline, but it

proved unable to haul even two empty wagons up the moderate gradient. During the last attempt it stalled and ran backwards, destroying wagons parked in the Elsecar sidings, but fortunately causing no other harm.[427]

Lidgett Colliery closed in 1911 when the workings became exhausted, and the line toward Broadcarr Road was taken up shortly afterwards. Other coal working in this area continued under lease and later under the Earl's direction, but the majority of their output was carried by the Midland Railway. The incline and the lower permanent way to Elsecar was largely dismantled around 1930, leaving only some rails across the public roads to retain the wayleave. The last of these visible crossings, only covered with tarmac in 1973, was on Broadcarr Road.[428]

The route of the incline survives as a footpath between embanked hedgerows running in a perfectly straight line between the original bridge, built to allow it to straddle the Midland Railway cutting, and the junction with Fitzwilliam Street opposite the Crown Garage, 550m to the east. The upper part of this route, north of Milton House, has been encroached upon somewhat and the path narrowed by dumping in a former gravel pit set in the angle between the incline and the railway. Further east, however, where the gradient of about 1:20 descends towards Elsecar, the path is wider, and there are visible traces of the rail bed. Individual sleeper stones and runs of up to a dozen in places are intermittently visible along the footpath depending on the time of year and the amount of slippage from the banks to either side (Figure 185). The sleepers are about 0.5m square, set in two parallel lines about 1m apart to carry the rails on a standard 4ft 8 ½ (1.43m) gauge. The southern rail sleepers are frequently visible, whilst the parallel stones are largely concealed beneath the spread of the northern hedgerow bank. An attempt was made to detect a profile across the rail bed toward the top of the incline in 2018, using magnetometry and ground penetrating radar. This proved inconclusive, except to suggest the presence of a number of possibly disturbed sleeper stones.[429] The incline would benefit from a full survey of the visible stones and some minor excavation to expose the northern sleepers, both to assess their survival and to seek clues to the earlier gauge used before the line was re-laid in the late 19th century.

The lower section of the incline, the last stretch of about 100m where it levels out toward Fitzwilliam Street, has been surfaced as a lane serving the properties on the northern side of The Croft: a cul-de-sac developed in the 1930s over a former football pitch to the south of the line. Nothing remains above ground of a former smithy which stood to the south of the line near Fitzwilliam Street until the 1950s, although the foundations of a small brick hut, perhaps the shelter for the flagman at this junction, can still be seen on the north side of the lane.[430]

Fig 185. Stone sleepers visible on the line of the Elsecar-Milton incline west of Fitzwilliam Street, viewed from the east D Went, April 2019. © Historic England.

The line of the railway is perpetuated to the east of Fitzwilliam Street by an alleyway passing north of the Crown Garage toward the green space in the centre of the village. Although this open area was extensively landscaped around 1970 the route across the green can still be seen as a slight ridge for much of its length. The 1850 OS 6-inch map shows the rails diverging in the area of the later green, one route turning south to the Elsecar Ironworks, the other continuing east to the canal-side wharf. By the time of the OS first 25-inch edition in 1892 these route diverged into multiple tracks to either side of the gasworks, the eastward strands leading both to the new canal basin and the main Elsecar sidings (*see* Figure 203). A geophysical survey in early 2018 traced the pattern of the rail beds across the green, clearly showing the separation of the tracks to either side of the former gasworks. The results indicate that, in all likelihood, the actual rails have long since been removed rather than buried, but patterns of heightened magnetic response are still concentrated along these routes.[431] The broad outline of these track beds, and clearer details of the gasworks structures, appeared as parchmarks in the grass and were recorded from the air in the dry summer of 2018.[432]

Reform Row Lime Kilns

The OS 6-inch map of 1855 depicts a small cluster of lime kilns in three banks situated on what is now the green space between Reform Row and the canal (Figure 186). Only two remaining banks are shown on the Hoyland Township plan of 1867, and none apparently remained when the 1st OS 25-inch map was being surveyed in 1890.

In February 2018 Historic England commissioned a geophysical survey of this area to assess the survival of buried remains with an eye to the possibility of future community excavations. The results were inconclusive. Magnetometry indicated the presence of some fired material near the expected base of the middle kiln and some slight curved patterns which might reflect aspects of the kiln structure. Ground penetrating radar evidence was similarly vague, suggesting part of a base and a spread of rubble.[433]

Given their date and location it would seem likely that the kilns were primarily required to produce lime for mortar for industrial and domestic buildings, rather than for agricultural purposes. As the village developed and lime mortar became more readily available from suppliers elsewhere, they may have become an unnecessary eyesore in the foreground of Cobcar Row, the Earl's most elaborate cottage development. If the demolition was carried on the Earl's express order, that might explain why the process appears to have been so thorough.

Fig 186. Extract from the 1st edition Ordnance Survey 6-inch map, sheet 283, 1855 (surveyed 1849-50) showing the three banks of lime kilns, each seemingly with two charging holes indicating twin furnaces. Reproduced with permission from the National Library of Scotland.

Summary of Significance

Through the buildings and landscape of Character Area 6, it is possible to trace the evolution of Elsecar from a tiny, mid-18th century hamlet, to a populous, 21st century village. Though there has been some loss in the area, largely due to subsidence, the incremental development of the village - which began with the consolidation of Elsecar Green and the area to the west of the canal, and then continued at St. Helen's and Stubbin/Stubbin Bottom - can be clearly distinguished through the surviving buildings. The Earls concentrated their investment in estate buildings at Elsecar Green and to the west of the canal, building a considerable number of good-quality estate cottages for the workers of his industrial enterprises, and establishing a church, a school, a market hall and a lodging house to encourage their religious and educational prosperity, as well as their social and moral wellbeing. The Fitzwilliams also displayed their power, influence and wealth in Elsecar through the sophisticated architecture of their estate buildings, which varied from the more austere example of workers' housing at Reform Row, to the ornate cottages of Cobcar Terrace. The use of sandstone as the predominant building material, along with distinctive details such as deep monolithic lintels, often scored to appear as though they were formed out of several individual blocks, sunken aprons, robust quoins, and classical design features, provided an overall cohesion, as well as being a sign of their quality. As a whole, the built environment of Character Area 6 is an important as a well-preserved and highly-readable example of an estate village.

The current conservation area boundary offers adequate protection of the historic core of Elsecar. A new row of houses currently being built to the north of Fitzwilliam Street between nos. 42 and 54 demonstrates how the historic fabric of the settlement and the architectural design features of the Earl's estate buildings can be used to inform the style and design of future developments. The demolition of the 1980 NCB warehouse to the east of the canal (recently occupied by Dawson's, Character Area 1), has also opened up views across to the west side of Wath Road. The corn mill and Holy Trinity Church can now be clearly seen from the former canal basin. The selective removal of trees planted to screen the former warehouse would also open up views of the Station Row. The listing coverage throughout Elsecar village is satisfactory, though Elsecar School is an omission, and is currently under consideration as a good example of a pre-1870 purpose-built education building. Given the historical and architectural significance of the built environment of Character Area 6, it is strongly recommended that a local heritage list is developed to draw attention to distinctive buildings such as the former Electra Picture House and Co-op.

The landscape to the west of Fitzwilliam Street/Hill Street, although bisected by the railway line, is nonetheless of considerable significance as part of the interconnected story of Elsecar and Milton. Central to this connection is the route of the former inclined plane, which is still used as a footpath along its entire length, and which still retains buried stone sleepers and doubtless other evidence of its former use. It does not appear to be as well preserved as other contemporary and earlier examples in Yorkshire and the North, and for that reason it is not presently under consideration for designation; however, it is certainly worthy of inclusion in any local list of heritage

assets. The open landscape to the north and south of the incline is a continuation of that mentioned in Area 4, important both for being largely unchanged from Elsecar's industrial heyday and for maintaining the historical distinction between the Earl's two industrial settlements.

The Inspector's report on the Barnsley Local Plan challenged an existing housing allocation (H2) marked for the area immediately north and west of Foundry Street. Based on the findings of ArcHeritage's Historic Area Assessment, the report determined that this site 'falls within a larger area that makes a significant contribution to the understanding of Elsecar as a planned industrial village within the wider Wentworth Estate and to the understanding of the early coal mining and iron working industry in the area' and that 'development of the safeguarded land could prejudice further investigation of the surviving buildings and buried remains'.[434] In consequence, the adopted Barnsley Local Plan identifies this area as 'Undevelopable Land due to Heritage', abutting the wider area to the south and west (including the Milton incline) which is designed as Green Belt land, to be kept mainly free from development.[435] Given the evident historic significance of the open landscape on this side of the village, significant portions of Character Areas 4 and 6 may be eligible for consideration as an extension to the present Conservation Area.

Character Area 7: Early 20th-century and inter-war Elsecar

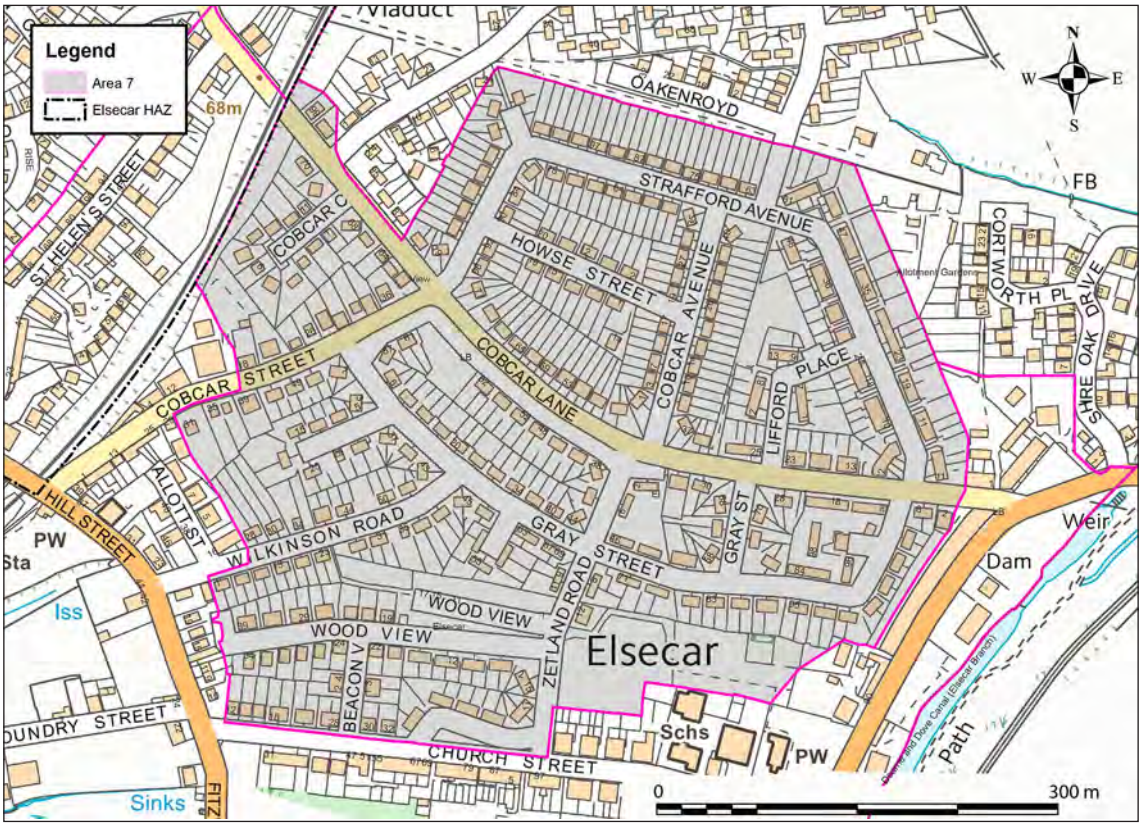


Fig 187. Detail from Figure 201 showing the extent of Character Area 7. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

In the mid-18th century the whole of Area 7 comprised little more than a series of fields east of Stubbing Green, with a small triangular green (Cobcar Green) to the west, set within the angle of Cobcar Lane and Cobcar Street, and Cobcar Wood extending to the east between Cobcar Lane and the Jump Valley stream. This pattern altered only slightly with the enclosure of Cobcar Green towards the end of the century, and remained largely unchanged well into the 19th century.[436] Little of it remains to be seen today amidst the later housing developments. The two exceptions are the line of the two roads, Cobcar Lane and Cobcar Street, which are little different from those mapped in 1771, and the strip of narrow 'Stubbing Closes' mentioned above (Area 6), which is partly retained in a band of green spaces comprising Wood View, the school playing field and the new cemetery behind Holy Trinity. On the north side of the character area the properties on Strafford Avenue back onto the former line of the inclined plane from Jump Pit, the creation of which altered the course of the Jump Valley stream, which had long stood as the boundary between the townships of Hoyland and Wombwell. These features are discussed further in Area 8, below.

Until the early 20th century, according to the 1902 OS 25-inch map, the only buildings in this Character Area were those of a single farm (Cobcar House) to the north of Cobcar Lane, which has since been demolished. Over the course of the 20th century however, the entire area, including the allotment gardens to the west of Reform Row (as shown on the 1892 OS map, *see* Figure 203), was developed with estates of suburban housing. This was largely driven by the opening of Elsecar Main Colliery in 1908, which led to in an increased demand for housing. Part of Strafford Avenue was built by Earl Fitzwilliam in 1911, and in 1926 the Hoyland Nether Urban District Council erected 152 more houses in Strafford Avenue, Howse Street and Cobcar Avenue.[437] Strafford Avenue, initiated by Earl Fitzwilliam, was a model village development aimed at providing comfortable, modern housing for the workers at the new colliery site, and was a league apart from the terraced housing that was erected over the course of the previous century (*see* Character Area 6). In 1940, the Hoyland Nether Urban District Council constructed 98 houses and 26 bungalows in the area to the south-east of Cobcar Street and south-west of Cobcar Lane.[438] At this time, Wilkinson Street, Gray Street and Zetland Road were also created.

Elsecar model village development comprised the housing to the eastern arm of Strafford Avenue, Lifford Place and part of Cobcar Lane. The houses were designed by architect Herbert Smith of Wentworth for the builder, Thomas Playford Hague, and the original plans survive among the Hoyland Urban District Council (UDC) Building Control Plans. The houses are set out in rows of up to five two-storey brick-built houses with rendered upper storeys, tiled roofs and brick chimneystacks. Nos. 11 Cobcar Lane and 1, 3 and 5 Strafford Avenue have side entries for the two end houses, and two front entries for the central houses (Figure 188a). There are projecting gabled bays at each end of the row, and small roundel windows above the two front doorways. The Hoyland UDC Plans shows that these houses originally had a large front living room and scullery (with a built-in bath), and wc to the rear (Figure 188b). Nos. 7, 9, 11 and 13 Strafford Place were a variation on this design, with a central triangular-shaped porch for the two front doorways and two linked roundel windows above. The gables to the side walls are partially-clad in timber. Nos. 2, 4, 6 and 8 Strafford Avenue occupy the corner of Strafford Avenue and Cobcar Lane, and are butterfly-shaped in plan (Figure 189a). The Hoyland UDC plans show that these houses have wedge-shaped inner hallways and rear living rooms with triangular-shaped bay windows and corner fireplaces (Figure 189b). These houses each have four bedrooms.

Nos. 23-31 Strafford Avenue are a row of five houses with three projecting bays with half-timbered gables (Figure 190a). The Hoyland UDC plans show that the outer two houses were very large, with a parlour as well as a living room and scullery, three bedrooms, an extra upstairs wc and a box room lit by an oculus above the front entranceway (Figure 190b). Nos. 26 and 28 are an example of a row of two houses, and have recessed arched porches and central timber-framed gablets to the roof. Nos. 41-45 have linked, elongated moulded porch surrounds with integrated roundel windows (Figure 191a). Ground-floor, built-in baths were standard in the designs for these houses, possibly influenced by the occupations of each household's working inhabitants. Each house has its own front and rear garden.

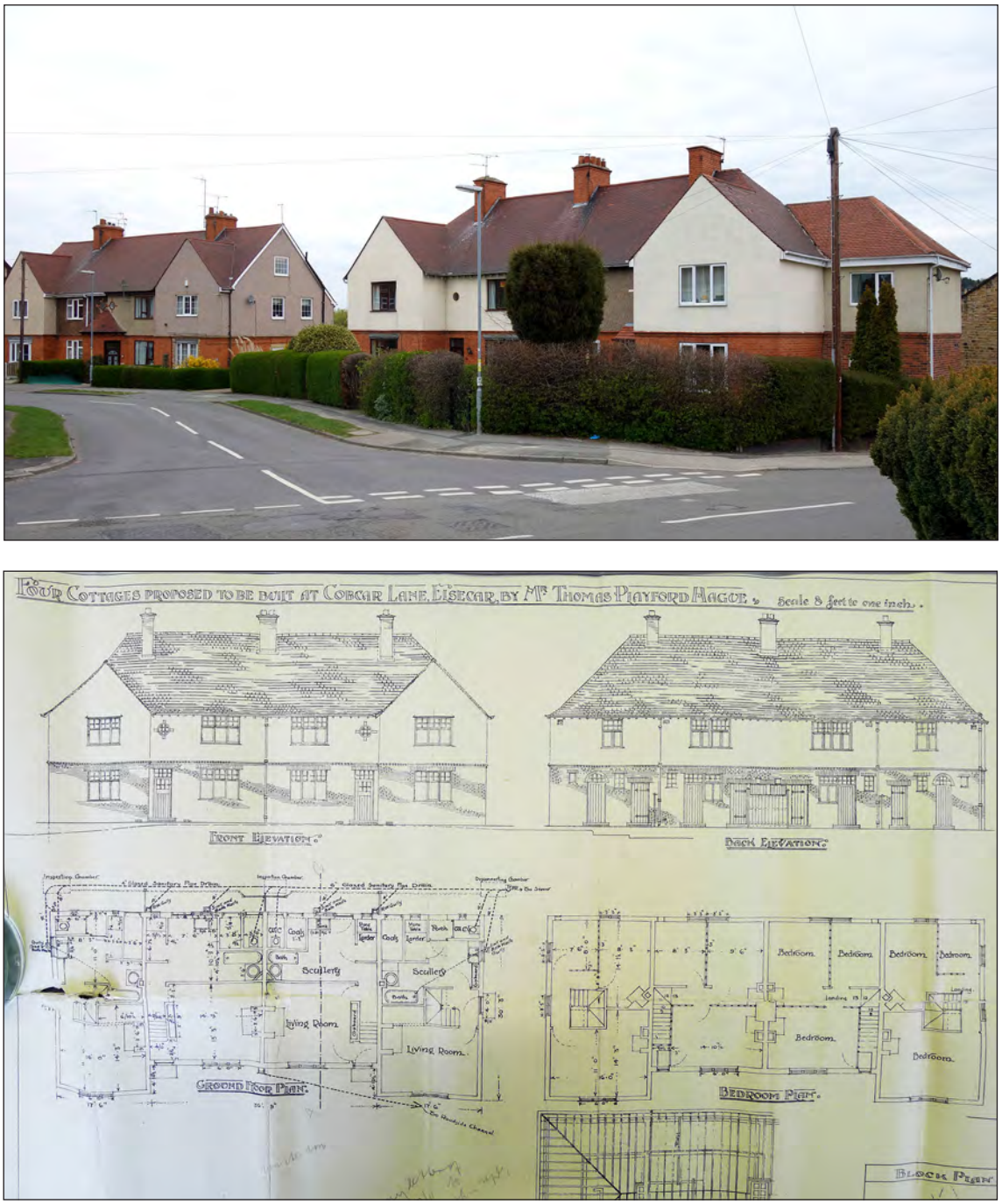


Fig 188. (a) Nos. 11 Cobcar Lane and 1, 3, 5 Strafford Avenue, April 2019 (DSC00912), © Historic England, D Went, and (b) the matching Building Control Plan, reproduced with kind permission of Barnsley Archives and Local Studies (Hoyland Urban District Council Plan 722).

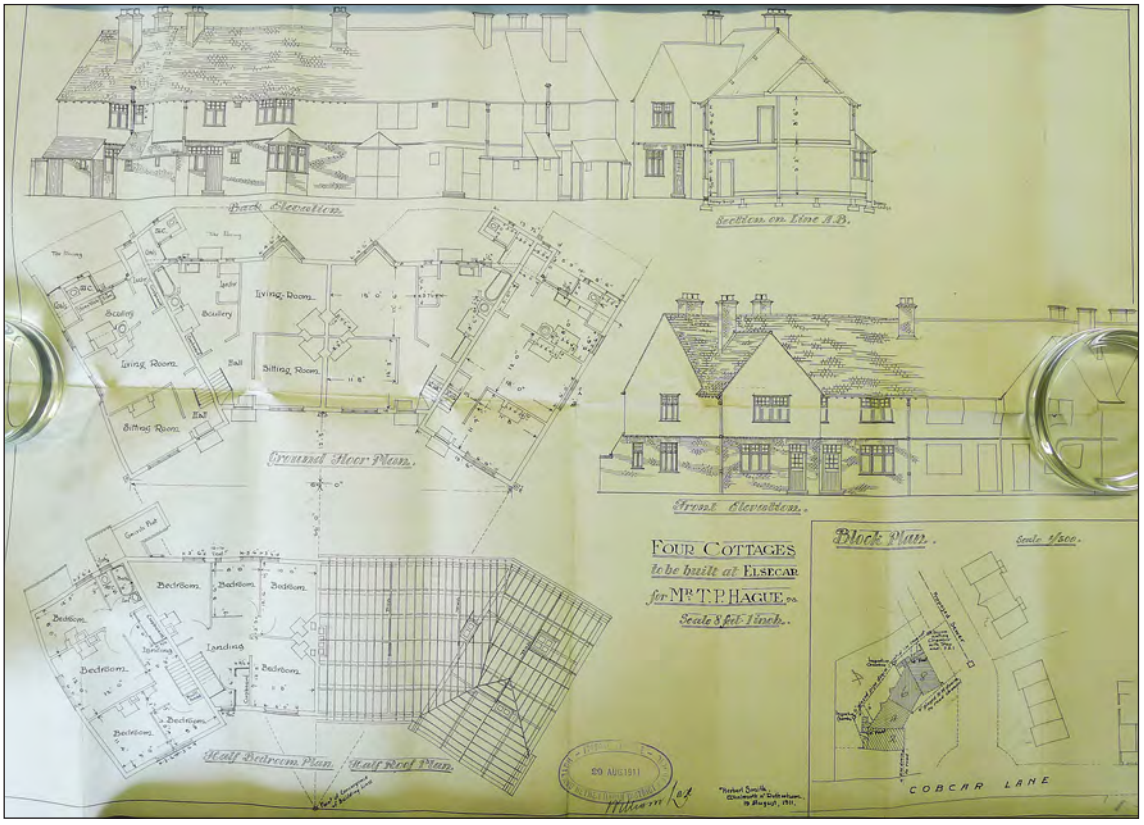


Fig 189. (a) Nos. 2,4,6 and 8 Strafford Avenue (P1240973) © Historic England, D Went, and (b) matching Building Control Plan, reproduced with permission from Barnsley Archive (Hoyland Urban District Council Plan 742).

Fig 190. (a) Nos. 23-31 Strafford Avenue, D Went, October 2017. © Historic England (b) matching Building Control Plan, reproduced with kind permission of Barnsley Archives and Local Studies (Hoyland Urban District Council Plan 743).

Fig 191. (a) Nos. 41-45 Strafford Avenue, detail of internal porches and (b) Nos. 11-17 Cobcar Avenue, D Went, October 2017. © Historic England.

The model village of Strafford Avenue essentially comprised a small, self-contained housing development arranged across two streets. There are no associated community buildings, such as the Folk Hall at the model village of New Earswick in York, which is perhaps an indication that the residents of this new neighbourhood were expected to integrate into village life in Elsecar, rather than being separate from it. Whether this was the proposed extent of the development, or whether there were plans to expand it at a further date, is unknown. There is a curious stone panel at the centre of row at the very top of Strafford Avenue which appears as though it was intended to be carved with a construction date, or a building name. It is, however, unembellished, and may be an indication that the development was never fully completed. The houses to the west of the development constructed by the Hoyland Urban District Council including Cobcar Avenue (Figure 191b) and Howse Street are much more utilitarian in design. They are semi-detached, brick-building houses with hipped tiled roofs and pantile ridge tiles, and shared chimneystacks. They would originally all have had rendered upper storeys. Some have stone lintels; others have blue brick lintels and window sills.

The council housing development to the south-east of Cobcar Street and south-west of Cobcar Lane involved the creation of Wilkinson Road, Gray Street, and Zetland Road, and incorporated both houses and bungalows. The houses are fairly uniform, semi-detached brick-built structures with pantiled hipped roofs and shared chimneystacks (Figure 192a). They each have bay windows with pantiled hipped roofs to the ground floor and string courses at first floor level. Some houses have internal porches with stone surrounds. Each house has a small front and rear garden. The bungalows are concentrated on Zetland Place and the east end of Gray Street (Figure 192b). They are brick-built pairs with overhanging tiled hipped roofs and canted bay windows. They were probably built as retirement homes for miners.

In the late 20th century, this development was extended with the creation of Cobcar Close to the south-west of Cobcar Lane, Wood View and Beacon View to the north of Church Street. Housing to the east of Zetland Road was also built on the site of the former allotment gardens behind Reform Row. The development to Beacon View and Wood View is mainly grey-brick bungalows, though there are semi-detached houses of the same style to Wilkinson Street. The buildings to the east of Zetland Road are a combination of red-brick semi-detached houses and yellow-brick bungalows, and include the Gray Street Community Centre. Cobcar Close is also a development of bungalows in red and grey brick. The large numbers of bungalows in these developments suggests a focus on housing provision for the aging population of Elsecar.

Fig 192. (a) 1940s houses to the south of Cobcar Street and (b) bungalows on Gray Street, D Went, October 2017. © Historic England.

Summary of Significance

Over the course of the 20th century, Character Area 7 was developed with housing estates which incrementally expanded across former farmland. The first of these initiatives was the model village of Strafford Avenue, the last-known major housing project in Elsecar led by Earl Fitzwilliam. The spacious and carefully-designed housing of this development contrasts sharply with the uniformity of the later 20th-century council estates which have come to dominate this area, and which have resulted in some losses, including the allotments to the rear of Reform Row. That the Fitzwilliams' chose to invest in a model village development of this kind indicates that they had an awareness of similar housing initiatives by industrialists elsewhere in the country, and were conscious of efforts made by others to provide the most up-to-date housing for their workers, particularly those employed at the newly-built Elsecar Main Colliery. The houses of Strafford Avenue, with internal ground-floor bathrooms and other modern facilities, were a marked departure from the speculative rows of terraces erected in Elsecar during the second half of the 19th century and early 20th century (Character Area 6). They showed, in some respects, a return to the attitudes which drove the very first estate village developments of the late 18th/early 19th century at Skiers Hall (Character Area 4), Station Row and Wath Road (Character Area 6), which were focussed on providing good quality housing that was also a statement of their power and authority. As such, the model village development plays an important role in the history of the development of workers' housing in Elsecar as provided by the Earls Fitzwilliam. In order to ensure that they are adequately protected and preserved, any future reassessment of the conservation area boundary should strongly consider including the model village centred on Strafford Avenue and Lifford Place as part of it.

Character Area 8: North of Elsecar

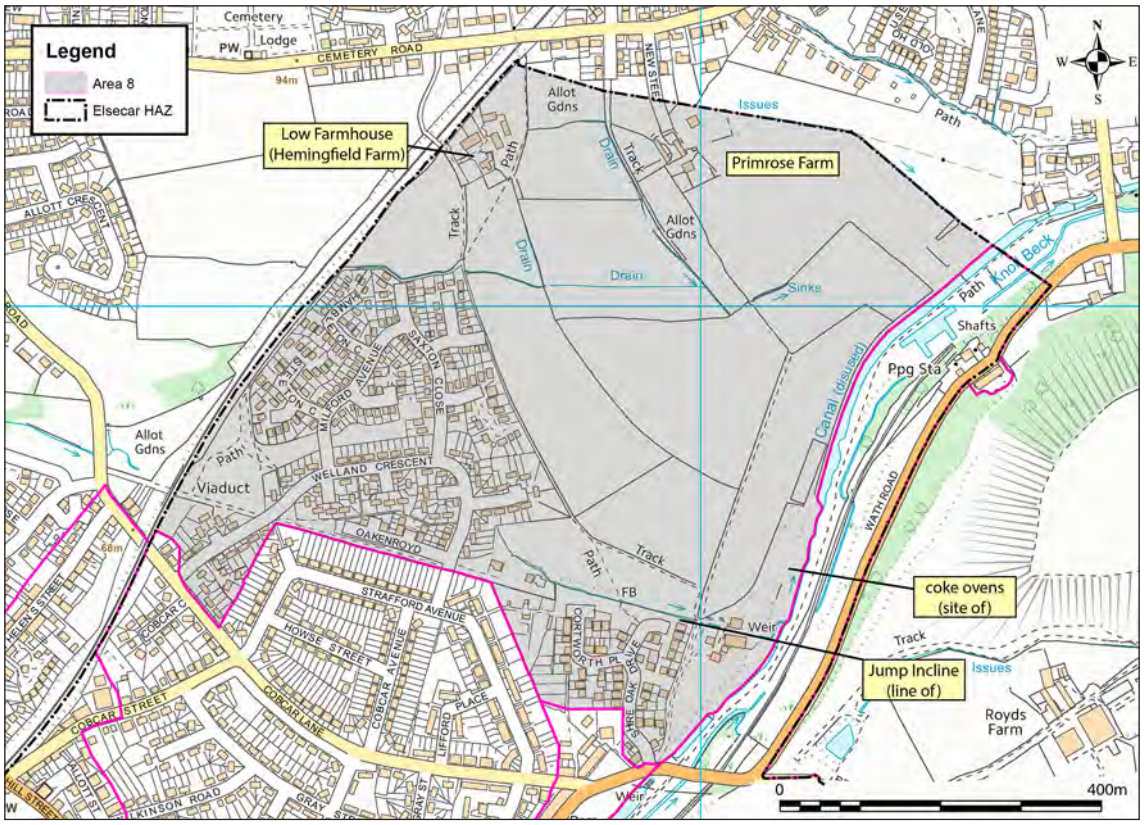


Fig 193. Detail from Figure 201 showing the extent of Character Area 8. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

With the exception of the modern cul-de-sacs of Shire Oak Drive and Cortworth Road, the greater part of Area 8 lies within the historical township of Wombwell and the parish of Darfield, to the north of the Jump Valley stream which formed the historic boundary with Hoyland township and the parish of Wath. The expansion of Elsecar across this boundary in the period after Second World War (that is Welland Crescent, Millfield Close, Saxton Avenue) supplanted several fields belonging to Hemingfield Farm, although the broad sweep of farmland further to the east has remained largely unchanged since the mid-19th century. This pattern of fields includes two sweeping boundaries running between the farm and the foot of the valley, the curvature of which hints at medieval cultivation. Traces of broad ridge and furrow were still visible in the area immediately north of the farm in 1962.[439] One of these boundaries, shown as a track on the 1850 OS 6-inch map, marks the eastward limit of the modern housing estates and remains in use as a public right of way for much of its length. To the north of this housing expansion the collection of buildings now known as Low Farm House, The Old Barn, The Granary and Owl Lodge was known as Hemingfield Farm prior to the end of the 20th century. Low Farm, a second smaller farmstead situated some 200m to the east, was similarly renamed as Primrose House Farm around the same time.[440]

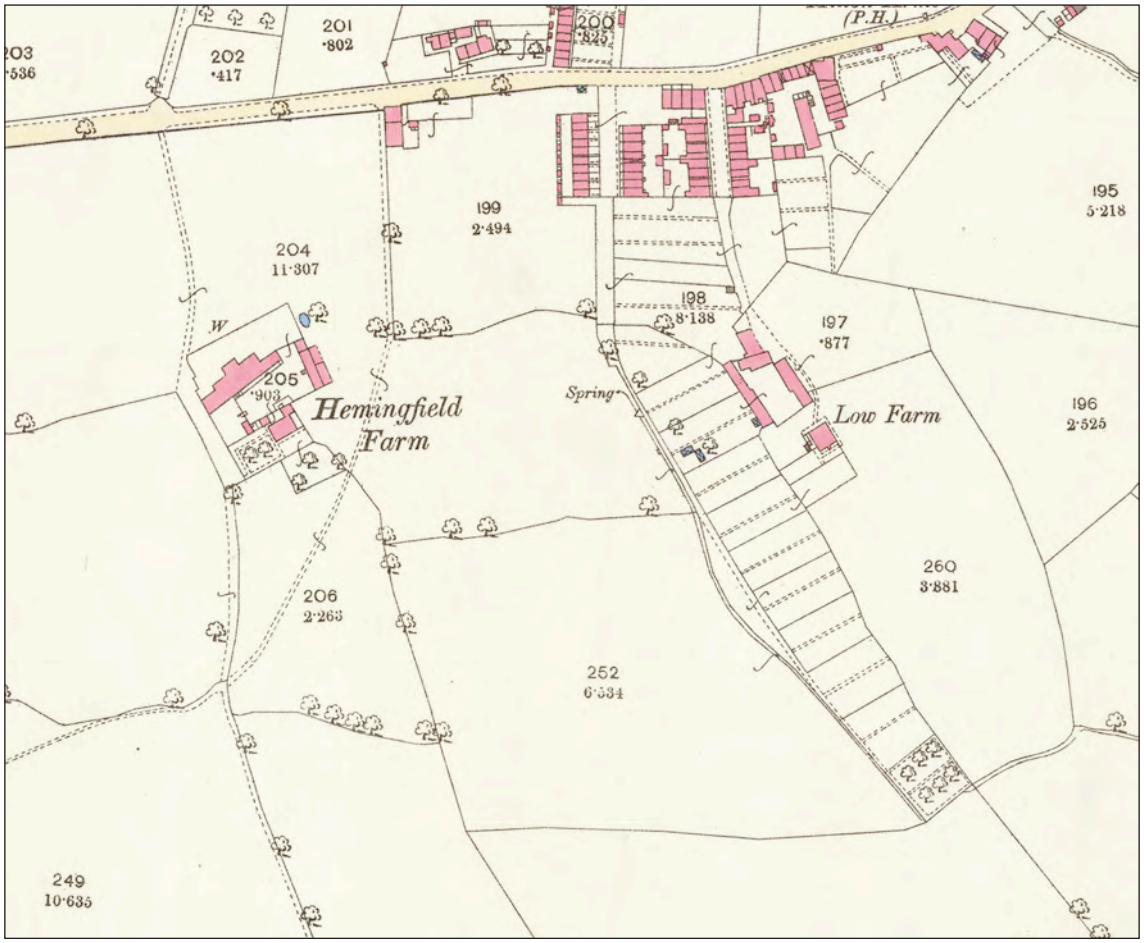


Fig 194. Extract from the 1st edition Ordnance Survey 25-inch map published in 1892 (surveyed 1890) showing the development of fields and gardens around Hemingfield Farm and Low Farm. Reproduced with permission from the National Library of Scotland.

Neither of these holdings are now actively engaged in farming, their outbuildings and barns having been converted or replaced to provide domestic dwellings (*see below*). The long field immediately west of Primrose House Farm was entirely divided to a series of small plots, possibly fruit orchards or market gardening in the mid to late 19th century, the northern part of which appears subsequently to have been adopted for allotments serving the expansion of terraced houses on Fitzwilliam Street and New Street, off Cemetery Road (Figure 194). A further set of allotments had been established on the west side of New Street (plot 199 on Figure 194) by the time of the 1930 OS 25-inch map. These are now thoroughly overgrown.

Industrial developments

In the 1840s a pit, later known as the Hoyland Silkstone Colliery, was established on the Barnsley Seam at Platts Common in the north of Hoyland township by William Vizard and partners. The greater part of this pit's coal, which was considered excellent for steam, was shipped to Hull for distribution along the east coast ports and elsewhere, requiring a railway and inclined plane between the colliery and a shipping staithe on the Dearne and Dove Canal - a distance of over 2km taking in Jump Pit along the way. The incline was fully in place by the time of the 1855 OS 6-inch map, as shown in Figure 195. Use of the Jump incline diminished after 1877 when the colliery was connected northward to the Manchester, Sheffield and Lincolnshire Railway, and the significance of the canal staithe and connection to the Elsecar branch railway similarly declined once a connection was made between the incline and the Midland Railway's Chapeltown extension after 1897.[441]

Fig 195. Extract from the 1st edition Ordnance Survey 6-inch map, sheet 283, 1855 (surveyed 1849-50) covering Area 8. Reproduced with permission from the National Library of Scotland.

At the base of the incline the 1855 map shows a basin set back from the western side of the canal with mooring arms to either side of the rails, as well as a spur of track leading to a set of bunkers or coal drops alongside the canal a little to the north. There is a suggestion of a bridge or gantry from the basin to the newly established railway sidings on the east side of the canal, and a label indicating a turntable, although this feature is not clearly marked. By the time of the 1892 OS 25-inch edition (Figure 196) the canal basin appears to have been filled in, superseded by a more substantial bridge carrying the rails across the lock to the railway. The northern spur to the staithe remained in place serving, as it did in 1850, a three sided arrangements of coke ovens adjacent to the canal. A further set of coke kilns shown in an arc to the south of the canal basin on the 1855 map seems to have been demolished by this time, together with a further set of ovens on the opposite side of the canal. The concentration of coke ovens here was dependant on the development of the incline, although the Elsecar Branch railway plan of *c* 1850 indicates that a number of ovens had to be demolished to make way for the line (*see* Area 2).[442] The pattern of ovens shown on the 1855 map post-dates these changes.

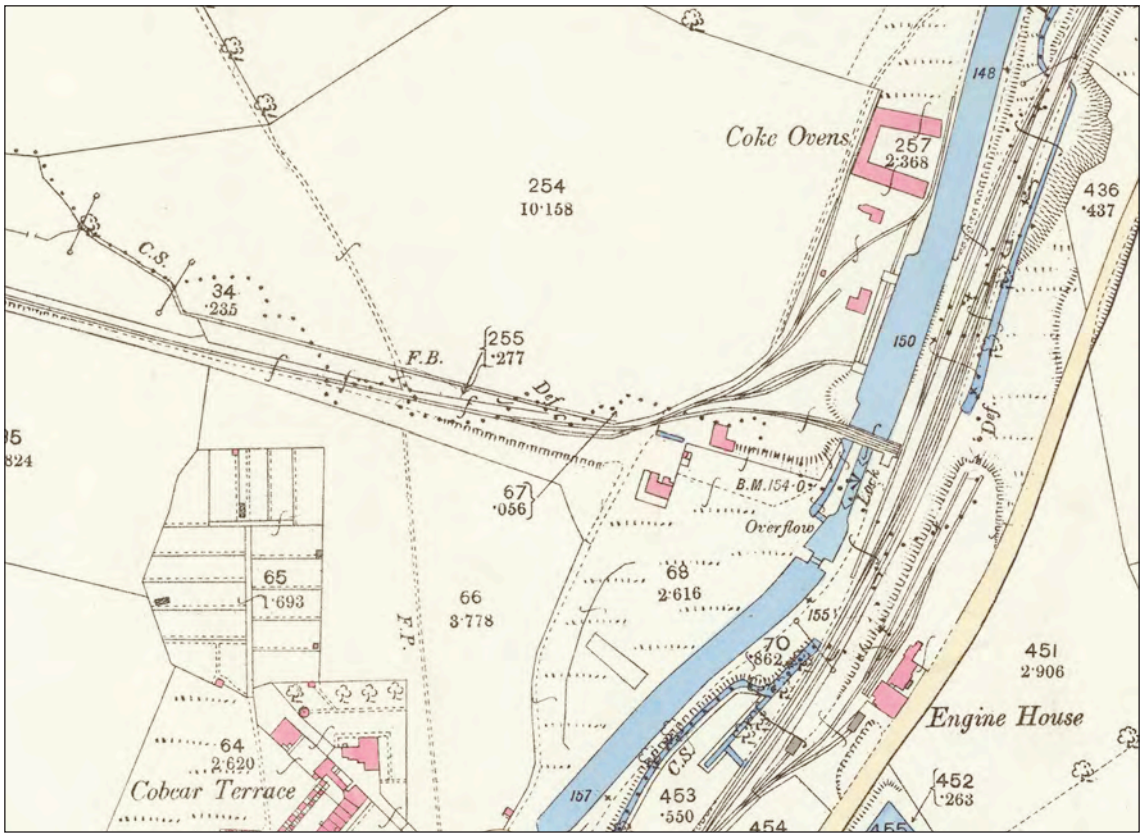


Fig 196. Extract from the 1st edition Ordnance Survey 25-inch map published in 1892 (surveyed 1890) showing the lower section of the Hoyland Silkstone (Jump) incline and the canal. Reproduced with permission from the National Library of Scotland.

By the time of the OS 25-inch map of 1930 the lower part of the incline, to the east of the Midland Railway junction, had been taken up. Some vestigial walls of the old coal drops still remained alongside the canal, but the coke ovens appear to have been demolished. The area immediate to the east of the former staithe had been developed as a local sewage works with an array of humus tanks and filter beds running parallel to the canal. These works were depicted largely unchanged on the 1989 OS map, but have since been demolished. Only one building appears to have been retained throughout this area's changing fortunes. This originated as an 'L' shaped structure, with a small yard and outbuilding to the north, bracketed by two tracks leading to the canal basin as shown in 1855 (*see* Figure 195), and was presumably linked to the operation of the incline. The building remained after the basin was closed. Its depiction on the 1892 map (Figure 196) - with two wings or bays projecting to the north – seems little different from today. The OS 1957 25-inch map labelled this property as 'Sewage Farm Cottage', although whether this indicated an operational link or just proximity to the adjacent works is unclear.

Unfortunately, the Sewage Farm property, including the entire area of the former canal basin and staithes, was not accessible during the period of research. Viewed from across the canal it would appear that some parts of the retaining wall of the staithe survive, and some upstanding brickwork might be linked to a chimney marked between the filter beds and the canal on the 1930 map. Aerial photography and lidar has provided no further evidence of industrial remains here due to the density of undergrowth. This area could repay further investigation if circumstances allow, particularly of the house itself and the former sidings and staithe to the north. Topographic and geophysical survey of the rough pasture to the south of the house might determine whether any evidence survives of the early coke oven structures shown here on the 1855 OS map.

The route of the incline extending to the north-west from the canal is no longer visible across the landscape ground to the rear of Cortworth Place/Shire Oak Drive, although the approximate line is reflected by the field boundary and drainage ditch which lay along its northern side. The line is perpetuated in the rear property boundaries leading to Welland Crescent, and it continues as an earthwork and track passing between the gardens on Strafford Avenue and Oakenroyd Croft. The final section within the HAA area is now a rough-surfaced track and footpath running from Welland Crescent beneath the railway viaduct toward Wentworth Road (Figure 197). The railway viaduct itself has four arches and is constructed out of blue and red bricks with stone imposts. The incline runs through the second arch from the south.

Fig 197. The line of the former Jump (Hoyland Silkstone) incline running north-west from Welland Crescent under the Midland Railway viaduct which was built to accommodate it, D Went, October 2017. © Historic England.

Farm Buildings

Low Farmhouse – formerly Hemingfield Farm – is a stone built two-storey dwelling dating to the first half of the 19th century (Figure 198). It has been extensively renovated, though some original features still survive. There are large quoins to the north-west corner of the building, and the three first-floor windows to the rear elevation have scored monolithic lintels. The gables each have stone chimney stacks and moulded stone kneelers. To the north of the farmhouse is a rectangular, two-storey stone building with a cart entrance known as Owl Lodge, which has also been substantially re-built. To the east of the site is a large, modern two-storey brick-built structure known as The Granary. The main façade is symmetrical, with a taller central block with recessed arches, semi-circular arched first-floor windows, and a rounder window to the attic. It is attached to earlier stone buildings. There are uninterrupted views from the complex over the fields towards Elsecar and beyond.

Primrose Farm is a collective of three former farm buildings: two parallel stone ranges dating to the *c* 18th century, and a farmhouse to the south/south-east of the site. The stone range to the west of the site is known as Primrose Cottage and Lodge (Figure 199), and consists of a two-storey block (with attics) to the south and a single-storey block to the north. The two-storey block has four bays, shaped kneelers to the gables and quoins to the corners of the building. To the first floor, the small, square-shaped window openings have monolithic stone jambs, lintels and sills. The ground-floor window openings have large, monolithic stone lintels. It may have been a row of cottages to house farm workers. The single-storey block could originally have been open-fronted, and utilised for farm equipment. The stone range to the east is known as Primrose Barn dates to the 19th century and has king post roof trusses. It has been extensively renovated. There are large, would-be herringbone-tooled quoins to the corner of the building. The first-floor window openings also have monolithic jambs. The jamb stones to wide doorway opening at ground floor level still retain their iron pintles for a former door. Primrose Farmhouse is a late 19th century two-storey stone building with brick chimneystacks. It has scored monolithic lintels to the window openings, as is common for Elsecar.

Fig 198. Low Farmhouse from the rear, looking north, D Went, October 2017. © Historic England.

Fig 199. Primrose Cottage and Lodge: a two-storey block of cottages to the west of Primrose Farm, D Went, October 2017. © Historic England.

Post- World War II housing

Welland Crescent and the cul-de-sacs leading off it to the south and east were laid out in the 1950s, and populated with semi-detached pairs of system-built pre-cast concrete housing (Figure 200). Local authority building campaigns such as these were instigated as a result of a demand for housing after the Second World War, as well as renewed Government objectives for improving living conditions.[443] A shortage of skilled labour meant that non-traditional methods of construction were adopted, which included pre-cast concrete housing.[444] The houses in Welland Crescent were manufactured by the building firm Wates, who over a period of 10 years, made 22,000 houses which were subsequently erected across the country.[445] Since the 1980s, problems with concrete buildings has led to particular housing systems being designated defective under the 1984 Housing Defects Legislation, which was incorporated into the Housing Act of 1985.[446] A number of houses in Welland Crescent appear to have been repaired, either with replacement external brick walls or with stone, brick or render cladding. The houses are built to a fairly standard design though some have their main doorways to the front, and others to the side. Some still retain their original curved or flat porch canopies. The houses are generally set back from the road with small front gardens as well as gardens to the rear.

The built-up areas to the south and east of Character Area 8 largely comprise late 20th/early 21st century housing developments. To the north of Welland Crescent, Millford Avenue and Saxton Close, and the cul-de-sacs leading off them, are modern housing developments dating to the 1980s and later. The housing consists of two-storey brick-built semi-detached dwellings and bungalows. To the south of Welland

Fig 200. Wates pre-cast concrete housing, Welland Crescent, D Went, November 2017. © Historic England.

Crescent, Oakenroyd Croft is a late 20th/early 21st century housing development of detached and semi-detached stone-clad dwellings. To the south-east of the Character Area, Shire Oak Drive and Cortworth Place is a development of mainly two-storey detached brick houses and three-storey townhouses. There are two rows of relatively-new stone-clad dwellings at the south end of South Oak Drive.

Summary of Significance

Character Area 8 is an area of two parts, dominated to the south and south-west by post-Second World War housing developments, and to the north and east by former farming and industrial landscape. The modern housing developments are evidence of the growing population of Elsecar village from the mid-20th century onwards, and this expansion northwards has undoubtedly assisted with the preservation and integrity of the historically and architecturally–important historic core of the village (*see* Character Area 6). Among the 20th-century housing, the Wates pre-cast concrete buildings in and around Welland Crescent deserve mention. Although they are not now without structural problems, these houses played an important role in fulfilling a demand for new housing as well as improving living conditions in post-war Britain. Though the farms to the north of the Character Area have been modified and re-purposed for domestic use they, along with their surrounding landscapes, are a reminder of the former agricultural nature of this part of Elsecar.

CONCLUSION

As Graham Mee stated in *Aristocratic Enterprise*, the Wentworth Estate, in the first half of the nineteenth century, can be seen as a microcosm of the whole Industrial Revolution, based as it was on two of its principle components – coal and iron. The village of Elsecar stood at the centre of these Wentworth industries. It was surrounded by winding and ventilation shafts that served an immense underground labyrinth cut into the Barnsley coal beds. At the village's heart stood the Earl's colliery workshops, flanked at various times by a coal tar distillery and a gasworks, and to the north and south stood ironworks – Elsecar and Milton – each equipped with fiery banks of furnaces, casting houses and forges. A local rail network linked the mines to the works, brought ironstone from quarries to the west and took the coal and finished iron products to a depot east of the workshops, from whence they were shipped, first by canal and later by rail, to local, national and international markets. Elsecar's rich coal deposits powered the ironworks and provided the backbone of its industrial wealth for more than two centuries until the last mine closed in 1983. Throughout most of the 19th century, until their demise in the 1880s, the two ironworks competed for prominence, one casting bridges and bridge components to designs by Marc Brunel and John Rennie, while the other came to specialise in wrought and rolled iron for engines, armour plate and rails.

The importance of Elsecar lies, however, as much in the manner of its growth as in the extent of its industrial development. In the mid-18th century Elsecar was barely more than a tiny hamlet clustered around a green on the northern edge of the Marquess of Rockingham's Wentworth Woodhouse estate. This rural aspect remains an essential part of Elsecar's unique character, particularly to the west where the fields and farmsteads retain traces of their medieval as well as pre-industrial origins. Dense patterns of shallow coal workings are found throughout Elsecar's older southern woodlands, but prior to the mid-century coal mining hereabouts lacked the investment and infrastructure needed for significant growth. That changed when the 2nd Marquess took a direct interest in mining in 1752. Demonstrating an unusual degree of personal involvement (for an aristocrat), he employed his own overseer and sunk a new and highly productive pit within sight of the estate village of Wentworth, barely a mile distant across the valley to the south. The 4th Earl Fitzwilliam, who succeeded in 1782, took a still greater interest in Elsecar's industrial development, sinking a new mine alongside the village, bringing the Dearne and Dove Canal to meet it, and establishing the two ironworks: one alongside the new mine, the other next to the old mine half a mile to the west.

The remarkable factor in these and later enterprises, particularly under the direction of the 4th and 5th Earls, is that profit was far from the only motivation. By their deeds and words it is clear that the Fitzwilliams viewed Elsecar as an integral part of their Wentworth Woodhouse estate, and took a paternalistic approach to its development and the welfare of its population based on their political convictions and religious principles. The character of the resulting settlement, with rows and groups of sandstone cottages separated by green space and allotments, maintains the look of a rural estate village. But the fact that this is industrial housing sets Elsecar apart from most villages created by the Fitzwilliams' aristocratic contemporaries. It is also

somewhat earlier in origin than the notable model industrial villages, such as Saltaire and Bourneville, and contemporary with New Lanark, whose proprietors came from lower social strata and were often motivated by non-conformist religious doctrines. It is also notable that the collieries closely related to Elsecar, and for a time the two Elsecar ironworks, were managed directly by the Fitzwilliams and their agents, rather than merely leased in exchange for rents and royalties, as was the common practice among their peers.

Elsecar today embodies the character which arose from the Fitzwilliams 'aristocratic enterprise'. The physical remains of these entwined stories - mining, iron-making, transport and social provision - are found everywhere in and around the village and are key to its layout and unique sense of place. Many of the industrial elements are already well known and recognised for their significance. Structures as the New Colliery Newcomen engine (the only one its kind still housed in its original engine house), or the 5th Earl's remarkable array of buildings – the colliery workshops, his private railway station and the ironworks rolling shed - are all listed and now form the nucleus and key elements of the present day Heritage Centre. Similarly, there are numerous buildings around the village which are recognised for their architectural qualities and for the insights they provide into the Earls' paternalistic values and the social conditions of Elsecar's industrial workforces. These include the Miners' Lodging House, Milton Hall and the purpose-built rows of cottages along Wath Road and Fitzwilliam Street.

These buildings form the established core of Elsecar's identity, but there are many lesser known or less immediately visible heritage assets which add to Elsecar's significance, first among which must be counted the remarkably complete colliery buildings, engine houses and winding gear at Hemingfield (Elsecar Low) Colliery and the adjacent canal basin. At Elsecar itself there are partly exposed remains of the blast furnaces, charging platform and a probable blowing engine house which demand further investigation in order to be properly understood alongside the surviving buildings of the ironworks. Extending beyond the village are the lines of two inclined planes – one to the Milton ironworks, the other to Jump Colliery – both of which set the grain of Elsecar's housing and can be followed today as footpaths. The Milton incline retains indications of buried tramway features which require further investigation, but may prove to be second only in terms of survival to those of the Silkstone Waggonway – itself considered a rare regional survival.

Close to the now buried remains of the Milton ironworks (recently depicted by geophysical survey) stands Milton House, perhaps located on and possibly incorporating a structure from the Marquess' first Elsecar Colliery. In the valley below, stretching toward Wentworth, lie a group of unlisted late 18th-century cottages; they are clearly the product of estate architecture, perhaps influenced by John Carr, and undoubtedly constructed by the 4th Earl to house his workforce. A little further to the west, also unlisted, is the substantial Italianate villa built in 1834 to house the Milton ironmaster, and latterly home to George Dawes after his firm took the lease on both ironworks in 1849.

In the village of Elsecar itself, there is a considerable contrast between the architecture of the housing, church and school erected by the Wentworth Estate and the commercial premises and housing that were built to service and expand the community. Even the 20th-century housing varies between private and social provision, such as the difference between the garden city or model village character of Lifford Place and the eastern end of Strafford Avenue and the rest of Strafford Avenue and Cobcar Lane. There are streets of Wates system-built reinforced concrete houses from the 1950s alongside privately-funded developments from the 1970s to the present day. But green lungs, generous housing provision and the low density of development across the settlement demonstrate the pervasive ideas first of the paternalistic Wentworth Estate, and then the local authority.

Elsecar thus presents a unique record of industrial endeavour and aristocratic patronage, where a significant proportion of its industrial buildings have survived alongside the more domestic and commercial parts of the village. Though the iron and coal industries have now gone, their stories are represented not only by individual structures in the area of the Heritage Centre but throughout the entire village. And the surrounding landscape and farmsteads are integral to those stories, telling of the rural origins and early industrial development of Elsecar, for centuries heavily influenced by the Wentworth Estate.

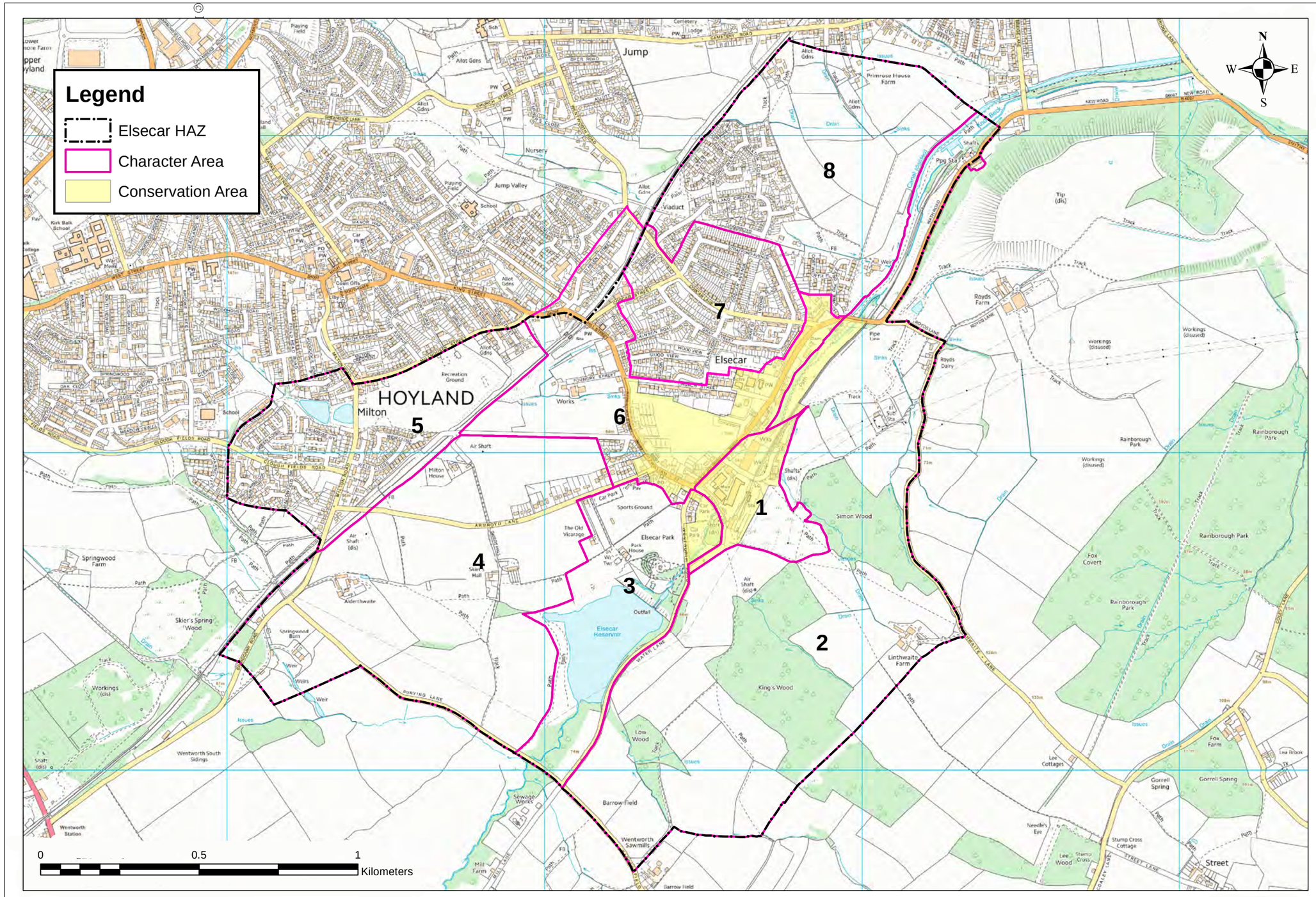


Fig 201. Elsecar's Character Areas. Crown Copyright and database right 2018. All rights reserved. Ordnance Survey Licence number 100024900.

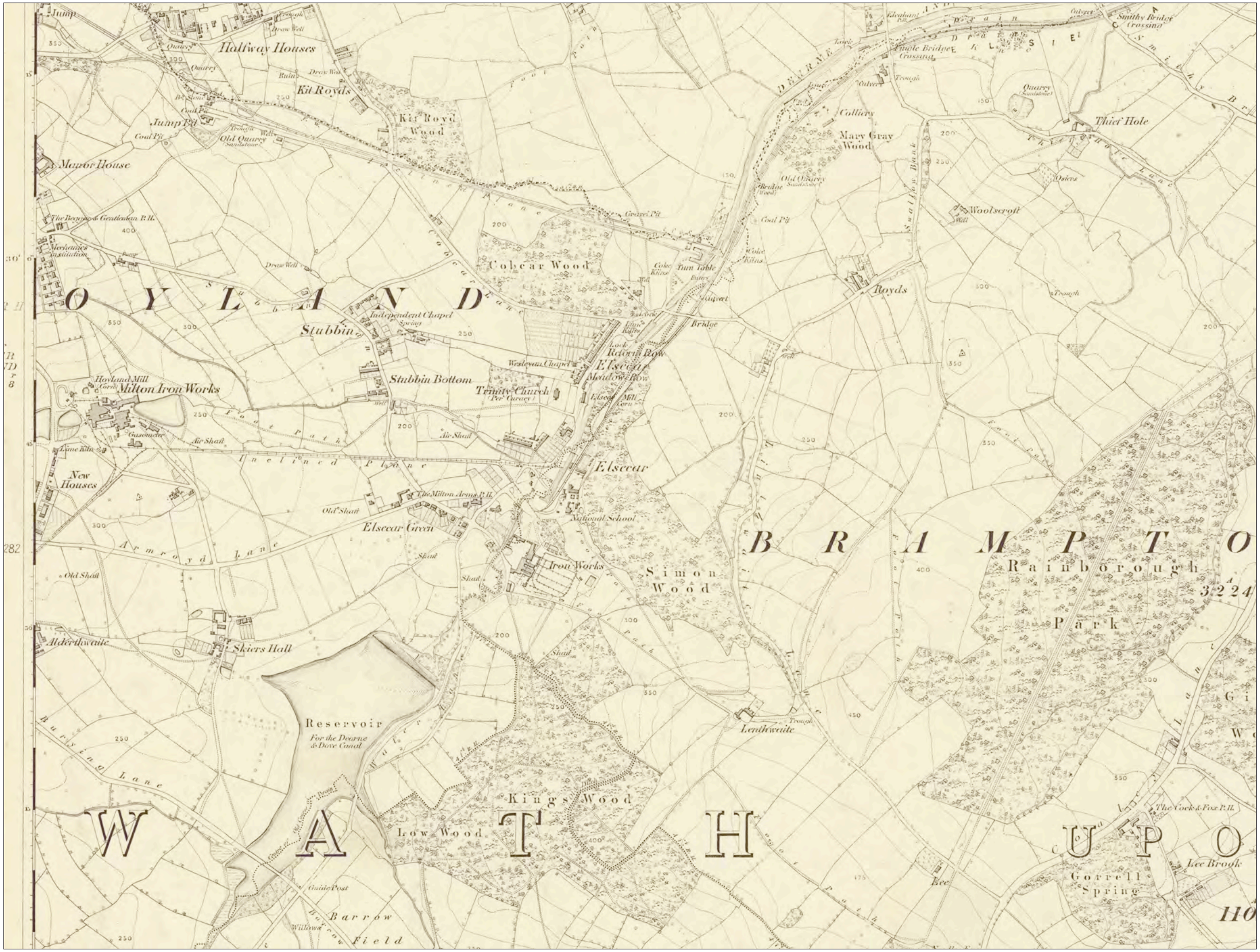


Fig 202. Elsecar shown on the Ordnance Survey 1st edition 6-inch map, sheet 283, 1855 (surveyed 1849-50). Not to scale. Reproduced with permission from the National Library of Scotland.

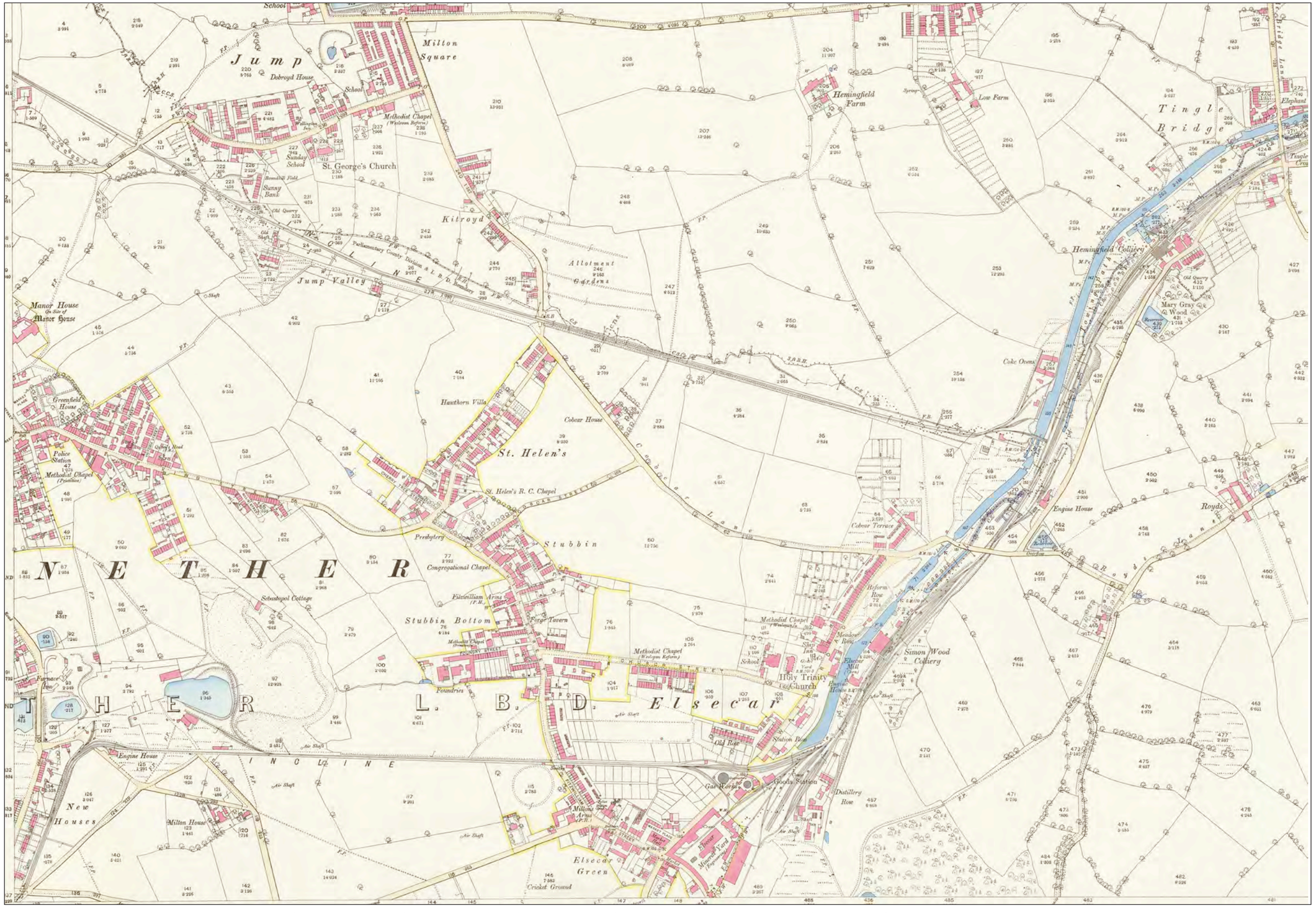


Fig 203. Elsecar shown on the Ordnance Survey 1st edition 25-inch map, sheet 283.5, published in 1892 (surveyed 1890). Not to scale. Reproduced with permission from the National Library of Scotland.

APPENDIX 1. FURTHER RESEARCH

A number of avenues for further research have been identified in the course of the HAA project. Some of the ideas listed below may be suited, in part or entirely, to future volunteer-supported projects.

- Stabilisation and exploratory archaeological investigation of the Elsecar blowing engine house and boiler yard (Area 1).
- Archaeological investigation to seek further details of the Elsecar blast furnace bases and associated supply tunnels (Area 1).
- Scrub clearance followed by geophysical survey of the marshalling yard to the rear of the Elsecar ironworks furnace bank (Area 1).
- Detailed architectural investigation, combined with documentary and oral history research, to refine understanding of the development and multiple uses of the buildings of the Earl's workshops (Area 1).
- Archaeological survey to reveal and record details of the more elaborate shaft mounds in Simon Wood and King's Wood (Area 2).
- Archaeological investigations to examine the possible early terraced workings in the centre of King's Wood, south-west of Linthwaite Farm (Area 2).
- Archaeological investigations, if access can be obtained, to determine the survival of evidence for the Jump incline, sidings, staithe and former coke ovens in the area of Sewage Farm (Area 2).
- Scrub clearance, recording and improved presentation of the Hemingfield canal basin (Area 2).
- Archaeological survey and documentary study of the cascade garden alongside Skiers Spring Lodge ironmaster's house (Area 4).
- Archaeological excavations on the Milton Ironworks site to explore further the area of the probable calcining kiln revealed in 2018, and perhaps to determine the position of the blast furnaces, with particular reference to the Walker and Co. period and the Boulton and Watt blowing engine house (Area 5).
- Documentary studies focussed on Birmingham Archives' Boulton and Watt collection to explore in greater detail their association with Walker & Co's Milton ironworks (Area 5).
- Documentary studies to identify the speculative builders in Milton and Hoyland (Area 5) and Elsecar Village (Area 6).
- Limited excavations to clean and record the stone setts along the Milton-Elsecar inclined plane (Area 6).

- Continued documentary and oral history research into the communities of Elsecar and their connections with domestic, commercial and industrial buildings (Areas 1-6).
- The influence of the 6th Earl as head of the estate (1857-1903) requires further study. We found few innovations which were directly attributable to him, but he did oversee a period of great expansion in freight and mining.

ARCHIVAL SOURCES

The main archival sources referred to in this report, chiefly maps and plans, are listed below. Others are referenced within the text and captions.

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309 B1-B4 Elsecar Foundry Records

A/3491/Z/1/1 1757 A Map of the Collieries at Elsicar & West Wood, and the Wharf at Kilnhurst: with the Lands demised therewith to J. Hall, and others, for the accommodation of the Collieries Wharf. Surveyed and drawn by William Fairbank junior 1757

Hoyland Urban District Council Building Control Plan 671 (Church Street)

Hoyland Urban District Council Building Control Plan 1252 (The Croft)

Hoyland Urban District Council Building Control Plans 722, 742, 743 (Strafford Avenue)

MB 510 1774-5 Survey of Brampton Bierley 1774, Handsworth 1773 and of Wadsley. William Fairbanks

NCB Workshops Archive photographs

NBC 417 (R) 1818 Untitled plan of the Township of Hoyland

NBC 418 1889 Untitled plan of township of Upper and Nether Hoyland and Platts Common. Wade and Turner, Barnsley

NBC 460a 1859 Untitled map of the area for proposed enlarged sidings of the South Yorkshire Railway. Annotation: Earl Fitz William / & / M.S. & L. late / South Yorks Rway / Land at Elsecar / Sidings. Etc in / Agreement of 1859 / 1879 April 8th Received / From Mr [Sacre?]/Newman & Sons

NBC 460b 1876 'M.S.L.R Elsecar. Plan of land required from Earl Fitzwilliam'. M... Sacre. Annotation on reverse: Earl Fitzwilliam / & / M. S. & L. later / South Yorks Rway / Land at Elsecar / Sidings Etc in / Agreement of / 1867 / 1879 April 8th Received / From Mr [Sacre?] /Newman & Sons

NBC 466 (R) 1-4 *c* 1849/1861 Two plans of Milton and Elsecar Ironworks (1-2); one of Elsecar Ironworks (3), and a tracing (4). Undated but showing the extent of the Dawes' lease around 1849, possibly prepared for the Dawes v Fitzwilliam legal case 1864

UDC Plan 1447 Survey of Elsecar gas Works 1949

Uncatalogued plan of the proposed South Yorkshire Railway through Wombwell and Brampton to Elsecar. Undated, but presumably drawn up around 1850. Marginalia includes 'S.Y.R & River Dun Co: Earl Fitzwilliam's Estate Newman & Sons' and 'Earl Fitzwilliam & S Y R Elsecar Branch'

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MS 1347/3/Correspondence and Papers Series

Sheffield Archives

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FC/ECa/12/S Plan of Elsecar Reservoir 1796/1801

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FC/P/Wath 13L 1771 Plan of the Manor of Hoyland

FC/P/Wath 14L 1794 Draft Nether Hoyland enclosure map

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SY/309/B Records of the Elsecar Foundry, general ironfounders and manufacturers of cast iron goods

WWM A/1638 Brampton Bierlow Cropping Book 1871-1882

WWM/F/70/142 Charles Bowns' letter to Earl Fitzwilliam 1814

WWM/MP/16/3 John Carr's designs for colliers' housing at Elsecar

WWM/MP/56 A Plan of Elsecar Colliery by Joshau Biram, 1793

WWM/MP/115R Map of the Township of Brampton Bierlow 1867

WWM/MP/123R Map of the township of Nether Hoyland 1867

WWM/MP/134 Plan of Township of Brampton Bierley 1842

WWM/V/11 Misc. Valuation, 31 December 1841

X417 Thomas Newbould's memoranda books

Note: Extracts from the WWM collection (Wentworth Woodhouse Muniments) are reproduced here with permission from The Milton (Peterborough) Estates Company (the Wentworth Woodhouse papers have been accepted in lieu of Inheritance Tax by HM Government and allocated to Sheffield City Council)

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ENDNOTES

Abbrievations

BA	Barnsley Archives and Local Studies
HEA	Historic England Archive (Swindon)
NCML	National Coal Mining Museum Library
NHLE	National Heritage List for England
NHRE	National Heritage Record for England
OS	Ordnance Survey
RCHME	Royal Commission on Historical Monuments (England)
SA	Sheffield City Archives
TNA	The National Archives

1 'Understanding Place' Historic England 2017.

2 For example: Alston Moor, Jessop and Whitfield 2010.

3 Historic England 2017.

4 May 2017.

5 Linford et al 2017.

6 Davies and Udyrysz 2018.

7 Young 2018.

8 Tanner 2015.

9 Pearce 2017.

10 NAA 2008.

11 Mudd and Webster 2001.

12 Hunter 1831, Vol 1 Map of the Deanery of Doncaster.

13 Hunter 1831, 74-100.

14 http://opendomesday.org; Smith 1961, 112-114.

15 Aerial photograph RAF/543/1677 V 0086 3-MAR-1962 (HEA).

16 Clayton 1973, 3.

17 Smith 1961, 112; Clayton and Hopkinson 2003, 82; FC Wath 13L Plan of the Manor of Hoy-

land, 1771 (SA).

18 Burke & Burke 1844, 452; Clayton and Hopkinson 2003, 83; Clayton 1973, 3-6.

19 May 2017 11-12; Clayton and Hopkinson 2003, 82-3.

20 Clayton 1973, 4-5.

21 Hunter 1831, 101; Clayton 1973 15-16.

22 Farrer & Clay 1947, 204; Holmes 1899, 101; Hunter 1831, 74.

23 MB 510 Survey of Brampton Bierley 1774 (SA).

24 Smith 1962, 215.

25 Clayton 1973, 3, 6.

26 Ibid; A/3491/Z/1/1 1757 Map of the Collieries (BA); FC/P/Wath 4L 1773 Draft Brampton Township Plan (SA); FC/P/Wath 14L 1794 Draft Nether Hoyland Award Map (SA).

27 Clayton 1973, 4.

28 Clayton 1973, 5.

29 NBC H3 An Act for Dividing, Allotting and Inclosing the Open Common Fields, Commons, and Waste Grounds, within the Township of Hoyland, 34 Geo III 1794; NBC B7 A Bill for Inclosing Lands in the Townships of Brampton and Swinton 53 Geo III Sess. 1814-1815 (BA).

30 FC Wath 14L Draft Nether Hoyland Award 1794 (SA); FC P Wath 4L Draft Brampton Township Plan 1773 (SA).

31 WWM/MP/134 Plan of Township of Brampton Bierley 1842 (SA); NBC 417R Township of Hoyland Plan 1818 (BA).

32 John Hunter, personal communication, based on research carried out for the 2017 Early Engines Conference, cited in Hunter 2018 1-31.

33 Clayton 1973, 39.

34 Clayton 1973, 44; Jones 1980,158-60.

35 Clayton 1973, 105.

36 Ibid, 5, 12.

37 Ibid, 6; Howse 2002, 72.

38 FC/ECa/12/S Plan of Elsecar Reservoir 1796/1801 (SA); WWM/MP/115 Brampton Bierlow Tithe Map 1867 (SA).

39 Medlicott 1998a, 135.

40 Farrell 2004, online edition. For his scientific interests see Armytage 1956.

41 For further information on George Stubb's paintings of Thomas Smith *see* Egerton 2007a, 218-9 and 222-3, and Egerton 2007b.

42 Smith 1975, 6.

43 Smith 1975, 34.

44 Smith 1975, 33.

45 Crouzet 1985, 71, 80.

46 Cavanagh 2018, 18-21.

47 Eyres 1991, 116-123.

48 Wasson 1980, 166-167.

49 Eyres 1991, 122.

50 Cited in Mee 1975, 141.

51 Ibid.

52 Cavanagh 2018, 21-2.

53 Clayton 1973, 29; Jones 1998, 123.

54 White 1879, 103.

55 Medlicott 1998a, 134-41.

56 Ibid and John Hunter, personal communication.

57 Medlicott 1998b, 150; Clayton 1966, 75.

58 Mee 1975, 25.

59 Medlicott 1998a, 134.

60 Medlicott 1987.

61 Medlicott 1987; Medlicott 1998a.

62 Clayton 1964, 7-8; Clayton 1973, 41.

63 Medlicott 1998a, 135.

64 Ibid.

65 Clayton 1966, 82.

66 Clayton 1966, 77; Clayton 1973, 40.

67 Clayton 1966, 77.

68 Clayton 1974, 40.

69 Clayton 1966, 77.

70 Medlicott 1998b, 157.

71 John Hunter, personal communication. William Fairbank's field books, May 1790, are held at Sheffield Archives, FC/FB68.

72 Clayton 1964, 83.

73 Clayton 1966, 82; Medlicott 1998a, 137.

74 Clayton 1966, 79-80; Medlicott 1998b, 150.

75 Clayton 1966, 80.

76 Clayton 1973, 40.

77 Clayton 1966, 80. This information was recorded in William Fairbank's field book. Jones's Christian name was not given.

78 Ibid.

79 Tanner 2015, 5.

80 Medlicott 1998b, 150.

81 Medlicott 1987, 113; Medlicott 1998a 141-43; Medlicott 1998b, 165.

82 Ibid, 94. A dozen is one square yard of coal multiplied by the height of the seam. In the Barnsley seam at Elsecar and Low Wood this was 9 feet high, so 81 cubic feet or about 42-45 cwt. There were 12 pulls to a dozen. *See* Jones 1980, 158.

83 Clayton 1966, 77-78.

84 Ibid, 83-84.

85 Medlicott 1987, 113; Medlicott 1998a 141-43; Medlicott 1998b, 165.

86 Clayton 1964, 7-8; Medlicott 1998a, 138-39.

87 Mee 1975, 24, Table 2.

88 Ibid.

89 For a discussion of Joshua Biram's plan of Elsecar Colliery see Clayton 1964, 5; Medlicott 1998a 148-49.

90 Clayton 1964, 4-8; Clayton 1973 41-2; Medlicott 1998b, 159-60.

91 May 2017a, 14, citing personal communication with John Hunter and data from the South Yorkshire Mining Advisory Service.

92 Clayton 1964, 8. Quotation cited by Clayton, from the WWM, Steward's Papers. 13.

93 Medlicott 1998b, 156-57.

94 WWM/V/11 Misc. 31 December 1841 (SA). We are grateful to John Hunter for drawing our attention to this document and sharing his transcription with us.

95 Ibid.

96 Mee 1975, 23-7.

97 Mee 1975, 26, figure 1.

98 Clayton 1973, 71.

99 Goodchild 2005, 20.

100 Clayton 1973, 38; Medlicott 1987, 108; Medlicott 1998b 153.

101 Medlicott 1998b 153.

102 Priestley 1831, 185-6.

103 Ibid.

104 *Hull Advertiser and Exchange Gazette*, 8 November 1798, 1, via www.britishnewspaperarchive.co.uk.

105 Glister 2004, 50.

106 Medlicott 1987, 103.

107 The information in this paragraph is drawn from Clayton 1973, 40-42 and Clayton 1964, 4-6.

108 Sheffield Archives COAL/Z6/1/18/3, South Yorkshire Mines Drainage Committee Annual Reprt for 1942 (presented 23rd April 1943). We are grateful to Chris Jones for this reference.

109 Clayton 1973, 41. Note that Medlicott 1998b, 157 identifies that the engine pits and bye-pits at the colliery were 35 yards deep.

110 Clayton 1973, 42; Medlicott 1998b, 156-57.

111 Clayton 1964, 4-5; Medlicott 1998a, 148-49.

112 Medlicott 1998a, 148-49.

113 Sheffield Archives MD2697-2702. Report by C.E. Rhodes and Sons Mining Engineers for the South Yorkshire Coal Owners' Association, 31st October 1917. We are grateful to Chris Jones for this reference.

114 Unless otherwise stated, the information in this paragraph is drawn from Mee 1975, 27-39; Medlicott 1998b, 165-67.

115 Figures from Medlicott 1998b, 166.

116 WWM/V/11Misc. 31 December 1842 (SA).

117 Clayton 1964, 26; Mee 1975, 25.

118 Clayton 1973, 70.

119 Goodchild 2005, 5-22.

120 Lodge 1974, 237-47

121 The colliery is identified in the Brampton Bierlow Cropping Book of 1871-1882 as 'Tingle Bridge Colliery'. WWM A/1638 entry number 237 (SA).

122 Clayton 1964, 25-27.

123 Mee 1975, 25.

124 Chris Jones, personal communication. This information is from the 1844 Wentworth Woodhouse household vouchers, transcribed by A.K. Clayton in his 1995 'papers on local history', an unpublished typescript held at Barnsley Archives.

125 Clayton 1964, 26.

126 Mee 1975, 25, states that it was six years after reported drainage problems in December 1842 that coal began to be extracted.

127 The Friends of Hemingfield Colliery. History. Website https://hemingfieldcolliery.org/history/ Accessed 3/12/2018.

128 Ibid.

129 Clayton 1964, 27.

130 Biram, 1851, 215-17. We are grateful to Chris Jones for drawing our attention to this reference.

131 Clayton 1964, 27-28; Chris Jones, personal communication.

132 We are grateful to Chris Jones for these references, which are from the Alfred Perkins Rockwell papers, American Philosophical Society Mss. B.R59p Series II Notebooks 3, 'Notes on Collieries near Barnsley, Yorkshire', 2nd August 1858 and Atkinson 1861, 89-98.

133 John Hunter, personal communication.

134 Clayton 1973, 42.

135 Clayton 1973, 70.

136 Sheffield Archives X417 Thomas Newbould's memoranda books. Habershon and Hardwick 1910, 342-62. We are grateful to Chris Jones for these references.

137 Mee 1975, 106-7.

138 *Sheffield Daily Telegraph* Wednesday 29th October 1856, 2; *Leeds Mercury* Thursday 30th October 1856, 3; *Sheffield Independent* Saturday 1st November 1856, 12. The *Sheffield Independent* reported that the festival took place in the 'large carpenter's shop', though it probably meant the 'fitting shop', as this building is better suited to large gatherings. For a further explanation of the functions of the New Yard buildings, *see* Character Area 1.

139 10th July 1912, *Sheffield Daily Telegraph*.

140 Bayliss (ed) 1995, 10, identifies the building as a the pillared Machine Shop ... and adjoining sawmill'.

141 Nigel Tyas, former blacksmith at the New Yard, personal communication.

142 Though this was actually Nasmyth hammer number 240, according to records held at Salford Archives. The Elsecar steam hammer has been recently restored and displayed at the Nasmyth Business Park in Patricroft near Eccles, Manchester. We are grateful to Chris Jones for this information.

143 Bird 2011. Unpaginated. The following excerpt and information is from Chapter 21.

144 MD7787 2005/16 Manchester, Sheffield and Lincolnshire Railway Company Estate Plans, 1887. (SA).

145 TNA 1891 England Census: Yorkshire, Nether Hoyland, District 13. Accessed through Ancestry.com, 9th January 2019.

146 Formerly the South Yorkshire Railway. The Manchester, Sheffield and Lincolnshire Railway (M,S&LR) took over the South Yorkshire Railway in 1864. In 1897 it was renamed The Great Central Railway (GCR) amd in 1921 became part of the London and North Eastern Railway (LNER). Elsecar Heritage Railway, https://www.elsecarrailway.co.uk/index.php/about-us/the-coalfield-line Accessed 8th January 2019.

147 NCB 460b Plan of Elsecar works and proposed railway sidings, 1876 (BA).

148 Franks 1980, unpaginated.

149 FC/ECa/12/S Plan of Elsecar Reservoir 1796/1801 (SA).

150 Clayton 1974, 1.

151 Ibid, 2; Fairbank field book FC/FB125 (SA), brought to the authors' attention by John Hunter.

152 Clayton 1974, 2.

153 Ibid, 3.

154 Twigg cited in Clayton 1973, 46; *Barnsley Chronicle* 10 January 1885, 5 the history of the Elsecar and Milton works.

155 Clayton 1974, 4.

156 Ibid.

157 Clayton 1973, 46; 1974, 4.

158 Dobson and Dobson 1811, 19-20.

159 Clayton 1974, 6-7.

160 Ibid 8; *Sheffield Iris* 11 February 1817.

161 Clayton 1974, 6; *Barnsley Chronicle* 10 January 1885, 3.

162 *Sheffield Iris* 29 January 1828; Clayton 1973, 9.

163 Clayton 1974, 11.

164 Mee 1975, 47.

165 Clayton 1974, 57.

166 Ibid 59, citing WWM G44.

167 Ibid 66, citing WWM G44.

168 Ibid, 52; Royal Commission 1849, 420-2.

169 Ibid, 12-13.

170 Ibid, 60.

171 Mee 1975, 32-3.

172 *Evening Mail*, Friday 16 February 1855, 5.

173 *The Globe* Wednesday 9 July 1856, 4; *Sheffield Daily Telegraph:* Friday 11 July 1856, 3; Saturday 30 January 1858; Saturday 16 October 1858, 8; *Leeds Intelligencer:* Saturday 9 August 1856, 11; Saturday 13 February 1858, 7.

174 *Derby Mercury* Wednesday 21 September 1859.

175 *Sheffield Daily Telegraph Wednesday* 25 January 1865, 2.

176 The beginning of the strike is reported in the *Leeds Mercury* 10 July 1866, p5, and further reports appear in the *Barnsley Chronicle* 1 September 1866, p2. The conclusion is reported in the *Sheffield Daily Telegraph* 1 Sept, p8 and 22 September, p8, 1866. E B Wilson's adaptations to the Milton furnace were described and illustrated in *The Engineer* 1866, vol. 1, 376 (*see* Figure 21, this report). The quantity of puddling furnaces was noted in *Engineering* vol 1, 8 June 1866, 383.

177 *Sheffield Daily Telegraph* Mon 3 December 1866, 2. The quality of the plate rolls and the supply of similar to John Brown and Co. is mentioned in *Engineering Vol. 1* 8 June 1866, 383.

178 *Sheffield Daily Telegraph* Sat 20 April 1867.

179 *Engineering* Vol 1 8 June 1868, 383, cited in https://hemingfieldcolliery.org/history/spotlight-ironworks-elsecar-and-milton; *Barnsley Chronicle, etc.* - Saturday 5 June 1869, 8; Saturday 19 June 1869, 5; *The Cambrian* 6 November 1874, 3; *Sheffield and Rotherham Independent* 18 December 1871.

180 The newspaper clippings stored in the Goodchild Collection at Wakefield Archives are undated and lack a source, but appear from internal references to date from the period 1871-73, and are clearly from a local paper, given the recurring article theme: 'Our Local Industries'. Chris Jones, researching on behalf of the Friends of Hemingfield Colliery, has suggested (pers comm) that the Doncaster Gazette and Rotherham Advertiser are possible sources, but this is yet to be verified.

181 *London Gazette* issue 24312, 7 April 1876, 23.

182 *Barnsley Chronicle* Sat 04 Dec 1880; 10 January 1885, 3.

183 *The Engineer* 25 Sept 1885, 247; Barnsley Chronicle 3 Jan 1885, 4; 7 Mar 1885, 8; 11 July 1885, 5; 26 Sept 1885, 8.

184 FC Wath 14L: Draft Nether Hoyland Award map, 1794 (SA).

185 Jones 1995, 88.

186 Two letters from Joshau Walker & Co. to Messrs Boulton and Watt dated 13 April and 26 December 1798 describe their engine requirements and the limitations of the furnace site. Birmingham Archives, Bouton and Watt Collection MS 3147/3/Correspondence and Papers Series. We are grateful to Christopher Jones for drawing these letters to our attention and Nigel Chapman for providing copies.

187 Ibid 89, Medlicott 1998a, 151-3.

188 Greenwood Map of Yorkshire 1817.

189 Grace's Guide cited in May 2017, 19.

190 Clayton 1964, 11.

191 Ibid.

192 Thornes 1991, 54.

193 Guest 1866, 47.

194 Ibid.

195 Skempton, 2002 , 754-55, Thornes 1991, 54; John, A H (ed.) 1951 *The Walker Family: Ironfounders and lead manufacturers 1741-1893* London 27, cited in May 2017, 20.

196 Mee 1975, 46; *Ivanhoe Review* 1899, 129.

197 *Sheffield Independent*, quoted in Clayton 1973, 48.

198 Jones 1998, 120.

199 Smiles, S 1885 *James Nasmyth, Engineer: An Autobiography.* London cited in Mee 1975, 46.

200 Mee 1975, 46.

201 Mee 1975, 45-7, 55; Jones 1998, 120; Clayton 1973, 46.

202 Jones 1995, 90.

203 Mee 1975, 47-55.

204 Cossons 1987, 116.

205 Mee 1975, 49.

206 Mee 1975, 54-55.

207 Clayton 1973, 59-61 cited in May 2017, 20; Royal Commission 1849, 423.

208 Clayton 1974, 62-3.

209 Clayton 1964, 13.

210 Clayton 1973, 105 (footnote).

211 Clayton 1974, 50, 64.

212 Goodchild 1994, 240.

213 Clayton 1973, 51; Jones 1998, 121; *Sheffield and Rotherham Independent*, 24 June 1848.

214 Royal Commission 1849, 423.

215 Mee 1975, 56.

216 Jones 1998, 122.

217 *Sheffield Independent*, 26 May 1849; *Hull Packet and East Riding Times*, 15 June 1849; *Aris's Birmingham Gazette*, 18 June 1849.

218 *Sheffield Independent*, 26 May 1849.

219 *Leeds Intelligencer*, 7 July 1849.

220 Clayton 1973, 51.

221 Clayton 1973, 64-66.

222 Jones 1998, 121-2, Mee 1975, 56, Grace's Guide https://www.gracesguide.co.uk/W._H._and_G._Dawes accessed 12 April 2018.

223 Jones 1998, 121-23.

224 Ibid, 127-35.

225 Clayton 1973, 64; Sheffield Independent 13 April 1850.

226 Ibid; https://www.gracesguide.co.uk/Milton_Iron_Works ; NHLE 1256509.

227 Clayton 1973, 66.

228 Clayton 1973, 64.

229 *Sheffield Daily Telegraph*, 24 August 1860.

230 *Sheffield Daily Telegraph*, 17 October 1861.

231 https://gracesguide.co.uk/W._H._and_G._Dawes

232 *Sheffield and Rotherham Independent*, 18 December 1872.

233 *Sheffield Daily Telegraph* 1873:Goodchild Collection, cited in May 2017, 44

234 *The Engineer*, 25th Sept 1885, 247.

235 Clayton 1973, 68.

236 *Barnsley Chronicle* 22 March 1902; Robinson's Barnsley Directory 1902, 268, cited in May 2017,44.

237 May 2016, 44.

238 Clayton 1973, 100; BA 309 B1-B4 Elsecar Foundry Records (BA).

239 May 2017, 44.

240 Mee 1975, 65-66.

241 Ibid 66-7; Clayton 1974, 33-34.

242 Mee 1975, 70-75.

243 *Sheffield Independent*, 5th December 1857, 6.

244 Burgin n/d, 7.

245 Burgin n/d, 7.

246 Bird 2011, unpaginated. This excerpt is from Chapter 21.

247 Tegwen Roberts, personal communication.

248 Clayton 1973, 115.

249 Dunningham and Grummell 1930, 21.

250 https://hemingfieldcolliery.org/history/ Accessed 14th January 2019.

251 Clayton 1973, 79-80. The building accounts for the construction of Elsecar Main Colliery are held at the NCML, 'Elsecar Main: details of shaft sinking and construction of surface buildings (1905-1908)'.

252 NCML, 'Elsecar Main: details of shaft sinking and construction of surface buildings (1905-1908)'.

253 *Sheffield Daily Telegraph* 10th July 1912.

254 Ibid.

255 Dunningham and Grummell 1930, 20.

256 Clayton 1973, 80.

257 The following information is from Dunningham and Grummell 1930, 20-4.

258 Douthwaite and Gullick 1949-50, 256-78.

259 Camm 1979, 77-9.

260 Bird 2011. Unpaginated. This excerpt is from Chapter 28. A digitised 8mm cine film dating to 1964 which shows a new coal cutting machine and the powered roof supports at Elsecar Main Colliery in 1971 is available on YouTube: https://www.youtube.com/watch?v=Byg30Ax-no-wo

261 Barnsley Council, Planning Application Number: B/79/0475/HN, dated 8th June 1979.

262 Pearce 2017.

263 May 2017, 30 and Figure 4; http://mapapps2.bgs.ac.uk/coalauthority/home.html accessed 113 February 2019.

264 Voil de 1943, 19.

265 Elsecar Heritage Railway, https://www.elsecarrailway.co.uk/index.php/about-us/the-coal-field-line Accessed 8th January 2019.

266 Voil de 1943, 20.

267 Voil de, 1943, 21.

268 *Barnsley Chronicle* 2nd June 1877.

269 Voil de 1943, 21.

270 *Sheffield Independent* 12th September 1857, 6.

271 *Sheffield Independent* 15th June 1867, 10.

272 May 2017, 31; Voil de 1943, 21; Beachill n/d.

273 OS Yorkshire CCLXXXIII.5 Revised 1929. Published 1930.

274 May 2017, 31.

275 Clayton 1964, 17.

276 Cavanagh 2017, 276; Cleal, Fraser, Lazarus and Dannell 2009.

277 Cossons 1993, 91.

278 The following account of the Newcomen engine draws on information in May and Sheppard 2011.

279 NBC 466/1 Plan of Milton and Elsecar Ironworks (BA).

280 NBC 460a Plan of sidings for the South Yorkshire Railway 1859 (BA).

281 May 2019.

282 WWM/F/70/142 Charles Bowns' letter to Earl Fitzwilliam 1814 (SA).

283 NBC 466 (R) 1 and 2, Plans of Milton and Elsecar Ironworks; 3 and 4, Plans of Elsecar Ironworks (BA).

284 *Barnsley Chronicle*, Saturday 5 June 1869, 8; Saturday 19 June 1869, 5; *The Sheffield and Rotherham Independent*, 18 December 1871.

285 Cavanagh 2016.

286 *Sheffield Independent*, Saturday 26 April 1845, 8.

287 Mee 1975, 47-55.

288 *Sheffield Independent*, Saturday 9 February 1856, 6.

289 Linford, Linford and Payne 2017.

290 WWM/A/1638 Brampton cropping book 1871-1882 (SA).

291 Barnsley Museum holds a copy of a photograph *c* 1960 that shows the round chimney still standing to a height of about 3.5m (*c* 25 brick courses), the base buried in the sloping ground.

292 The newspaper clippings stored in the Goodchild Collection at Wakefield Archives, *cf* footnote 30.

293 WWM/A/1638 Brampton cropping book 1871-82 (SA).

294 Nasmyth's autobiography quoted in Clayton 1974, 76-7.

295 Ibid.

296 Nigel Tyas, personal communication.

297 Tegwen Roberts, personal communication.

298 Nigel Tyas, personal communication.

299 Ibid.

300 Nigel Tyas, personal communication.

301 RCHME Photograph of Building at south-east edge of site, Negative No. BB93/5879 taken 19/10/88. (HEA).

302 https://www.elsecarrailway.co.uk/index.php/about-us/the-coalfield-line

303 Linford, Linford and Payne 2017, 8.

304 Young 2018.

305 Ibid, and further comments on the bore hole report by John Hunter of the Sheffield Area Geology Trust (*pers comm* to Dr Tegwen Roberts 10 January 2018).

306 Nigel Tyas, personal communication.

307 Nigel Tyas, personal communication.

308 Goodchild 2005, 17, also points out that the Machine Shop at the Elsecar Workshops was said to have had a datestone inscribed with the year 1850.

309 Nigel Tyas, personal communication.

310 Barnsley Archive Elsecar NCB workshops Archive photographs 32 and 34.

311 The following information on former uses is from Nigel Tyas, personal communication.

312 Nigel Tyas, personal communication.

313 Mee 1975. 64-77.

314 WWM A 1638 Brampton Cropping Book 1871-1882. No. 527 on plan WWM/MP/123R Brampton Bierlow Tithe Map 1867 (SA).

315 Voil de 1943, 15.

316 WWM A 1638 Brampton Cropping Book 1871-1882. No. 530 on plan WWM/MP/123R Brampton Bielow Tithe Map 1867 (SA).

317 English Heritage 2011, 3.

318 FC/P/Wath 4L 1773 Draft Brampton Township Plan (SA).

319 Ibid; WWM/MP/115 1867 Brampton Bierlow Title Map (SA).

320 FC/P/Wath 4L 1773 Draft Brampton Township Plan (SA).

321 NBC 460a Plan of South Yorkshire Railway Sidings 1859; NBC 460 b MSLR acquisition plan

1876 (BA).

322 WWM/MP/123R Map of the township of Nether Hoyland 1867 (SA).

323 NHLE 1151022.

324 https://hemingfieldcolliery.org/history/.

325 https://hemingfieldcolliery.org/history/.

326 Glen Shepherd and Chris Jones, personal communication.

327 OS Yorkshire CCLXXXIII.5 Revised 1929. Published 1930.

328 Davies and Udyrysz 2018.

329 Pearce 2017, 7.

330 The Reservoir Keeper's House is shown on the Dearne and Dove Company canal plans dating to *c* 1900 (SA MD8200).

331 Photographs of the park before and after the Reservoir Keeper's House was demolished can be seen in: Hugh Jones, Elsecar Now Photograph albums, 1980s (BA A/3706/Z/1/4).

332 Elsecar Reservoir Local Nature Reserve information panel.

333 May 2017, Character Area 15: Elsecar Park and Reservoir, 2, citing Howse 1999.

334 A photograph of the recently constructed outfall can be seen in Hugh Jones, Elsecar Now Photograph albums, 1980s: A/3706/Z/1/4 (BA).

335 Green Flag Award website, page on Elsecar Park and Local Reservoir Nature Reserve http://www.greenflagaward.org.uk/park-summary/?park=385 Accessed 18th February 2019.

336 A photograph of the paddling pool can be seen in Hugh Jones, Elsecar Now Photograph albums, 1980s: A/3706/Z/1/4 (BA).

337 John Hunter, personal communication.

338 May 2017, Character Area 15: Elsecar Park and Reservoir, 1-8.

339 Voil de, 1943, 16.

340 Tegwen Roberts, personal communication.

341 Tegwen Roberts, personal communication.

342 Pearce 2017.

343 http://mapapps2.bgs.ac.uk/coalauthority/home.html accessed 13 February 2019.

344 WWM/MP/134 Plan of Township of Brampton Bierley 1842 (SA); NBC 417R Township of Hoyland Plan 1818 (BA).

345 Pearce 2017, 7.

346 FC Wath 13L Plan of the Manor of Hoyland 1771 (SA).

347 Ibid; FC/ECa/12/S Plan of Elsecar Reservoir 1796/1801 (SA).

348 NBC 417R Township of Hoyland Plan 1818 (BA); A/3491/Z/1/1 Collieries Map 1757 (BA).

349 Clayton 1973, 51.

350 Ibid, 105.

351 Pearce 2017, 5 and GIS transcription.

352 Hunter 1831, 101; Clayton 1973, 16.

353 Information from Ian Ollerenshaw.

354 Clayton 1973, 6.

355 May 2017a, 11-12.

356 Eyres 1991, 114-16; 118-19.

357 Information from the present owner, and from TNA IR29/43/424, 69: Wath upon Dearne tithe map and commutation, Part 3 of which shows Hoyland, 1842.

358 TNA 1851 England Census: Yorkshire, Nether Hoyland, District 13.

359 OS 6-inch map, Yorkshire 283, surveyed 1849-50, published 1855.

360 Clayton 1973, 64.

361 John Tanner, personal communication.

362 This argument has been put forward by John Tanner.

363 Tegwen Roberts, personal communication, based on research into the census records and 1842 tithe map for Hoyland, carried out by Tegwen Roberts, John Tanner and Chris Jones.

364 Tegwen Roberts, personal communication. This is documented in the Hoyland UDC Plans (BA).

365 Hoyland UDC Building Control Plans, 948 (BA).

366 May 2017a, 52-53; May 2017b, 18-19; Housden, S 2018 Report on the Examination of the Barnsley Local Plan, Ref: PINS/R4408/429/12. The Planning Inspectorate, 44.

367 Barnsley Local Plan and Policies Map. adopted January 2019 https://www.barnsley.gov.uk/media/9924/local-plan-adopted.pdf

368 FC/Wath/13L Plan of the Manor of Hoyland 1771 (SA).

369 FC/Wath/14L Draft Hoyland Award map 1794 (SA).

370 NBC 466 (R) 1 and 2, Plans of Milton and Elsecar Ironworks (BA).

371 466 (R) 2. Plan of Milton and Elsecar Ironworks (BA).

372 Royal Commission 1849, 422.

373 Birmingham Archives MS3147/5/688 Boulton and Watt drawings, main series: 1798, 1799.

We are grateful to Christopher Jones for drawing these plans to our attention, and to Nigel Chapman for providing copies.

374 Jones 1998, 121.

375 See for example the puddling furnaces of the Monk Bridge Ironworks, Leeds, in Davis et al 2011, 34-41.

376 May 2016, 44.

377 OS 6-inch map, Yorkshire 283, surveyed 1849-50. Two arcs of similar circular features are marked alongside the canal near the base of the Jump Pit inclined plane, and labelled 'Coke Kilns'. That they were not labelled as such at Milton may be explained by their presence within the overall complex of the Milton Iron Works.

378 Hayman 2005, fig. 88; http://www.ggat.org.uk/ynys_fach_excav/highslide/IMAGES/LARGE/recon4.jpg

379 Lodge 1974, 237.

380 Ibid, 239.

381 Ibid, 237.

382 Ibid, 248.

383 Pearce 2017, 8-9.

384 Stuart Palmer, *pers comm* 2017.

385 Linford et al 2017.

386 Ibid, 5 and Fig.10.

387 Four lengthy newspaper articles, each entitled 'A visit to the Milton and Elsecar Ironworks' are stored in the Goodchild Collection at Wakefield Archives. These serialise a single visit to the works dated on the strength of internal evidence to the early- or mid-1870s. The articles are evidently from a local newspaper, but the source has not been identified at the time of writing (see endnote 180).

388 Jackson 2019.

389 Census Returns for England and Wales, 1851 and 1861. Yorkshire, Parish of Hoyland Nether. Accessed through: Ancestry.com. *1851 England Census* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2005.

390 May 2017, 20, 28.

391 Harrison 2017, 101.

392 Timmins 2013, 111.

393 See Wikipedia entry for Ian John McKay, VC (1953-1982).

394 FC/Wath/13L Plan of the Manor of Hoyland 1771; FC/Wath/14L Draft Hoyland Award Map 1794 (SA).

395 The wide spread of allotments is marked on the OS 1966 6-inch map together with a path fol-

lowing the old incline railway; these had been removed, along with the gasworks, by the time of the 1980 edition.

396 Pearce 2017.

397 FC Wath 13L Plan of the Manor of Hoyland 1771 (SA).

398 The stone slate roof was in situ in 1986 when the building was listed.

399 Ayres 1991, 114-16; 118-19.

400 Tegwen Roberts, personal communication.

401 The following information on the 1930s Ship Inn was provided by Tegwen Roberts. A plan of the new pub can be found among the Hoyland UDC Building Control Plans.

402 Voil de 1943, 8-11.

403 Ibid, 12.

404 Graham Noble, personal communication.

405 Clayton 1974, 38.

406 Tegwen Roberts, personal communication.

407 We are grateful to Tegwen Roberts for this information, which is from Geoffrey Howse's reseach into Hoyland.

408 See Cavanagh 2017, 190-2 for a discussion on lodging in Elsecar.

409 WWM/G/45 Letter and printed rules and regulations relating to Lodging Houses 1854 (SA).

410 Tegwen Roberts, personal communication.

411 Voil de 1943, 20.

412 *Sheffield Independent* 28th November 1931.

413 Voil de, 15.

414 Ibid.

415 Graham Noble, personal communication.

416 As shown in the Hoyland UDC Plans (BA). We are grateful to Tegwen Roberts for this information.

417 A/3706 Z/1/1, Hugh Jones, Elsecar Now Photograph albums, 1980s (BA). We are grateful to Tegwen Roberts for this information.

418 Unknown 1903. *The Coronation History of the Barnsley British Co-operative Society Limited. 1862-1902*. Manchester, Co-operative Wholesale Society's Printing Works. Pp. 182-85.

419 UDC Plan 985 (BA).

420 Lodge 1974.

421 Cinema Treasures website. Page on the Futurist Cinema, 58 Hill Street, Elsecar http://cinematreasures.org/theaters/18473 Accessed 8th March 2019. See also James Bentley Archive (private collection), photograph of the Electra Palace Picture House Cinema Hoyland Road https://www.jbarchive.co.uk/ Accessed 19th July 2019.

422 Voil de 1943, 23.

423 Hoyland Urban District Council Building Control Plan 1252 (BA).

424 Clayton 1973, 105 (footnote).

425 Clayton 1964, 13.

426 Clayton 1974, 40.

427 Lodge 1974, 237-47.

428 Ibid, 249-51.

429 Davies and Udyrysz 2018, 7, Figs 11-13.

430 The smithy and hut are marked on the first OS 25 inch map (1892) to the third edition (1930), after which the area drawn into the development of The Croft. Both had disappeared by the time of the first post-war edition of 1956.

431 Davies and Udyrysz 2018, 6-7, Figs 8-10.

432 Drone imagery was captured by Leeds University during further geophysical surveys of the gasworks in June 2018. Tegwen Roberts *pers comm*.

433 Davies and Udyrysz 2018, 5, Figs 2-4.

434 May 2017a, 52-53; May 2017b, 18-19; Housden, S 2018 Report on the Examination of the Barnsley Local Plan, Ref: PINS/R4408/429/12. The Planning Inspectorate, 44.

435 Barnsley Local Plan and Policies Map. adopted January 2019 https://www.barnsley.gov.uk/media/9924/local-plan-adopted.pdf .

436 FC/Wath/13L Plan of the Manor of Hoyland 1771 (SA); FC/Wath/14L Draft Hoyland Award Map 1794 (SA); OS 1st edition 6-inch map 1850.

437 Voil de 1943, 22-3.

438 Ibid.

439 Pearce 2017.

440 OS 25 inch map, first edition 1892, Yorkshire CCLXXXIII.5 surveyed 1890; 1:10,000 revision 1989.

441 https://hemingfieldcolliery.org/pits-hoyland-silkstone/ (accessed February 2019); OS 2nd edition 25-inch map 1903.

442 Un-catalogued plan of the proposed Elsecar Branch railway route, undated, but presumably around 1850. Marginalia includes 'S.Y.R & River Dun Co: Earl Fitzwilliam's Estate Newman & Sons' and 'Earl Fitzwilliam & S Y R Elsecar Branch' (BA).

443 Ross 2002, 5-6.

444 Ibid.

445 Ibid, 11, Table 1.

446 Ibid, 12-13.

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