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UNIVERSITY OF
BIRMINGHAM

**STOURBRIDGE
SAND CAVERNS**

**ST. JOHN'S ROAD
STOURBRIDGE
WEST MIDLANDS**

Archaeological
Desk-Based
Assessment

September 2008

UNIVERSITY OF
BIRMINGHAM



Project No. 1858

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**STOURBRIDGE SAND CAVERNS
ST. JOHN'S ROAD, STOURBRIDGE
WEST MIDLANDS**

[DMBC HBSMR Ref: 12175]

Archaeological Desk-Based Assessment

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**The Stourbridge Sand Caverns,
St. John's Road, Stourbridge, West Midlands**

Archaeological Desk-Based Assessment, September 2008

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The Stourbridge Sand Caverns St. John's Road, Stourbridge, West Midlands

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SUMMARY

Birmingham Archaeology was commissioned in September 2008 by Dudley Metropolitan Borough Council to undertake an archaeological desk-based assessment in respect of a series of sandstone caverns located below St. John's Road, Stourbridge, West Midlands (centred on NGR SO 90150 84545). The caverns are due to be backfilled following a condition assessment of early 2008, which raised serious concerns regarding the long term stability of the complex. The assessment aimed to collate all existing archaeological and historic information relating to the caverns site and its immediate environs, and to establish their historical context and archaeological potential. No site inspection was undertaken as part of the assessment due to Health and Safety considerations.

The assessment has established that the area of the caverns remained essentially undeveloped until the middle years of the 19th century, when expanding industrialisation gradually encroached onto an area of former fields and gardens. A brewery (the Stourbridge Brewery) was established by a Mr. John Wall, formerly a maltster, at some point between 1837 and 1851, occupying the area directly above the cavern complex. The caverns are commonly held to have been originally excavated as cellarage for this brewery but, though probable, no documentary sources have been identified to definitively support such a conclusion and their origins remain somewhat obscure. They certainly seem to have been sited to exploit the proximity of the Stour River, Stourbridge Canal, the railway goods yards and associated communication networks, either for the receipt of incoming raw materials or for the export of finished products. The Stourbridge Brewery was amalgamated in 1886 to form the North Worcestershire Breweries Company, subsequently being taken over by Wolverhampton and Dudley Breweries and closed soon after 1910, at which time the caverns became obsolete and were abandoned. During World War II, the complex of caverns was refurbished to function as air raid shelters for use by the general public and by pupils and staff of the King Edward VI Grammar School. Following the end of the war, the caverns were once again closed and partially infilled.

The caverns are clearly of significant archaeological interest, both in terms of their original purpose and in their subsequent use as air raid shelters during the Second World War. It is thus recommended that a further stage of archaeological work comprising a detailed survey and analysis of the complex be undertaken in advance of stabilisation works, which it is understood will involve the backfilling of the entire cavern system.

The Stourbridge Sand Caverns St. John's Road, Stourbridge, West Midlands

Archaeological Desk-Based Assessment, September 2008

1 INTRODUCTION

1.1 Background to the Project

- 1.1.1 Birmingham Archaeology was commissioned in September 2008 by Dudley Metropolitan Borough Council (DMBC) to undertake an archaeological desk-based assessment (DBA) in relation to a series of caverns excavated below St. John's Road, Stourbridge, West Midlands (centred on NGR SO 90150 84545; see Figure 1). The caverns are due to be backfilled following a condition assessment of early 2008, which raised serious concerns regarding the long term stability of the complex, the result of increasingly damp conditions and a rise in standing water levels.
- 1.1.2 This report outlines the results of the assessment, which has been prepared in accordance with the Institute of Field Archaeologists *Standard and Guidance for Archaeological Desk-Based Assessment* (IFA 2001).
- 1.1.3 The assessment has been undertaken in accordance with a Written Scheme of Investigation (WSI), prepared by Birmingham Archaeology (2008) and approved by the DMBC Planning Archaeologist (see **Appendix A**).

1.2 Statutory Designations

- 1.2.1 The sandstone caverns are included on the Dudley Metropolitan District Council Sites and Monuments Record (SMR), reference number 12175.

2 AIMS AND OBJECTIVES

- 2.1 The general aim of the archaeological desk-based assessment was to collate existing archaeological and historic information relating to the caverns site and its immediate environs, and to establish their historical context and archaeological potential. A further objective was to assess the necessity for and nature of any further stage of archaeological recording that may be needed by way of mitigation in advance of the infilling of the complex.

3 METHODOLOGY

3.1 Documentary Research

- 3.1.1 A search was made of all relevant and readily available published and unpublished documentary source material, including historic maps and photographs of the site, held by the Worcestershire County Record Office, the Dudley Archives and Local History Service, Coseley, the local studies sections of the Stourbridge Public Library and the libraries of the University of Birmingham. The Dudley Metropolitan Borough Council Sites and Monuments Record (HBSMR), the principal source of archaeological data for the Borough, was also consulted. In addition, King Edward VI Sixth Form College, Stourbridge and Marston's Plc (formerly Wolverhampton and Dudley Breweries) were contacted. A number of drawings and photographs of the tunnel complex resulting from

previous stability inspections were made available for inspection by the engineers department of DMBC.

3.2 Site Assessment

- 3.2.1 The undertaking of a site visit and assessment was not possible during the course of the current desk-based assessment. This is as a result of significant logistical and Health and Safety concerns regarding access to the complex and the financial implications of arranging safe access. The current Desk-Based Assessment is thus based upon available documentary sources alone.

4 SITE LOCATION AND GEOLOGY

4.1 Site Location

- 4.1.1 The sand caverns are located on the north of Stourbridge town centre extending below the north-east section of the St. John's Road ring road, slightly to the north of the junction with Duke Street and are centred on NGR SO 90150 84545 (Figures 1 and 2; Plates 1 - 3). Formerly accessed from the grounds of the King Edward VI College to the west, the present access, which may constitute an original access route, is via a long, narrow tunnel leading from the Mill Race Lane industrial estate to the east. An outline description of the tunnel complex is given below in Section §.9.

4.2 Geology

- 4.2.1 The site of the tunnels is located within beds of Wildmoor Sandstone (Waite 2006, 2) which form part of the lower Sherwood Sandstone Formation of the Triassic period (formerly known as 'Bunter' Sandstone). These sandstones occur across a large area in the locality, from Stourport in the south to Stourbridge in the north and east to west from Bromsgrove to Hagley. Wildmoor sandstone is a red, poorly cemented, thick bedded, fine to medium grained sandstone with numerous mudstone and siltstone beds (*ibid.*). It is usually unsuitable for building stone although some of the lower beds are locally hardened by carbonate of lime and stand out in a rocky form. This is demonstrated at Kinver Edge, where former dwellings are cut into the sandstone cliff (Patrick 2000).

5 GENERAL ARCHAEOLOGICAL AND HISTORICAL CONTEXT

5.1 Early History

- 5.1.1 Historically, Stourbridge forms a part of Old Swinford parish, situated at the far north-eastern corner of Worcestershire, of which the town formed a part until its incorporation into the West Midlands in 1974. The original settlement of the parish was based to the south upon the high ground at Old Swinford (VCH 1913, 213-233). Swinford is mentioned in a Saxon charter of about 950 AD and is recorded in the Domesday Survey (as *Suineforde*), when the manor was in the possession of William Fitz Ansculf, Earl of Dudley. The settlement of Stourbridge was originally known as Bedcote, the name Stourbridge originating with the building of a bridge over the River Stour, and occurring as '*Sturbrug*' and '*Sturebrige*' in a Worcestershire assize roll of 1255 (Haden 1988, 5).

5.2 The Post-Medieval Period

- 5.2.1 In 1482, King Edward IV granted permission for a weekly Tuesday market and two annual fairs at the town of Old Swinford and Stourbridge (Patrick 2000, 4)

and Stourbridge grew to be a thriving market town during the medieval period, due in part to its early development of a cloth and clothing trade (Ellis 2002, 17). Surrounded as it was by heath and hills suitable for the rearing of sheep, and with a plentiful supply of clean water for washing wool, like many English towns, Stourbridge became a centre of woollen cloth production. Occupation centred on a portion of the Wolverhampton to Bromsgrove road, which was later to become the High Street, with the settlement expanding west towards Wollaston and south towards Old Swinford (Patrick 2000, 5).

- 5.2.2 The local coal, limestone and fireclay had been exploited on a small scale from early times but it was the 16th and 17th centuries that saw the birth of the great industrial complex later to be known as the Black Country (Haden, 1980). Glassmakers exiled from Lorraine, France, first arrived in the town in the mid-17th century, drawn by the high quality local sources of sand and clay as well as supplies of coal, and established an industry for which the town would later become internationally renowned.

5.3 The 18th Century

- 5.3.1 The impact of the Industrial Revolution of the 18th century was felt strongly in Stourbridge where the woollen trade, in decline from the 17th century, was overtaken by the production of ironwork, edge tools, nails, chain, bricks and heavy engineering. Stourbridge's importance as an industrial and commercial centre was greatly enhanced by the arrival of the canal system in the late 18th century. The Stourbridge and Dudley canals were originally proposed as a single canal scheme in 1775 (Hadfield 1966, 73), but were eventually authorised separately, the Stourbridge branch by 'An Act for making and maintaining a navigable canal from or near the town of Stourbridge, in the County of Worcester' of 1776;¹ the engineer was Thomas Dadford and work was largely completed by 1779. It served to link the Staffordshire and Worcestershire canal (at Stourton Junction, affording access to traffic from the River Severn) with the Dudley No.1 Canal, and hence, via the Birmingham Canal Navigations (BCN), to Birmingham and the Black Country. At Wordsley Junction, the Stourbridge Town Arm headed south-east into the town of Stourbridge.

5.4 The 19th Century

- 5.4.1 As the 19th century advanced, new industries were introduced, forges and factories sprang up and more and better dwellings were erected for the increasing population, which rose by 300% during the course of the century (Perry 2001, 85). Industrial growth was centred on the eastern part of the town, with residential development being located outside of the core at Oldswinford, Wollaston and Norton. As with many burgeoning industrial towns, large swathes of poor quality housing and small workshops grew to accommodate the expanding population, here centred on Lye Waste.
- 5.4.2 The first railway, the Oxford, Worcester and Wolverhampton Company (later the West Midlands Railway Company), reached Stourbridge in 1852 (Perry 2001, 102). A branch railway line from Stourbridge Junction station, via the Town Station to Stourbridge Basin to the north-east of the town was built in the 1850s, the basin serving as the interchange with the canal system. A large area of sidings and associated goods sheds developed on the north bank of the Stour, immediately north-east of the site occupied by the caverns currently under consideration.

¹ Birmingham University ML Spec.Coll r q HE 438. S71.

6 MAP REGRESSION

6.1 Early Maps

- 6.1.1 The earliest known map of Stourbridge dates to 1781 (see Perry 2001, 69; fig. 29);² the plan is somewhat schematic in nature, not allowing for detailed conclusions to be drawn about individual buildings, though it does indicate that the area to the east of High Street towards the Stour was undeveloped fields and gardens at that date. Mill Street (at that time, Mill Lane) was fairly well developed as far as the junction with Giles Hill which is clearly discernible, and the line of the later Duke Street is suggested by the line of a possible trackway.
- 6.1.2 Scott's plan of 1802 (see Perry 2001, 82; fig. 38) again indicates the area between High Street and Mill Street/The Cliff as undeveloped land, with buildings concentrated towards the northern end of Mill Street up to its junction with Giles Hill. Duke Street would appear still not to have been laid out, or comprised simply a short lane leading northwards off Coventry Street.
- 6.1.3 By the time of John Wood's '*Plan of Stourbridge from an Actual Survey*' of 1837 (Figure 3), Duke Street had become established, and is clearly labelled. The area between High Street to the west and Mill Street/The Cliff to the east remains essentially undeveloped, though a concentration of buildings had become established around the central area of Duke Street. The area to the east is shown as being in the ownership of Joseph Pitman Esq., listed in Pigot's Directory of 1828 (p.877) as a tanner, whose residence is shown fronting High Street at the corner of Giles Hill and whose extensive works were located on the northern side of Mill Street adjacent to the river. To the east of Pitman's land ran The Cliff, an extension of Mill Street running approximately north-south to join Coventry Street, and east of this, a steep incline sloping down to the River Stour. An isolated structure is shown east of The Cliff at approximately the location of the entrance to the cavern system.

6.2 Ordnance Survey Maps

- 6.2.1 The Ordnance Survey County Series 1:2500 1st edition map of 1885 (Figure 4) shows the continuing development along Duke Street, with a brewery building first indicated to the eastern side of the road, occupying the area directly above the main area of the tunnel complex. A '*Parchment Works*' had been established on Pitman's land to the east of the brewery site, on the western side of The Cliff, with further associated development on the eastern side of the road.³ Pitman's original skinning premises on the north side of Mill Street had been significantly enlarged with four ranges of buildings arranged around a central block, together labelled '*Leather and Parchment Works*'. Kelly's Directory of 1896 (p.221) reflects the state of development shown in this map, describing the large ironworks of William Orme Foster Esq (the Stourbridge Forge) and relating '...there is also a brewery, malthouse, skinyard, parchment manufactory, glue works and many glassworks in the area'.
- 6.2.2 The single greatest development by this date was the arrival of the railway in 1852, and the associated sidings and goods yards which occupied the east bank of the Stour opposite Pitman's Works (compare Figures 3 and 4).
- 6.2.3 The Ordnance Survey County Series 1:2500 1st revision map of 1903 (Figure 5) shows only limited changes from the 1885 edition, the principal development

² WCRO: BA 3762/149

³ A surviving two-storey brick range and chimney stack (Plate 6) may represent a survival from these buildings.

being the extension of the North Worcestershire Brewery site to the eastern side of Duke Street, while to the north of the current study area, the '*Forward Works*' of Palfrey and Ick are shown to the south of Giles Hill (here labelled Cliff Hill).

- 6.2.4 By the time of the Ordnance Survey County Series 1:2500 2nd revision map of 1919/20 (Figure 6), the North Worcestershire Breweries premises are labelled as being 'disused', a development which occurred following the purchase of the company by Wolverhampton and Dudley Breweries in 1910. The parchment works of the 1903 edition are here labelled '*Leather Works*', representing the premises of W J Turney.
- 6.2.5 The Ordnance Survey editions of 1938 and 1956 (Figures 7 and 8) show little significant change, though the buildings of the North Worcestershire Breweries had been adapted by 1938 for use by the Medusa Mills (Felts and Fillings).

7 DEVELOPMENT OF THE STUDY AREA

7.1 The Duke Street Brewery

- 7.1.1 The first reference in the trade directories to a brewery located in Duke Street is found in Slater's Directory of 1851 (p.132) which lists John Wall as the proprietor;⁴ Littlebury's Directory of 1872 lists the executors of John Wall, and names the premises as the Stourbridge Brewery. Kelly's directories of 1884 (p.1276), 1892 (p.310) and 1896 (p.374) list Haskew, Whitwell and Hand as brewers in Duke Street. The North Worcestershire Breweries Ltd is first listed in Kelly's directory of 1901 (p.406) and last listed in Coe and Coe's Directory of Worcestershire of 1911 (p.111). No brewers are listed in Duke Street in Kelly's Directory of 1912. The brewery had evidently ceased production at this date, reflected in the buildings being annotated as 'disused' in the Ordnance Survey edition of 1919/20 (Figure 6).
- 7.1.2 The Stourbridge Brewery was amalgamated with the Rowley Brewery (Black Heath), the White Swan Brewery (Oldbury) and the Royal Oak Brewery (Brierley Hill) in 1886 forming the North Worcestershire Breweries Company, which also had a combined total of 135 tied-houses. Brewing was thereafter concentrated on the Stourbridge site at Duke Street (McKenna 2005, 103). The brewery premises were reconstructed after a fire in 1897, to designs by the architects Johnson Charles and Son while a new bottling store was erected in 1906/7, by the architects Folkes and Folkes of Hagley Road, Stourbridge.⁵ The firm was taken over by Wolverhampton and Dudley Breweries (now Marston's Plc) in 1910 (*ibid.*) though it was apparently out of production by 1919; the implication being that W&DB purchased the brewery in order to take control of the tied-houses as opposed to the additional brewing capacity. A2A list various deeds and drawings related to tied houses of the North Worcestershire Breweries,⁶ though no records pertaining to the Duke Street brewery itself.

⁴ John Wall is listed (as a maltster) operating in High Street in Pigot's Directory of 1842 (p. 36), and again in Duke Street and High Street in the PO directory of 1850.

⁵ WCRO: 705:399/8008/215/ii

⁶

<http://www.a2a.org.uk/search/doclist.asp?nb=0&nbKey=1&com=1&keyword=north%20worcestershire%20breweries&properties=0601>

7.2 The Stourbridge Ring Road

- 7.2.1 A comparison of historical Ordnance Survey mapping with a modern aerial view of the area (Figure 9) clearly illustrates the dramatic changes to the area wrought by the creation of an orbital ring road (Plates 1-3), officially opened by Viscount Cobham in November 1969 (Perry 2001, 216). The creation of the ring road greatly disrupted the historic street pattern of the town and effectively isolated the historic centre. The eastern arm of the ring road utilised and extended the line of St. John's Road northwards, curtailing Coventry Street and obliterating the northern end of Duke Street, which involved the demolition of the Medusa Mills (former Brewery) buildings.
- 7.2.2 The area to the east of the ring road to either side of the channelled Stour river has subsequently been redeveloped as the Mill Race Lane industrial estate, with associated car parking areas. An isolated two-storey brick structure with stack (Plate 4) represents a sole survival of the former leather works of W J Turney (closed 1957) rising above 'The Cliff' pathway. The eastern retaining wall of The Cliff survives to the western side of the car park area, below Turney's works, and includes a blocked doorway (Plate 5) serving the eastern access to the cavern complex.

8 SITE ASSESSMENT

- 8.1 No assessment of the cavern complex was possible during the present study due to lack of physical accessibility, the result of Health and Safety concerns and the financial implications of arranging safe access. It is understood that access to the caverns will only be possible immediately prior to the proposed stabilisation works (R Morgan DMBC, *pers. comm.*). The description of the cavern complex included below (Section 9.9) is based entirely upon descriptions arising from previous inspections.

9 THE CAVERN COMPLEX

9.1 Summary Description of the Caverns⁷

- 9.1.1 The complex of caverns comprises a series of two sets of parallel galleries, approximately 2.5m wide x 2.75m high, cut into the natural sandstone extending perpendicularly to either side of a central corridor aligned approximately east-west (Figure 10). The caverns vary in height between 2.00 and 2.45m with a varying thickness of rock overburden, down to a minimum extrapolated depth of 2.35m below the overlying road surface (Charlesworth 2007, 3). Entry to the caverns is gained via paired entrances to the west within the grounds of King Edward VI College (presently blocked) and to the east via a long, narrow tunnel leading from the Mill Race Lane industrial estate on the western side of the channelled Stour River. In addition, a spiral stair rises from the terminal of one of the southern galleries (beneath the current ring road).
- 9.1.2 The principal access route from the west is formed of two parallel, descending flights of concrete stairs, divided by a brick partition. The northern flight descends straight from the grounds of the College into the westernmost of the southern galleries, while the southern flight includes a dog-leg turn and joins the southern end of the second gallery to the east.

⁷ Based upon Condition Assessment reports prepared by Johnson, Poole and Bloomer for DMBC (Waite, 2006; Charlesworth 2007).

9.1.3 The central corridor is aligned approximately east-west, floored in brick and includes a central drainage channel. It terminates in a domed terminus standing 4.2m high to the west, while to the east a narrow, brick-lined tunnel (2.15m high x 0.98m wide) leads eastwards to a doorway within the retaining wall below 'The Cliff' path overlooking the Mill Race Lane industrial estate. A total of nine side galleries are arranged to either side of the central corridor, four to the north and five to the south. Low tunnels interconnect the terminal ends of the side galleries. The galleries display certain common characteristics, being floored in brick with central drainage channels though details of length, height and profile vary. A number of galleries display signs of having been scoured out to form domed terminuses, possibly to house ventilation fans⁸ several include vertical shafts rising from the crown of the vault, while a spiral staircase rises from the terminal of the one of the southern galleries. The easternmost north gallery includes a small void in the floor, partially exposing a possible lower level cavern, filled with water, the extent of which is not known (Waite 2007, 4). Each gallery narrows at the junction with the main corridor with the exception of the easternmost south gallery, which is wider and taller than the other galleries.

9.2 Known Development of the Caverns

9.2.1 The caverns are commonly held to have been originally excavated as cellarge for the Stourbridge Brewery (later North Worcestershire Breweries), though no documentary sources have been identified during the course of the current project to definitively support such a conclusion and their origins remain somewhat obscure. Whatever the origins of the caverns, with the closure of the North Worcestershire Breweries soon after 1910, they became obsolete and were abandoned and partially backfilled.

9.2.2 During World War II, the complex of caverns was emptied of backfill and refurbished to function as air raid shelters, providing accommodation for 1000 individuals; 600 places assigned for staff and pupils from the King Edward VI Grammar School and 400 places for the general public (Sanders, undated). School and public were provided with independent means of access to the caverns, the school entrance descending from the playground opposite 'Block C' and the public entrance on land adjacent to Duke Street between the school caretaker's house and George Wright's bakery (*ibid.*). The shelters were equipped with benches of concrete and wooden slat construction within the side galleries, were lit by electricity (with a chamber accommodating a back-up generator), and included rudimentary chemical-toilets and possibly cooking facilities (Waite 2007, 4).

9.2.3 Following the end of the war, the caverns were once again closed and, in the spring of 1946, the entrances were demolished and closed over, with loose rubble being tipped down the entrance tunnels.

10 DISCUSSION AND RECOMMENDATIONS

10.1 Discussion

10.1.1 Man-made sandstone caverns are known from a number of towns on the lower Triassic sandstones fringing the Midland basins, for example at Stockport, Chester, Hawkstone, Bridgnorth and Kinver (Waltham 1992, 1). More famously an extensive system of caves exist within the Sherwood Sandstones below the city centre of Nottingham where a variety of uses have been identified including

⁸ Letter from N J Waite of Johnson, Poole and Bloomer to RJ Morgan (DMBC) dated 11.09.86.

storerooms, basements, factories, pub and brewery cellars, residences and air raid shelters (*ibid.*). Few of the caverns have a primary function as mines due to the poor quality of the stone as a building material, and their prevalence reflects the relative ease with which the strata can be excavated using only hand tools, which makes them possibly more economical than building cellars by more traditional methods.

- 10.1.2 The current desk-based assessment has allowed for the Stourbridge cavern complex to be set within a loose historical framework. The absence of any documents directly related to the caverns themselves, however, together with the unfeasibility of a site inspection, preclude any hard and fast conclusions being drawn at this stage as to their origins and development.
- 10.1.3 It is commonly held that the complex was originally excavated for cellaring of the Duke Street (Stourbridge) Brewery. Should this be the case, then they would date to some point between 1837, when the brewery is not marked on Wood's map of Stourbridge (Figure 3) and 1851 when John Wall is first listed as maintaining a brewery in Duke Street. The caverns would have presented ideal conditions for the storage of beer, providing a cool, consistent temperature. However, the arrangements and proportions of the complex would appear, from the available reference materials, to be somewhat constricted for brewery cellaring, especially if purpose-built.⁹ The possibility therefore exists that the caverns pre-date the establishment of the Stourbridge Brewery and were simply re-used for cellaring. Reference to Wood's map indicates a series of buildings around the centre of Duke Street which may have had access to the caverns, though the nature of these buildings, and thus their requirement for cellaring/storage, has not been established. The Post Office Directory of Birmingham Staffordshire and Worcestershire lists Henry Harris (coal merchant), Richard Williams (engineer) and John Wall and Co. (Maltster) as operating from Duke Street in 1850.
- 10.1.4 Even without the benefit of a site inspection, it is apparent that the caverns show clear signs of chronological development, most apparent in the variety of profile forms used within the construction of the side galleries described in the 2007 stability assessment (Waite 2007). The brick-lined tunnel leading eastwards from the central corridor towards the Stour River is of particular interest, though its chronological relationship with the remainder of the complex is not possible to define from the available sources. It would seem logical to suppose that the tunnel represents an original feature, providing as it does, direct access to the Stour, the canal basin, wharfs and railway sidings on the far side of the river, thus providing loading and unloading facilities for import of raw materials and export of end products to the transport networks. However, the brick lined nature of its construction has led to its being previously interpreted as a secondary addition (Sanders, undated).

10.2 Archaeological Potential of the Cavern Complex

- 10.2.1 The caverns are clearly of significant archaeological interest, both in terms of their original purpose and in their subsequent use as air raid shelters during the Second World War. A number of questions regarding the origins and development of the complex have been raised by the current assessment (see above) which may be addressed, at least in part, by a detailed inspection of the extant remains. While it is debatable whether a detailed record would be able to establish a definitive date for their formation, constructional details may well

⁹ Waltham (1992, 13-14) discusses a similar system of mid-19th-century, parallel brewery storage caverns at Radford Road, Nottingham; in this case the individual galleries were 5m wide.

indicate former uses, with attendant implications for their original function and, by association, date of origin.

- 10.2.2 The re-use of the caverns during the Second World War is also of intrinsic archaeological and historical interest. Over the past decade, recent military heritage has gained not only in academic credibility but in prominence within the educational curricula (Schofield 2004, 2), and thus the use of the Stourbridge caverns for this purpose can be seen to be of significance.

10.3 Suggested Further Archaeological Recording

- 10.3.1 It is recommended that the opportunity is taken before stabilisation works are undertaken to implement a programme of archaeological recording to ensure that as full a record as possible of the cavern complex is made. Such a programme of work should seek to generate a high-resolution base survey of the cavern complex and to accurately place the caverns in relation to surface features, structures and buildings. Survey work should be accompanied by an archaeological inspection of the complex to identify and record details of construction, evidence of chronological development and indications of use pertaining to both its original function and to its 20th-century re-use.
- 10.3.2 Under ideal circumstances the caverns would be recorded by means of high-resolution laser scanning, a technique which lends itself admirably to the three-dimensional spacial aspects of the recording of a cavern complex. Base survey, by whatever means, should be undertaken in conjunction with a thorough archaeological analysis, photographic and written record to a level commensurate with a 'Level 3' record as defined by English Heritage in '*Understanding Historic Buildings: A Guide to Good Recording Practice*' (EH, 2006).

11 ACKNOWLEDGEMENTS

- 11.1 The project was commissioned by Dudley Metropolitan Borough Council, Engineering Department; thanks are extended to Mr. Roger Morgan and Ms Fiona Shivlock for help and cooperation throughout the course of the project. Thanks also to Mr John Hemingway of DMBC Historic Environment team. Thanks are also due to the staff of the Worcestershire County Record Office, the Dudley Archives and Local History Service and the Stourbridge Public Library.
- 11.2 The historical research was undertaken by Mr Ric Tyler AIFA of Birmingham Archaeology who also produced and illustrated the current report. The report was reviewed and edited Dr Malcolm Hislop MIFA of Birmingham Archaeology.

12 SOURCES

(a) *Cartographic Sources* (in chronological order)

- 1781 Plan of Stourbridge (WCRO: BA 3762/149)
- 1802 John Scott's 'Plan of the Town of Stourbridge in Worcestershire'
- 1837 John Wood's 'Plan of Stourbridge from an actual survey'.
- 1885 Ordnance Survey County Series 1:2500 map, 1st Edition.
- 1903 Ordnance Survey County Series 1:2500 map, 1st Revision.
- 1919/20 Ordnance Survey County Series 1:2500 map, 2nd Revision.
- 1938 Ordnance Survey National Grid Series 1:2500 map, 1st Edition.
- 1956 Ordnance Survey National Grid Series 1:2500 map, 1st Revision.

(b) *Documentary Sources*

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(c) *On-line sources*

A2A (the on-line resource of the National Archives)

<http://www.nationalarchives.gov.uk/a2a>

British History On-line (Victoria County History)

<http://www.british-history.ac.uk>

(d) *Trade Directories* (in chronological order)

- 1828 Pigot's Directory
- 1850 PO Directory
- 1851 Slater's Directory
- 1872 Littlebury's Directory
- 1884 Kelly's Directory
- 1892 Kelly's Directory
- 1896 Kelly's Directory
- 1902 Littlebury's Directory
- 1911 Coe and Coe's Directory
- 1912 Kelly's Directory
- 1914 Kelly's Directory

APPENDIX A: WRITTEN SCHEME OF INVESTIGATION (WSI)

1 INTRODUCTION

- 1.1 The following document represents a Written Scheme of Investigation (WSI) for an archaeological desk-based assessment to be undertaken in respect of a series of caverns excavated below St John's Road, Stourbridge, West Midlands. The caverns are due to be infilled following a stability inspection of 2008 which raised serious concerns regarding the long-term stability of the complex, the result of increasingly damp conditions and a rise in standing water levels.

2 SITE LOCATION AND DESCRIPTION

- 2.1 The sand caverns are located on the north of Stourbridge town centre extending from below the St. John's Road ring road slightly to the north of the junction with Duke Street and are centred on NGR SO 90150 84545. Originally accessed from the grounds of the former Grammar School, the present access is via a tunnel leading from the Mill Race Lane industrial estate.
- 2.2 The complex of caverns comprises a series of two sets of parallel tunnels, approximately 2.5m wide x 2.75m high, extending perpendicularly from a central corridor aligned approximately east-west, running immediately below the ring road.

3 AIMS AND OBJECTIVES

- 3.1 The general aim of the archaeological desk-based assessment is to collate existing archaeological and historic information relating to the caverns site and its immediate environs, and to establish their historical context. A further objective is to assess the necessity for and nature of any further stage of archaeological recording that may be needed by way of mitigation in advance of the infilling of the complex.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 4.1 It is understood that the caverns were originally formed in the latter part of the 18th century, cut into the natural sandstone to create cellars and storage for a local brewery. Infilled with boiler ash in c.1920-30, the caverns were subsequently cleared out in the 1940s for use as air raid shelters by the nearby Stourbridge Grammar School (now King Edward VI College).

5 METHODOLOGY

5.1 Documentary Research

- 5.1.1 A search will be made of all relevant and readily available published and unpublished documentary source material, including historic maps and photographs of the site, held by the Dudley Archives and Local History Service, Coseley, the local studies sections of the Dudley and Stourbridge public libraries and the libraries of the University of Birmingham. The Dudley Metropolitan Borough Council Sites and Monuments Record (SMR), the principal source of archaeological data for the Borough, will also be consulted.

- 5.1.2 Further, reference will be made to a series of records held by the DMBC Engineers Department who retain a collection of drawings and photographs of the complex acquired during past stability inspections.
- 5.1.3 The King Edward VI Sixth Form College (formerly Stourbridge Grammar School) will be contacted in respect of any archival materials relating to the air raid shelter usage of the complex.

5.2 Site Assessment

- 5.2.1 Further to information supplied by Mr Roger Morgan, chief engineer for DBMC (telephone conversation of 10.09.08), it has been established that a site visit will not be feasible during the course of the current desk-based assessment. This is as a result of significant logistical and Health and Safety concerns regarding access to the complex and the financial implications of arranging safe access. **The Desk-Based Assessment will thus be based upon available documentary sources alone in this instance.**

6 REPORT FORMAT

- 6.1 Upon completion of the documentary research, the results of the desk-based assessment will be presented in a report containing the following information:

Text

- Non-technical summary
- Introduction
- Site location and description
- Aims and objectives
- Methodology
- Archaeological and historical context
- Historical development of the cavern complex as evident from documentary sources
- Map regression analysis
- Discussion
- Statement of archaeological significance and potential
- Suggested further archaeological recording measures
- List of sources consulted

Figures

- Appropriate illustrations, including location plan and a selection of historic maps, together with a selection of photographs to illustrate the physical context of the site and present condition of the complex (if images are available from other sources).

7 STAFFING

- 7.1 Documentary research and report preparation will be undertaken by Mr Ric Tyler AIFA of Birmingham Archaeology with specialist advice from Ms Kirsty Nichol MIFA. The final report will be reviewed by Dr Malcolm Hislop MIFA, Project Manager and Research Fellow (Built Heritage and Conservation), Birmingham Archaeology.

8 TIMETABLE

- 8.1 Upon formal instruction to proceed, it is envisaged that documentary research will be completed before the end of September 2008. The report would ordinarily be completed within three weeks of the project start date.

9 PROFESSIONAL STANDARDS

- 9.1 The project will follow the requirements set down in the *Standard and Guidance for Archaeological Desk-Based Assessment* (IFA, 2001). The project will further follow any specific guidelines laid down by the DMBC planning archaeologist in the project brief.
- 9.2 Birmingham Archaeology is a Registered Archaeological Organisation (RAO) with the Institute of Field Archaeologists (IFA); all project staff will adhere to the *Code of Conduct of the Institute of Field Archaeologists* (IFA, 2002) at all times.

10 HEALTH AND SAFETY

- 10.1 All current health and safety legislation, regulations and guidance will be complied with during the course of the project. As noted above (section 5.2.1), access to the cavern complex is logistically unfeasible as a part of the current project.

11 REFERENCES

Institute of Field Archaeologists, 2001. *Standard and guidance for archaeological desk-based assessment*.

Institute of Field Archaeologists, 2002. *Code of Conduct*.

Birmingham Archaeology

11.09.08





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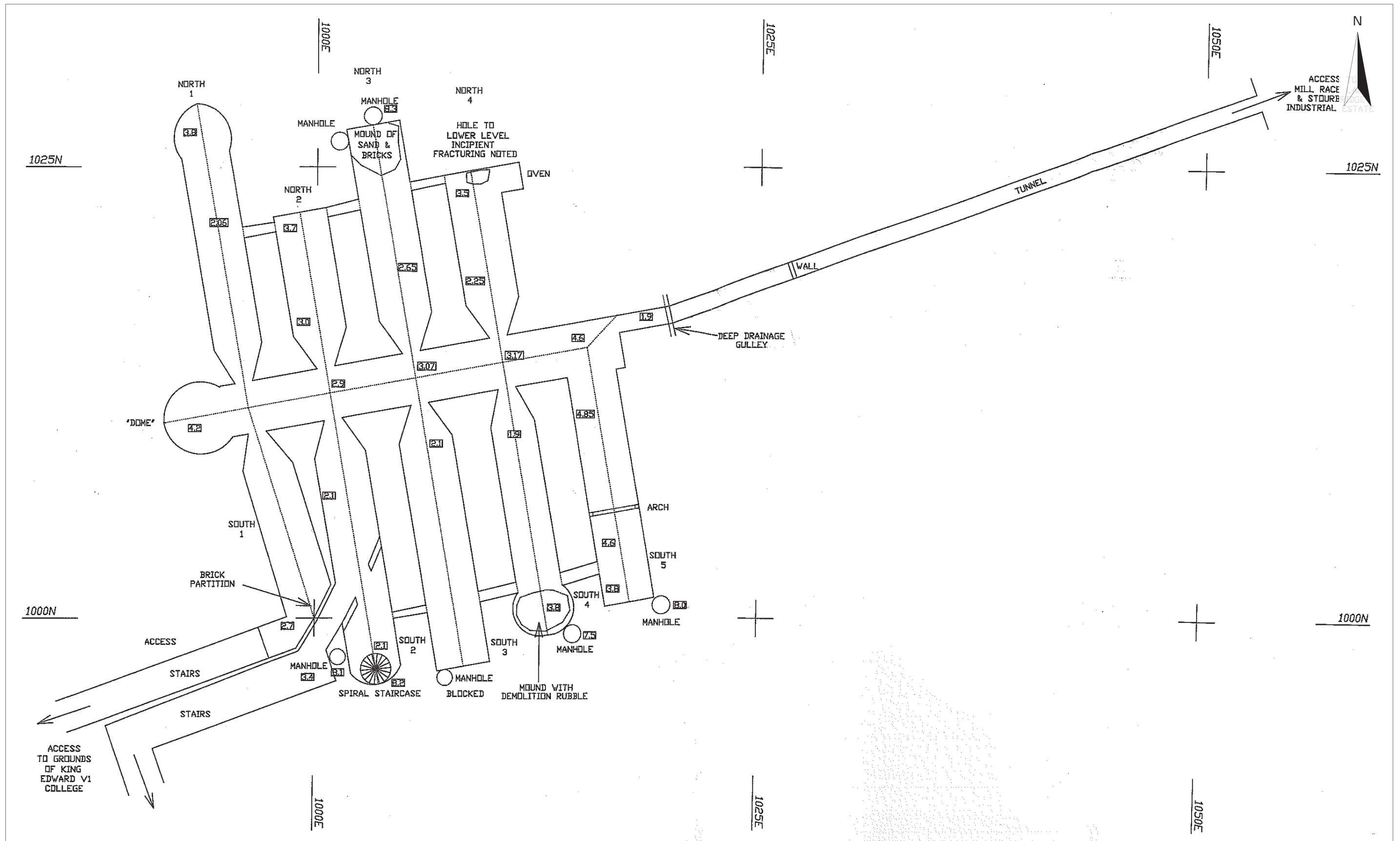
Figure 6 : Ordnance Survey County Series 2nd Revision 1:2500 map of 1919/20







Image © Google Earth



Reproduced from Johnson Poole and Bloomer Drg. No. FS321/03 (based upon DMBC survey MS446/2)



Plate 1: St. John's Road section of ring-road looking south.



Plate 2: St. John's Road section of ring-road looking north.



Plate 3: Truncated section of Duke Street (right) with ring road to left.



Plate 4: 19th /early 20th-century industrial ranges of (formerly Turney's Leather Works) overlooking western car park area and channelled River Stour.



Plate 5: Blocked doorway to cavern complex (right) within retaining wall to west side of car park.