

ARCHAEOLOGICAL INVESTIGATIONS  
AT  
SUNRISE BUSINESS PARK,  
WOLLASTON,  
STOURBRIDGE



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## **Archaeological investigations at Sunrise Business Park, Wollaston, Stourbridge**

Andrew Walsh and Tim Cornah

With a contribution by Dennis Williams

### **Summary**

An archaeological watching brief was undertaken at Sunrise Business Park, Wollaston, Stourbridge (centred on NGR SO 895 852) in advance of a residential development. It was undertaken on behalf of the Environmental Dimension Partnership, on behalf of their client, Revelan Group Plc, following the submission of a planning application to Dudley Metropolitan Borough Council (reference number P11/0106). A desk-based assessment had identified the potential for the truncated remains of a mill, located on the River Stour, to survive on the site. The mill was first recorded in 1532 and it survived up until the 1960s, when it was demolished to construct a large industrial works.

No structural remains relating to the medieval or early post-medieval mill were identified, although a section of river channel, which appears to have been straightened prior to 1699, was exposed up stream of the mill.

The principle feature identified on the site was the main block of the mill. Historic mapping suggests one wall of the structure could have dated to the 18<sup>th</sup> century, although most of the other walls and internal features probably dated to between 1885 and 1902 when there was a period of intensive redevelopment on the site. A number of brick or concrete structures were identified within the mill. These related to the various manufacturing processes which took place on the site during the 19<sup>th</sup> and 20<sup>th</sup> centuries.

Other features identified on the site included part of two buildings, both dating to c 1760 to 1827, one of which may have been the miller's house, and the other built to house a wheel or machinery. Part of a mill pond and a water management system, which probably also dated to between c 1760 and 1827, were also identified.

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## Report

### 1 Background

#### 1.1 Reasons for the project

A programme of archaeological monitoring was undertaken at Sunrise Business Park, Wollaston, Stourbridge (centred on NGR SO 895 852) by Worcestershire Archaeology (WA). It was undertaken for the Environmental Dimension Partnership (EDP) on behalf of their client Revelan Group Plc, following the submission of a planning application for a residential development to Dudley Metropolitan Borough Council (DMBC; reference number P11/0106). The development site was considered to include heritage assets and potential heritage assets, which may have been affected by the application. The monitoring took place during ground levelling and remediation works undertaken in advance of the construction phase of the development.

The project conforms to a Written Scheme of Investigation as prepared by EDP (2013) and for which a project proposal (including detailed specification) was produced by WA (WA 2013). The project also conforms to the *Standard and guidance for an archaeological watching brief* (IfA 2008). The event reference for this project is P4123.

### 2 Aims

Stourbridge Urban Historic Landscape Characterisation states that any remains of the 18<sup>th</sup> or 19<sup>th</sup> century mill, including river channel management would 'be of, at least, regional interest and later structures would be of local interest' (DMBC 2011, 20).

With this in mind the aims of the works were:

- to preserve by record any important archaeological remains uncovered by the ground works contractors operations. Ground works, in the relevant area, would be halted until the remains had been suitably investigated and recorded;
- to retain samples of artefactual and ecofactual material for further study;
- to make the results available to the wider community.

### 3 Methods

#### 3.1 Personnel

The fieldwork was led by Tim Cornah BA who joined Worcestershire Archaeology in 2006 and has been practicing archaeology since 2003. He was assisted in the field by Graham Arnold BA MSc, Richard Bradley BA MA AlfA, Ruth Humphreys BSc MA, Pete Lovett BSc, Mike Nicholson BSc and Andrew Walsh BSc MSc FSA Scot AlfA. The report preparation was led by Andrew Walsh and the project manager responsible for the quality of the project was Tom Vaughan BA MA AlfA. Illustrations were prepared by Carolyn Hunt BSc MlfA. Dennis Williams BSc MA PhD CPhys, MinstP contributed the finds report.

#### 3.2 Documentary research

An HER search and documentary research was undertaken as part of archaeological desk-based assessment produced by EDP in advance of the archaeological works (EDP 2010). Some additional research was undertaken by WA. Published and grey literature sources are listed in the bibliography. Cartographic sources are listed below.

##### *Cartographic sources*

- 1699 Plan of the Parish of Oldswinford, by Josiah Bach. From Old Maps of Stourbridge and the Surrounding Area (<http://www.oldstourbridgemaps.kjdocs.co.uk> )
- c 1760 Plan of Amblecote parish. From Old Maps of Stourbridge and the Surrounding Area (<http://www.oldstourbridgemaps.kjdocs.co.uk> )

- 1774 Plan of the proposed route of the Stourbridge Branch Canal, by Robert Whitworth. From Old Maps of Stourbridge and the Surrounding Area (<http://www.oldstourbridgemaps.kjdocs.co.uk> )
- 1782 Plan of Oldswinford Parish, by Court and Blackden. From Old Maps of Stourbridge and the Surrounding Area (<http://www.oldstourbridgemaps.kjdocs.co.uk> )
- 1827 Plan of Wollaston, attributed to LO Davies (HOW 2004, 105)
- 1828 Plan of the Parish of Oldswinford (EDP 2010, figure 2)
- 1837 Plan of the Hamlet of Amblecote (EDP 2010, figure 2)
- 1848 Plan of Wollaston Hall and Estate as arranged for sale (HOW 2004, 113-114)
- 1<sup>st</sup> edition, 1885, Ordnance Survey, scale 25":1 mile
- 1903 Ordnance Survey, scale 25":1 mile
- 1919-1920 Ordnance Survey, scale 25":1 mile
- 1938 Ordnance Survey, scale 25":1 mile
- 1955-1956 Ordnance Survey, scale 25":1 mile
- c 1956 Nash & Tyzac plan (HOW 2004, 87)
- 1967 Ordnance Survey, scale 25":1 mile

### **3.3 Fieldwork strategy**

A Written Scheme of Investigation was prepared by EDP, and a detailed specification was also produced by WA (WA 2013). Initially the site remediation ground works were monitored under watching brief conditions. This involved the breaking out and removal of concrete, followed by the excavation grubbing out of all concrete and brick remains (Figure 2). Four areas (Figure 2; WB Areas 1-4) were monitored under these conditions but the depth and nature of the excavations, often at over 3m in depth (Plate 1), meant that recording often had to be undertaken from a distance, at the edge of the excavation area or after structures were removed (Plate 2). For example, brick walls, mill stones (Plate 3) and wooden remains (Plate 4) were all frequently observed in the machine bucket.

As a result adjustments were made to the fieldwork strategy. This involved the excavation of five evaluation trenches (5-9) over the approximate location of the mill. These trenches identified structural remains and it was agreed to undertake a strip, map and record operation across the site of the mill. The adjustments to the methodology were agreed upon by EDP, WA, Jayne Pilkington (Senior Conservation Officer, Dudley Metropolitan Borough Council) and the groundworks contractor (McAuliffe).

The strip, map and record operation focused on the central part of the site. Two areas (hereafter Trenches 10 and 11), amounting to just over 5,400m<sup>2</sup> in total, were excavated and recorded (Figure 2). They were divided by a concrete culvert enclosing the present alignment of the River Stour. Deposits not considered to be significant were removed using a 360° mechanical excavator, employing a toothless bucket and breaker, and under archaeological supervision. Surfaces were cleaned and inspected to determine their nature. Deposits were recorded according to standard WA practice (WA 2012).

The watching brief was undertaken between 17 June and 12 August 2013. The evaluation was undertaken between 20 and 21 August 2013, and the strip, map and record operation took place in two stages between 29 August and 24 September 2013. The site reference number and site code given by WA is P4123.

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### 3.4 Artefact methodology, by Dennis Williams

#### 3.4.1 Recovery policy

The artefact recovery policy conformed to standard WA practice (WA 2012, appendix 2).

#### 3.4.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date range was produced for each stratified context. These date ranges were used for determining the broad phases defined for the site. All information was recorded on *pro forma* sheets.

The pottery and ceramic building material was examined under x20 magnification and referenced as appropriate by fabric type and form according to the fabric reference series maintained by the Service (Hurst and Rees 1992 and [www.worcestershireceramics.org](http://www.worcestershireceramics.org)).

#### 3.4.3 Discard policy

The following categories/types of material will be discarded after a period of 6 months following the submission of this report, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository):

- where unstratified
- post-medieval pottery, and;
- generally where material has been assessed as having no obvious grounds for retention.

### 3.5 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural and artefactual evidence, allied to the information derived from other sources.

### 3.6 Topography, geology and archaeological context

The site occupies the base of a broad valley, cut by the River Stour, with only a gentle fall from south to north. This extends from close to 65m above Ordnance Datum (AOD) at the southern tip of the site to slightly in excess of 64m AOD near the northern boundary. The river transects the site, which is bounded to the north by the A461 Wollaston Road, to the east and south-east by the Stourbridge Branch Canal, and to the west and south-west by residential properties. The underlying geology of the site is mapped as bright orange-red to dark brick red sandstone of the Wildmoor Sandstone Formation, overlain by alluvium along the River Stour (BGS 2013).

The archaeological and historical background of the site was examined by the desk-based assessment (EDP 2010). The following is based on that assessment together with further research undertaken by WA.

No archaeological remains dating from the prehistoric or Romano-British periods (500,000BC to 43AD) are recorded on the HER within or near the site.

Since the early medieval period the River Stour, which runs through the development site, has formed the administrative boundary between the township of Wollaston, which was part of Worcestershire, and the manor of Amblecote in Staffordshire. Despite this division the historic development of the whole site appears to have been closely tied to that of Wollaston.

Wollaston probably derives its name from the Old English personal name *Wulflaf* and the suffix *tun*, which is taken to mean 'farm'. The earliest reference to Wollaston is a charter of AD 951-955 (EDP 2010), although the township was not recorded in the Domesday Survey of 1086. There are no records indicating the legal existence of a manor at Wollaston (Chambers 1978), although the owners of the township were described as 'Lords' (HOW 2004, 5) and probably occupied a



message. This was almost certainly located on the site of Wollaston Hall (HER 7565), which was built in 1617 next to a medieval hall and tower. Wollaston Hall was positioned on a small hill 50m west of the development site (Figure 1). Historic mapping indicates that land on both sides of the river would have been meadow during the medieval period (Hemingway 2005a and 2005b).

A mill (HER 4712) belonging to Wollaston Hall was first recorded at the end of the medieval period (1532 AD) and, like the hall, it may have had earlier origins. During the 16<sup>th</sup> century it was grinding grain for flour and in 1592 comprised of two watermills under a single roof (EDP 2010). The earliest plan of Wollaston, dating to 1699, does not illustrate the mill itself, but fields on either side of the location of the mill are named mill meadow. The plan also appears to show that the river to the north and the south of the mill had been straightened and that the road between Wollaston and Amblecote was routed to the south of its present alignment and passed directly by the hall, presumably crossing the river by the mill.

In 1667, the River Stour was canalised between Kidderminster and Stourbridge by Andrew Yarranton to allow the transportation of coal. He 'chose to go round' Wollaston Mill (Hemingway 2005a), and although the canal was quickly abandoned, its alignment to the east of the mill is still visible on a plan of Amblecote parish dating to around 1760. The mill is also recorded on this plan, illustrated as a simple rectangular building straddling the straightened river, with separate channel flaring out past the east side of the mill. The road between Wollaston and Amblecote is illustrated running past the mill. The Wollaston side of the mill is illustrated on a 1782 plan of Oldswinford, showing the road continuing to run past the hall. A group of smaller ancillary buildings are also illustrated on either side of the road, to the south-west of the mill.

A map of the proposed line of the Stourbridge Canal, dating to 1774, shows the road between Wollaston and Amblecote running directly past the hall and mill. Although this is not a detailed map, it does show the mill buildings clustered along the road. The Stourbridge Branch Canal (HER 5865) was completed in 1779, running to the east of the mill along the same course as the 17<sup>th</sup> century canal built by Yarranton.

During the late 18<sup>th</sup> century Wollaston Mill was used for cutting glass and by 1809 it was in use as a 'slitting mill' (EDP 2010). Two similar plans of Wollaston, dating to 1827 and 1828, illustrate the mill as a complex set of buildings. The main building straddling the river in 1760 appears to have been extended to the north. The ancillary buildings visible to the south-west of the mill in 1782 are illustrated as two rows of three cottages, four of which are shown as being inhabited. A larger square-shaped house is now illustrated to their north and the road through the complex has been abandoned in favour of a new alignment passing around to the north of the mill and hall.

Between the mill and the new road alignment a mill pond has been constructed by 1827, and a number of other ancillary buildings have been erected around the mill. To the south-east of the mill a row of seven gardens are illustrated and part of a leat for a mill pond is visible. This mill pond lay beyond the mapped area in Amblecote parish, but it is illustrated on an 1837 plan of Amblecote. This plan shows two mill ponds to the east of the mill, which are separated by a north-east to south-west aligned track running between the mill and a group of buildings located adjacent to the canal.

A sale plan dated 1848 records the mill complex as Lot 9. This is the earliest plan to clearly illustrate the whole site on one plan, and shows the complex as largely unchanged from the 1827 and 1837 plans. The two mill ponds to the east are surrounded by Osier beds, and it clearly illustrates mill leats between the River Stour and the southern mill pond at both the south-west and north-west corners of the pond. It is not clear how the northern pond was fed. The southern part of the site is illustrated as enclosed areas probably representing agricultural fields or formal gardens attached to Wollaston Hall, which is recorded as part of Lot 10.

The first edition Ordnance Survey map, dated 1885, illustrates no major changes to the overall layout of the mill complex from the 1848 plan. The mill is labelled as manufacturing *Spades and Shovels*, and most of the mill buildings appear unchanged. The leat from the river to the south-



west corner of the southern mill pond is not illustrated and had presumably been filled in, and a *Weir* is recorded further north which presumably replaced the leat.

The map also illustrates that the western fringe of the development site continued to hold peripheral elements of Wollaston Hall, which was itself located beyond the development site. These features appear to have comprised formal gardens adjacent to the house, surrounded by open fields. The lack of detail suggests that any formal landscape arrangements, which may have existed prior to the breakup of the estate in 1848, had been lost or discarded. In 1887 the mill was purchased by Isaac Nash and Sons and the company continued to own the site until the early 1950s (HOW 2004, 86-87).

The OS map of 1903 shows that the mill building had been extended further south and north-west than previously, incorporating some of the ancillary buildings into one main block. The small pond to the north-west is no longer illustrated and a scatter of outbuildings and a '*Tank*' are recorded in this area.

The track to the canal has been expanded southwards over the north-west corner of the southern mill pond. The weir no longer appears to have fed the mill ponds to the east of the mill and they are shown as having accumulated marshy vegetation. This strongly suggests that the means of motive power had changed by this date and water management was no longer required.

The 1938 revision of the OS map shows a continued expansion in the building stock occupied by the mill, which is now labelled as *Wollaston Mills* and producing *Edge Tools etc.* The complex of buildings has extended to the north and east. A series of chimney are illustrated indicating power is being provided by coal fired engines. The southern mill pond now survived as nothing more than an oxbow at the north-west end and the northern pond is not illustrated. The in-filled ponds and the area to the south are undeveloped open space.

Beyond the western boundary of the development site, Wollaston Hall has disappeared and a housing estate built in its place. However, the steps down from the house and the associated garden enclosures survived. The south of the development site is shown as undeveloped open space stretching down to meet the canal overflow, which separated it from Bradley's Ironworks beyond.

The 1955-56 OS map illustrates the final layout of the mill and a plan of the site, drawn by an employee and dated to 1956, records the function of the various buildings on the site just before it closed. Although clearly based on a rough sketch it is interesting to note that the direct course of the river, under the mill, is not illustrated and may have been blocked off.

Isaac Nash and Sons merged with Tyzack, and Brades of Oldbury, to form the BNT group in the early 1950s and Wollaston Mills closed in 1957 when the group transferred the tool production to Oldbury. The site was sold to Better Sound Reproduction in 1959 who demolished the mill, realigned and culverted the river, and constructed 200,000 sq ft works across the site (HOW 2004, 103). The works were sold to the Sunrise Medical group in 1997, giving the site its present name.

### **3.7 Land-use**

The standing buildings, constructed during 1960s, had been demolished prior to the works, leaving the concrete floors, and tarmaced roads and car parks in place. The southern area of the site comprised of mature woodland flanked by the canal to the east and the River Stour to the west.

## **4 Structural analysis**

The observed areas and features recorded are shown in Figures 3a-c and 4a-b. The features are discussed by phase and from north to south. The phased features are illustrated in Figures 4a-b. They are overlain on the 1<sup>st</sup> edition 25" to 1 mile OS map (1885) in Figure 5 and the 1955-6 edition in Figure 6. Unless stated otherwise, the walls were constructed of ceramic bricks.

#### **4.1.1 Phase 1: Natural deposits**

Four deposits were observed that may represent natural layers although two of these were only seen in the base of deep trenches so could not be closely analysed.

A yellow clay (303) was seen extending along the western part of WB Area 3 at a depth of c 2.5m below the top of the trench. The deposit appeared sterile but the possibility of it being a redeposited layer cannot be ruled out. Within Evaluation Trench 6, a layer of yellowy orange sands and gravels (614) were observed. Again, this was at too great a depth to be safely investigated so their interpretation could not be confirmed. At the southern end of Trench 11, a yellow brown silty sand (1130) was observed which appeared to be a natural deposit. A red orange natural sand with blocks of sandstone bedrock was also exposed along the western edge of the site where terracing had occurring in the 1960s.

#### **4.1.2 Phase 2: The River Stour**

At the southern edge of Trench 11, feature (1126) was observed cutting natural (1130). It was exposed for approximately 25m in length, aligned roughly north to south, though it was seen turning slightly towards the south-west. To the north the feature was truncated by buildings (1135) and (1136). It was machine and hand excavated to a depth of 1.2m, until the water table was encountered (Plate 5; Figure 7). This feature was probably the top of the west bank of the River Stour, although it was truncated to the east by the concrete culvert built in the 1960s to enclose the realigned river, and the full width of the channel could not be established.

No dating evidence was recovered from the fills, although the lower fills (1128 and 1129) appeared to be dark, ash rich deposits suggesting they probably date from the industrialisation of the area in the late 18<sup>th</sup> century onwards (Plate 5). It is likely that the upper fill (1127) dates to the 20<sup>th</sup> century, and may be contemporary with the construction of structure (1135) to the north (Phase 3), or the redevelopment of the site in the mid 20<sup>th</sup> century (Phase 4).

#### **4.1.3 Phase 3: c 1760-1885**

A number of features identified during the works appear to align with buildings and structures recorded on 19<sup>th</sup> century plans and the 1<sup>st</sup> edition OS map (1885; Figure 5). The origins of these features are not clear but all would appear to post-date the c 1760 plan of Amblecote, with the possible exception of wall (1121).

At the northern end of Trench 10, a brick wall (1003) was observed running roughly south-east to north-west (Plate 6). It formed the retaining wall of the west side of an infilled channel, recorded on the historic mapping as by-passing the eastern side of mill complex. It was also observed in WB Trench 2 as wall (202), and further south it was visible joining brick culvert (1030).

Culvert (1030) was located below the deposits exposed during the strip and map operation. The culvert was orientated south-west to north-east and measured 7.5m in width and 11.5m in length although it was truncated by the realigned river to the west. To the east were a brick arch and two curtain walls, which turned in a northerly direction forming the course of the channel described above. The height of the culvert could not be established due to the presence of water (Plate 7).

The channel, passing around the east side of the mill, was recorded on the historic plan of Amblecote (c 1760), although on this plan it is illustrated as an open water course throughout with no evidence of any features representing culvert (1030) at the southern end. By the 1827 plan of Wollaston the channel appears blocked at the southern end, which presumably indicates the culvert had been constructed between c 1760 and 1827. The retaining wall (202/1003) was probably contemporary with the construction of the culvert.

Immediately south of the culvert, a small L-shaped section of wall (1016) survived which appears to correspond to a small building, which historic mapping indicates was built between 1848 and 1885. It lay immediately east of the River Stour and close to the end of the track between the mill and the canal.

To the south-east of this building were a group of features which related to the track, and the southern mill pond. Although no road surface was observed during the works, the alignment of wall (1025) suggests that it formed a retaining wall between the track and the mill pond (302) to the south. This wall, which was constructed of iron slag bricks, was exposed for 14.60m length and presumably also acted as a dam for the mill pond (Plate 8). To the north a short section of a corresponding brick wall (1029) was also observed. Although the wall was truncated a clear cut (1031) between a disturbed yellowish sandy clay (1032), which would have laid under the track, and rubble infill of the channel to the north, continued on the same alignment towards the north-east.

To the north-east of wall (1025) and cut (1031) was wall (1023/1028). It was orientated south-east to north-west, with the heavily truncated remains of an arch visible on its north-east side (Plate 9). The arch would have carried the track between the mill and canal over a north-west to south-east aligned culvert or channel, with wall (1024) forming the base of the other side of the arch (Plate 10). A brick from wall (1023) dated to 1784-1840 which correlates well with the known date of the construction of the mill ponds, between c 1760 and 1827. The culvert would have allowed water to pass from the mill pond (to the south) into the channel running to the east of the mill (see above), and may have been either a simple overflow outlet or controlled by a sluice gate. Wall (1024) was visible for 3.1m in length and it probably also represents the continuation of the retaining wall between the track and the mill pond.

The south-western end of wall (1025) was constructed of ceramic bricks and was bonded to a culvert (1026; Plate 11). At the entrance to this culvert were the remains of a wooden and iron sluice gate (1027). The culvert measured 4.25m in length although it was truncated to the south-west. These features were also observed in WB Area 4; the culvert was recorded as (401) and the sluice gate as (404; Plate 12). The culvert would have carried water from the mill pond (302) into the river towards the mill. A brick from the culvert was dated to 1650-1750 although historic mapping suggests the mill pond and culvert was probably built between c 1760 and 1827.

South of Trench 10 in WB Area 3, the western edge of mill pond (302) was visible cutting possible natural deposits. A small section of wall aligned roughly east to west was also visible. This may have been be part of the small square building illustrated on the 1848 sale plan or the end of the weir recorded on the 1<sup>st</sup> edition 1885 OS map.

Within Trench 11, fewer remains were observed relating to this phase. Structure (1101/1102) was exposed for 16.75m in length, 7.8m in width and at least 2.2m in depth, although it was truncated to the north and east by the concrete culvert. It was constructed of ceramic and iron slag bricks and was probably built over a number of phases (Plates 13 and 14). The structure incorporated a mortar covered brick culvert (1105) which may have fed water to or from the small mill pond located to the north-west of the mill complex. It aligns with a building that is illustrated on plans from 1827 at the northern end of the mill complex straddling the River Stour. It is unlikely that it is the mill building illustrated on the c 1760 plan, as this building appears to be located further south, but the linear internal layout, illustrated on the 1848 sale plan and 1885 OS map, suggests it may have be used to house a wheel or water driven machinery.

Approximately 23m south-west of Structure (1101/1102/1105) was brick Building (1114). It was exposed for 11.09m in length and 7.90m in width (Plate 15), although the western half of the structure lay outside the observed area. This building aligns with a detached building first recorded on the 1827 plan to the west of the mill. Later OS mapping illustrates that this building was incorporated into the main block of the mill building as it expanded rapidly between 1885 and 1903, and the brick and concrete floor exposed within the structure probably date to later, Phase 4, activity.

One further brick wall (1121) may also relate to this phase, although it is slightly unclear. The wall measured 11.30m in length and 0.55m in width (Plate 16), and it appears to align with an external wall of the main mill building, as illustrated on the 1885 OS map. Historic mapping illustrates the mill complex as largely unchanged in layout from 1827 to 1885, and also indicates that the core

section of the main mill building, including this wall, was probably the same rectangular building illustrated straddling the river in c 1760. However, it is possible that the wall was a later, internal wall within the expanded 20<sup>th</sup> century mill.

#### **4.1.4 Phase 4: 1885-1957**

The remaining structures are likely to date to the development and expansion of the mill between 1885 and its closure in 1957. The majority of the observed structures align well with the buildings seen on the 1955 OS map (Figure 6).

In Trench 10 the machine pits or bases (1005; Plate 17), (1006), (1007), (1008) and (1012) probably relate to various ancillary buildings visible on OS maps from 1902. Surfaces (1004; Plate 17) and (1009) may be the remains of internal floors or external paths or yards. Walls (1014) and surfaces (1010), (1013) and (1015) represent the remains of the eastern edge of the unified mill block. An external concrete drain (1011) was visible along with a row of iron posts (1017) which presumably formed the frame of this part of the building.

Building 1035 aligns with a building recorded on OS mapping as having been constructed between 1938 and 1955. It had been constructed over a concrete slab (1034), which had been constructed to extend brick culvert (1030). Buildings (1019) and (1022) also align with buildings constructed between 1938 and 1955. Surface (1020/1021) was cut by building (1022) and may be the remains of the widened track to the south-east of the mill, constructed between 1885 and 1903.

At the northern end of Trench 11, a group of associated structures were numbered (1111), (1112; Plate 18), (1113) and (1131). They made up six internal areas, some of which had surviving floors constructed of brick or concrete. Two possible machine bases were also identified within (1113). At the northern end of structure (1111), a culvert was exposed running under these structures in a north-east to south-west alignment (Plate 19). It is possible that Structure (1109) is part of the superstructure of the culvert as it does not correlate with any buildings illustrated on the historic mapping. To the north of this, walls (1106) and (1108) align with a building which is first illustrated on the 1902 OS map. To the east a large cast iron pipe and two brick man holes were visible.

Structures (1115) to (1135) all relate to the unified main block of the mill which historic mapping indicates was created between 1885 and 1902 by extending the core mill building into the surrounding buildings. At least one of the walls (1121) in this structure may have survived from Phase 3 and it is possible that some the other walls or features may have been earlier in date than interpreted. The main parts of the building were recorded as structures (1115), (1116), (1119), (1120), (1122), (1124), (1132) (1134) and (1135).

The best preserved area of the building was cellar 1116 which had a concrete floor, and contained the remains of an access ramp, and iron posts which would have supported the upper floor(s) or roof (Plate 20).

The area immediately south of the historic core of the mill was also well preserved (structure 1131; Plate 21). It contained a number of brick and concrete floor surfaces (1132 and 1133). The former surface was laid over a reddish brown silty sand (1138; Plate 22) that yielded a number of brick fragments which dated to 1784 to 1900. To the south of this were structures (1134) and the later (1135), which marked the south extent of the mill buildings. They were very poorly preserved. The walls on the north-east side of structures (1131), (1134) and (1135) formed the edge of the river channel (Plate 21).

Within these structures were various brick and/or concrete surfaces, including (1132) and (1133) which were the best preserved. The truncated remains of numerous machine bases or pits constructed of brick and/or concrete, including (1120; Plate 23), and groups (1122), (1124) and (1136; Plate 24), were also present throughout this area.



#### 4.1.5 Phase 5: 1960s redevelopment

The remaining features and deposits relate to the redevelopment of the site after the mill closed in 1957. The redevelopment involved the demolition of the mill and the construction of a large works over site of the mill, which was illustrated on the 1967 OS map.

The most noticeable feature of this phase was a large concrete culvert, which had been constructed to carry the River Stour under the works. The culvert was located slightly to the east of the earlier alignment of the river, and it truncated all earlier deposits along its course. This phase was also characterised by a black clinker, coarse building material and other industrial detritus. It was numbered (103), (200), (300), (400), (501), (601), (701), (801), (901), (1000) and (1100) over the various trenches and sealed the remains of the mill. The depth of this deposit varied greatly across the site, ranging from 0.50m to over 3m. Given the volume of this material and the fact that the structures discussed above have survived, this material was clearly imported in order to raise the level of the site before the works was constructed. Above the clinker were the concrete slab floors and footings of the works building, and the associated tarmaced roads and car parks.

Along the western side of the site the hillside between the former mill and the site of Wollaston Hall was terraced to bedrock to allow the construction of a smaller outbuilding which was located to the west of the main works.

### 5 Artefactual analysis, by Dennis Williams

The artefactual assemblage, from five stratified contexts, consisted mainly of building material, as shown in Table 1.

period	material class	material subtype	object specific type	count	weight (g)
post-medieval	ceramic	-	brick	5	7618
post-medieval	slag	slag(Fe)	brick	1	4322
post-medieval/modern	metal	brass	-	1	2
post-medieval/modern	organic	wood	-	1	22
totals:				8	11964

Table 1: Quantification of the assemblage

#### 5.1 Summary of artefactual evidence by period

The context finds summary, with *terminus post quem* date ranges, is shown in Table 2.

context	material class	object specific type	fabric code	count	weight (g)	start date	end date	tpq range	date
1001	organic	-	-	1	22	1850	1950	1850-1950	
	metal	-	-	1	2	1850	1950		
1023	ceramic	brick	-	1	3942	1784	1840	1784-1840	
1025	slag	brick	-	1	4322	1800	1900	1800-1900	
1026	ceramic	brick	-	1	2614	1650	1750	1650-1750	
1138	ceramic	brick	-	3	1062	1784	1900	1784-1900	

Table 2: Summary of context dating based on artefacts

### **5.1.1 Building material**

Mould-made, unfrogged clay bricks, with lime mortar adhering, were recovered from wall 1023 and structure 1026. The example from 1023 was 2¾ inches thick, and possibly manufactured during 1784-1840, while the Brick Tax was imposed. However, a later date of manufacture could not be ruled out. The brick from 1026 was significantly thinner, at 2¼-2½ inches, suggesting a late 17<sup>th</sup> or early 18<sup>th</sup> century date. Mould-made brick samples from layer 1138 were fragmentary with thicknesses of 3 inches, indicating a date range of 1784-1840, or possibly later.

A single large brick fragment cast from iron smelting slag, and probably 19<sup>th</sup> century in date, was recovered from wall 1025.

### **5.1.2 Wood/metal**

The only other find was a turned wooden handle, with a decorative, pressed brass end cap, function unknown, recovered from floor layer 1001.

## **5.2 Significance**

The finds recovered during this watching brief were of limited archaeological significance, and as expected for a late 18<sup>th</sup> and early 19<sup>th</sup> century site, although the brick taken from structure 1026 may be indicative of an earlier structure.

## **6 Synthesis**

Although a significant potential for features relating to a late medieval mill was identified on the site, no deposits, structures or finds relating to this period were observed during the investigations. The failure to identify earlier phases of the mill may be due to truncation by later phases of the mill or by the culverting of the River Stour in the mid 20<sup>th</sup> century. It is possible that elements of the earlier mill survived, unobserved, below the later features. Elsewhere in the region the remains of medieval mills such as the one at Hanbury, Droitwich (Mann forthcoming) have been identified preserved under post-medieval and later mills, although the intensive nature of the 19<sup>th</sup> and 20<sup>th</sup> century industrial activity on this site did make survival of earlier remains less likely.

In addition, no evidence of any features relating to Wollaston Hall, its garden or estate were identified. The hall itself lay outside the development area, and although garden features may have potentially survived within the site, redevelopment during the 1960s appears to have destroyed any remains.

The earliest identified feature was a section of infilled river channel (1126), located south of the mill complex in Trench 11. Although historic mapping indicates that the River Stour had been straightened by the late 17<sup>th</sup> century only the western side of the feature survived and it was not possible to confirm whether the channel was natural in origin, or had been excavated during the medieval or post-medieval periods.

The earliest known plan of the mill, dating to c 1760, depicts it as a simple rectangular building straddling the river. By 1827 it appears to have been extended to the north, but the southern element appears to retain a rectangular shape, also straddling the river. Wall (1121) aligns with this building indicating it pre-dates c 1760, although this could be a later wall on the same alignment.

Historic mapping appears to show how the mill complex developed between c 1760 and 1827. No evidence of this phase of the mill itself was recognised but two ancillary buildings, probably built during this period were identified. Building (1101/1102/1105) was located north of the mill, and like the main building it appears to have straddled the river. Its linear arrangement of walls, illustrated on the historic mapping and observed during the works, and its position over the river suggests this may have been built to house a wheel although no evidence of this was identified during the investigations. Building (1114) was built sometime before 1827. It was constructed on a different alignment to the mill, probably facing to the north-east, and it was illustrated as being inhabited in 1827. It may have been the miller's home. During the expansion of the mill between 1885 and

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1902 it was integrated into the main block of the mill, and prior to the closure of the mill was being used as offices (HOW 2004, 87)

Historic mapping indicates that the large mill ponds to the east of the mill were also built between c 1760 and 1827. A hand made brick from the culvert at the north-east corner of the southern mill pond dated to 1650 to 1750, and although the manufacture of these types of bricks could have continued on a local basis after this date, it probably suggests the ponds were constructed during the mid to late 18<sup>th</sup> century.

The mill ponds appear to have originally been fed by a leat from the river to the south-west but between 1848 and 1885 the leat was replaced by a weir further north. However by 1902 the motive power had changed and the system of mill ponds had been abandoned. A series of chimneys are visible on 20<sup>th</sup> century mapping and a boiler room was located within the main mill building prior to its closure in 1957. This room was not identified during the excavation and may have been destroyed during the realignment of the river. The change in motive power was probably initiated by Isaac Nash and Sons after they purchased the mill in 1887 (HOW 2004, 86).

As well as a change in motive power Isaac Nash also appears to have instigated a major redevelopment of the mill complex. Historic mapping indicates that between 1827 and 1885 there was relatively little change on the site, but between 1885 and 1902 the complex appears to have expanded rapidly. The core mill building expanded, represented by (1115), (1116), (1119), (1120), (1122), (1124), (1132) (1134) and (1135), incorporating some of the surrounding buildings such as (1114). Although heavily truncated by the later realignment of the river the surviving remains of this building correlated well with the Ordnance Survey maps. Prior to the closure of the site in 1957 this building was recorded as being used for 'Fork Blades and Rolling and Stamping' (HOW 2004, 87). The various machine bases and pits identified in this area (eg 1120 and 1136) were probably being used in these manufacturing processes.

After 1902 expansion of the site appears to have slowed. Some development appears to have occurred to the north, which lay outside the monitored area, to the east where 20<sup>th</sup> century buildings including (1022) and (1035) were identified, and to the south-west where building (1135) was constructed. Building (1022) may have been a fitting shop and (1135) used for sharpening and hardening tools (HOW 2004, 87).

Wollaston Mills closed in 1957 and the site appears to have been cleared and then demolished. No unfinished tools or pieces of abandoned machinery were identified on the site, suggesting that all the valuable metal items were removed prior to the demolition of the mill. The iron posts supporting the roofs had been cut down, the walls demolished to a fairly uniform level and the site covered in clinker. The only manufacturing items to survive were the mill stones (Plate 3), which it is proposed will become a feature on the redeveloped site.

## 7 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

*Archaeological monitoring was undertaken on behalf of the Environmental Dimension Partnership at Sunrise Business Park, Wollaston, Stourbridge (centred on NGR SO 895 852) in advance of a residential redevelopment. A desk-based assessment had identified the potential for the truncated remains of a mill, located on the River Stour, to survive on the site. The mill was first recorded in 1532 and existed up until the 1960s, when it was demolished to construct a large works.*

*No structural remains relating to the medieval or early post-medieval mill were identified, although a section of river channel, which appears to have been straightened prior to 1699, was exposed up stream of the mill.*



*The principal feature identified on the site was the main block of the mill. Historic mapping suggests one wall of the structure could have dated to the 18<sup>th</sup> century, although most of the other walls and internal features probably dated to between 1885 and 1902 when there was a period of intense development on the site. A number of brick or concrete structures were identified within the mill. These related to the various manufacturing processes which took place on the site during the 19<sup>th</sup> and 20<sup>th</sup> centuries.*

*Other features identified on the site included part of two buildings, both dating to c 1760 to 1827, one of which may have been the miller's house, and the other built to house a wheel or machinery. Part of a mill pond and a water management system, which probably also dated to between c 1760 and 1827, were also identified.*

## **8 Acknowledgements**

Worcestershire Archaeology would like to thank the following for their kind assistance in the successful conclusion of this project; Jo Vallender and Andrew Crutchley (the Environmental Dimension partnership), Jayne Pilkington (Senior Conservation Officer, Dudley Metropolitan Borough Council) and Chris Cassell (McAuliffe).

## **9 Bibliography**

BGS 2013 *Geology of Britain Viewer*, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> , British Geological Survey, accessed 15 November 2013

Chambers RL 1978 *Oldswinford, Bedcote and Stourbridge Manors and Boundaries*, Dudley Teachers Centre

DMBC 2011 *Stourbridge Urban Historic Landscape Characterisation*, Dudley Metropolitan Borough Council, <http://www.dudley.gov.uk/resident/planning/historic-environment/historic-landscape-characterisation-hlc/stourbridge-hlc/> , accessed 15 November 2013

EDP 2010 *High Street, Stourbridge, West Midlands: Archaeological Desk-Based Assessment*, The Environmental Dimension Partnership

EDP 2013 *Sunrise Business Park, Wollaston, Stourbridge: Written Scheme of Investigation for Archaeological Monitoring*, The Environmental Dimension Partnership, dated April 2013

Hemingway, J 2005a *Amblecote Township*, Dudley Metropolitan Borough Council <http://www.dudley.gov.uk/resident/planning/historic-environment/historic-maps-of-dudley/> , accessed 15 November 2013

Hemingway, J 2005b *Wollaston Township*, Dudley Metropolitan Borough Council <http://www.dudley.gov.uk/resident/planning/historic-environment/historic-maps-of-dudley/> , accessed 15 November 2013

HOW 2004 *A History of Wollaston*, History of Wollaston Group

Hurst, J D, and Rees, H, 1992 *Pottery fabrics; a multi-period series for the County of Hereford and Worcester*, in Woodiwiss, S G (ed), *Iron Age and Roman salt production and the medieval town of Droitwich*, CBA Res Rep, **81**, 200-9

IfA 2008 *Standard and guidance for an archaeological watching brief*, Institute for Archaeologists

WA 2012 *Manual of service practice, recording manual*, Worcestershire Archaeology, Worcestershire County Council, report **1842**

WA 2013 *Proposal for an archaeological watching brief at Sunrise Business Park, Wollaston Road, Stourbridge, West Midlands*, Worcestershire Archaeology, Worcestershire County Council, unpublished document dated 29 April 2013, P4124

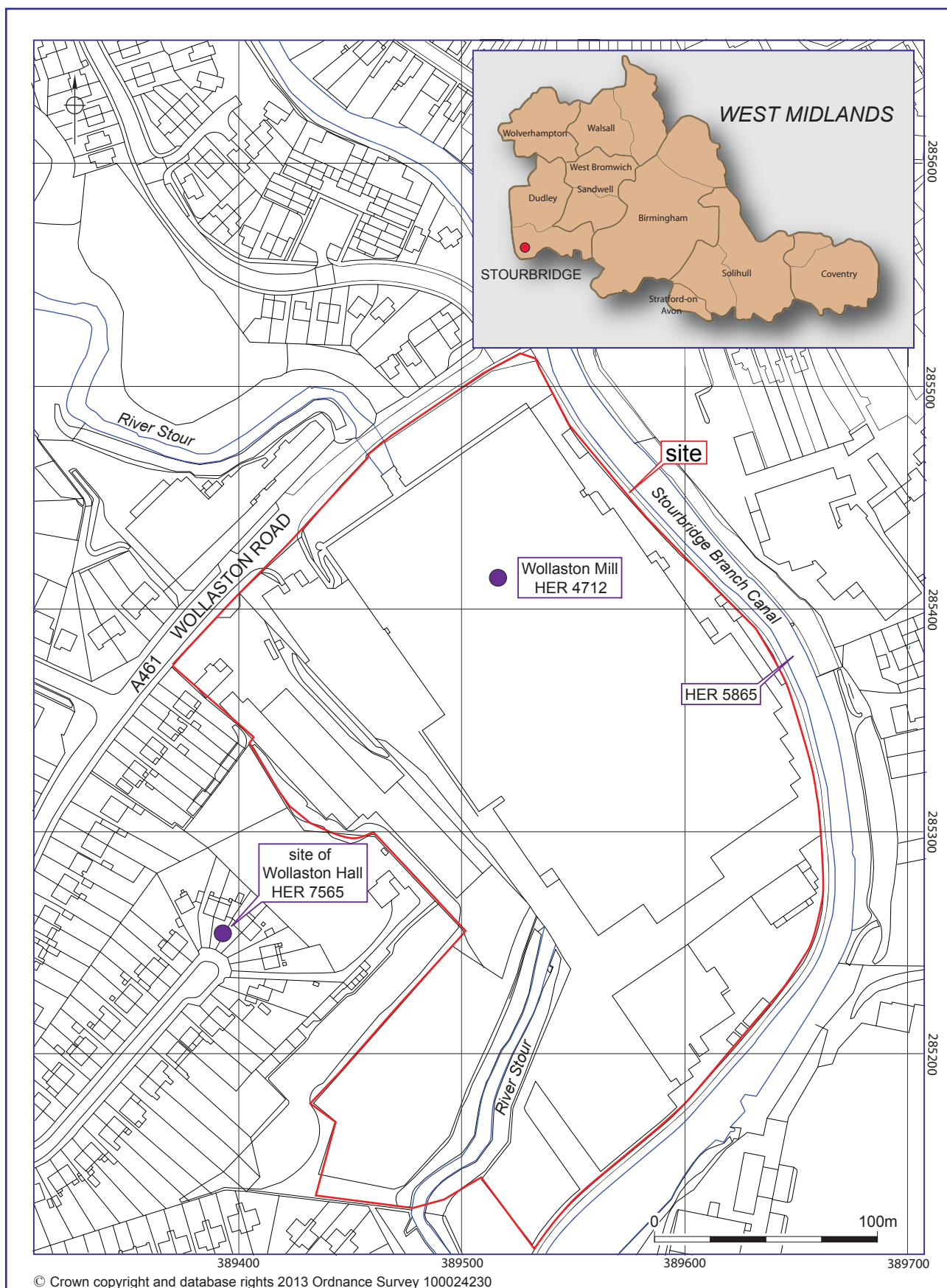
Worcestershire Archive and Archaeology Service, 2012 *Worcestershire online ceramic database* [online]. Available from: [www.worcestershireceramics.org](http://www.worcestershireceramics.org) ]





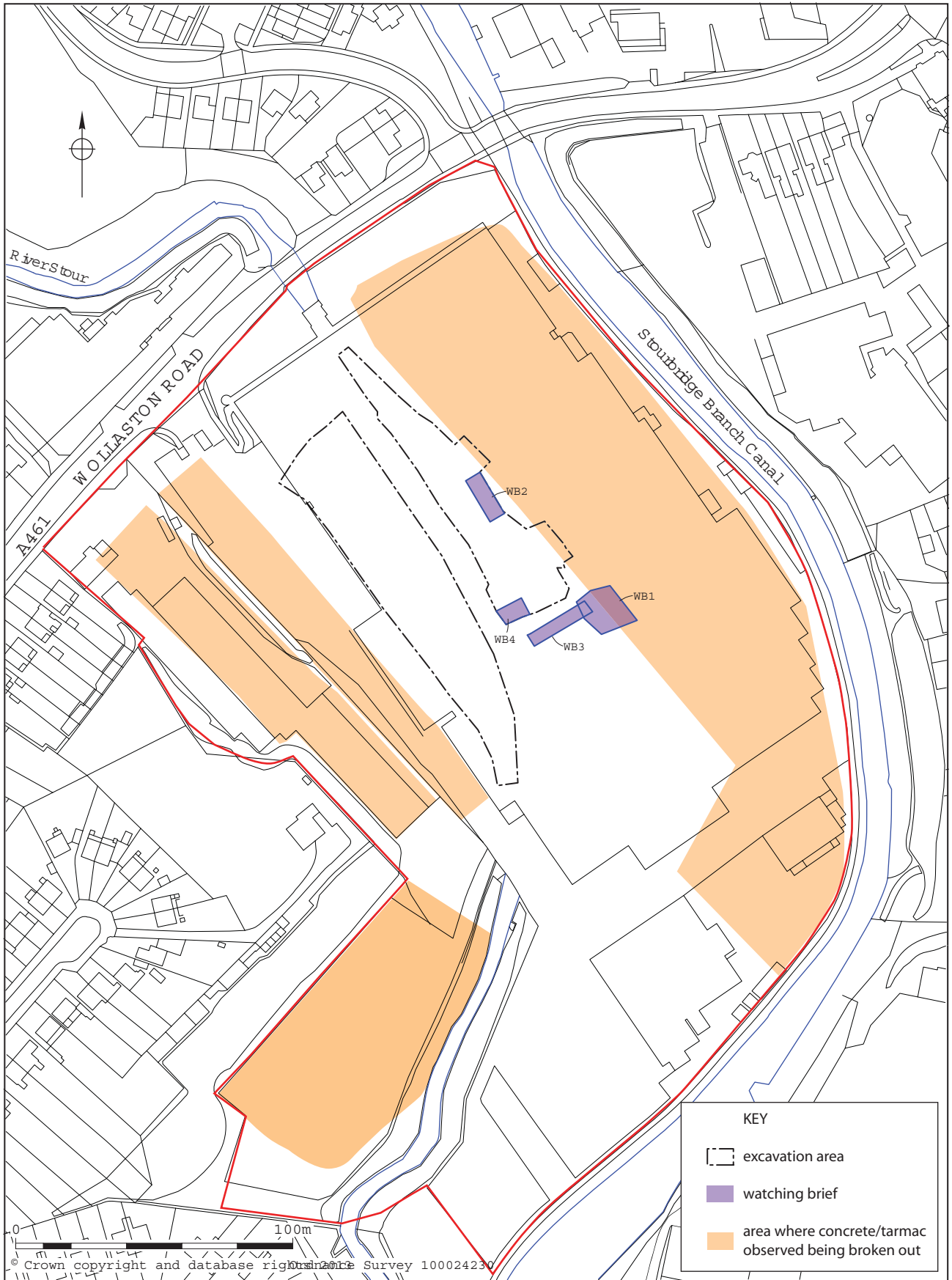
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# Figures



Location of the site

Figure 1



Trench location plan

Figure 2



Phase plan: northern ar





Phase plan: southern ar

Figure 3b



Phase plan: tip of southern area

Figure 3c



Features: northern ar

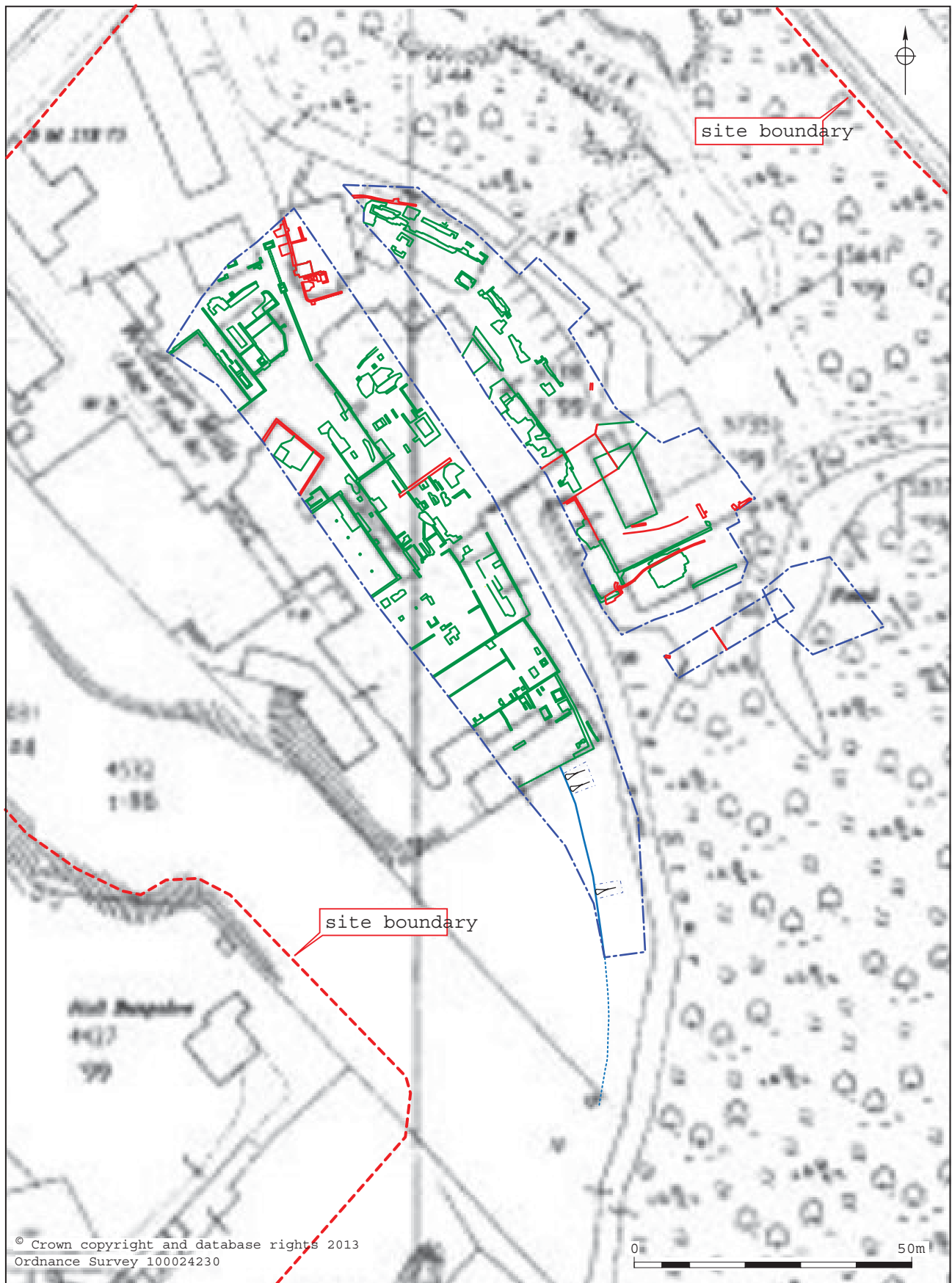
Figure 4a



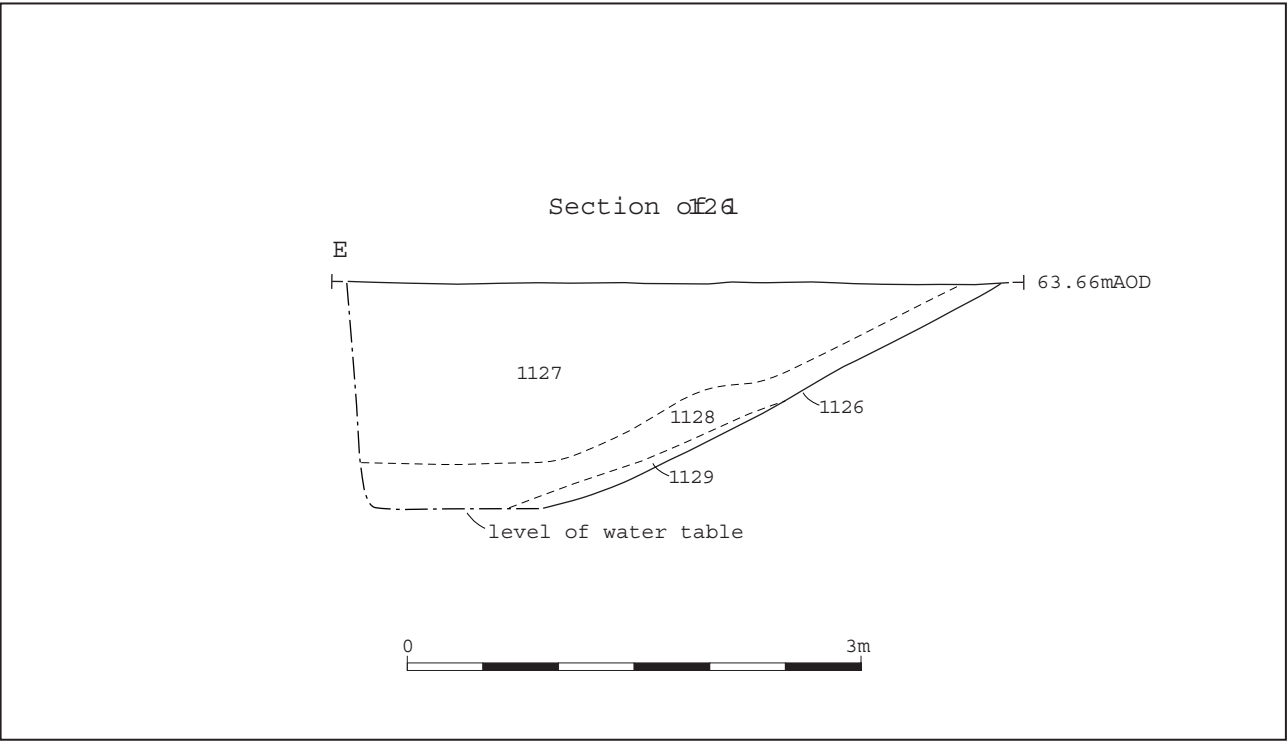
Features: southern area

Figure 4b





Phase 2 to 4 features overlaid on 1955-1956 edition of the OS map



Section of 1126

Figure 7

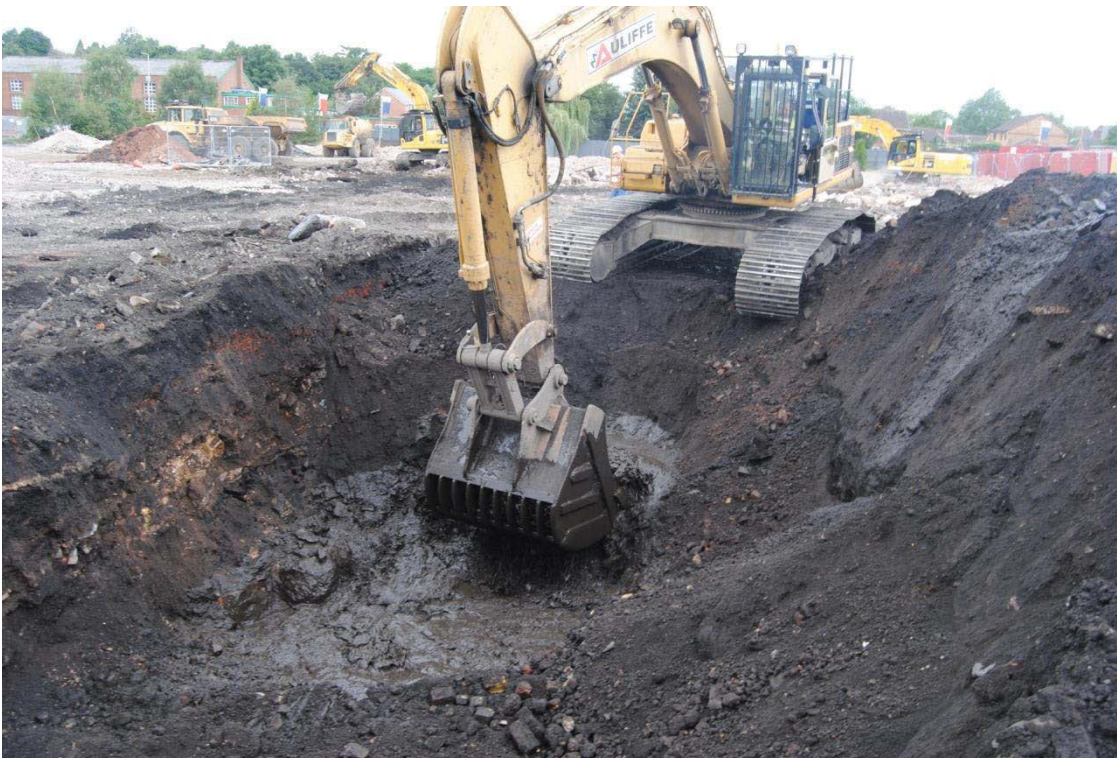


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## Plates



*Plate 1: The nature of the groundworks during the watching brief (WB Area 1)*



*Plate 2: Although structural remains, such as the brick wall to the left of the bucket, were observed it was not possible to safely record the features (WB Area 2)*

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*Plate 3: Mill stones recovered during the watching brief*



*Plate 4: Some of the wooden remains observed during the watching brief*

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*Plate 5: Feature 1126 was the former course of the River Stour, and was truncated by the modern alignment in a concrete culvert (visible top left); view south*



*Plate 6: Wall (1003) formed a retaining wall for the channel running to the east of the mill. The arrows indicate the direction of flow; view west*





*Plate 7: Brick culvert (1030), with retaining wall (202/1003) visible to the right. In the foreground the broken out remains of a later concrete slab extension to the culvert (1034) are visible; view south-west*



*Plate 8: Walls (1025) and (1029) were probably retaining walls on either side of the track between the mill and the canal; the mixed backfill (1033) of the southern mill pond (302) is also visible; view north-west*

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*Plate 9: The heavily truncated remains of an arch were visible as part of wall (1023/1028); view south*



*Plate 10: The arch would have bridged walls 1023/1028 and 1024, and would have allowed water pass between the southern mill pond (to the left) to the channel to the north; view north-west*





*Plate 11: The truncated remains of a culvert (1026) at the south-west end of wall (1025); the remains of a wooden and iron sluice gate (1027) also survived in situ; view west*



*Plate 12: The remains of sluice gate (1027) were also observed during the watching brief as (404)*

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*Plate 13: The northern part of structure (1101/1102) was constructed of iron slag and ceramic bricks, and was constructed over a number of phases; view north-west*



*Plate 14: The southern part of structure (1101/1102), with the mortar covered brick arch visible to the top right; view west*





*Plate 15: The northern end of building (1114); the building probably dates to the late 18<sup>th</sup> or early 19<sup>th</sup> centuries although the visible floor surfaces are almost certainly later; view north-east*



*Plate 16: Wall 1121, which is visible to the right of the shot, aligns on historic mapping with the core of the mill building which probably dates to the early 19<sup>th</sup> century or earlier; view south-west*

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*Plate 17: Machine pit or base (1005), with surface 1004 visible in the foreground and concrete machine base (1006) in the upper right of shot; view south-east*



*Plate 18: Structure (1112), view south*





*Plate 19: This culvert arch was part of structure (1111); view north-east*



*Plate 20: Building (1116) had a well preserved cellar, complete with access ramp and iron supports; view south-east*

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*Plate 21: Structure (1131) which formed part of the south extension to the main mill building; the course of the River Stour is highlighted; view south*



*Plate 22: A reddish brown silty sand (1138), which contained brick fragments dating to the late 18<sup>th</sup> to 19<sup>th</sup> century, was visible below floor surface (1132); view south-west*





*Plate 23: Machine pit or base (1120); view south-west*



*Plate 24: Brick and concrete machine bases (1136); view north-east*

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## Appendix 1 Technical information

The archive (site code: P4124) consists of:

66	Context records AS1
13	Field progress reports AS2
10	Photographic records AS3
747	Digital photographs
1	Drawing number catalogues AS4
3	Scale drawings
15	Trench record sheets AS41
1	CD-Rom/DVDs
1	Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Dudley Museum and Art Gallery  
St James's Road  
Dudley  
West Midlands  
DY1 1HU  
Tel. Dudley (01384) 815575  
Fax Dudley (01384) 815576