

Chatterley Whitfield Colliery, Dirt Conveyor Tower, North Staffordshire



Watching Brief



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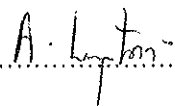
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CONTENTS

SUMMARY	2
ACKNOWLEDGEMENTS	3
1. INTRODUCTION.....	4
1.1 Circumstances of the Project.....	4
2. METHODOLOGY	5
2.1 Project Design	5
2.2 Site Familiarisation.....	5
2.3 Watching Brief	5
2.4 Archive.....	5
3. BACKGROUND	6
4. WATCHING BRIEF	7
4.1 Introduction	7
4.2 Results.....	7
5. DISCUSSION	9
5.1 Synthesis.....	9
6. BIBLIOGRAPHY.....	10
6.1 Secondary Sources.....	10
7. ILLUSTRATIONS.....	11
7.1 List of Figures.....	11
7.2 List of Plates.....	11
APPENDIX 1: PROJECT DESIGN.....	16

SUMMARY

Birse Civils are currently undertaking the redevelopment of the main spoil tip (Tip 1) at the former Chatterley Whitfield Colliery, North Staffordshire (NGR SJ 875,535), transforming the site to a Heritage Country Park (Phase 1b). The redevelopment of the site is part of a wider scheme incorporating three phases (1a-1c). Phase 1a has been completed and included improvements to the access arrangements to the north-east of the site and refurbishment of one of the former buildings, whilst Phase 1c relates to the future restoration and development of the remainder of the former colliery buildings to the east. As the former colliery is a Scheduled Monument (SM No 21575), the Department for Culture Media and Sport specified that prior to works being carried out arrangements were to be made for the observation, recording and removal for study of any matters of archaeological and/or historic importance revealed by the works. Subsequently, OA North was invited by Birse Civils to submit a project design for an archaeological watching brief during ground disturbance in the area of the Dirt Conveyor Tower, and upon acceptance of this document, the watching brief was duly carried out on the 27th and 28th of July 2009.

Limited, small-scale coal mining activity has been undertaken at Whitfield since the medieval period but more formally during the eighteenth century. During the mid-nineteenth century, following improvements to local transport links, Hugh Henshall Williamson, the owner of the Whitfield estate, enlarged the coal mines at Whitfield. In 1937 Chatterley Whitfield became the first colliery to produce more than 1,000,000 tons of coal in one year. By World War II the colliery was the largest producer in Staffordshire. It was nationalised in 1947 and closed sometime between 1976 and 1977.

During the programme of works to reconfigure the main colliery spoil heap, no archaeological deposits related to the dirt conveyor tower were observed. However, situated approximately 20m away, the remains of a red brick wall were uncovered in the outer limits of the Scheduled Monument. The wall appears to be the remains of the dirt disposal plant associated with the dirt conveyor tower. A cast iron slurry pipe was also observed. The dirt conveyor tower remains in a derelict state.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Birse Civils for commissioning the project. Desmond O’Leary undertook the watching brief and compiled the report. Mark Tidmarsh produced the drawings. Alison Plummer managed the project and edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Birse Civils are currently undertaking the redevelopment of the main colliery spoil tip (Tip 1) at the former Chatterley Whitfield Colliery North Staffordshire (NGR SJ 875535) transforming the site to a Heritage Country Park. The redevelopment of the site is part of a wider scheme incorporating three phases (1a-1c). Phase 1a has been completed and included improvements to the access arrangements to the north-east of the site and refurbishment of one of the former buildings, whilst Phase 1c relates to the future restoration and development of the remainder of the former colliery buildings to the east. As the former colliery is a Scheduled Monument (SM No 21575), the Department for Culture Media and Sport has specified that prior to works being carried out arrangements are to be made for the observation, recording and removal for study of any matters of archaeological and/or historic importance revealed by the works.
- 1.1.2 Subsequently, Oxford Archaeology North (OA North) undertook an archaeological watching brief at the site of the extant dirt conveyor tower, which is located on the slope of the main spoil tip, and immediately adjacent to footpath development works. This was undertaken over a two day period between the 27th and 28th of July 2009.
- 1.1.3 The following report sets out the results of the watching brief in the form of a short document outlining the findings.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 1*) for the watching brief was compiled by OA North and submitted to Birse Civils. The aim of the watching brief was to identify and retrieve any surviving industrial archaeological deposits or structural elements of the dirt conveyor tower disturbed or exposed by the groundwork for the redevelopment programme. The project design was adhered to in full.

2.2 SITE FAMILIARISATION

2.2.1 A rapid study of the desk-based and landscape assessments, and the Scheduled Monument description, as provided by the client, was undertaken. No additional research was required for this project.

2.3 WATCHING BRIEF

2.3.1 A programme of field observation recorded accurately the location, extent, and character of any surviving archaeological features and/or deposits within all ground disturbances in the immediate area of the dirt conveyor tower and the general area of the Scheduled Monument. Although part of the scheduled monument the tower is not contained within the colliery perimeter fence, it is located just outside and slightly to the to the south. This work comprised observation during the excavation for these works, the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all features of archaeological interest and/or horizons, and any artefacts, identified during observation.

2.4 ARCHIVE

2.4.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). OA North has been requested to deposit the project archive with Birse Civils.

3. BACKGROUND

- 3.1 There was no requirement to undertake desk-based research as part of the watching brief programme of works. However, in order to provide a context for the results of the watching brief, a short summary of the history of the site is offered below. It is taken from *Chatterley Whitfield Colliery, Archaeological Desk-based Assessment* (WSP Environmental Ltd, 2008) which was compiled on behalf of Birse Civils.
- 3.2 The site of the Chatterley Whitfield colliery lies to the north of Stoke on Trent, and approximately 1.5km to the east of Tunstall in Staffordshire (Fig 1). The area is known to have been predominantly used for agricultural purposes throughout the medieval and post-medieval periods, at which time a move towards more extensive mineral extraction and industrial processes began to encroach into it. The colliery lies on the North Staffordshire Coalfield, and it is recorded that the area has been mined since the thirteenth century.
- 3.3 Coal extraction in the area of the Chatterley Whitfield site is documented from at least the mid-eighteenth century, which continued into the early nineteenth century. Following the construction of the Biddulph Valley Railway (which formerly ran along the western edge of the site area) in 1860 the mines at Whitfield were expanded and the Whitfield Colliery site was established. In 1872 the Chatterley Coal and Iron Company purchased the site, and it was subsequently given the name of the Chatterley Whitfield Colliery. The colliery expanded throughout the nineteenth and early twentieth centuries (Plate 5) to become the largest colliery within Staffordshire employing over 4000 staff and producing more than 1,000,000 tons of coal a year.
- 3.4 The colliery continued working until its closure in 1976/7. Part of the colliery site was utilised as a national museum for mining until 1993, which enabled much of the site area to remain undisturbed and intact (including many smaller fixtures and fittings). Following the closure of the museum, and in recognition of the importance of the colliery in terms of its historical and cultural heritage significance, the main area of the colliery buildings was designated as a Scheduled Monument (SM No 21575).
- 3.5 In 1993 the Chatterley Whitfield Partnership was established, involving amongst others, English Heritage, Stoke City Council, English Partnerships and the Friends of Chatterley Whitfield. The aim of the Partnership is to find a viable future for the Scheduled site, whilst safeguarding its historic significance. The aim of the current project is also to improve the area surrounding the scheduled site.

4. WATCHING BRIEF RESULTS

4.1 INTRODUCTION

4.1.1 A programme of archaeologically controlled monitoring in the form of a watching brief was conducted on the 27th and 28th of July 2009 by OA North at the site of the dirt conveyor tower (Plate 1) at Chatterley Whitfield Colliery, North Staffordshire (Fig 1). The dirt conveyor tower is located at the bottom of the main colliery spoil heap (Tip 1) situated to the south of the colliery (Plate 1) and, although outside of the perimeter fence, forms part of the Scheduled Monument (SM No 21575) (Fig 2). The watching brief observed the reconfiguration of the area in the vicinity of the tower using a 45 tonne mechanical excavator.

4.2 RESULTS

4.2.1 The foot of the spoil heap is to become a footpath that extends through the proposed Country Park; this section of the colliery spoil heap was removed and relocated to another part of the site. The exposed sections of the spoil heap, either side of the proposed pathway, were tampered down using the underside of the mechanical excavator bucket creating a batter of 45° angle (Plate 2).

4.2.2 During the excavation process a section of pipe was exposed extending out of the batter in a north-south direction, approximately 5m west of the dirt conveyor tower (Fig 3). The cast iron pipe had an external diameter of 0.016m and an internal diameter of 0.012m (Plate 3). A slurry-pumping house was situated approximately 100m to the north-west of the dirt conveyor tower as indicated on the Surface Electrical Plan (Fig 2). The pipe may, therefore, have been related to the removal of slurry generated around the dirt conveyor tower and the base of the spoil heap.

4.2.3 Continuing with the removal of spoil and creation of a batter south-west of the dirt conveyor tower, a 3m section of wall sitting on a concrete platform was exposed, aligned in a north/south direction (Fig 3). The wall comprised orange/red machine-made brick, typically measuring 0.023m x 0.011m x 0.008m, bonded by white mortar (Plate 4). The bricks had been arranged in a stretcher-bonding pattern and survived to a maximum height of eight courses. The extant structure has been demolished at both ends and appears to be the eastern gable end of the dirt disposal plant highlighted on Figure 2. Plate 5 shows the location of the dirt disposal plant and its relationship to the dirt conveyor tower.

4.2.4 In addition to the creation of the footpath, a service trench was cut into the bank of the Scheduled Monument, approximately 20m west of the dirt conveyor tower to facilitate the laying of an electrical cable (Plate 6). Using a ditching bucket, a mechanical excavator dug a trench 20m long by 0.6m wide to a depth of 0.06m, extending from the perimeter fence surrounding the colliery towards the batter created by principal contractor. The bank was found

to comprise made up ground containing shale (10%), ceramic building material (5%) and sandy-clay (85%). No archaeological features or deposits were exposed or observed during this part of the excavation.

- 4.2.5 Although no structural remains from the dirt conveyor tower were discovered, several cast iron chains were found, which were probably associated with the colliery.

5. DISCUSSION

5.1 SYNTHESIS

- 5.1.1 The remodelling of the main spoil heap (Tip 1) at Chatterley Whitfield Colliery impacted upon the area immediately south and south-east of the dirt conveyor tower, which is situated at the southern edge of the Scheduled Monument. Although not closely datable, the tip does not appear on the Ordnance Survey maps until 1925, and expanded into the 1960s.
- 5.1.2 The dirt conveyor tower was the last in a series of towers supporting the covered conveyor belt. This fed spoil (colliery waste) up the tip via an inclined rail track. The spoil was collected in the main tub hall, located at the east end of the conveyor belt. The main tub hall is dated to *c* 1952. The tower is a relic of modern mining practice, and therefore dates to the mid-twentieth century phase of the colliery, as does the associated dirt disposal plant and most probably the slurry pipe.
- 5.1.3 No structural elements relating to the tower were exposed during the stripping activities. Although the tower was not impacted upon by the landscaping works, it remains in a derelict state.

6. BIBLIOGRAPHY

6.1 SECONDARY SOURCES

English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn London

WSP Environmental Ltd, 2008 *Chatterley Whitfield Colliery, Archaeological Desk-based Assessment*, unpubl rep

7. ILLUSTRATIONS

8.1 LIST OF FIGURES

Figure 1: Location Plan

Figure 2: Watching brief location plan

Figure 3: Plan of dirt conveyor tower showing location of cast iron pipe and section of wall

8.2 LIST OF PLATES

Plate 1: South-facing elevation of the dirt conveyor tower

Plate 2: Newly created pathway alongside dirt conveyor tower

Plate 3: Cast iron slurry pipe exposed to the east of dirt conveyor tower

Plate 4: Section of brick wall, part of the dirt disposal plant

Plate 5: Photograph showing dirt disposal plant adjacent to the dirt conveyor tower

Plate 6: Service trench excavated to the south-west of the dirt conveyor tower

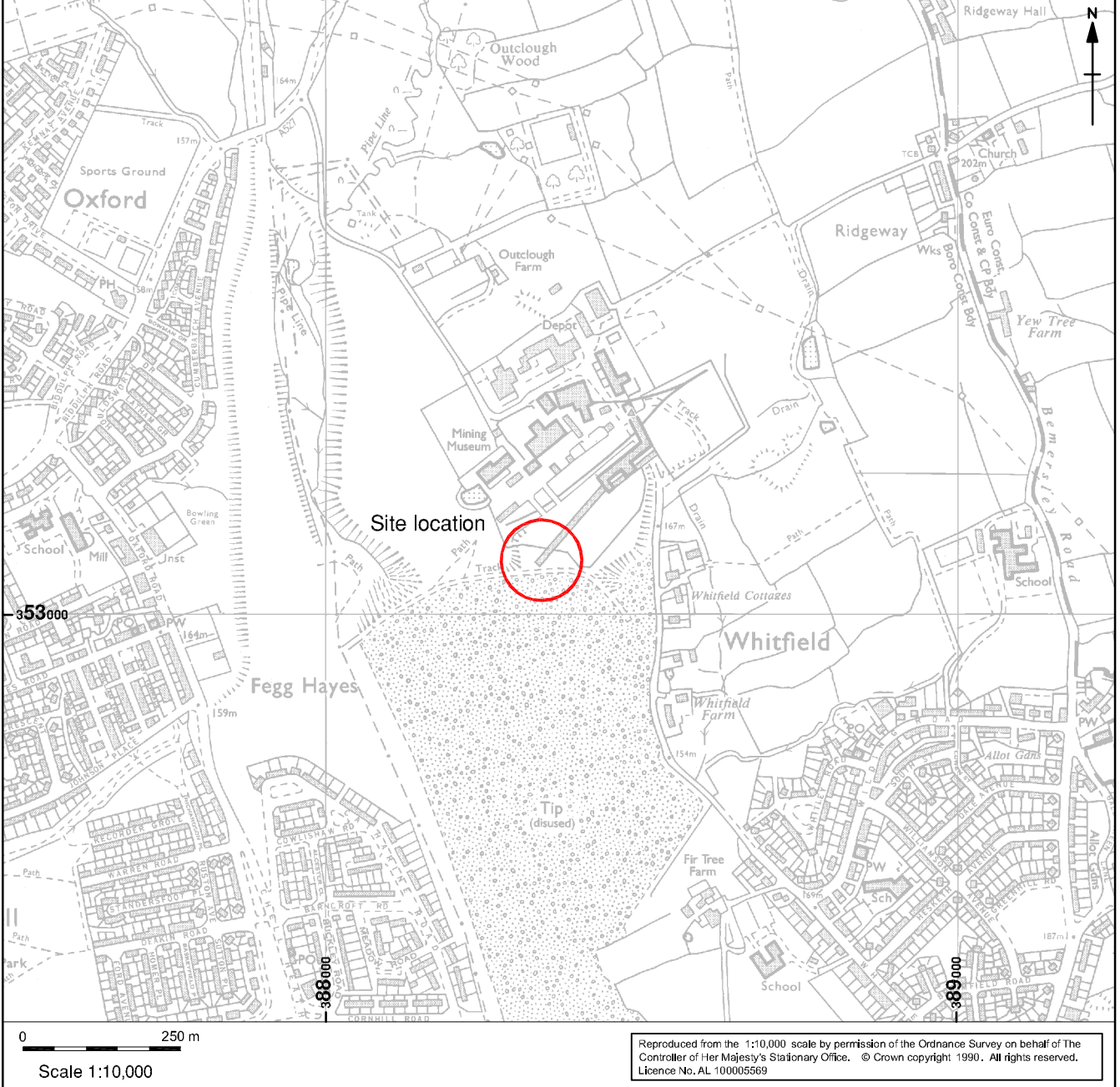
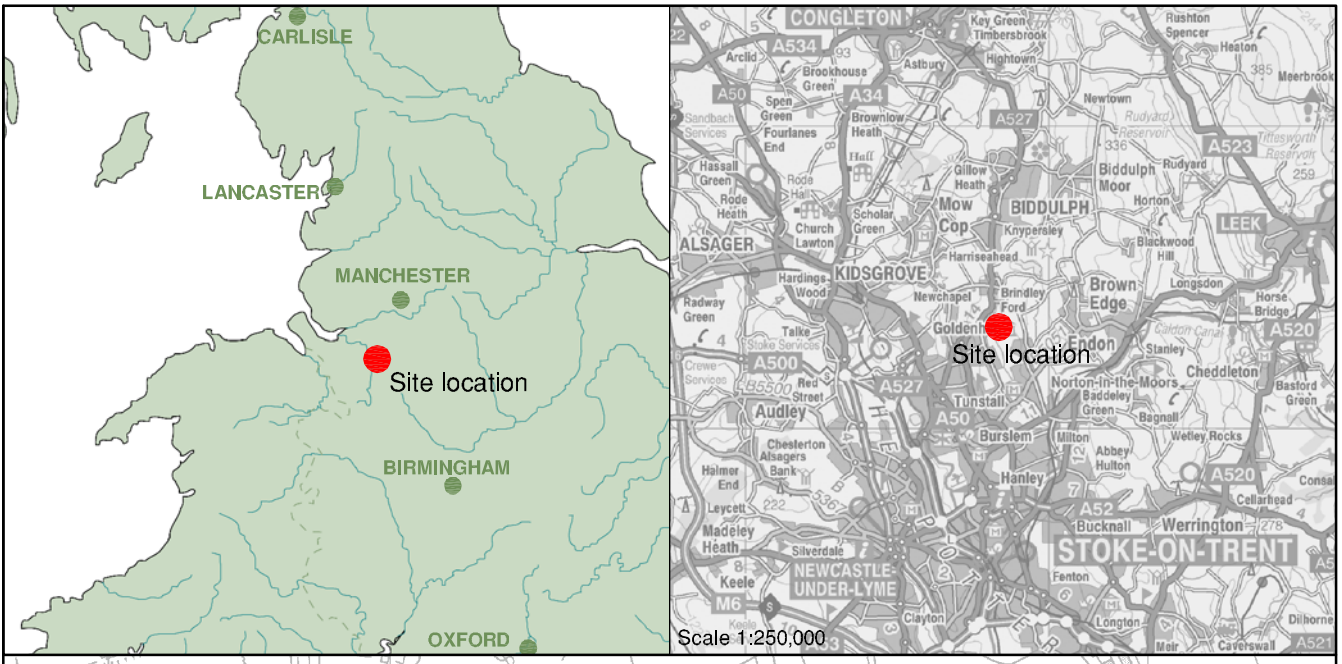


Figure 1: Site Location

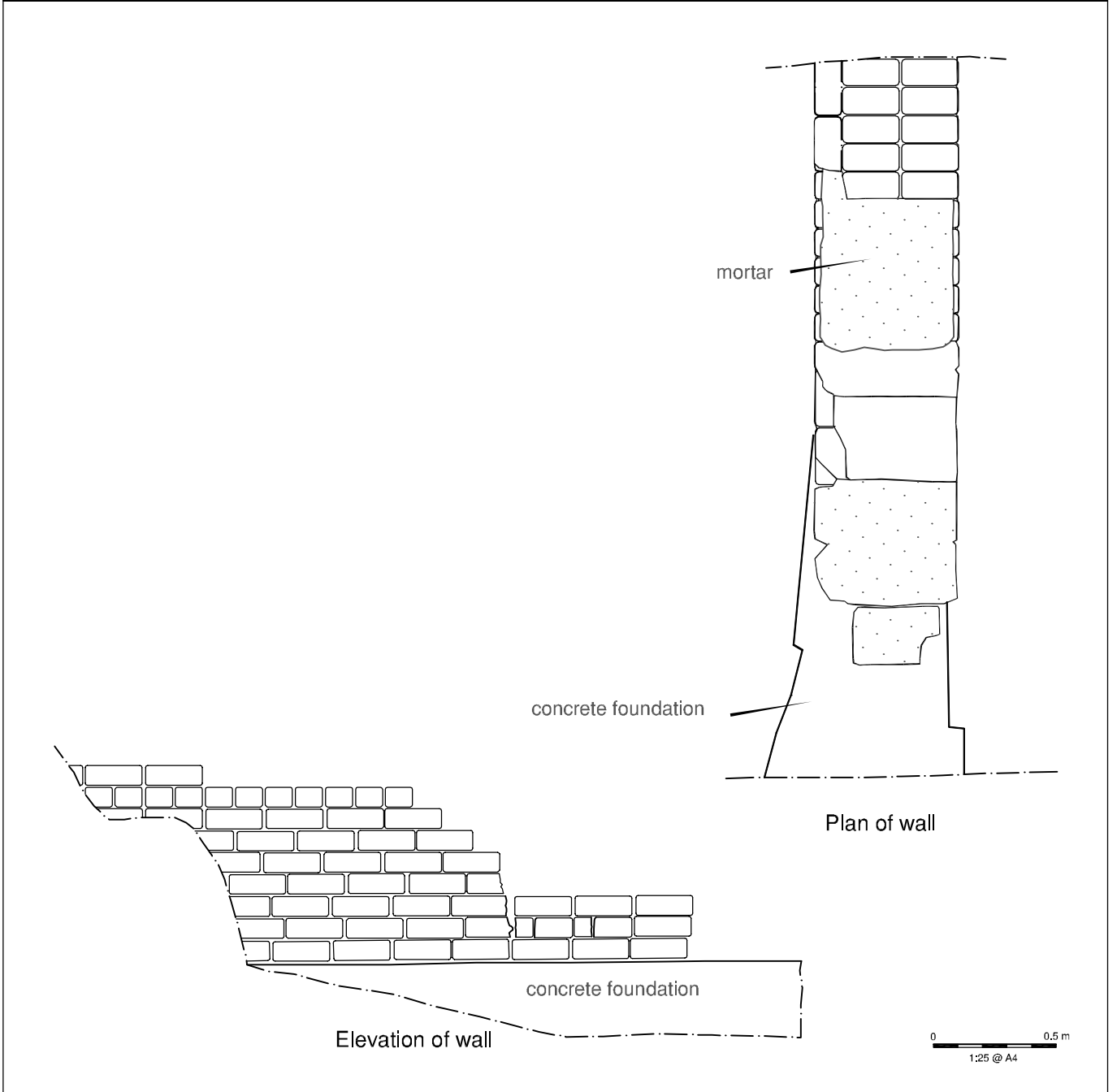
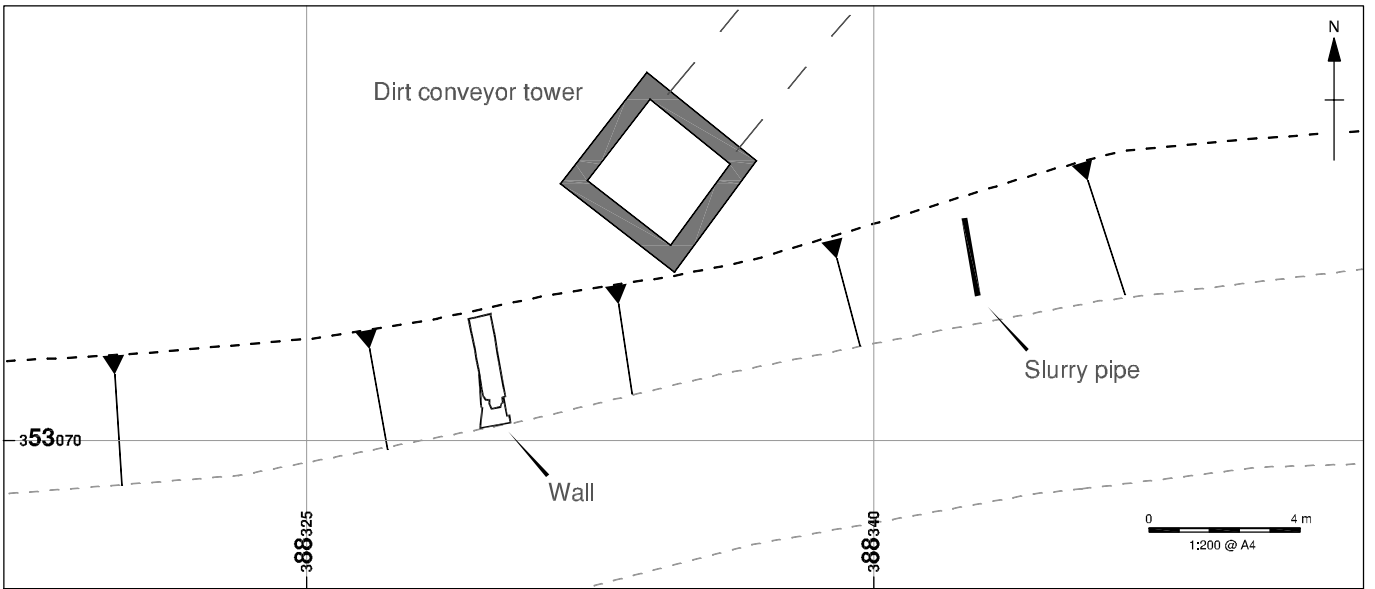


Figure 3: Plan and elevation of wall



Plate 1: South-facing view of the dirt conveyor tower



Plate 2: Footpath created alongside dirt conveyor tower



Plate 3: Cast iron slurry pipe exposed to the east of the dirt conveyor tower



Plate 4: Section of brick wall, part of the dirt disposal plant

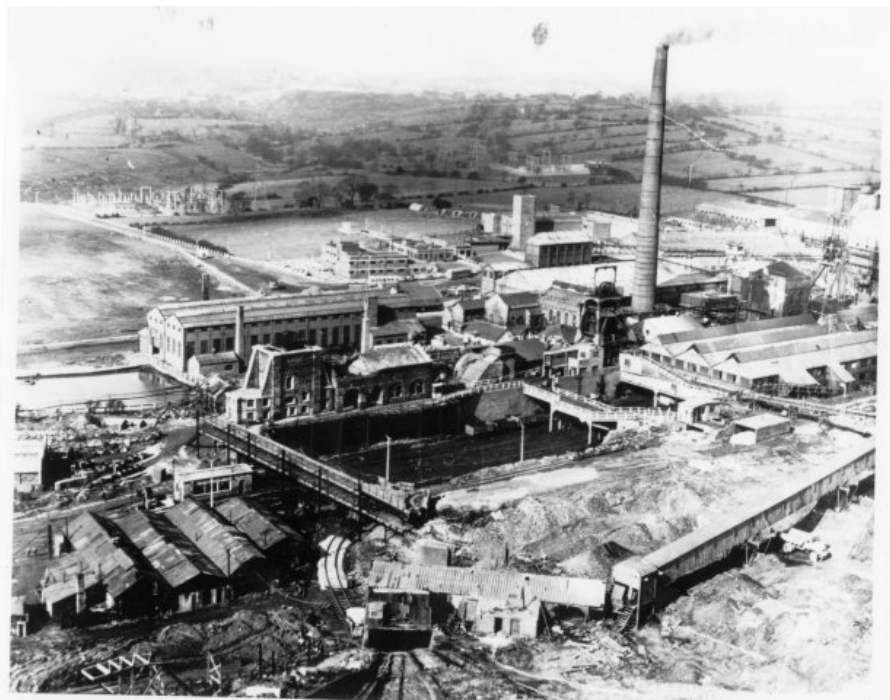


Plate 5: Photograph showing the dirt disposal plant adjacent to the dirt conveyor tower



Plate 6: Service trench excavated to the south-west of dirt conveyor tower

APPENDIX 1: PROJECT DESIGN

**CHATTERY
WHITFIELD
COLLIERY, DIRT
CONVEYOR
TOWER
NORTH
STAFFORDSHIRE**

**Archaeological Watching
Brief
Project Design**



Oxford Archaeology North

July 2008

Birse Civils

OA North Job No: L100027
Scheduled Ancient Monument No:
217575
NGR: SJ 875 535

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Birse Civils (hereafter the 'client') are currently undertaking the redevelopment of the main spoil tip at the former Chatterley Whitfield Colliery, North Staffordshire (NGR SJ 875535), to a Heritage Country Park. The former colliery is a Scheduled Ancient Monument (SAM No 21575). The Department for Culture Media and Sport has specified that prior to works being carried out arrangements are made for the observation, recording and removal for study of any matters of archaeological and/or historic importance revealed by the works.

1.1.2 Subsequently, the client has requested that Oxford Archaeology North (OA North) submit proposals for an archaeological watching brief to be undertaken at the site of the extant dirt conveyor tower, which is located on the slope of the main spoil tip, and immediately adjacent to footpath development works.

1.1.3 Limited, small-scale coal mining activity has been undertaken at Whitfield since the medieval period but more formally during the eighteenth century. During the mid-nineteenth century, following improvements to local transport links, Hugh Henshall Williamson, the owner of the Whitfield estate, enlarged the coal mines at Whitfield. Prior to 1872 the colliery was simply known as the Whitfield mines. It was only given its present name following a take over by the Chatterley Coal and Iron Company, who following financial difficulties became the Chatterley Whitfield Company. By WWII the colliery was the largest producer in Staffordshire, and in 1937 it became the first colliery to produce more than 1,000,000 tons of coal in one year. It was nationalised in 1947 and closed sometime between 1976 and 1977.

1.1.4 English Heritage are of the opinion that Chatterley Whitfield is one of the best surviving examples of a coal mining complex dating from the period of peak production of the British Coal Industry. The site includes a range of structures, which together, preserve the surface history of the industry between the 1860s and the 1980s.

1.2 OXFORD ARCHAEOLOGY NORTH

1.2.1 Oxford Archaeology North has considerable experience of sites of all periods, having undertaken a great number of small and large-scale projects throughout Northern England during the past 24 years. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.

1.2.2 Of most relevance OA North have undertaken the excavation of three collieries dating from the late eighteenth to mid nineteenth century (Sharlston, West Yorkshire; Gin Pit, Greater Manchester and Windle near St Helens. In addition, OA North has also undertaken the evaluation of a further nineteenth century colliery (Pewfall, St Helens).

- 1.2.3 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute of Field Archaeologists (IFA) **registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct (1994).

2 OBJECTIVES

- 2.1 The following programme has been designed to identify and retrieve any surviving industrial archaeological deposits or structural elements of the dirt conveyor tower that may be disturbed or exposed by groundworks for the proposed redevelopment works. The required stages to achieve these ends are as follows:
- 2.2 **Site Familiarisation:** a rapid study of the desk-based and landscape assessments, and the Scheduled Ancient Monument Description provided by the client. This will be undertaken in order to provide a context for any remains that might be encountered (in accordance with the IFA standards (1999a). There is no requirement for further research.
- 2.3 **Permanent Presence Watching Brief:** to maintain a watching brief during all ground disturbances in the immediate area of the dirt conveyor tower.

3 METHOD STATEMENT

3.1 WATCHING BRIEF

- 3.1.1 **Methodology:** a programme of field observation will record accurately the location, extent, and character of any exposed elements of the dirt conveyor tower, *insitu* or otherwise, that are observed during the footpath development works. This work will comprise observation during the excavation/landscaping of the spoil tip, and the accurate recording of all industrial archaeology features and structural elements of the tower encountered.
- 3.1.2 Any structural elements of the tower that may have been removed or fallen from the structure will be retrieved, photographed and described and stored inside the SAM perimeter fence. Putative industrial archaeological features and/or structural elements identified by the machining process, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and where appropriate sections will be studied and drawn. Any such features will be sample excavated (ie. selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal). A photographic record will be undertaken simultaneously.
- 3.1.3 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where

appropriate). Features will be planned accurately at appropriate scales and annotated on to a large-scale plan provided by the Client.

- 3.1.4 It is assumed that OA North will have the authority to stop the works for a sufficient time period to enable the recording of important deposits. It may also be necessary to call in additional archaeological support if a find of particular importance is identified or a high density of archaeology is discovered, but this would only be called into effect in agreement with the Client and English Heritage and will require a variation to costing. Also, should evidence of burials be identified, the 1857 Burial Act would apply and a Department of Constitutional Affairs Licence would be sought. This would involve all work ceasing until the proper authorities were happy for burials to be removed.

3.2 REPORT

- 3.2.1 One hard copy and one electronic copy of the final written synthetic report (to include CAD plans, text and plates) will be submitted to the client within eight weeks of completion of the fieldwork. The report will include;

- a site location plan related to the national grid;
- a front cover to include the SAM number and the NGR;
- a concise, non-technical summary of the results;
- the circumstances of the project and the dates on which the fieldwork was undertaken;
- description of the methodology, including the sources consulted;
- a summary of the historical background of the study area;
- the results of the watching brief;
- appropriate plans showing the location and position of features located, tied into the National Grid;
- monochrome and colour photographs as appropriate;
- a copy of this project design, and indications of any agreed departure from that design;
- the report will also include a complete bibliography of sources from which data has been derived.

- 3.2.2 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.3 ARCHIVE

- 3.3.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with Appendix 3 of the current English Heritage guidelines (*Management of Archaeological Projects*,

2nd edition, 1991). This archive will be prepared in accordance with UKIC guidelines (1990) provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the HER (the index to the archive and a copy of the report).

4. HEALTH AND SAFETY

4.1 OA North provides a Health and Safety Risk Assessment for all projects and maintains a Unit Safety policy. A written risk assessment will be undertaken in advance of any fieldwork and a copy will be submitted to the client for inclusion in the safety file. The archaeologist will attend a site induction to be given by the client.

4.2 Liaison for basic site access will be undertaken through the client. There is designated and separate pedestrian and vehicle access routes across the site. These will be adhered to at all times.

4.3 The client will provide welfare facilities in the site compound.

5. WORK TIMETABLE

5.1 *Site familiarisation:* approximately one day will be required for this element.

5.2 *Watching brief:* the duration of this will be dependent upon the progress of the contractor. It is not expected to exceed three days in duration, and is likely to be a single day.

5.3 *Report and Archive:* the final report will be available within eight weeks of completion of the fieldwork.

6. STAFFING

6.1 The project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North Senior Project Manager) to whom all correspondence should be addressed.

6.2 Present timetable constraints preclude detailing at this stage exactly who will undertake the archaeological work, but each element of the project is likely to be supervised by an OA North project supervisor experienced in such projects.

7. INSURANCE

7.1 OA North has a professional indemnity cover to a value of £5,000,000; proof of which can be supplied as required.

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