JAMES STREET, RADCLIFFE, GREATER MANCHESTER: AN ARCHAEOLOGICAL RECORDING BRIEF



On behalf of C Smith and Sons

CS Archaeology June 2011 On behalf of: C Smith and Sons

Sladen Fold Farm, Lightowlers Lane, Littleborough, Lancashire OL15 OLP

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Frontispiece: view of the excavations

CONTENTS

| 1. | SUMMARY | 2 |
|-----|--|---|
| 2. | INTRODUCTION | 3 |
| 3. | ARCHAEOLOGICAL AND HISTORICAL BACKGROUND | 3 |
| 4. | AIMS AND OBJECTIVES | 5 |
| 5. | METHODOLOGY | 5 |
| 6. | RESULTS | 6 |
| 7. | CONCLUSIONS | 7 |
| 8. | RECOMMENDATIONS | 8 |
| 9. | BIBLIOGRAPHY | 9 |
| 10. | ACKNOWLEDGEMENTS | 9 |

List of Figures

- 1: Location Map
- 2: Plan of the PDA
- 3: Plan of the PDA (western corner)

List of Plates (with register Nos)

- 1: an aerial view across the PDA and towards the western corner c. 1980
- 2, 5: general view of the excavations
- 3, 11: oblique view of the section through the dam
- 4, 13: detailed view of the SW facing section through the dam
- 5, 8: view of masonry removed from the back fill deposits of the reservoir
- **6**, 17: detail of the overburden a concrete/brick floor
- 7, 23: view of the modern culvert with adjacent stone capped brick culvert (poorly defined) to the left
- 8, 2: View of the removed flagstones
- 9, 49: general view of the walls (Building 2)

Appendices

- 1: Photographic Register (Digital)
- 2: The Project Design

SUMMARY

- 1.1 An Archaeological watching brief was undertaken during the land remediation of the Proposed Development Area (PDA) off James Street, Radcliffe, Greater Manchester. An archaeological condition was attached to the planning application (App. No. 51848) by Bury Local Planning Authority for a programme of archaeological investigation to be undertaken in accordance with a written scheme of investigation approved in advance by Bury Local Planning Authority. This was conditioned in order to make a record of any significant buried archaeological remains for archive and research purposes.
- 1.2 The recording brief consisted of monitoring the remediation of a series of trenches designed to sift and remove all obstructions, for purposes of future piled foundations.
- 1.3 The results of the recording brief were largely negative. However four areas of archaeology did survive.

2 INTRODUCTION

- 2.1 Radcliffe lies 10 kms northwest of Manchester and 7.5 kms southeast of Bolton. Radcliffe is positioned on the River Irwell. The PDA is situated across the northwest slope of the River Irwell valley and consists of 2.4 hectares (Figure 1).
- 2.2 This archaeological work has been organised in response to planning conditions 51848 and 51849, for outline development and remediation respectively conditions 22 and 23 in 51848 and their equivalent conditions 16 and 17 in 51849:

Condition 22, no earthworks, clearance or remediation shall be undertaken within the site until a written scheme of investigation to include:

- Desk based study to determine the scope and extent of archaeological works and investigations required within the site;
- Timetabling of on-site physical investigations works and implementation (or in relation to a phased approach, which is to be agreed as required) for archaeological excavations; and
- The submission of a report of findings has been submitted to and approved in writing by the Local Panning Authority. The development shall be implemented in accordance with the approved details unless otherwise agreed in writing.

Reason: to understand, determine and make a record of any significant buried archaeological remains for archive and research purposes pursuant to Planning Policy Guidance Note 16 and Unitary Development Plan Policies EN3/1 - Impact of Development on Archaeological Sites and EN3/2 - Development Affecting Archaeological Sites.

Condition 23, where archaeology is found within the site within the site, the developer shall devise and submit to the Local Planning Authority a scheme of publicity for commemorating the industrial heritage of the site. The details of the commemorative scheme should be agreed in writing with the Local Panning Authority and shall be implemented in accordance with programme of implementation relating to the publicity.

Reason: to understand, determine and make a record of any significant buried archaeological remains for archive and research purposes pursuant to PPG16 and UDP Policies EN3/1 - Impact of Development on Archaeological Sites and EN3/2 - Development Affecting Archaeological Sites.

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1 Previous archaeological work re. the PDA consists of a desk-based assessment (LUAU 2000). In the DBA, it states that the PDA was owned by John Lancaster c. 1840 and patent lead pipes were made. The area was known as the 'Pipe Mill' well into the 20th century.
- 3.2 The PDA lies on the right bank of the River Irwell. By 1846 (Ordnance Survey Map) the central PDA depicts a 'Dye Works'. A dye works is defined as a site used for the production of dyes from natural ingredients, and it was presumably re-use or redevelopment of the lead pipe manufactory. In 1846 the 'Dye Works' is depicted as a 'U' shaped building that lay on an open water course (Cowdaw Clough). There were two adjacent reservoirs, southeast and northwest of the Dye Works. The upper reservoir (to the southeast) would have provided the Dyke Works with a reliable source of water and power. Details regarding the 19th century water supply, such as water races and waterwheels, are unknown and could still survive. By the 1890s Ordnance Survey maps depict the PDA as the 'Pipe Mill'.
- 3.3 During the early 20th century, George Chadwick acquired the site and used part for the printing of posters, handbills and small magazines but the site went over to the production of paper and card.
- 3.4 The original (19th century) buildings were demolished in 1933, and replaced by modern re-enforced concrete and brick as this recording brief has demonstrated.

4. AIMS AND OBJECTIVES

- 4.1 Work on the Proposed Development Area (PDA) involved a staged programme of site remediation works. This involved the removal of the overburden in the form of a site strip. There has been industrial development within the PDA since at least the mid 19th century. These developments have left a series of truncated platforms into the hillside. Away from these areas of truncation, archaeological deposits are potentially still in situ.
- 4.2 The archaeological works will record all potential remains down to final formation levels. The archaeological record will establish the presence/absence, character, extent, state of preservation and date of any archaeological deposits within the site outlined in *Figure 2* of the WSI (Appendix 1), and if suitable, samples will be collected for palaeoenvironmental/artefact/building material research.

5. METHODOLOGY

- 5.1 This watching brief has been carried out in accordance with a written scheme of Investigation issued by CS Archaeology in January 2010 (Appendix 1). The anticipated level of archaeological preservation throughout the site was disappointing and a sampling strategy was not employed.
- 5.2 This project has been undertaken in a manner consistent with the guidance of MAP2 (English Heritage 1991) and professional standards and guidance (IFA, 2001). The survival of archaeology within the PDA was of limited significance and no samples were retained.
- 5.3 General digital shots of the site were taken. These have been used to illustrate the report and are listed in Appendix 2. The digital photographs form a running sequence of activity on the site from March to June 2011.
- 5.4 The nature of the remediation, intensive machine working, prevented detailed examination of the excavated deposits. Because of the difficult site conditions the potential for recording in situ archaeology was extremely limited. Recording was also limited due to unstable and flooded conditions.
- 5.5 Dr A Myers of the Great Greater Manchester Archaeology Unit was kept informed of work and results.

6. RESULTS

- 6.1 These were limited to 'islands' of surviving archaeology within a context of extensive truncation and insertion of concrete foundations which produced the extensive array of 20th century mill buildings and storage areas (Plate 1).
- 6.2 The remediation work was organised into areas. Initially activity was divided in to four areas each started from the western boundary (Figure 2) and progressed north-eastwards (Plate 2). Four areas of archaeology survived:
 - a dam wall and embankment;
 - a stone covered brick culvert;
 - two areas of in situ flagstone flooring;
 - a substantial brick wall.
- 6.3 The dam/reservoir which was originally built to power and supply the mill with water ,had historically been in-filled. Its bank was revealed in the course of the site works (Plates 3-4). This was evident as a tapering of redeposited natural which re-enforced a brick wall c.0.5m wide (Plate 4). The dam lay on a broad northeast to southwest alignment. During the remediation works large quantities of infill material was remediated including some architectural fragments of decorated ashlared stone (e.g. Plate 5).
- 6.4 The main area of archaeological interest was just to the northwest of the reservoir the site of the early mill and pipe works. This area was broadly divided into two building complexes (1 and 2: Figure 3). No clear building plan was revealed only small 'islands of archaeological survival in a palimpsest of modern foundations (e.g. Plate 6). These find areas consisted of a stone capped brick culvert (Plate 7) which appeared to be on an alignment from the reservoir to the site of the early mill. Site conditions prevented a detailed examination of this feature. Two areas of in situ flagstone flooring were observed as they were removed and deposited on the side (Plate 8). The areas of the flagstone floors broadly correlate with the early mill (Building 1) but no dividing walls were apparent.
- 6.5 The last area of archaeology was represented by a substantial brick wall (Plate 9) that was double thickness (nearly 1m in width). The nature and alignment suggests it was associated with the Building 2 and represented the only historic feature.

7. CONCLUSIONS

- 7.1 The archaeological resource was largely affected by modern 20th century construction works. This recording brief has allowed some limited recording of the 18th/19th century mill. Elements of the mill were revealed in the form of flagstone floors and brick walls but 20th century truncation prevented the reconstruction of a detailed plan of the mill. All that could be ascertained is that there was a correlation of in situ remains to the plan of the late 19th century mill complex as depicted in Figure 3.
- 7.2 Overall the PDA represented limited opportunities for pre- 20th century archaeology. Elements of the 19th century mill building were revealed but only in un-related 'islands' of survival. Significantly, no pre-19th century archaeology in the form of earlier (pre 18th/19th century) structures survived. This negative evidence leads the author to believe that the 18th/19th century mill was either constructed on a 'greenfield' site or earlier structural remains, possibly from an earlier mill, had been removed prior to the construction of the modern mill.
- 7.3 The surviving elements were so limited in nature and extent the archaeology was of negible /low importance.
- 7.4 This report will be submitted to the Local Planning Authority for their review and in support of the discharge of Conditions 22 and 23 of Planning Permission 51848, and 16 and 17 of Permission 51849."

8 RECOMMENDATIONS

- 8.1 No further archaeological mitigation is recommended.
- 8.2 Since no areas of significant archaeology were discovered during a detailed examination of the areas identified as being of potential archaeological interest, there will be no need for a scheme of publicity commemorating the industrial heritage of the site

9. BIBLIOGRAPHY

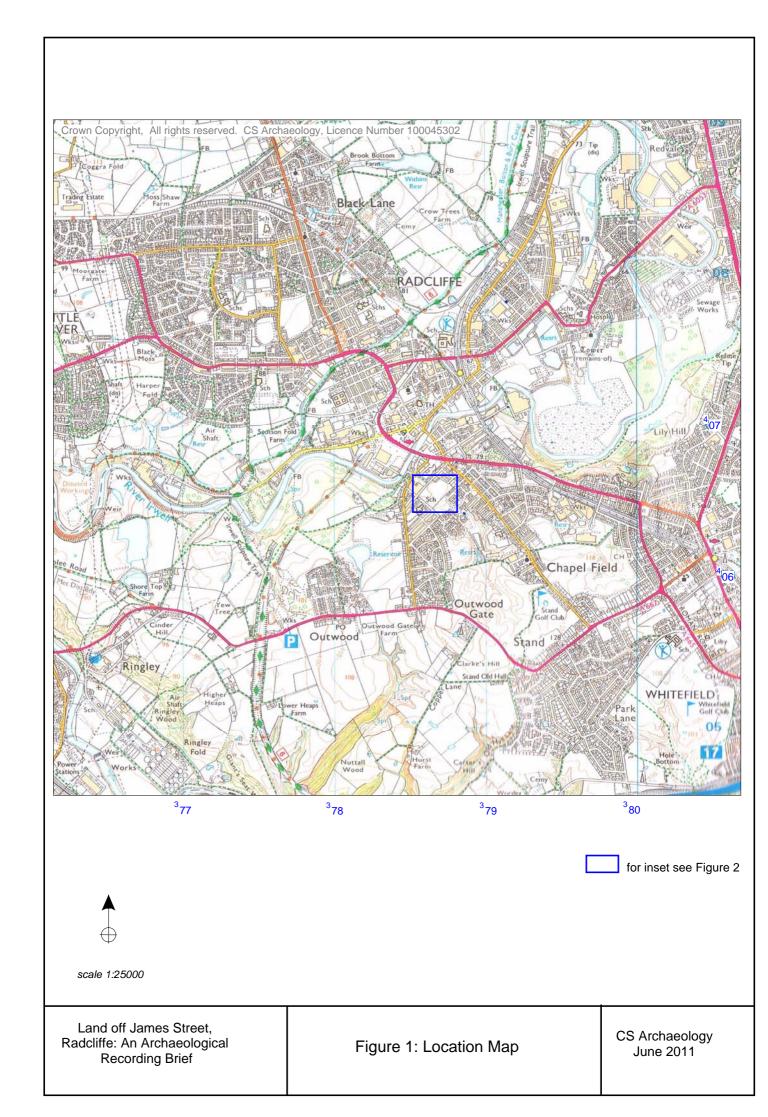
English Heritage, 1991, Management of Archaeological Projects (MAP2)

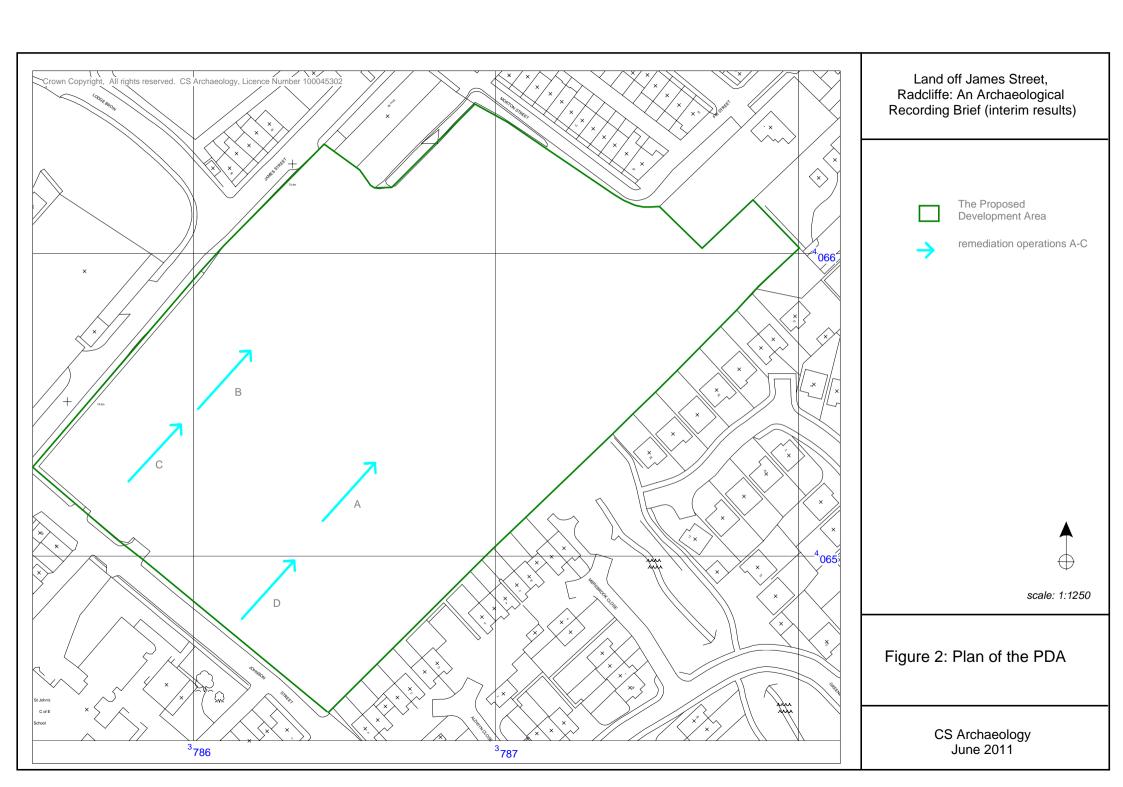
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10. ACKNOWLEDGEMENTS

Thank you to Mr Mike Smith (C Smith and Son) for commissioning this report, to Mr Terry Dene for his comments on the report, and to Dr Myres of Greater Manchester Archaeology Unit for highlighting the site's potential.

FIGURES







PLATES

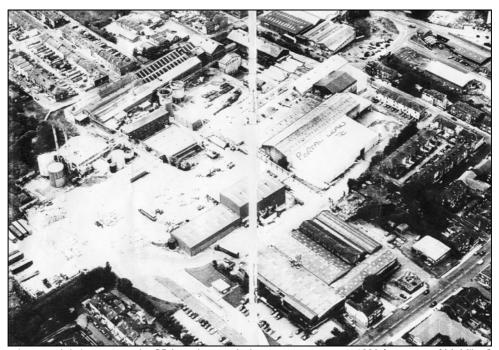


Figure 1: an aerial view across the PDA and towards the western corner c. 1980 (courtesy of Mr Mike Smith)



Plate 2, 5: general view of the excavations, looking north



Plate 3, 11: Oblique view of the section through the dam, looking north

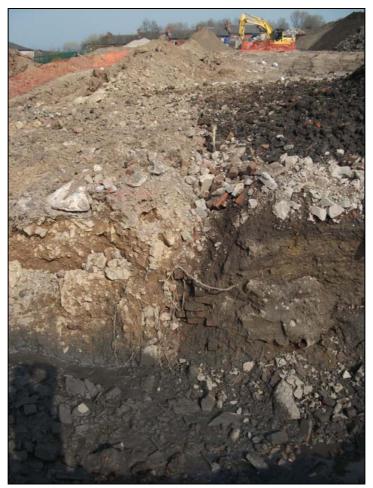


Plate 4, 13: detailed view of the SW facing section through the dam, with the brick revetting, looking northeast



Plate 5, 8: view of masonry removed from the back fill deposits of the reservoir, looking east



Plate 6, 17: view of the overburden a modern concrete/brick floor, looking southeast

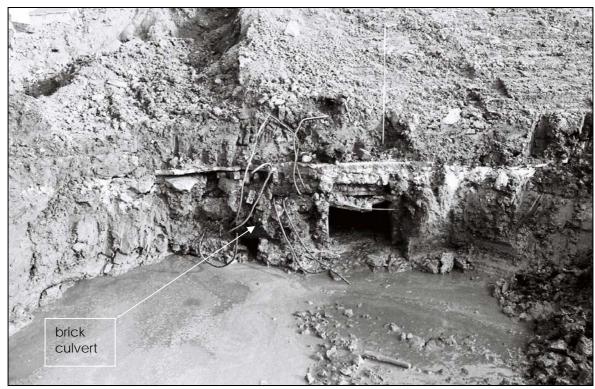


Plate 7, 23: view of the modern culvert with adjacent stone capped brick culvert (poorly defined) to the left, looking southeast



Plate 8, 2: New of the removed flagstones, looking west



Plate 9, 49: General view of the walls (Building 2), looking north northeast

APPENDICES

A WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL RECORDING BRIEF AT LAND OFF JAMES STREET, RADCLIFFE, GREATER MANCHESTER

CS Archaeology

January 2010

0 SUMMARY

- 0.1 This Written Scheme of investigation outlines CS Archaeology's approach to the archaeological mitigation of 2.4 hectares of land that has outline consent for residential redevelopment (App. No. 51848).
- 0.2 Before site works commence a rapid data gathering exercise will up date our archaeological knowledge of the Proposed Development Area (PDA). This will inform of the potential archaeological resource within the PDA.
- It is only during the proposed site remediation works that the archaeological resource can be truly assessed. The nature, extent and condition of the PDA's early industrial buildings may be revealed although. The in situ preservation of the archaeology will be the preferred mitigation approach.
- O.4 After completion of the development an information board will be established for public information.

1 INTRODUCTION

1.1 Details

- 1.1.1 Site Name: Land off James Street
- 1.1.2 Location: James Street, Radcliffe, Greater Manchester (Figure 1)
- 1.1.3 Status: Derelict Land with an application for re-development (App No.

51848

- 1.1.4 NGR SD 7867 0655 (centred on)
- 1.1.5 Area *c.* 2.4 hectares
- 1.1.6 Purpose of the work: Work on the Proposed Development Area (PDA) involve a staged programme of site remediation works. This involves the removal of the overburden in the form of a site strip. There has been industrial development within the PDA since at least the mid 19th century. These developments have left a series of truncated platforms into the hillside. Away from these areas of truncation, archaeological deposits are potentially still in situ.
- 1.1.7 The archaeological works will record all potential remains down to final formation levels. The archaeological record will establish the presence/absence, character, extent, state of preservation and date of any archaeological deposits within the site outlined in Figure 2, and if suitable, samples will be collected for palaeoenvironmental/artefact/building material research.

1.2 Planning Background

- 1.2.1 There have been two previous planning applications relating to the PDA. This involved the proposed erection of 15 No. factory buildings and the erection of 288 dwellings, both of these applications received planning consent. Both applications had archaeological conditions attached. The current planning consent is an outline residential development of 82 dwellings and remediation of land in preparation for residential development (App. No. 51848). The current Planning Consent features two archaeological conditions:
 - 1. 1. No remediation or development should be undertaken until the applicant has secured the implementation of a programme of archaeological investigation to be undertaken in accordance with a written scheme of investigation approved in advance by Bury local planning authority. Reason: to make a record of any significant buried archaeological

remains for archive and research purposes.

2. No development should be undertaken until the applicant has devised and submitted a design for an information board to be erected commemorating the industrial heritage of the site. The details of the commemorative scheme should be agreed in writing with Bury local planning authority.

1.3 Archaeological Background

- 1.3.1 Previous archaeological work re. the PDA consists of a desk-based assessment (LUAU 2000). In the DBA, it states that the PDA was owned by John Lancaster c. 1840 and patent lead pipes were made. The area was known as the 'Pipe Mill' well into the 20th century.
- The PDA lies on the right bank of the River Irwell. By 1846 (Ordnance Survey Map) the central PDA depicts a 'Dye Works'. A dye works is defined as a site used for the production of dyes from natural ingredients, and it was presumably re-use or redevelopment of the lead pipe manufactory. In 1846 the 'Dye Works' is depicted as a 'U' shaped building that lay on an open water course (Cowdaw Clough). There were two adjacent reservoirs, southeast and northwest of the Dye Works. The upper reservoir (to the southeast) would have provided the Dyke Works with a reliable source of water and power. Details regarding the 19th century water supply, such as water races and waterwheels, are unknown and could still survive. By the 1890s Ordnance Survey maps depict the PDA as the 'Pipe Mill'.
- During the early 20th century, George Chadwick acquired the site and used part for the printing of posters, handbills and small magazines but the site went over to the production of paper and card.
- 1.3.4 The original (19th century) buildings were demolished in 1933.

2 OBJECTIVES

- 2.1 The aim of the archaeological works is to record and potentially sample the PDAs archaeological resource during the site reduction works. The archaeological works will gather sufficient information to establish the presence/absence, nature, date, quality of survival and importance of any archaeological remains and will enable an assessment of the potential and significance of the archaeology of the site to be made.
- 2.2 Before site work commences CS Archaeology will appraise our current knowledge of the site by a re-examination of primary and secondary sources. On completion of the archaeological works an information board will be devised and erected on the site to promote the public's awareness of the sites cultural heritage.
- As potential for archaeological survival of 19th century industrial archaeological remains, there is a strong presumption in favour of their physical preservation, and of maintaining future access to the archaeological resource for future investigation. Wherever possible, the preferred option will be the preservation of significant archaeological remains in situ. The potential for reconciling the needs of preservation with those of development will be fully explored, and will be assessed by CS Archaeology in conjunction with the GMAU. The results of the archaeological recording will enable the impact of the proposals on the archaeological resource to be assessed, and thereby enable informed decisions to be taken on the proposed development, and the need for any design amendments and/or mitigation strategies for management of the archaeological resource, including physical *in situ* preservation of archaeological remains, and excavation and preservation 'by record'.

3 METHODOLOGY

3.1 Documentary Research

- 3.1.1 This will involve the examination of primary and secondary sources, held within the Historic Environment Record held by GMAU and records of the PDA held by local and county libraries.
- Particular attention will be paid to obtaining pre-ordnance survey maps of the PDA. This information will be collated into final report, a summary will be supplied to GMAU and the client in advance of site works in order to guide archaeological management issues.

3.2 Recording Brief

- 3.2.1 Site remediation will involve the removal of both inert and contaminated material. The work shall be carried out by appropriately qualified and experienced staff. Details of staff numbers, their relative experience and their responsibilities in carrying out the work will be submitted to GMAU in advance of work starting. Staff CVs will also be included.
- Reasonable notice (at least 14 days) of the commencement of the development will be given to CS Archaeology. A minimum of one week's notice will be given to GMAU by CS Archaeology, to arrange monitoring visits.
- 3.2.3 All site remediation work will be under constant archaeological supervision. One archaeologist per excavating machine basis to allow for the identification and recording of any archaeological structures or material that might be uncovered.
- 3.2.4 Where structures, features or finds of archaeological interest are exposed or disturbed by construction works, the CS Archaeology must be given the opportunity to observe, clean, assess and , where appropriate, hand excavate, sample and record these features and finds.
- 3.2.5 The excavation/remediation work to the PDA will be undertaken by mechanical excavator, from the surface down to an as yet undetermined depth. Where practically possible a toothless bucket will be used in order to minimise damage to structural remains. Hand excavation/ cleaning will only but carried out as a last resort, because of the land contamination issues, using appropriate PPE. It is estimated that the PDA will consist of archaeological deposits consisting primarily of waste material and structural contexts from 19 th /20 century industrial activities.
- 3.2.6 A sufficient sample of any archaeological features and deposits revealed will be excavated in an archaeologically controlled and stratigraphic manner. The site monitors will be consulted on the treatment of significant features that may merit full preservation in situ. The complete excavation of features is not regarded as necessary; a sufficient sample will be investigated to understand the full stratigraphic sequence of areas of archaeological significance, down to naturally occurring deposits. The sampling policy will be as follows:

- a) A 100% sample will be taken of all stake-holes;
- b) A 50% sample will be taken of all post-holes, and of pits with a diameter of up to 1.5m;
- c) A minimum 25% sample will be taken of pits with a diameter of over 1.5m; but this will include a complete section across the pit to recover its full profile;
- d) A minimum 20% sample will be taken of all linear features, up to 5m in length; for features greater than this, a 10% sample would suffice;
- e) A representative sample, minimum of 4 bricks will be collected from each distinct wall/floor.
- 3.2.7 In certain cases, the use of mechanical excavation equipment may be appropriate (e.g. for removing deep intrusions such as modern brick and concrete floors or footings), or for putting sections through major features after partial excavation (e.g. ditches), or through deposits to check that they are of natural origin.
- 3.2.8 A full written, drawn and photographic record will be made of **all material** revealed during the course of the PDAs remediation. All archaeological features and deposits, and all sections, will be drawn and fully recorded for archival purposes. Plans will be completed at a scale of 1:50 or 1:20 (as appropriate), whilst section drawings will be at a scale of 1:20. A minimum 35mm format for photography will be undertaken in monochrome, colour slide and digital formats.
- 3.2.9 Where industrial activity is detected, material will be retained from each spatially and chronologically distinct deposit to ensure that any chronological or spatial changes in the use of the site can be investigated. The amount retained will be sufficient for any analysis required and will include examples that show distinctive features, such as details and marks, dimensions, fabrics and forms. It is not generally necessary to retain all the industrial residues from a deposit, and specialist advice will be sought. Where doubt exists, and only small quantities are present, all the material will be kept; where large quantities are present (more than one tonne), a proportion will be kept and the amount discarded recorded. Reference will be made to section 3.7 of the 'Science for Historic Industries' (English Heritage, 2006) guidelines.
- 3.2.10 Where industrial activity is detected, samples will be collected (in conjunction with hand-retrieved material). Separate samples (0.2 litres in volume) will be collected for micro-slags (hammer-scale and spherical droplets). When working areas are identified multiple samples will be taken at regular 0.2-0.5m intervals (e.g. a grid pattern to look at spatial distributions). Reference will be made to page 6 of the 'Metallurgy' (English Heritage, 2001) guidelines.
- 3.2.11 Deposits will be sampled for retrieval and assessment of the preservation conditions and potential for analysis of all biological remains. A strategy for the recovery and

sampling of environmental remains from the site will be agreed with an environmental consultancy, in advance of the project. The sampling strategy will include a reasoned justification for selection of deposits for sampling, and has been developed in collaboration with a recognised bioarchaeologist. If deemed appropriate opportunity will be afforded for an environmental specialist to visit the site during the recording brief and to discuss the strategy.

- 3.2.12 In keeping with the English Heritage guidelines, all securely stratified deposits considered suitable for environmental analysis (i.e. those not consisting of building debris, rubble mortar etc.) will be sampled (40-60 litres in volume, where deposits allow) in order that their potential can be fully assessed, and a suitable sampling strategy will be formulated in case of further mitigation. Reference will be made to the 'Environmental Archaeology' (English Heritage, 2002) guidelines.
- 3.2.12 Other samples will be taken, as appropriate, in consultation with specialists and the English Heritage Regional Science Advisor, as appropriate (e.g. dendrochronology, soil micromorphology, monolith samples, C14, etc.). Samples will be taken for scientific dating where necessary for the development of subsequent mitigation strategies.
- 3.2.13 Lifting of human skeletal remains will be kept to the minimum which is compatible with an adequate evaluation. At sites known in advance to be cemeteries, provision will be made for site-inspection by a recognised specialist. CS Archaeology will be aware of, and comply with, provisions of Section 25 of the Burial Act of 1857, and pay due attention to requirements of Health and Safety.
- 3.2.14 A finds recovery and conservation strategy will be discussed with GMAU and the recipient museum in advance of the project commencing, and a policy for finds recording will be agreed and submitted GMAU, before commencement of site works (see *Selection, Retention and Dispersal of Archaeological Collections, Guidelines for use in England, Northern Ireland, Scotland and Wales:* Society of Museum Archaeologists 1993). Any recording, marking and storage materials will be of archive quality, and recording systems will be compatible with the recipient museum (see 9 below). Copies of all recording forms and manuals will be submitted to GMAU, prior to the commencement of site works. Allowance will be made for preliminary conservation and stabilisation of all objects and an assessment of long-term conservation and storage needs. CS Archaeology will make an allowance for a **minimum of ten boxes** in calculating estimates for museum's storage grant.
- 3.2.15 A representative selection of finds (artefacts and ecofacts) visible during excavation will be collected, processed and assessed (by a suitably qualified and experienced specialist). Finds will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication *First Aid for Finds*. In accordance with the procedures outlined in MAP2, all iron objects, a selection of non-ferrous artefacts (including all coins), and a sample of any industrial debris relating to metallurgy will be X-radiographed before assessment. On large postmedieval or other metalworking sites, or sites yielding structural metalwork, there may be a need to vary this strategy, and the need and use of X-radiography will be established by the specialist in conjunction with the project monitors.
- 3.2.16 The following categories of artefacts may be predicted: pottery, ferrous and non-

ferrous metalwork, glass, ceramic building materials, worked bone, flint and/or worked stone.

- 3.2.17 Metalworking finds and metalworking residues will normally be washed, but some materials, however, are delicate and may be damaged; any cleaning procedures will be agreed with the metalworking specialist and / or conservator. Materials that will not be washed (except by, or under the supervision of, the metalworking specialist include crucibles, moulds, hearth and furnace linings. Reference will be made to page 6 of the 'Metallurgy' (English Heritage, 2001) guidelines.
- 3.2.18 CS Archaeology has experience of carrying out similar work in South and West Yorkshire and has used specialist subcontractors such as Dr Chris Cumberpatch (Sheffield) and Dr J Wheeler (Aberdeen University) to clarify and augment the archaeological interpretation and archive. CS Archaeology will also ensure that local museum's are visited to update artefact recognition particularly from the medieval and post-medieval periods within the region.
- 3.2.19 CS Archaeology will ensure that the pottery report, if required, will use the fabric classifications which have been published in the reports for other recently published medieval and post-medieval sites from the county, for the sake of consistency: access to the fabric series will be freely granted to pottery researchers.
- 3.2.20 This WSI will be agreed with GMAU at the outset of the project.
- 3.2.21 CS Archaeology will make provision for the use of shoring, pumps, or artificial lighting. Such strategies will also allow for sampling for radiocarbon, archaeomagnetic and/or dendrochronological determinations, as appropriate: where *in situ* timbers are found to survive in good condition, samples will be taken for dendrochronological assay.
- 3.2.22 Arrangements for site access and reinstatement are to be agreed with the commissioning body.
- 3.2.23 Should CS Archaeology or the client wish to vary the recording strategy, if, for example, a part or the whole of the site is not amenable to remediation as outlined above or an alternative evaluation/excavation technique may be more appropriate or likely to produce more informative results, a proposal for amended/additional work will be drafted by CS Archaeology, and discussed urgently with GMAU.
- 3.2.24 If human remains are encountered during the course of this evaluation, it may be necessary to remove these, under the conditions of a Home Office burial licence, to ensure that they are treated with due dignity. The preferred option would be for them to be adequately recorded before lifting, and then carefully removed for scientific study, and long-term storage with an appropriate museum; however, the burial licence may specify reburial or cremation as a requirement.
- 3.2.25 If it becomes clear during the archaeological recording brief that little of archaeological interest is likely to survive on the site, CS Archaeology will discuss the findings with the monitor (GMAU). A joint decision will then be made on reducing the work to an e.g. an intermittent recording brief or ceasing observation of ground works altogether.

3.3 Information Board

- 3.3.1 The establishment of an archaeological/historical information board will sited adjacent to a public path as close to the original 19 century buildings as possible in the design. It will feature concise industrial information which will be approved by GMAU. Depending on future mitigation measures, it will have either an imaginative illustration or historical map and will include a direction path to further information on manufacture surrounding Manchester's Cotton industry during the 19 century.
- 3.3.2 The proposed materials will be a durable exterior design, angled on a low plinth that will be compatible with observation from a wheel chair, and will include informative illustrations and text. The exact design of the plinth will be subject to client/agent agreement, it will be in keeping with the proposed architecture and will be approved by GMAU. Initial ideas include pipework in the design of the frame, reflecting the past use of the PDA.

4 REPORT PREPARATION, CONTENTS AND DISTRIBUTION

- 4.1 Upon completion of the evaluation, the artefacts, soil samples and stratigraphic information shall be assessed as to their potential and significance for further analysis.
- A report will be prepared which will provide the results of the fieldwork and assessment and will place the results in a contextual and historical framework. The project report will be produced in accordance with English Heritage guidelines as outlined in MoRPHE (2006), and IFA guidance for evaluations (2008). It will synthesise all elements of the evaluation work.

The report will include the following:

- a) A non-technical summary of the results of the work, introduction and aims and objectives.
- b) An introduction which will include
- . the site code/project number;
- . planning reference number;
- . dates when the fieldwork took place;
- . grid reference;
- . author of report and report date.
- c) An account of the methods employed during the project, and any constraints.
- d) An account of the results of the fieldwork, describing both structural data and associated finds and/or environmental data recovered, and with a quantification of artefacts, ecofacts, contexts and other primary records and registers.
- e) Interpretation, including phasing of the site sequence and spot dating of artefactual and environmental material recovered (including type series & fabric codes for local pottery groups, as appropriate). Descriptive material will be clearly separated from interpretative statements. This shall be supported by the use of **photographs and drawings**, to include an overall plan of the site accurately identifying the location of trenches, related to fixed points shown on current OS data, geo-referenced to National Grid; individual trench plans as excavated indicating the location of archaeological features with at least one section detailing the stratigraphic sequence of deposits within each trench; illustration of significant archaeological features with appropriately scaled plans and sections, with heights relative to Ordnance Datum.
- f) A specialist assessment of the artefacts recovered with a view to their potential for further study. Allowance will be made for preliminary conservation and stabilization of all objects and an assessment of long-term conservation and storage needs. Assessment of artefacts will normally include inspection of X-radiographs of all iron objects, a selection of nonferrous artefacts (including coins), and a sample of any industrial debris relating to metallurgy. However, on large post-medieval or other metalworking sites, or sites yielding structural metalwork this may not always be appropriate, and the need and use of X-radiography will be established by the specialist. A rapid scan of all excavated material will be undertaken by conservators and finds researchers in collaboration. Material considered vulnerable will be selected for stabilisation after specialist recording. Where

intervention is necessary, consideration will be given to possible investigative procedures (e.g. glass composition studies, residues in or on pottery, and mineral-preserved organic material). Once assessed, all material will be packed and stored in optimum conditions, as described in *First Aid for Finds*. Waterlogged organic materials will be dealt with, following the English Heritage documents, *Guidelines for the care of waterlogged archaeological leather*, and *Guidelines on the recording, sampling, conservation and curation of waterlogged wood*.

- g) A specialist assessment of environmental samples taken, with a view to their potential for subsequent study. Processing of all samples collected for biological assessment, (or sub-samples of them, in the case of heavy clay for instance) will be completed. Bulk and site-riddled samples from dry deposits will have been processed during the excavation, where possible. The preservation state, density and significance of material retrieved will be assessed, following methods presented in *Environmental Archaeology: a Guide to the theory and practice of methods from sampling and recovery to post-excavation.* Unprocessed sub-samples will be stored in conditions specified by the appropriate specialists. Assessments for any technological residues will be undertaken. Samples for dating will be submitted to laboratories promptly, so as to ensure that results are available to aid development of specifications for subsequent mitigation strategies.
- h) The results from investigations in Archaeological Sciences will be included in the Site Archive and presented in the report. Reports will include sufficient detail to permit assessment of potential for analysis. They will include tabulation of data in relation to site phasing and contexts, and will include non-technical summaries. The objective presentation of data will be clearly separated from interpretation. Recommendations for further investigations (both on samples already collected, and at future excavations) will be clearly separated from the results and interpretation, and will be incorporated into the Specifications/Project Design for any future intervention or mitigation strategy.
- i) An assessment of the archaeological significance of the deposits identified, in relation to other sites in the region.
- j) A conclusion with recommendations for further post-excavation work, if required.
- k) Details of archive location and destination (with accession number, where known), together with a catalogue of what is contained in that archive.
- I) Appendices and figures, as appropriate, including a copy of this Written Scheme of Investigation.
- m) References and bibliography of all sources used.
- 4.3 Copies of the report will be submitted to the commissioning body, Dr Andrew Myres, Greater Manchester Archaeology Unit, within an agreed timetable and subject to any contractual requirements on confidentiality (see 5.4 below). The usual for a written, illustrated report is within 3 months (or longer period by mutual agreement) following completion of fieldwork.
- 4.4 A brief, Interim Report will be prepared during or shortly after the completion of

fieldwork, to assist in making decisions on development proposals.

- 4.5 As well as a printed copy of the report, an electronic copy of the report will also be supplied in PDF format to GMAU. This will allow a text summary to be incorporated by the Historic Environment Record (HER) into any review or synthetic documents.
- 4.6 An on-line OASIS form will also be completed at http://ads.ahds.ac.uk/project/oasis/, for inclusion in the ADS database.

5 COPYRIGHT, CONFIDENTIALITY AND PUBLICITY

- Unless the individual/organisation commissioning the project wishes to state otherwise, the copyright of any written, graphic or photographic records and reports rests with CS Archaeology. Agreements on copyright will be agreed with the commissioning body at the outset of the project.
- 5.2 The circumstances under which the report or records can be used by other parties will be identified at the commencement of the project, as will the proposals for distribution of the report (see 4 above). All archaeologists undertaking work will respect the commissioning body's requirements over confidentiality, but the archaeologist will endeavour to emphasise their professional obligation to make the results of archaeological work available to the wider archaeological community within a reasonable time.
- 5.3 The archaeologist undertaking the evaluation has a duty of confidence to the client commissioning the work. All aspects of publicity will be agreed at the outset of the project between the commissioning body and the archaeological organisation or individual undertaking the project.

6 ARCHIVE PREPARATION & DEPOSITION

- The requirements for archive preparation and deposition will be addressed and undertaken in a manner agreed with the recipient museum. The recipient museum will be contacted at an early stage, before submission of the project design and before commencement of fieldwork
- A site archive will be prepared in accordance with English Heritage MoRPHE guidelines (English Heritage 2006). See also *Towards an Accessible Archaeological Archive, the Transfer of Archaeological Archives to Museums: Guidelines for use in England, Northern Ireland, Scotland and Wales* Society of Museum Archaeologists 1995.
- 6.3 The site archive, including finds and environmental material, subject to the permission of the relevant landowners, will be labelled, conserved and stored according to the United Kingdom Institute for Conservation (UKIC)'s *Guidelines for the Preparation of Excavation Archives for Long-term Storage* (Walker 1990) and the Museums and Galleries Commission's *Standards in the Museum Care of Archaeological Collections*, 1992. Provision will be made for the stable storage of paper records and their long-term storage on a suitable medium, such as microfilm, a copy of which will be deposited with the NMR (English Heritage). An index to the contents of the archive, together with details of its date and place of deposition will be lodged with the SMR.
- 6.4 Will no further archaeological work be initiated, the archive will be deposited with a suitable repository which meets the criteria for the storage of archaeological material. An agreed allowance will be made for a contribution to the recipient museum towards the curation and storage of material.
- 6.5 If further archaeological evaluation be initiated and additional archaeological work undertaken, the evaluation archive will be prepared accordingly for incorporation into the final archive.
- 6.6 Archive deposition will be arranged in consultation with the recipient museum and the GMAU, and will take account of the requirements of the recipient museum and the relevant guidelines (see above) relating to the preparation and transfer of archives. The timetable for deposition shall be agreed on completion of the site archive and narrative.

7 POST EXCAVATION ANALYSIS, PUBLICATION & DISSEMINATION

- 7.1 The information contained within the assessment report will enable decisions to be taken regarding the future treatment of the archaeology of the site and any material recovered during the recording brief.
- 7.2 If further archaeological investigations take place, any further analyses (as recommended by the specialists, and following agreement with the curator) will be incorporated into the post-excavation stage of the archaeological programme.
- 7.3 If further site works do not take place, it will be appreciated that assessment may produce results of sufficient significance to merit publication in their own right, and allowance will be made for the preparation and publication in a local and/or national journal of a short summary on the results of the evaluation and of the location and material held within the site archive.
- 7.4 Should further archaeological excavation be undertaken, a synopsis of the results of the assessment will be prepared for publication with the final results of any further fieldwork.

| 8 | MONITORING, HEALTH AND SAFETY, STAFFING & INSURANCE |
|-----|--|
| 8.1 | The archaeological work will be monitored under the auspices of the GMAU. |
| 8.2 | All CSCS staff and subcontracting archaeologists are CSCS accredited, details available on request. |
| 8.3 | CS Archaeology will ensure that arrangements are made for monitoring visits and meetings before, during and after the archaeological site work, as appropriate. |
| 8.4 | CS Archaeology will report any significant or unexpected discoveries immediately to the project monitors and the client/agent. |
| 8.5 | Health and safety will take priority over archaeological matters. All archaeologists undertaking fieldwork will comply with all Health and Safety Legislation; this includes the preparation of a Risk Assessment. |
| 8.6 | Necessary precautions will be taken over underground services and overhead lines. |
| 8.7 | CS Archaeology will ensure that they, or any proposed sub-contractors, are appropriately qualified to undertake such projects. |
| 8.8 | CS Archaeology has ensured that they are adequately insured, to cover all eventualities, including risks to third parties. |

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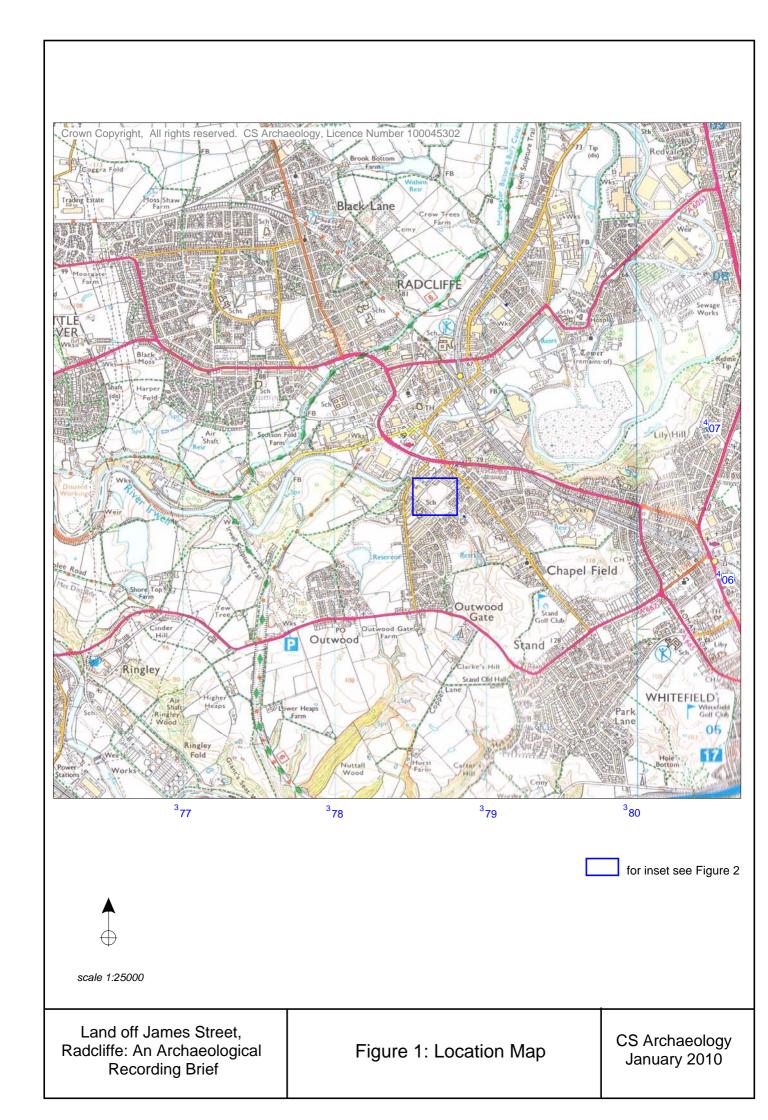
Smith Grant, 2009. Radcliffe Paper Mill: Site Investigation and Risk Assessment. Unpublished client report Ref. R1293-R01.

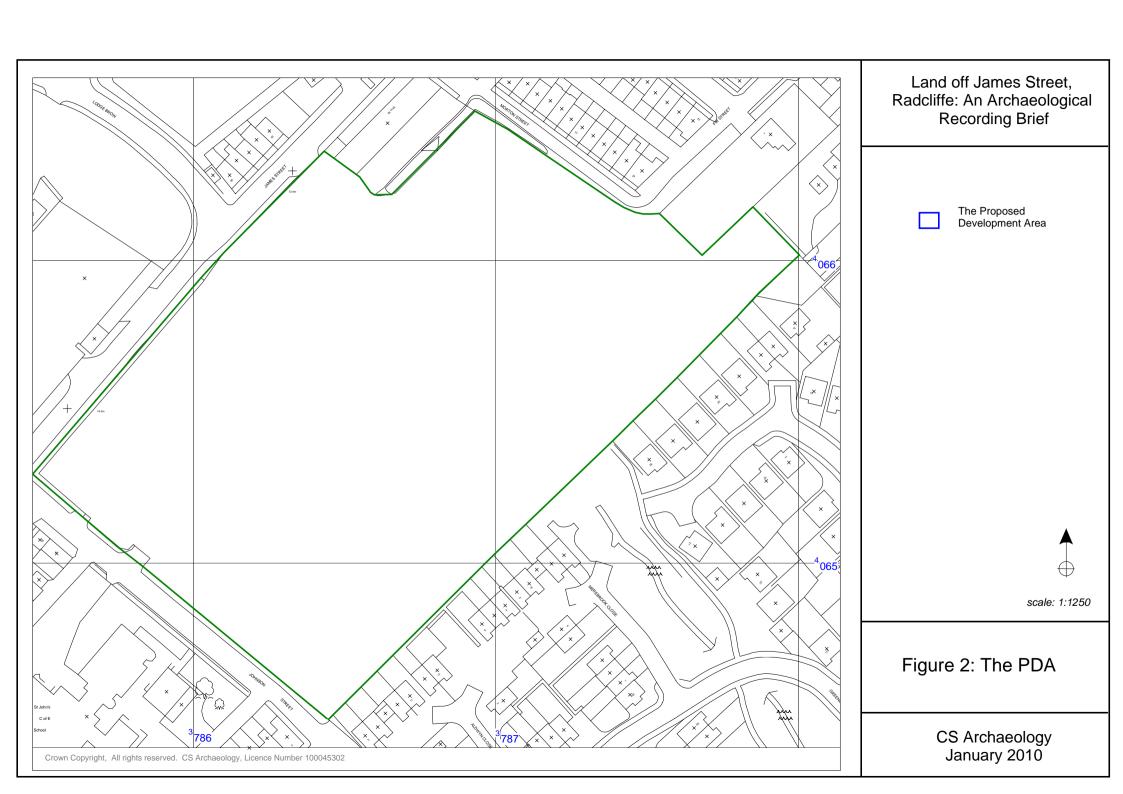
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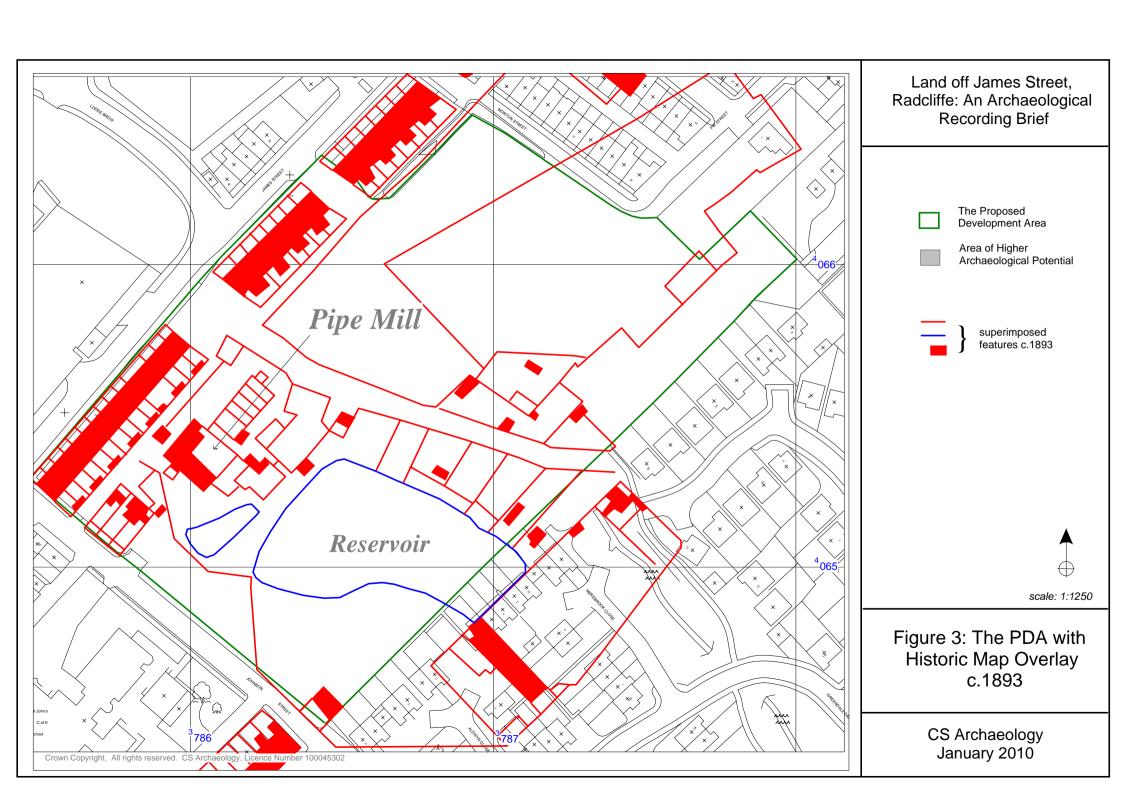
CS Archaeology

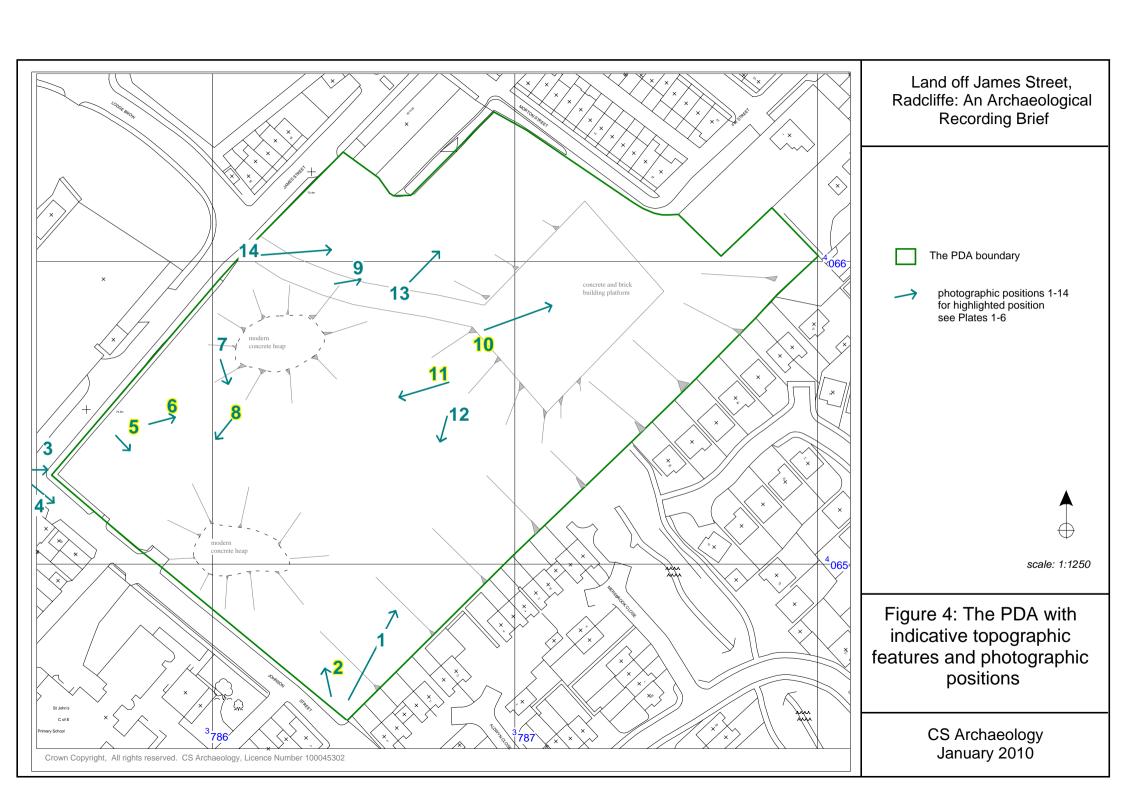
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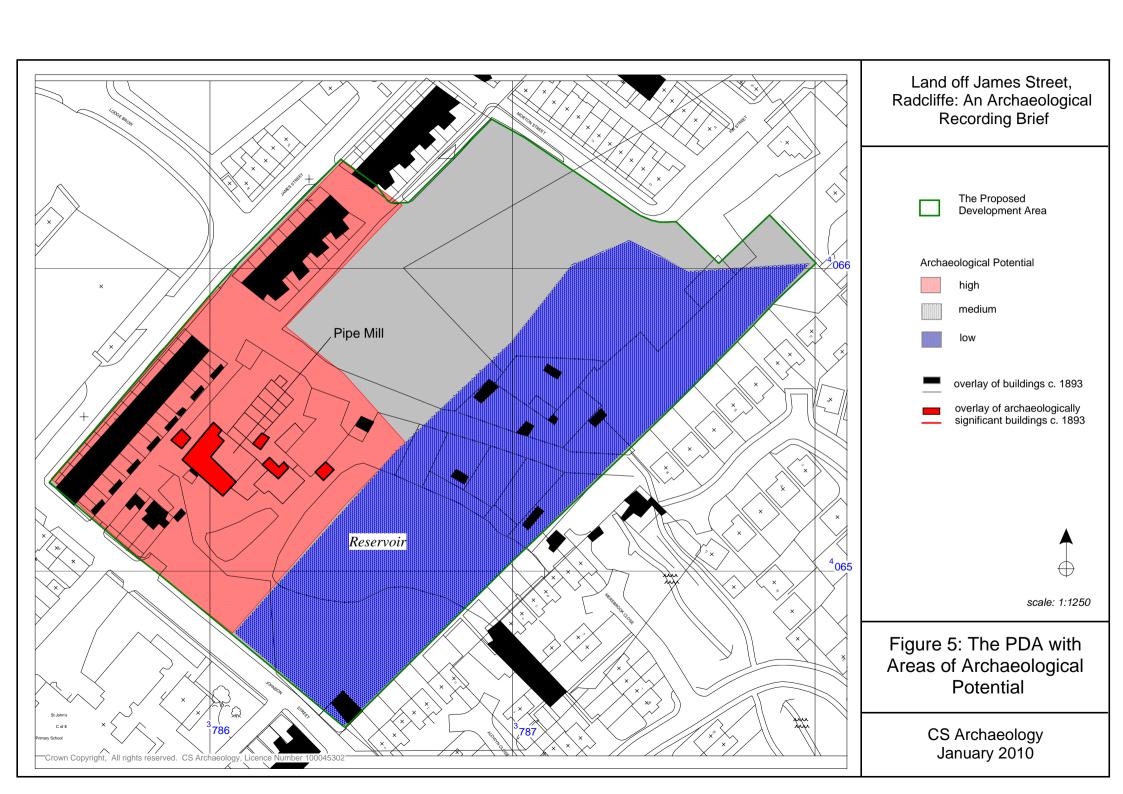
FIGURES











PLATES



Plate 1 (2): general view of the PDA, from the south



Plate 2 (5): general view of the PDA, from the south



Plate 3 (6): general view of the PDA towards the building platform, from the west



Plate 4 (8): general view of the PDA, from the northeast



Plate 5 (10): the western area of the PDA with the building platform, from the west southwest



Plate 6 (11): general view across the area of archaeological potential and significance, from the southwest

Appendix 2: Photographic Register

PHOTOGRAPHIC REGISTER A

Digital colour at 12 mega-pixel resolution

| No. | Plate | Location | Description | Looking |
|-----------|-------|----------|--|---------|
| 1 | | | View of the concrete culvert | SE |
| 2 | 8 | | View of the removed flagstones | W |
| 3 | | | General view of the excavations | E |
| 4 | | | General view of the excavations | SE |
| 5 | 2 | | General view of the excavations | NW |
| 6 | 9 | | View across the PDA | NNW |
| 7 | | | General view of the excavations | N |
| | | | View of redeposited masonry (from the | |
| 8 | 5 | | reservoir | S |
| 9 | | | General view of the excavations | W |
| | | | Redeposited masonry from the excavations of | |
| | | | the reservoir to the southeast of the historic | |
| 10 | | | mill | N |
| 11 | 3 | | Oblique view of the section through the dam | N |
| | | | Detailed view of the SW facing section | |
| 12 and 13 | 4 | | through the dam | NE |
| 14 | | | General view of the section through the dam | E |
| 15 | | | Removal of a concrete/brick floor | NE |
| 16 | | | Section through the concrete/brick floor | E |
| 17 | 6 | | Detail of the concrete/brick floor | SE |
| | | | View of the removal of a concrete beam, part | |
| 18 | | | of the modern foundations | NE |
| 19 | | | Section of brick walling revealed in section | NE |
| 20 | | | General view of the excavations | NW |
| | | | View of the modern culverts which were on a | |
| 21-23 | 7 | | NW-SE alignment (towards the reservoir) | SE |
| 24 | | | General view | E |
| 25 | | | General view of the excavations | N |
| | | | View of the flagstone flooring on the spoil | |
| 26 | | | heap | NW |
| | | | View of the sifting operation with 'griddle' | |
| 27 | | | bucket on the 360 | NE |
| 28 | | | General view of the remediated area | SW |
| 29 | | | View of the modern foundation stratigraphy | E |
| 30 | | | View of a brick pier/wall | NE |
| 31 | | | General view | SW |
| 32 | | | General view | N |
| 33 | | | View revealing to top of a concrete beam | NE |
| 34 | | | Removal of concrete beam | N |
| | | | The revealed section with stone setts to the | 1 |
| 35 | | | top of the section | NE |

| | | | | Lookin |
|-------|-------|----------|--|--------|
| No. | Plate | Location | Description | g |
| 36 | | | View of an overturned flagstone with lime mortar still adhering | N |
| 37 | | | General view of the fully remediated eastern corner of the PDA | SW |
| 38 | | | General view stripping out the concrete beams | NE |
| 39 | | | View of a substantial brick wall which probably relates to historic building 1 | E |
| 40 | | | View of a substantial brick wall which probably relates to historic building 1 | ENE |
| 41 | | | General view of the excavations | E |
| 42 | | | General view of the excavations | SE |
| 43 | | | General view of the excavations | NW |
| 44-46 | | | General view of the excavations | NW |
| 47-48 | | | General view of the revealed mill walls | ESE |
| 49 | 9 | | General view of the walls (Building 2) | NNE |
| 50-1 | | | General view of the excavation | Е |
| 52 | | | Locational view of the excavations towards the school | SW |

NB No artefacts have been retained as part of the archive