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ARCHAEOLOGICAL &
BUILT HERITAGE SERVICES
SINCE 1997

Written Scheme of Investigation for Archaeological Standing Building Recording

On Behalf of
713 Homes Ltd

Concerning
Pumping Station
Mill Drove South
Cowbit
Spalding
Lincolnshire
PE12 6FS

February 2025

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1 Introduction

Border Archaeology (BA) has been instructed by Mr Dale Harrison of 713 Homes Ltd (the Client) to carry out a programme of Archaeological Standing Building Recording (ASBR) to Historic England Level 2 of a non-designated Railway Goods Shed built in 1867 in connection with its conversion as part of a proposed residential development at Pumping Station Mill Drove South Cowbit Spalding Lincolnshire PE12 6FS (NGR: TF 26591 18083 - *figs.1-3*).

In accordance with the *National Planning Policy Framework* (*NPPF*; Ministry of Housing, Communities and Local Government 2023), planning permission for the proposed works has been granted by South Holland District Council (Planning Refs.: H01-0509-23; H01-0007-25) subject to Condition 7 of the Planning Decision, as outlined below:

Prior to commencement of the development hereby approved, a full photographic building recording of the site shall be carried out which contains:

1. A general view or views of the building in its wider setting.
2. The building's external appearance.
3. The overall appearance of the principal rooms and circulation areas.
4. Any external or internal detail, structural or decorative, which is relevant to the building's design, development and use, with scale where appropriate.
5. Any machinery or other plant, or evidence for its former existence.
6. Any dates or other inscriptions; any signage, makers' plates or graffiti which contribute to an understanding of the building. A transcription should be made wherever characters are difficult to interpret.
7. Any fixtures and fittings.
8. Copies of maps, drawings, views and photographs, present in the building and illustrating its development or that of its site.

This photographic building recording should also contain a written account which provides the precise location of the property as an address and in the form of a National Grid Reference, A note of any statutory designations, the date of recording with the name(s) of the recorder(s) and the location of any archive material.

Thereafter, the photographic building recording report shall be submitted to and approved in writing by the Local Planning Authority and submitted to the Lincolnshire County Council Historic Environment Record for archiving within 3 months of completion.

Reason: To ensure that the heritage significance of the host property is properly recorded in its undeveloped state. This Condition is imposed in accordance with Section 16 of the National Planning Policy Framework 2023.

This Written Scheme of Investigation (WSI) has been prepared with reference to *Standard and guidance for the archaeological investigation and recording of standing buildings or structures* (CI*f*A 2020) and Lincolnshire County

Council's (LCC) *Archaeology Handbook* (Historic Places Team 2024); it is for submission to Ruben Lopez Catalan Historic Environment Officer (HEO) Lincolnshire County Council.

2 Site Description

Cowbit is situated at c. 3m AOD on the B12357 Stone Gate, close to the junction of the A16 Crowland Bypass and E of the River Welland. The settlement lies c. 5km S of Spalding in S Lincolnshire, a flat, open fenland landscape designated as a National Character Area (NCA 46) and defined as … *a distinctive, historic and human influenced wetland landscape lying to the west of the Wash estuary, which formerly constituted the largest wetland area in England. The area is notable for its large-scale, flat, open landscape with extensive vistas to level horizons*. Spalding is one of several notable settlements in the inland fens or 'townlands', which also include Boston, Holbeach and Wisbech. The area has been associated with salt-making from the Iron Age and residual mounds or 'salterns' remain in many places, especially at Spalding and in the Boston area.

The Lincolnshire Historic Landscape Characterisation Project places Spalding in Character Zone WSH6—'Townlands within The Wash Character Area', largely comprising arable fields, which are used to cultivate a variety of food and cash crops with pasture around historic settlements. The character zone encompasses most of the nucleated settlements in the wider Wash region, Spalding and Boston being the two largest settlements, the former representing the hub of the food production industry in the region, with an assortment of processing plants, canneries and distribution centres, while the latter is a medieval port which retains a strong maritime character. The application Site lies to the W of Mill Drove South and forms part of a wider area of brownfield land of the former railway yard.

The Site is located outside the Spalding Conservation Area and no Listed Buildings or Scheduled Ancient Monuments (SAMs) are situated within the Site boundary. The Goods Shed of 1867 was built by the Great Northern Railway and is a non-designated heritage asset contemporary with Cowbit Railway Station (MLI23554) and is listed in the gazetteer to *The Railway Goods Shed and Warehouse in England* (Minnis & Hickman 2016, 106).

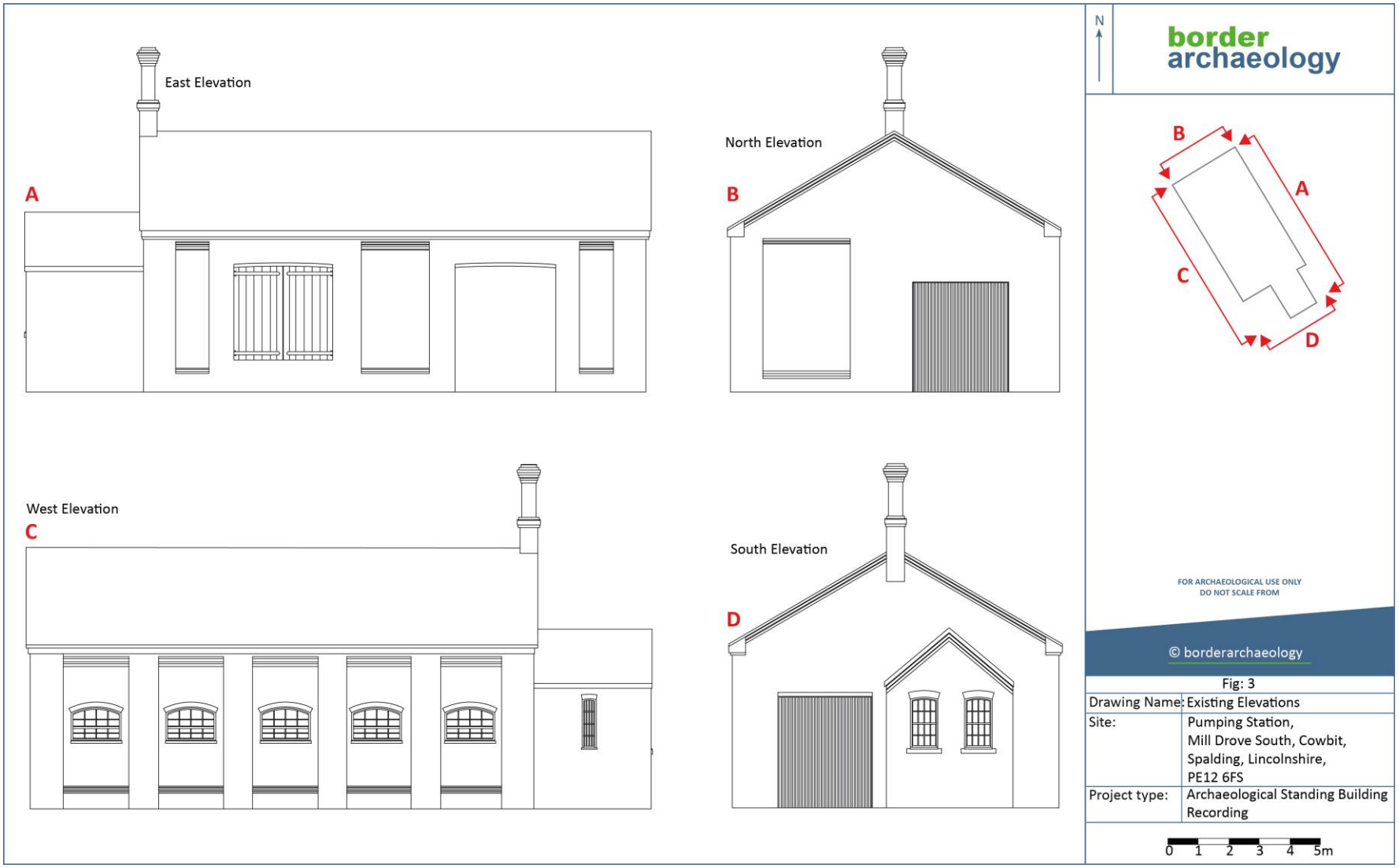
The nearest SAM is the Roman Settlement between Broadgate Farm and Lower Delgate Farm (List Entry Number: 1004963) (NGR TF 27643 16891). The nearest Listed Buildings are The Mill at Backgate (Grade II) List Entry Number: 1359258) (NGR TF 26611 17921) and early 19th century four-stage tapering red brick tower mill c 200m S of the Site and the 13th century Church of St Mary (Grade I) (List Entry Number: 1064482) (NGR TF 25979 18009) located c 600m to the W.

2.1 Soils & Geology

The British Geological Survey (BGS) identifies sedimentary mudstone bedrock of the Oxford Clay Formation which was laid down between 166.1 and 157.3 million years ago during the Jurassic period. The superficial geology is composed of clay and silt Tidal Flat Deposits formed between 11,800 years ago and the present during the Quaternary period (BGS 2023). No historic borehole data is available within a c 1km radius of the Site.


N
Site Location
Cowbit
The Slipe
Cowbit Fen
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© borderarchaeology
Fig: 1
Drawing Name: Site Location Plan
Site: Pumping Station, Mill Drove South, Cowbit, Spalding, Lincolnshire, PE12 6FS
Project type: Archaeological Standing Building Recording
0 50 100 150 200 250m


N
border archaeology
Site Boundary
Proposed New Development
Building Subject to Recording
Mill Drove South
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DO NOT SCALE FROM
OS Licence: 100055758
© borderarchaeology
Fig: 2
Drawing Name: Site Plan
Site: Pumping Station, Mill Drove South, Cowbit, Spalding, Lincolnshire, PE12 6FS
Project type: Archaeological Standing Building Recording
0 5 10 15 20 25m


East Elevation
A
North Elevation
B
West Elevation
C
South Elevation
D
N
B
A
C
D
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DO NOT SCALE FROM
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Fig: 3
Drawing Name: Existing Elevations
Site: Pumping Station, Mill Drove South, Cowbit, Spalding, Lincolnshire, PE12 6FS
Project type: Archaeological Standing Building Recording
0 1 2 3 4 5m

3 Brief Historical & Archaeological Background

In order to understand the full archaeological and historical context of the area, the Lincolnshire Historic Environment Record (LHER) was consulted for information on known cultural heritage features within a 1km study area around the Site (Ref. HES000083). The following summarises the information contained therein. The *Spalding Extensive Urban Survey* (Grayson & Robertson-Morris 2022) was consulted for the purposes of this WSI for general background information.

3.1 Prehistoric & Romano-British

The South Lincolnshire fenland is characterised by soils formed over sediments accumulated during the Flandrian interglacial, the oldest being basal peat which probably began to form during the Mesolithic (the contemporary land surface underlying some 10m of Flandrian sediments around Cowbit). Radiocarbon dating of the peat returned dates of 4710-4380 Cal. BC and 4490-4360 Cal. BC. Peat formation became widespread during the Neolithic to Early Bronze Age period and which have been found to contain 'bog oaks'.

These peat deposits are overlaid by marine alluvial clays within which are raised silty features, or roddons, representing former creeks, which, due to their elevation, were attractive to early settlement (Hayes 5-6, 176). Overlying are deposits of pre-Roman silt (high silts), peat and freshwater alluvium deposited by the formerly braided channel of the river Welland.

The area is characterised in archaeological terms by remains of Iron Age and Romano-British settlement activity, with sites often found in association indicating continuity of settlement. Much of the evidence informing this characterisation was revealed during a survey carried out in 1985-6 as part of *The Fenland Project No.5: Lincolnshire: The South-West Fens* (Hayes & Lane 1992), during which the entire parish of Cowbit (although not all fields could be walked) was surveyed, along with other fen-edge settlements. Since publication, extensive further investigations have been carried out, most notably in connection with the A1073 Relief Road scheme. Stonegate itself would appear to represent the alignment of a possible E/W Roman road from Billingford to Cowbit (MLI22100) and is marked as such on the earlier Ordnance Survey mapping (*Figs 3-5*) and it was during the Roman period that drainage and reclamation works were undertaken on any scale. Iron Age saltern sites were found to be particularly prolific.

3.2 Saxon and Medieval

A period of retreating sea levels from around the 7th century rendered the fens more conducive to permanent settlement and it is thought that most of the villages in the district owe their origins to this period. However, evidence of Saxon activity was extremely tenuous prior to the investigations associated with the A1073 relief road, consisting of two sherds of pottery of inconclusive date recovered to the N of the modern village. An Early Saxon sherd (COW A4) (MLI23102) (NGR TF 2641 1860) came from a long-lived Roman site (COW 9) (see above), while

the second (COW A3) was recovered some distance to the NW (NGR TF 253 189) and was identified as Early or Middle Saxon. However, an evaluation off Backgate in 2004 (MLI86341) revealed two ditches with similar profiles but varying depths and a truncated pit containing Saxo-Norman pottery (Cambridgeshire Archaeological Field Unit 2004).

The medieval settlement was established along New Fendyke (a former Roman road, now modern Stonegate) (NGR TF 2640 1808) and formed a large part of the parish of Spalding. The Church of St Mary is the oldest surviving building in Cowbit and is a Grade 1 Listed Building, the earliest fabric dating to 13th century when the church was built by Prior de Moulton of Spalding. The chancel and Perpendicular tower were added and the church reconsecrated in 1486-7. The fabric was restored in 1882.

There is also evidence for a continuation of salt production at Drain Bank (MLI98449) on the route of the A1073 relief road (NGR TF 253 193).

3.3 Post-Medieval

Little appreciable growth occurred at Cowbit during the earlier post-medieval period, from the 16th-18th centuries. The dissolution of Spalding Priory brought to an end the system of monastic land management. A replacement system of 'Town Husbands' was established in 1561 (and which still has a charitable function) but little was done of a practical nature to prevent a return to wetland.

In 1618, the stretch of the Welland between Spalding and Crowland was inspected by commissioners who suggested that the medieval High Bridge (MLI23608) at Spalding should be taken down, the river widened and a sluice erected at Cowbit Wash, a move which deprived the local population of the opportunities for collecting waterfowl and fish. However, as a result of the disruption caused by the Civil War, the banks and sluices fell into neglect and parts of the fens were flooded once more.

The earliest available map depicting the area in some detail is the 1819 enclosure map entitled 'Plan of part of Cowbit and Peakhill in the County of Lincoln', which names Mill Drove and Stone Gate and shows the fieldscape as it was prior to the coming of the railway. The Site occupies the easternmost of a series of narrow linear plots running N off Stone Gate.

Although there is no tithe map available for the parish, the chief landowners recorded in 1842 were a Maurice Johnson and J. R Carter. The settlement underwent no significant expansion during the later post-medieval period and between 1831 and 1911, the population remained below 664. In 1870-72, the entry for Cowbit in John Marius Wilson's *Imperial Gazetteer of England and Wales* read … *The village stands near the Welland navigation and the March and Spalding railway… The parish includes also Peakhill hamlet, and allotments in Pinchbeck North Fen. Acres, 4, 590. Real property, £4, 591. Pop., 649. Houses, 141. The living is a vicarage in the diocese of Lincoln. Value, £625.* Patrons, Feoffees.*

Agriculture remained the principal industry, with locally-grown produce sold over a wide area, including into the markets of London. The river played a key economic role in the movement of commodities but its importance declined with the coming of the railway in the mid-19th century, which was originally intended to supply the eastern counties with Yorkshire coal (Cope-Faulkner 2018).

The Great Northern Railway Act establishing a railway from London to York received Royal Assent in June 1846 and the same year the Stamford and Spalding Railway Act was passed 'for making a Railway from the intended Great Northern Railway in the Parish of Ufford in the County of Northampton, to unite with the Loop Line of the same Railway in the Parish of Crowland in Lincolnshire'.

Cowbit Station (MLI23554) was opened in September 1867 by the Great Northern Railway on the route between Spalding and March. The station was constructed to a standard design comprising platforms, station house/offices, goods shed and crossing cottage; the present signal box was built c. 1880 and survives with the lever frame still intact inside. A building survey of the signal box was carried out in 2005 (Pullen 2005; HER M6/2).

The railway enabled larger amounts of goods and agricultural produce to be shipped by rail. As a result, the railway flourished and expanded to meet the demand for the shipment of goods: at one point there were 14 employees, mainly dealing with freight as passenger numbers remained low due to the relatively small population. The extensive freight-handling facilities included the large goods shed, a non-designated heritage asset, and the Railway Hotel opened to the rear of Cowbit Station (MLI23554), which is shown on the 1st edition of the Ordnance Survey (*fig. 5*) and which was still standing in the 1950s.

The Great Northern Railway amalgamated with the Great Eastern Railway in 1882 to become the 'Joint Line, this in turn being absorbed by the London and North Eastern Railway in 1923 and from 1948 it was under the management of British Railways.

Cowbit, together with Postland and French Drove and Gedney Hill, were among the stations that were closed to passengers in 1961 and by 1964 the line had ceased to carry freight. However, in reality, the postwar increase in road traffic had sealed the fate of the line, which had been in decline for some time prior to closure. The line through the village eventually closed in 1982 and the rails removed. Much of the track-bed has since been lost to development but it can be seen to the S of the village before again becoming lost in farmland.

Cowbit Goods Shed Is one of the roughly 600 surviving examples of a large class of buildings associated with 19th century railway infrastructure development. Historic England states: …*the typical goods shed would be located in a goods yard with two or three sidings. Some items, particularly bulk loads, would be unloaded outside, directly from wagons in the sidings*. *Common to all methods of construction was the practice from the 1860s, and in many cases earlier, of division of the shed into clearly defined bays. In brick, this was achieved by constructing a series of recessed panels, often flanked by what were, in effect, pilasters. The panels could be flat-headed or with segmental or pointed arches. This form of construction was for economy*… (Minnis & Hickman 2016, 1, 22).

This particular example of the type is rectangular in plan aligned NW/SE with small low extension to the SE end of the building (*Plates 1 & 2; fig. 2*). The shed is constructed in English bond brickwork and comprises five bays

separated by pilasters with five iron round headed windows in corbelled panels to each bay on the W elevation and two principal bays on the E elevation, with a large ledged-and-braced plank door to the right accommodating wagons and a second large raised doorway to the left containing double doors. Each elevation has eaves corbelling beneath a tiled roof with brick stack. Internally, the building is open to the roof with exposed machine cut trusses and rafters on an axial beam running the length of the building.



Plate 1: W elevation



Plate 2: E elevation

In the vicinity of the Site, an undated pit and two ditches, one of which was a former field boundary, were revealed in March 2011, during the archaeological monitoring of groundworks for a new property near 18 Stonegate (23106c - TF 2606 1805) with medieval and post-medieval pottery found within the topsoil.

A post-medieval pottery scatter and possible brick clamp (MLI81606) were recorded off Backgate (NGR TF 2654 1770), when, following geophysical survey, trenching was opened to reveal two ditches recorded, together with deposits of building material and brick wasters. Post-medieval pottery was also recovered, together with glass and shells (Archaeological Project Services 2002). Also, on land E of Backgate (NGR TF 269 178) evaluation along the route of the relief road encountered two post medieval ditches (MLI86344), with nine subcircular ditches/gullies subsequently recorded during excavation, which were interpreted as hayrick drainage ditches (Archaeological Project Services 2011). A post-medieval dyke was (MLI86340) also encountered at Moulton Chapel Road (NGR TF 268 180), during trial trenching along the relief road route comprising a broad and deep ditch aligned east to west which was originally some 3m wide and 4m deep. The dyke appears to have become overgrown by marsh vegetation and probably represents part of a surviving, more extensive drainage system.

A number of undated ditches have also been recorded (MLI86339, MLI86336), these most likely associated with land division, together with several 19th century farmsteads.

3.4 Modern

After the Second World War, the railway lost freight to road transport and the line closed in 1961. The March-Spalding line was closed on the 27th November 1982. The track was lifted in two stages between 1983 and 1985 and, while the track-bed has been built over, the station buildings survive and included the refurbished station house and signal box together with the goods shed which at present survives in a derelict condition.

3.5 Cartographic Evidence

The first map to depict the village and surrounding landscape in any appreciable detail is the 'Plan of part of Cowbit and Peakhill in the County of Lincoln' published in 1819 (not reproduced) which predates the railway.

The impact of the railway is shown on the Ordnance Survey 1st Edition 25-inch map of 1888 (*Figs. 3 & 4*) which shows the Goods Shed and surrounding landscape and topography in greater detail. The settlement and surrounding fenland are shown to comprise a reclaimed fieldscape of long rectilinear enclosures divided by drains, dykes and drove roads. The map identifies Stone Gate as a Roman road and it is shown as such on subsequent editions. The railway is shown running roughly NW/SE to the E of the village and Cowbit Wash to the SW between the New River drainage channel and the R. Welland. These washlands along the river, which were traditionally used as pasture rather than arable as they were tracts of land where the river was periodically allowed to flood.

The Ordnance Survey 25-inch 2nd Edition map of 1904 shows very little evidence of change, with no evidence of further development (*Fig. 5*). Similarly, the OS edition of By 1951/52 shows very little evidence of postwar development (*Figs. 6 & 7*).

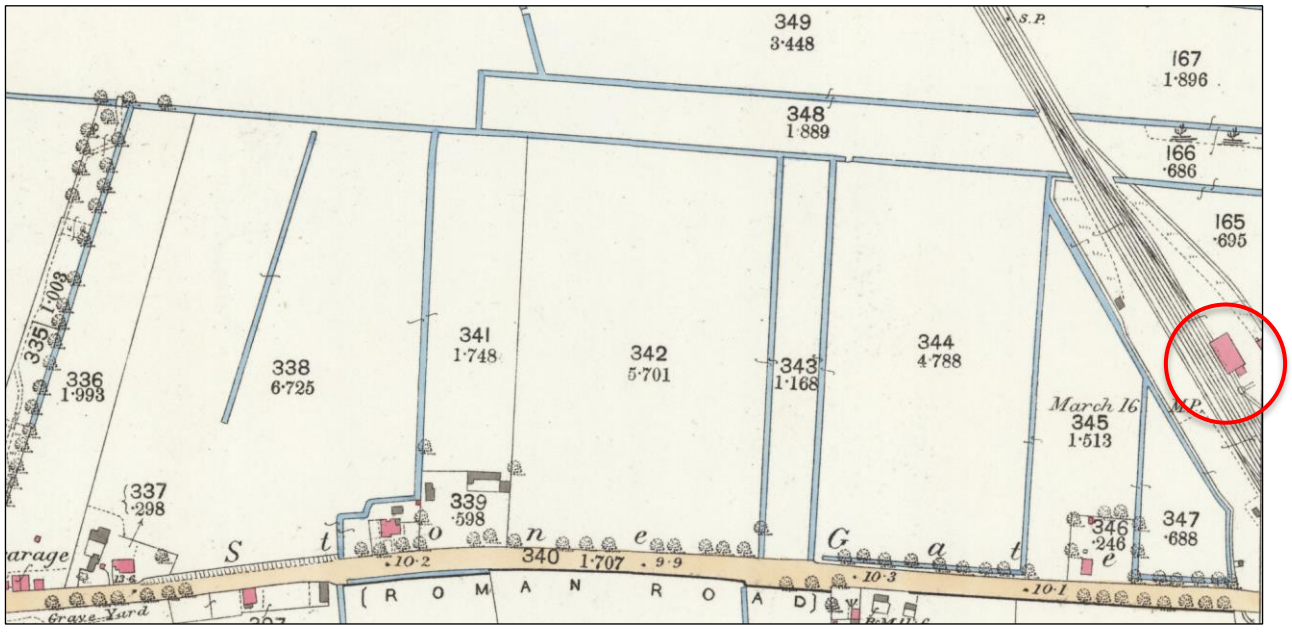


Fig. 4: Extract from the Ordnance Survey 25-inch 1st Edition map of 1888 (Lincolnshire CXLII.10) (Goods Shed circled red)

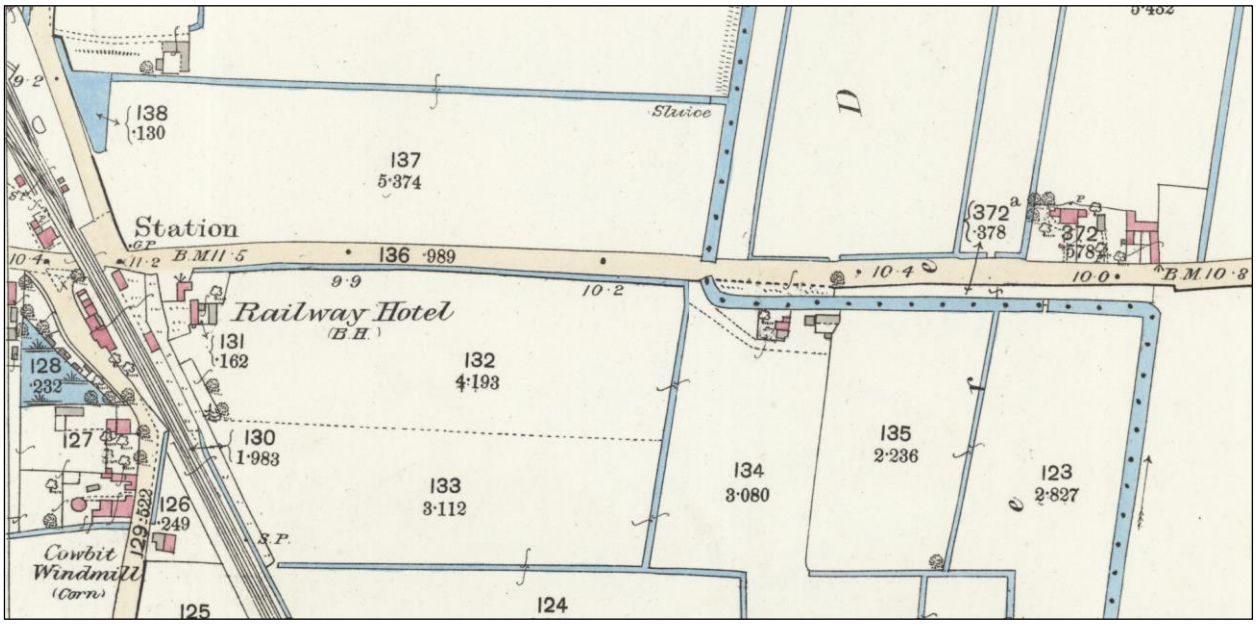


Fig. 5: Extract from the 25-inch 1st Edition map of 1888 (Lincolnshire CXLII.10) showing Cowbit Station and the Railway Hotel

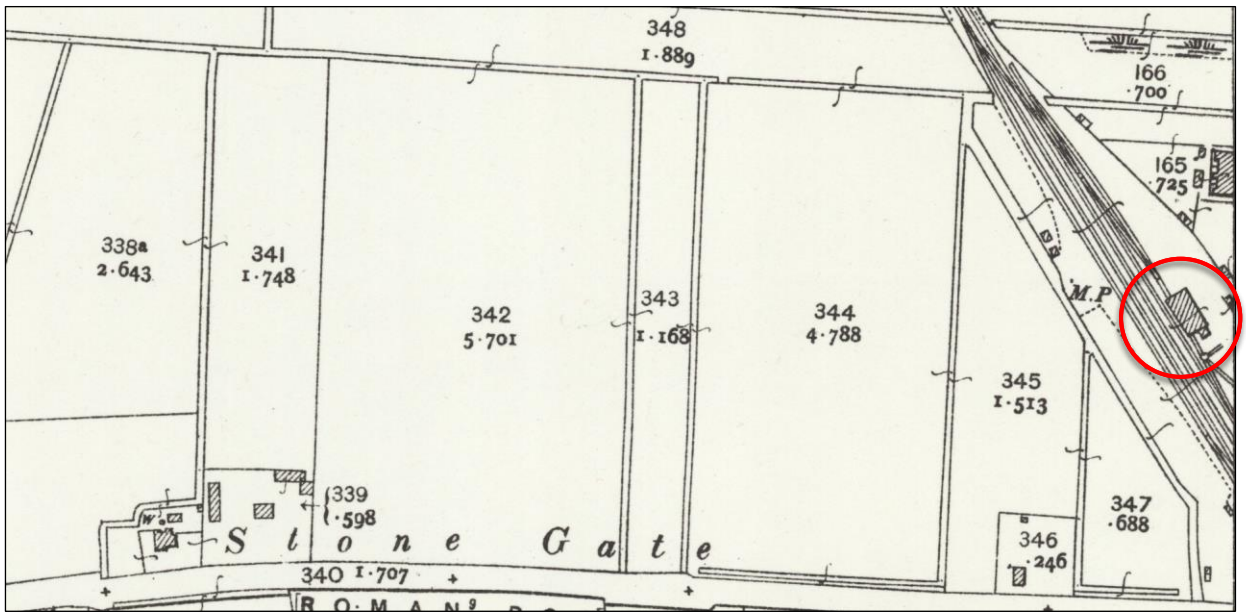


Fig. 6: Fig. 3: Extract from the Ordnance Survey 25-inch 2nd Edition map of 1904 (Lincolnshire CXLII.10) (Goods Shed circled red)



Fig. 7: Extract from the Ordnance Survey 6-inch Provisional Edition of 1959 (Goods Shed circled red)

4 Aims & Objectives

The aim of the project is to undertake a programme of ASBR of the Goods Shed as detailed in *Understanding Historic Buildings – A guide to good recording practice* (Lane 2016) to allow for the preservation by record of all standing building fabric, fixtures and fittings of historical interest that will be removed or substantially altered by the proposed development.

5 Methodology

Recording will reflect Historic England/RCHME guidance and will be undertaken in accordance with standards set by the Chartered Institute for Archaeologists (CI*f*A), namely, *Standard and guidance for the archaeological investigation and recording of standing buildings or structures* (CI*f*A 2020a) and *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (CI*f*A 2020b). BA also adheres to the CI*f*A *Code of conduct* (CI*f*A 2022) and to project management advice set out in *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (Lee 2015).

The specific recording methodology is based on a Historic England/RCHME Level 2 record as detailed in *Understanding Historic Buildings – A guide to good recording practice* (Lane 2016), which sets out guidance on the recording of historic buildings for the purposes of historical understanding and is a revised and expanded version of *Recording Historic Buildings: A Descriptive Specification* (RCHME 1996).

Level 2 is defined as follows:

'*Level 2 is a descriptive record, made in similar circumstances to Level 1 but when more information is needed. It may be made of a building which is judged not to require a more detailed record, or it may serve to gather data for a wider project. Both the exterior and interior of the building will be seen, described and photographed. The examination of the building will produce an analysis of its development and use and the record will include the conclusions reached, but it will not discuss in detail the evidence on which this analysis is based. A plan and sometimes other drawings may be made but the drawn record will normally not be comprehensive and may be tailored to the scope of a wider project*' (Lane 2016).

This Level 2 record will comprise the following specifics:

5.1 Drawn Record

This will comprise the following:

- Plans of the buildings, with photo locations clearly marked, and a location plan related to the national grid
- Annotated elevation drawings;
- Appropriate additional illustrations that help support findings and the interpretation of the buildings;
- Additional illustrations of dateable fixtures and fittings (mouldings, catches, hinges, latches etc.);
- A summary description of the buildings in their current form in the format of a typical listed building description.

5.2 Photographic Record

- The photographic survey will consist of the following:

High-resolution colour digital photographs, with suitable scales, of the following:

- All external elevations;
- All internal room spaces (where accessible);
- Details of any architectural or functional fixtures, fittings and features relating to either the function or development of the building;
- General photographs illustrating the building's relationship to the surrounding buildings and setting.

5.3 Written Account

This will consist of the following:

- A summary statement describing the building's significance and purpose, historically and at present, its materials and possible date(s) so far as these are apparent from a superficial inspection.

5.4 Recording Methodology

Records will be made in accordance with BA's *Archaeological Field Recording Manual* (2023) and Historic England conventions as detailed in *Understanding Historic Buildings – A guide to good recording practice* (Lane 2016). BA adheres to the CI*f*A *Code of conduct* (2022).

The photographic record will be made using a Sony RX100 Mk. II digital camera at a greater than 20mpx resolution. Photographs will be taken of all the external elevations where possible with an appropriate scale.

General views of the building and its setting (for contextual purposes) and additional photographs of relevant architectural details will also be taken. Individual features will be photographed as separate items and in detail. Each feature will also be photographed and placed into a wider context (i.e. the surrounding elevation).

Each photograph (both external and internal) will contain an appropriate scale and all photographic images will be indexed and cross-referenced to a written photographic register, which will include full details concerning subject and direction of view.

6 Archive Preparation

The archive will be assembled in accordance with specific deposition guidelines set out by The Collection and with guidance contained in *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (CI*f*A 2020c). Archiving will be consistent with advice detailed in *Guidelines for the preparation of excavation archives for long-term storage* (Walker 1990), *Standards in the museum care of archaeological collections* (Paine 1992), *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown 2011a) and *Safeguarding Archaeological Information: Procedures for minimizing risk to undeposited archaeological archives* (Brown 2011b). BA is also cognisant of the recently compiled 'Archive Selection Toolkit' (CI*f*A 2020d) and staff have been trained in its use and purpose.

All records created during fieldwork will be checked for consistency and accuracy and will form part of the Site Archive. This Archive will contain all data collected and other specialist materials and will be ordered, indexed, adequately documented, internally consistent, secure, quantified, conforming to standards required by the archive repository and signposted appropriately to ensure future use in research, as detailed in the *Management of Research Projects in the Historic Environment* (Lee 2015). Indexing will include a plan showing the location and reference number of sections, with photograph locations and directions of view.

BA undertakes that the following issues will be addressed and concluded to the satisfaction of the HEO.

The written, drawn and photographic records will be of sufficient quality to facilitate publication in an appropriate specialist journal;

Data concerning complete identifiable and itemised objects will be transferred to specified object record sheets.

An HER Event Unique Identifier will be requested from Historic Environment Record which will serve as the primary accession reference for the archive.

7 The Report

The specific requirements of the report will necessarily vary according to the scope of works, the nature of the results and/or other factors (CI*f*A 2020a). However, the report will contain the following sections and illustrative components:

- Non-Technical Summary;
- Introduction;
- Site Description;
- Aims and Objectives;
- Historical and Archaeological Background (including documentary research as appropriate to inform the results of the ASBR);
- Methodology;
- Results & Discussion;
- Conclusions;
- Appendices;
- Illustrations;
- Bibliography.

A digital copy of the report (in PDF format) will be sent to the Client and the HEO for approval before formal submission to the Lincolnshire HER. A digital copy of the approved report will also be deposited with OASIS.

8 Staff and Timescales

The programme of ASBR will be undertaken by Stuart Forsythe BSc (Manager: Surveying).

George Children MA MCI*f*A (Director: Quality & Compliance) will provide overall editorial guidance to all constituent aspects of the works programme.

Overall project management remains the responsibility of Stephen Priestley MA MCI*f*A (Director: Research)

A project start date will be advised in due course.

9 Border Archaeology Operating Standards & Arrangements

All projects are carried out in accordance with CI*f*A *Standard and guidance* as detailed within the Company's *Archaeological Field Recording Manual* (2023). A pre-works risk assessment (RA) will be completed on Site at the outset to allow accurate contemporary identification of risk and lodged in the Site Health & Safety File.

Border Archaeology holds public liability and professional indemnity insurance as supplied by Towry Law Insurance Brokers, Leominster.

10 Monitoring

The Site will be subject to monitoring by the HEO. All issues of a technical nature should be addressed in the first instance to Stephen Priestley MA MCI*f*A (Director: Research).

11 Copyright

Border Archaeology Ltd shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988, with all rights reserved, excepting that it hereby provides a licence to the Client and the Council for the use of the report by the Client and the Council in all matters directly relating to the project as described in the Project Specification to use the documentation for their statutory functions and to provide copies of it to third parties as an incidental to such functions.

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13 Appendix 2: Specialists

The following specialists have been appointed to provide, where required, sampling, consulting, analysis & reporting services:

1. Geoarchaeology: Rob Batchelor BSc PhD MCI*f*A Director Quest University of Reading; ARCA, University of Winchester;
2. Pottery: Emily Edwards BA PgDip Freelance Specialist, Rob Perrin M.Litt MCI*f*A FSA Freelance Specialist, Jo Mills Freelance Specialist, Paul Blinkhorn BTech (Hons) Freelance Specialist;
3. Coins: Peter Guest BA PhD University of Cardiff;
4. Flint: Rebecca Devaney MA ACI*f*A Freelance Specialist;
5. Petrological Analysis: Imogen Wood BA MA PhD;
6. Glass: Nicola Powell MA MCI*f*A Freelance Specialist;
7. Clay Tobacco Pipes: Nicola Powell MA MCI*f*A Freelance Specialist;
8. Leather and Metal Objects: Quita Mould Barbican Research Associates;
9. Archaeometallurgy: Gerry McDonnell BSc PhD Gerry McDonnell Archaeometals;
10. Glass Working: John Shepherd BA FSA MCI*f*A Freelance Specialist;
11. Artefact & Materials Conservation: Ian Panter York Archaeological Trust;
12. Building Materials: Katherine Crooks BA PGCE Pottery Specialist Border Archaeology Ltd;
13. Worked Stone: Ruth Shaffrey BA PhD MCI*f*A Freelance Specialist;
14. On-Site Conservation: Janice McLeish MA ACI*f*A Border Archaeology Ltd;
15. Faunal Remains: Matilda Holmes BSc MA PhD ACI*f*A AFHEA Freelance Specialist & Janice McLeish MA ACI*f*A Director: Post Excavation Services Border Archaeology Ltd & Clare Rainsford Freelance Specialist;
16. Human Remains: Malin Holst HND BA MSC MCI*f*A York Osteoarchaeology Ltd;
17. Archaeobotanical, Charcoal & Wood ID: Amy Bunce BSc MA MCI*f*A Director: UK Operations & Palaeoenvironmental Sciences Border Archaeology Ltd.

Other specialist suppliers will be sourced, if deemed appropriate; suitable management time will be expended to ensure that such external suppliers' work complies with accepted national guidance.

14 Appendix 2: Border Archaeology Digital Data Management Plan (DMP) v.3.3

Date DMP initiated:	***Insert date***	***Initials of the editor***
Version: 1.0	**3rd February 2025**	*GC*
Updated Version:	*tbc*	*tbc*

14.1 Section 1: Project administration

Project BA Number:	BA2516(2404)PSM
Site Code:	PSM25
OASIS ID:	borderar1-531322
HER event number:	TBC
Accession number:	TBC
Project Brief:	Not supplied
Planning Ref:	H01-0509-23; H01-0007-25)

Additional Unique Identifiers: (e.g. DOI number for ADS Grey Literature Library)

Project Name/Location/Scheme number: Pumping Station Mill Drove South Cowbit Spalding Lincolnshire PE12 6FS.

Project Description: (nature of the project / key techniques)
Archaeological Standing Building Recording (Historic England Level 2)

Investigation Techniques: (purpose of the investigation)
This work is in connection with a Listed Building Consent application for the conversion of the former goods shed to residential use as part of the larger development.

Project Funder/Client:	Lincolnshire County Council
Project Manager:	Stephen Priestley MA MCIfA, Director: Research, Border Archaeology Ltd.
Site Manager:	TBC
Data Contact Person:	Kate Smith MA, ACI*f*A Director: Performance Delivery Border Archaeology Ltd.

14.2 Section 2: Data collection

14.2.1 What data will you collect and create? How will the data be collected or created?

Methods of data collection are specified within the Written Scheme of Investigation (WSI) and will meet the requirement set out in the Project Brief; the organisation's *Archaeological Field Recording Manual* (August 2023) (BAFM21/REV5); relevant CIfA Standards and guidance; and are defined against ADS Guides to Good Practice.

The table below provides a summary of anticipated data types, formats and estimated volume for this project. This table will be updated as the project progresses.

Documents and Reports	Word (.doc); pdf; pdf/a	1 pdf/a
Photographs and images	Our baseline standard is jpeg but we are guided by CA's etc. and then use tif or raw accordingly	tbc.
Maps and Plans	AutoCAD (.Dwg); Illustrator (.ai);	Final export: Jpeg for inclusion in report
Spreadsheets	Excel (.xls); (.xlsx)	tbc
GIS	QGIS; ArcGis	tbc
GIS (Research data)	NB GIS data "bought in" for research reports will not be deposited as it is not our data.	n/a
Geophysics	We outsource all geophysics	

Please note: that this reflects the total digital data for the Working Project Archive, **not** the archived selection of project (Preserved Archive).

14.2.2 Where will the working project archive be stored?

The Working Project Archive will be stored in a project specific folder on the internal organisational server. The server is backed-up by our professional IT provider.

14.2.3 File naming conventions

File naming conventions follow established organisational procedures.

14.2.4 Quality assurance

Instruments and cameras used in the collection of data are calibrated prior to use and checked to ensure that are in full working order.

All Site records and data collected will be checked during Project Delivery.

14.3 Section 3: Documentation and metadata

14.3.1 What documentation and metadata will accompany the data?

Total station data/Digital location data is used for most projects (excluding AOs). The data is exported and transferred to our Illustrations Department.

Digital images captured during an archaeological programme of work are downloaded as soon as practicable from the camera memory card onto our internal server.
This is especially important for those Sites that:

- Are large ongoing Sites with multiple cameras
- Stop/start Sites where more than one Site manager may be involved

The paper Photographic Record form is completed every time a photograph is taken. This register will include the make and model of the camera, the initials of the individual(s) who took the image, date and details of the area photographed.

14.3.2 Post-Fieldwork Summary

As soon as fieldwork is completed the Site manager completes an Archive Review Form (ARF), which provides an initial "snapshot" of the results of fieldwork. It quantifies the Site paperwork, the unprocessed finds and samples collected and the number of digital images taken.

The Site archive then undergoes a review by the field staff. The finds and samples are delivered to our Post Ex department. Digital images are uploaded to the internal server, if not already within the job folder. We retain the SD card until the archive is deposited.

The paperwork will be checked/audited prior to writing the report. The Site Manager will review the digital images and make an initial selection of those that warrant inclusion in the report and/or inclusion within the Preserved Archive. No images will be deleted at this stage.

14.4 Section 4: Ethics and legal compliance

14.4.1 How will you manage and Ethical, Copyright and Intellectual Property Rights (IPS) Issues?

Copyright for all data collected by the Project Team belong to Border Archaeology.

Formal permission to include data from external specialists and contractors is secured on the engagement of the specialist or contractor.

Personal data will be removed from the archaeological project archive and permission to include individual's names in any report is obtained prior to use.

14.5 Section 5: Storage and backup

14.5.1 How will the data be stored, accessed and backed up during the research?

The **Working Project Archive**:-

Site specific SD cards will be retained until the Site archive has been deposited, at which point they will be recycled.

Downloaded data will be stored in a project specific folder on the internal organisation server.

- The server operates on permission-based access.
- The server is accessible by permitted staff on and offsite through secure log in.

Where internet access for data backup is not possible, the raw data will be backed up to a separate media device (such as a laptop and portable external hard drive).

14.5.2 Organisational Server

Organisational IT is managed by an external data management provider (who is also responsible for the management and verification of our daily back-ups and who support access to security copies as required.

The internal organisation server is backed up daily by our external data management provider. They ensure that there is sufficient storage space for our digital collection.

Any “archived” data removed from the server is kept in two locations away from the main office.

14.6 Section 6: Selection and preservation

14.6.1 What should be retained, shared and/or preserved?

The Selection Strategy and DMP are reviewed and updated during the PEX Archiving process and with results from specialist reporting.

Prior to deposition, the Selection Strategy and DMP will be updated and finalised in agreement with all project stakeholders (including the HEO, The Collection, ADS).

Selection will be informed by the WSI, defined against the research aims, regional and national research frameworks, specialist advice and the significance of the project results.

The data archive will be ordered, with files named and structured in a logical manner, and accompanied by relevant documentation and metadata, as outlined in Sections 2 and 3 of this DMP.

14.6.2 What is the long-term preservation plan for the dataset?

It is understood that the reasons for selection of particular digital components will vary from project to project and will take into consideration the project aims as stated within the WSI, the significance of the results, research potential of the results, research framework requirements and relevant museum guidelines.

As with other aspects of an archaeological archive, it is unlikely that all digital files generated during an archaeological project will be retained as part of the deposited digital archive (Preserved Archive).

Consequently, a project specific Selection Strategy will be implemented:-

External dissemination of the digital archive will be with a CoreTrustSeal certified online depository (most likely the Archaeology Data Service (ADS)) if specified by The Collection, HEO/HER, etc., guidance, the components of which will be determined by the relevant museum deposition guidelines and correspondence with the necessary stakeholders.

- Therefore all final reports generated from interventive programmes of work will be uploaded to **OASIS V** following approval by principal project stakeholders- including the client and HEO/Lincolnshire County Council.
- If appropriate digital images and supporting documentation will be uploaded to **ADS-Easy** complement grey literature reports.
- Research reports *may* be deposited on OASIS but only under the direction of the HEO/HER, museum curator, etc.

BA will not preserve all digital files from the Working Project Archive on their internal company servers indefinitely.

- Internal preservation of selected digital data on BA's internal server will conform to internal Selection and Deselection standards[1],

14.6.3 Have you contacted the data repository?

The relevant museum will be contacted in the early stages of the project to request an accession number; to confirm current deposition guidelines (unless already contacted within the previous 3 months) and to establish current deposition costs.

The deposition guidelines will be consulted to confirm the situation with regard to the digital archive component and whether this should be deposited with a trusted digital repository.

If the investigation establishes that the Site is negative, the HEO, The Collection etc. will be contacted to establish whether this can be an OASIS only deposition.

[1] BA Selection and De-selection Guidance 2021

14.6.4 Have the costs of archiving been fully considered?

Sufficient resources to allow for the preparation of the archive, and the cost of deposition of the physical and digital archive have been included in the project budget. A costing estimate may be produced for more complex sites, using the ADS Costing Calculator.

14.7 Section 7: Data sharing and accessibility

14.7.1 How will you share the data and make it accessible?

A summary of the project will be included on the OASIS Index of Archaeological Investigation and the museum and digital archive repository, and will be updated as the project progresses.

The investigations are likely to result in a number of documents: Project Brief; Written Scheme of Investigation; Final Report; Journal Submission

A final version of the project report will be supplied to the Historic Environment Record via OASIS, and any data which they request can also be provided directly.

The location(s) of the final Archaeological Archive will be added to OASIS when appropriate.

The ADS will disseminate the digital elements of the Archaeological Archive online under a creative commons licence and the dataset will receive a unique identifier (DOI).

14.7.2 Any restrictions of data sharing required?

In certain situations a temporary embargo may be required on the sharing of the project results. If this is the case, specific details once agreed will be included in the updated version of this DMP and will be documented in the overarching Project Collection Metadata.

14.8 Section 8: Responsibilities

14.8.1 Who will be responsible for data management?

The Project Manager will be responsible for implementing the DMP, and ensuring it is reviewed and revised at each stage of the project. Data capture, metadata production and data quality are the responsibility of the Project Team, assured by the Project Manager.

Storage and backup of data in the field is the responsibility of the field team. Once data is incorporated into the organisations project server, storage and backup is managed by an external company . Data archiving is undertaken by the project team under the guidance of the Archives Officer, who is responsible for the transfer of the Archaeological Project Archive to the agreed repository.



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