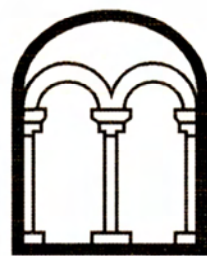


**BRITANNIA GATE
CHAMPION WAY
BEDFORD**

**ARCHAEOLOGICAL OBSERVATION,
INVESTIGATION, RECORDING,
ANALYSIS AND PUBLICATION**

Albion
archaeology



**BRITANNIA GATE
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INVESTIGATION, RECORDING,
ANALYSIS AND PUBLICATION**

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Preface

All statements and opinions in this document are offered in good faith. This document has been prepared for the titled project or named part thereof and was prepared solely for the benefit of the client. This document should not be relied upon or used for any other project without an independent check being carried out as to its suitability and the prior written authority of Albion Archaeology (a trading unit of Central Bedfordshire Council).

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Key Terms

Throughout this document the following terms or abbreviations are used:

AOD	Above Ordnance Datum
BARS	Bedfordshire Archives and Records Service
BBC	Bedford Borough Council
BBHER	Bedford Borough Historic Environment Record
b.g.l.	Below ground level
CI/A	Chartered Institute <i>for</i> Archaeologists
HET	Historic Environment Team
LPA	Local Planning Authority
PDA	Permitted development area
WSI	Written Scheme of Investigation



Non-Technical Summary

Planning consent (18/01087/MAF) was granted by Bedford Borough Council for a residential development known as 'Britannia Gate', Champion Way, Bedford. A planning condition required an archaeological mitigation strategy to be undertaken. The approved strategy was for preservation in situ, with archaeological monitoring where works might potentially disturb archaeological remains.

The groundworks were completed in autumn 2019, monitored by Albion Archaeology. The archaeological observations were also informed by the results of previous archaeological trial trenching, engineer's test-pits and piling logs. Reference was also made to historical maps and aerial photographs to help interpret the observations.

Although the observations demonstrated that the majority of the permitted development area (PDA) had been heavily truncated by basements of the former Britannia Ironworks buildings, there was a reasonably large area of the site, at the south and west sides, which retained some archaeological potential.

The north-east part of the PDA had been truncated to c.26.3m AOD by the construction of the basement of a single, large ironworks building. However, the south and west sides of the PDA were historically separate land parcels and that had led to differential survival of archaeological remains. A ditch was found during excavation of ground beam trenches. This was undated, but trial trenching had found Iron Age remains nearby, so the ditch is likely also to have dated from the Iron Age (although its alignment might also indicate that it was a much more recent boundary ditch). Only one archaeological feature was found, but it is possible that shallow archaeological features might have been lost due to levelling of the site prior to commencement of the present development.

The results of the present work might help in interpretation of the archaeological evidence from the surrounding areas. It is interesting that the large ironworks building extended over the area where, in 2012, a trial trench found human remains. The remains were found below 26.5m AOD, which could have been immediately below the floor of the ironworks basement. It raises the possibility that the remains were found during the construction of the former building and reinterred at the time below the basement floor.



1. INTRODUCTION

1.1 Background

Planning consent (18/01087/MAF) was granted by Bedford Borough Council for the construction of forty-nine dwellings and associated works on land off Champion Way, Bedford — a development known as ‘Britannia Gate’.

The permitted development area (PDA) is located in an area of archaeological interest. For this reason, the Historic Environment Team (HET) advised that the following condition (no. 3) should be attached to the permission:

No development shall take place until an archaeological mitigation strategy has been submitted to and approved in writing by the Local Planning Authority. The archaeological mitigation strategy shall include a timetable and the following components (the completion of each to the satisfaction of the Local Planning Authority will result in a separate confirmation of compliance for each component):-

- (i) fieldwork and/ or preservation ‘in situ’ of archaeological remains;*
- (ii) a post-excavation assessment report (to be submitted within six months of the completion of fieldwork);*
- (iii) a post-excavation analysis report, preparation of site archive ready for deposition at a store approved by the Local Planning Authority, completion of an archive report, and submission of a publication report (to be completed within two years of the completion of fieldwork).*

The archaeological mitigation strategy shall be carried out in accordance with the approved details and timings.

REASON: To safeguard archaeological assets within the approved development boundary from impacts relating to any groundworks associated with the development scheme and to ensure the proper and timely investigation, recording, reporting and presentation of archaeological assets affected by this development, in accordance with Saved Policies BE24 & BE25 of the Bedford Borough Local Plan 2002, Policy CP23 of the Bedford Borough Core Strategy and Rural Issues Plan (2008) and according to national policies contained in the National Planning Policy Framework (DCLG 2012). The Local Planning Authority is satisfied that the timing of compliance is fundamental to the development permitted and that the permission ought to be refused unless the condition is imposed in this form.

The HET agreed a preservation-by-design solution with the client, employing piled foundations to enable preservation *in situ* of potential archaeological remains on the PDA. This was secured by Condition 10, which states that:

No development shall take place until details of the proposed ground works are submitted to and approved in writing by the Local Planning Authority. The details shall include sections through the proposed building and car park showing AOD levels for the existing and proposed finished ground levels, the underside level of any groundworks for make-up slabs, the



layout and quantity of any proposed piling and dimensions, technique and depth, against the depths of known archaeology.

REASON: To safeguard archaeological assets within the approved development boundary from impacts relating to any groundworks associated with the development scheme and to ensure the proper and timely investigation, recording, reporting and presentation of archaeological assets affected by this development, in accordance with Saved Policies BE24 & BE25 of the Bedford Borough Local Plan 2002, Policy CP23 of the Bedford Borough Core Strategy and Rural Issues Plan (2008) and according to national policies contained in the National Planning Policy Framework (DCLG 2012). The Local Planning Authority is satisfied that the timing of compliance is fundamental to the development permitted and that the permission ought to be refused unless the condition is imposed in this form.

Albion Archaeology was commissioned to assess the impact of the proposed foundations and it was concluded that:

- The cumulative impact of piling would be comfortably less than 2% of the building footprint for the 350mm-diameter CFA piles that were proposed. This held true even when the effect of clustering of piles was taken into account.
- Analysis of the estimated formation levels for various construction works indicated that a clearance of at least 0.25m above the archaeological horizon would be generally achievable.
- The lowest invert levels for the proposed drains were at c.26.7m AOD, but would be at the north-east corner of the PDA, where Trench 10 suggested the top of archaeology survived at below 27.5m AOD. Also, the deeper drainage installations would only involve localised disturbance.
- It was concluded that the greatest risk of disturbance to significant archaeological deposits was at the west side of the PDA, where no piling, ground beams or lift shafts were proposed.

These conclusions were set out in a letter to the client (dated 22/07/2019), subsequently submitted to the Local Planning Authority (LPA) and issued to the HET for comment.

The HET accepted Albion Archaeology's assessment that preservation *in situ* would be achievable, but noted that the depth and survival of potential remains is known to vary considerably across the site so there would be a residual risk of archaeological deposits being disturbed as a result of the groundworks. Accordingly, the HET advised that the archaeological mitigation strategy should also include a precautionary programme of archaeological observation, investigation, recording, analysis and publication.

Albion Archaeology was commissioned to prepare a Written Scheme of Investigation (WSI) for archaeological observation, investigation, recording, analysis and publication (Albion Archaeology 2019/114).



1.2 Site Location and Description

The permitted development is located in the middle of the former Britannia Ironworks site off Kempston Road, Bedford. The ironworks once covered an area of c.8.4ha, but since its closure in the 1990s the land has gradually been developed for housing. The PDA is one of the last remaining vacant lots; it measures 0.267ha in extent and its south-west corner lies at grid reference TL 04422/48947 (Figure 1). The geological deposits in the area, confirmed by archaeological trial trenching, consist of yellow-brown silty sand and gravel. However, there has also been considerable truncation of the deposits resulting from recent industrial use of the site.

Since the demolition of the former ironworks, the PDA has been open land, used to stockpile brick rubble and other material associated with the demolition of the ironworks as well as materials used for construction works on adjacent sites. The client's topographical site survey (Warner Surveys drawing no. RT/319/0473/P/0001) recorded ground levels ranging from c.30.2m AOD near the north-west boundary of the PDA to c.29.0m AOD at the south-east edge. However, before development commenced, the entire site had been cleared of debris and levelled to a height of 28.52m AOD. The entire surface comprised hard-core.

1.3 Historical Background

The footprint of the PDA lies in the vicinity of the putative site of Cauldwell Priory (HER250), a medieval monastic site. Its probable location is shown on the 1884 1st edition OS map (Figure 2).

The priory was founded in c.1153 and dissolved in 1536, after which it was sometimes referred to as Cauldwell Manor (Albion Archaeology 2005). A year after the dissolution, the priory buildings were leased out to William Gostwicke along with 'all messuages, houses, buildings, barn, granges, dove houses, orchards, gardens, land and soil within the site, walk and precinct of the same' (BARS X26/1).

By 1604, a mansion house had been built on the site of the priory. After passing through several hands, the estate was again put up for sale in 1791 and included a manor house, farmyard, barn, outbuildings and dovecote. Between 1818 and 1857, the manor house was pulled down and a Victorian villa built. This would appear to be the easternmost of the group of buildings marked on the 1884 OS map (Figure 2).

The Britannia Ironworks factory was founded in 1851, and was expanded in 1859 over much of the former site of the priory. The Victorian villa and outbuildings are still shown on the 1926 OS map, but appear to have been demolished by the time of the 1960 OS map following further expansion of the ironworks. During the Victorian period the factory was known as the most complete agricultural implement factory in the world, and by 1860 employed over 600 men and had its own railway lines, wharf and despatch bay (Albion Archaeology 2005). By the late 1960s many of the Victorian factory had been demolished, although new buildings were still being constructed.



1.4 Archaeological Background

1.4.1 Results of the 2012 trial trenching at the site

Archaeological features were revealed in ten of the eleven trenches excavated (Albion Archaeology 2012). The earliest features comprised two inter-cutting pits dating to the early Iron Age found at c.28.10m AOD in Trench 8 on the south side of the PDA. Features likely to be associated with Cauldwell Priory were found at a depth of c.26.46m AOD within Trench 10 on the north-east edge of the PDA and within Trenches 9 (2.7m b.g.l) and 11 (2.9m b.g.l.) to the north-west. These comprised two stone walls and (in Trench 10) an inhumation. Other features mainly comprised remains associated with post-medieval and modern land-use of the site, some of which is likely to be associated with the farm and/or Victorian villa known to have been located in the north half of the site.

However, there was also evidence of deep truncation of the deposits by structures associated with the former ironworks. In Trench 19, substantial concrete and brick footings were revealed that probably formed the south-west side of a large basement structure. This was c.2m deep (at c.27.2m AOD). This accords with the findings of an environmental survey of the site (Smith Grant LLP Environmental Consultancy 2011) recorded areas of historical disturbance across the site, in particular the northern part, where it had been subject to substantial infilling with foundry waste and in the south-west corner, where a sand pit marked on the 1924 OS map had been backfilled.

1.4.2 Earlier investigations in the vicinity of the site

Investigations in advance of recent development of the eastern part of the ironworks to the north-east of the PDA revealed archaeological remains probably associated with the priory. These comprised the remains of a wall of a building constructed with rough-hewn limestone blocks that had been partially robbed out (Albion Archaeology 2007). The robber trench contained medieval pottery and ceramic building material. In addition, some pre-modern human remains were recovered from modern levelling layers in Trench 7 (Figure 1). Due to their proximity to three other find-spots of human bone found during construction of the ironworks (recorded under HER250, Figure 1), it was suggested that the ironworks might have been built in an area of post-medieval (or earlier) burials associated with the priory (Albion Archaeology 2007).

A ditch containing medieval pottery sherds was also revealed during an earlier phase of development to the east of the PDA (ASC 2003).

1.5 Project Objectives

The relevant research frameworks for the area are: *Bedfordshire Archaeology. Research and Archaeology: Resource Assessment, Research Agenda and Strategy* (Oake et al. 2007) and *A Revised Framework for the East of England* (Medlycott 2011).

Potential heritage assets on the PDA could relate to the medieval monastic complex, post-dissolution mansion house, Cauldwell Farm, the Victorian mansion and post-medieval Britannia Ironworks.



Depending on the nature of any remains revealed by the development groundworks, specific research aims were to be derived from regional research frameworks (Brown and Glazebrook 2007; Oake et al. 2007; Medlycott 2011).

In summary, the specific research objectives of the archaeological works were:

- To determine if any archaeological heritage assets relating to the medieval monastic complex were present within the PDA.
- To determine if any archaeological heritage assets relating to the post-dissolution house were present within the PDA.
- To determine if any archaeological heritage assets relating to Cauldwell Farm were present on the PDA.
- To determine if any archaeological heritage assets relating to the Victorian mansion were present on the PDA.
- To determine if any archaeological heritage assets relating to Britannia Ironworks were present on the PDA.
- To determine if any further burials were present on the PDA.

The general purpose of the archaeological observation was to recover information on the:

- location, extent, nature, and date of any archaeological features or deposits that might be present within the PDA;
- integrity and state of preservation of any archaeological features or deposits that might be present within the PDA;
- nature of palaeo-environmental remains to determine local environmental conditions.



2. FIELDWORK METHODOLOGY

2.1 Methodological Standards

The project adhered throughout to the standards set out in the following documents:

• Albion Archaeology	<i>Procedures Manual: Volume 1 Fieldwork</i> (3rd edn, 2017).
• Bedford Museum	<i>Preparing Archaeological Archives for Deposition in Registered Museums in Bedford</i> (ver. 2.8, 2010)
• ClfA	<i>Charter and by-law; Code of conduct</i> (2014)
	<i>Standard and guidance for an archaeological watching brief</i> (2014)
	<i>Standard and guidance for the collection, documentation, conservation and research of archaeological materials</i> (2014)
• Gurney	<i>Standards for Field Archaeology in the East of England</i> (2003). Association of Local Government Archaeological Officers (East)
• Historic England	<i>Management of Research Projects in the Historic Environment (MoRPHE) Project Managers' Guide</i> (2015)
	<i>Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation</i> , (2nd edn, 2011)

2.2 Archaeological Observation

The new building comprised three wings on the north, east and south sides of a central open courtyard area. The foundations comprised sub-surface ground beams supported on piles. The ground floors were suspended above the existing ground level, with only the lift pits requiring excavation.

Archaeological monitoring began on 19th September 2019 and was completed on 27th November 2019. In accordance with the WSI (Albion Archaeology 2019), all excavations were undertaken by building contractors but were monitored by an archaeologist where there was potential to expose archaeological remains. At the outset, it was assumed that this included all groundworks below 28.1m AOD, so the following works were covered:

- An attenuation tank, measuring c.12m x 12m in across and c.1.8m deep (formation level c.26.3 AOD) was excavated by the contractors on 19th September 2019. Due to an unfortunate breakdown in communication, this work was undertaken without an archaeologist being present. However, the HET's Senior Archaeologist was content for works to continue, on the grounds that the hole had been examined by an archaeologist who was able to confirm that no archaeological remains had been affected.
- Eight engineering test-pits were machine-excavated by the groundworks contractor and observed by an archaeologist between 19th September



and 2nd October 2019. They were up to *c.*2m deep (down to *c.*26.5m AOD).

- Main drainage service trenches for foul and surface water were excavated around the central courtyard, connecting with an existing service at the west end of the south wing of the building. The deepest drains in the north-east corner of the PDA were not observed (during the course of the works, it was demonstrated that these would be entirely within the made-ground of the backfilled basements and, therefore, would not affect any archaeological remains).
- Excavation of ground beams was carried out by the contractors between 30th October and 27th November 2019. They were excavated to a depth of between 1m and 1.3m (i.e. between 27.5m AOD and 27.2m AOD); they were generally *c.*0.65m wide.
- Four lift pits were excavated at the same time as the ground beams. These were dug to a depth of up to 1.3m (27.2m AOD).

The following works were not covered:

- General, site-wide ground levelling that had taken place prior to commencement of the present development. The existing surface throughout comprised hard-core, *c.*400mm thick, laid over plastic mesh at a formation level of *c.*28.1m OD. This mesh and levelling layer can be seen in various photographs (e.g. Photographs 5 and 6).
- Piling (comprising 172 bored piles, each *c.*350mm in diameter). Some piles needed to be re-bored.

All archaeological fieldwork was undertaken by a single archaeologist and the construction contractors allowed adequate time for investigation and recording of the few archaeological features and, where relevant, the extent of undisturbed geological deposits exposed during the works. Archaeological investigation and recording was undertaken in accordance with the WSI (but only one archaeological feature was encountered).

The HET was informed of progress during the works, with frequent progress reports sent via email to Vanessa Clarke, Senior Archaeological Officer. The HET did not need to visit the site.

All machine excavation was undertaken by the groundworks contractor under the control of the Principal Contractor. Archaeological monitoring was undertaken in compliance with Albion Archaeology's *Health & Safety Policy*, site-specific risk assessment, and all operational and safety requirements of the client and Principal Contractor.

2.3 Post-fieldwork Analysis and Reporting

Apart from one archaeological feature, the site records generated consist of watching-brief notes and photographs. There were no finds. No analysis of the results is warranted other than that which is included in the present report. This focuses on the significance of the observations in their local context, taking into account previous investigations and information held in the Bedford Borough Council Historic Environment Record (HER)..



2.4 Archiving and Publication

All records and materials produced will be archived to the standards outlined in Historic England's *Management of Research Projects in the Historic Environment* and those set out by Bedford Borough Council. No finds were recovered, but the project's documentary archive will be deposited in due course at The Higgins Art Gallery & Museum, Bedford (accession no.: BEDFM 2019:83).

This report, together with details of the project will be submitted to the OASIS database in accordance with the guidelines issued by Historic England and the Archaeology Data Service (reference no. albionar1-367679).

A summary of the findings will be submitted for publication in *South Midlands Archaeology*.



3. RESULTS OF FIELDWORK

The results of the observations and investigations in each of the four areas are summarised below and illustrated in Figures 4–7 and Photographs 1–18. Only one archaeological feature was recorded and the ‘contexts’ are described below.

3.1 Attenuation Tank

Although the attenuation tank had already been excavated by contractors without an archaeologist present, it was clear that no archaeological remains had been disturbed. The base of the excavation (c.26.3m AOD) revealed layers of subsoil and brick/concrete rubble that were clearly the remaining make-up layers for an old concrete floor slab that was visible in section (Photograph 12). A possibly natural, light yellow-brown gravel deposit was observed at the base of the excavation, in the south-west corner, but this underlay the old floor slab so might well have been imported ballast laid beneath the slab. A shallow drainage trench, <300mm deep and c.600mm wide, had been dug down the middle of the excavation. The base of this had exposed a yellow-brown sandy clay, which was almost certainly natural geology, but no archaeological features were visible.

The top of the old slab was recorded by the contractors at c.27.1m AOD. All the deposits seen in section above the slab were mixed dumps of very modern make-up containing rubble and plastic refuse.

The slab must have formed the basement floor of the former ironworks building.

3.2 Engineering Test-pits

Eight test-pits were excavated by the contractors across the site to look for obstructions that might affect piling operations (Figure 5; Photographs 6 and 7, 13–16). Six of these were dug through layers of made ground similar to the deposits observed in the sides of the attenuation tank excavation and came down onto the top of a concrete slab at c.27.1m AOD. Test-pit 5 had a second slab at c.28.0m AOD. The locations of these test-pits were not surveyed accurately but they were between 600mm and 1.2m wide by 1–2m long.

However, two test-pits in the south wing of the building revealed natural sands and gravels at a height of c.28.2m AOD (Photographs 6 and 7). These test-pits were accurately surveyed and shown on Figure 3. No archaeological features were observed, but the survival of natural deposits confirmed that this part of the site had not been basemented and retained potential for the survival of archaeological deposits.

3.3 Piling Records

Most of the piles encountered a slab at c.27.1m AOD (Figure 4). The slab was generally 200mm thick. Some piles struck two slabs. These records confirmed the extent of the former basement and demonstrated that the majority of the site had been heavily truncated. The main area of truncation lay within the footprint of the former ironworks building (compare Figures 3, 4 and 7).

However, approximately 46 piles in the south wing encountered no obstruction,



further indicating the potential for survival of archaeological deposits in that part of the site.

3.4 Service Trenches

The service trenches around the central courtyard were mostly dug through the made ground backfilling the former basement (Figure 5; Photographs 10 and 11), but along the north side of the south wing natural gravel deposits survived to a height of *c.*28.1m AOD (Figures 5 and 6; Photographs 8 and 9). No archaeological remains were found.

3.5 Ground Beams

Excavation of the ground beams revealed heavy truncation caused by former buildings within the PDA (Photographs 3, 4, 17 and 18). The majority of the site revealed modern truncation to a depth of at least 1m below the foundation level (i.e. below 27.05m AOD) (see Figures 5 and 7). Therefore, the potential for archaeological remains was restricted to a strip across the south corner of the area *c.*13m wide. Within this area natural deposits were reached at *c.*0.4m below the formation level (*c.*28.1m AOD) (Photographs 1, 2 and 5).

Observation revealed the remains of a ditch *c.*1.45m wide and 0.65m deep (Photograph 5). No dating evidence was recovered from the ditch. It must have terminated within a metre or so to the east, since it was not observed in the adjacent beam trench (its conjectured extent is proposed on Figures 5 and 6).



4. CONCLUSIONS AND SIGNIFICANCE OF THE RESULTS

Although the observations demonstrated that the majority of the PDA had been heavily truncated by the basements of the former ironworks buildings, there was a reasonably large area, at the south and west sides, which retained some archaeological potential.

With reference to old maps and aerial photographs from the HER (Figures 2 and 3; Photographs 19–22) it is possible to conclude that the north-east part of the PDA had been truncated to *c.*26.3m AOD by the construction of the basement of a single, large factory building. In Figure 7 the approximate footprint of this building is indicated in relation to the recent archaeological observations and earlier trial trenching. The south and west sides of the PDA were historically separate land parcels (Figure 2). As a result of this division, the subsequent development of the site resulted in differential survival of archaeological remains (Figure 7). Trial Trench 8 indicated that remains of Iron Age date survived on the western edge. Whilst the ditch observed during the recent works was undated, it is also likely to have dated from the Iron Age (although its alignment might also indicate that it was a much more recent boundary ditch).

That said, the levelling of the site prior to commencement of the present development probably compromised the survival of archaeological remains. The ground reduction that took place clearly truncated the ground levels by up to 2m on the west side (from *c.*30m AOD to *c.*28.1m AOD). There is no record of the nature of the material removed, and much of it might well have been modern dumped material from the demolition of the ironworks. However, it was clear from these observations that the levelling had cut into the top of the natural geology, so some shallower archaeological features might have been lost.

The results of the present work might help in interpretation of the archaeological evidence from the surrounding areas. It is interesting that the large ironworks building extended over the area where Trial Trench 10 (Figure 1) found human remains. The remains were found below 26.5m AOD, which could have been immediately below the floor of the ironworks basement. It raises the possibility that the remains were found during the construction of the building and reinterred at the time below the basement floor — which might explain the relative depth of the find.



5. BIBLIOGRAPHY

- Albion Archaeology, 2005 *Extensive Urban Survey for Bedfordshire: Bedford Archaeological Assessment* (Report 2001/42)
- Albion Archaeology, 2007 *Land at the former Britannia Ironworks, Kempston Road, Bedford: Archaeological Field Evaluation* (Report 2007/91)
- Albion Archaeology, 2012 *Former Britannia Ironworks—Phases E and F, Kempston Road, Bedford: Written Scheme of Investigation for Archaeological Field Evaluation* (Report 2012/53)
- Albion Archaeology, 2014 *Former Britannia Ironworks—Phases E and F, Kempston Road, Bedford: Archaeological Trial Trench Evaluation (Phases 1 and 2)* (Report 2014/25)
- Albion Archaeology, 2017 *Procedures Manual Volume 1 Fieldwork* (3rd ed.)
- Albion Archaeology, 2019 *Britannia Gate, Champion Way, Bedford: Written Scheme of Investigation for Archaeological Observation, Investigation, Recording, Analysis and Publication Procedures Manual Volume 1 Fieldwork* (3rd ed.) (Report 2019/114)
- ASC, 2003 *Archaeological Evaluation of the site of the Britannia Ironworks, Bedford*, Archaeological Services and Consultancy Ltd (Report BKR02/2)
- Brown, N. and Glazebrook, J. (eds), 2000 *Research and Archaeology: A framework for the Eastern Counties: Research Agenda and Strategy*, East Anglian Archaeology Occasional Paper 8
- Chartered Institute for Archaeologists, 2014 *Standard and guidance for an archaeological watching brief*
- Chartered Institute for Archaeologists, 2014 *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
- English Heritage, 2011 *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*
- Gurney, D., 2003 *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14
- Historic England, 2011 *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (2nd edition)
- Historic England, 2015 *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers Guide*



Medlycott, M., 2011 *Research and Archaeology Revisited: a revised framework for the east of England*, EAA Occasional Paper 24, 47-8 and 80

Oake, M., 2007 'Research Agenda and Strategy', in Oake, M., Luke, M., Dawson, M., Edgeworth, M. and Murphy, P., *Bedfordshire Archaeology. Research and Archaeology: Resource Assessment, Research Agenda and Strategy*, Beds. Archaeol. Monogr. 9, 11

Oake, M., Luke, M., Dawson, M., Edgeworth, M. and Murphy, P., 2007 *Bedfordshire Archaeology. Research and Archaeology: Resource Assessment, Research Agenda and Strategy*, Bedfordshire Archaeology Monograph 9

Smith Grant LLP Environmental Consultancy, 2011 *Phase E, Former Britannia Ironworks, Bedford. Stage 1 Environmental Report*

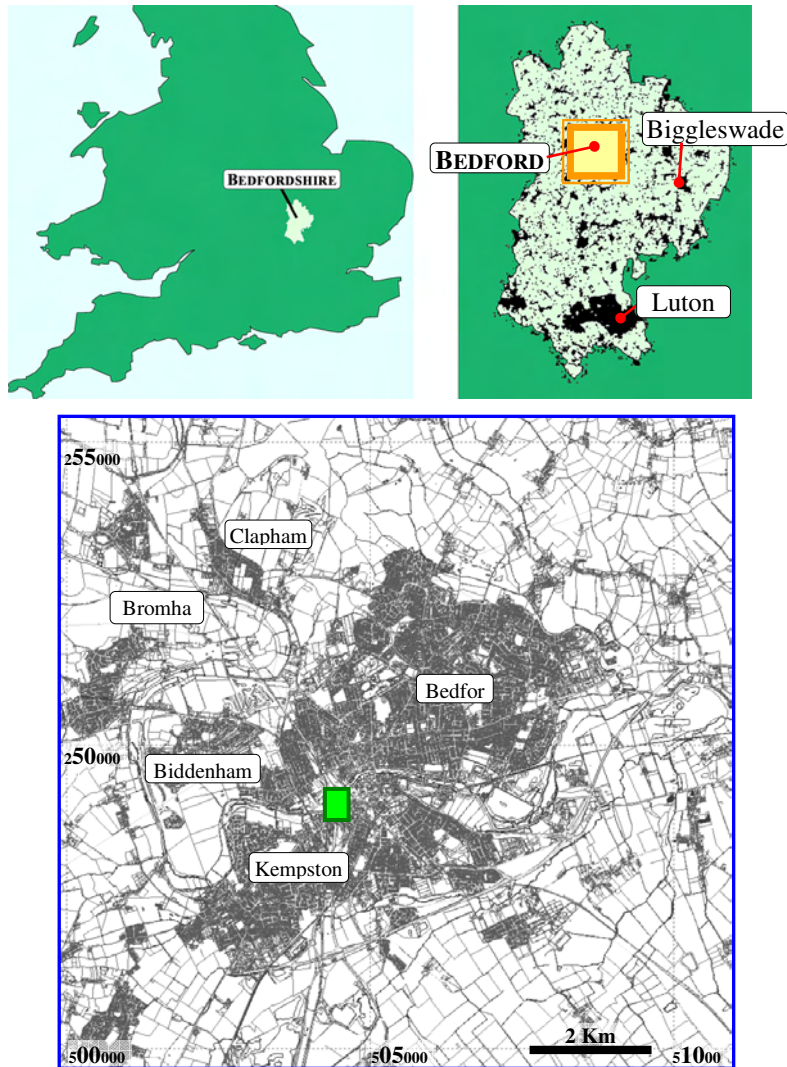
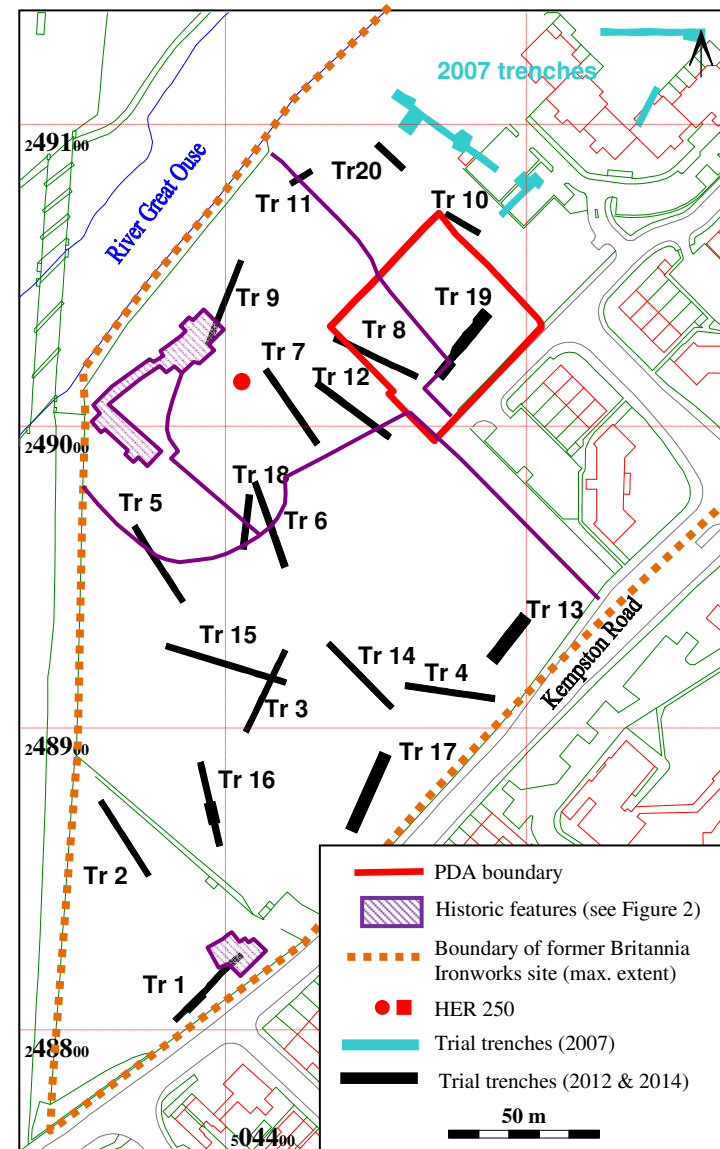


Figure 1: Site location plan

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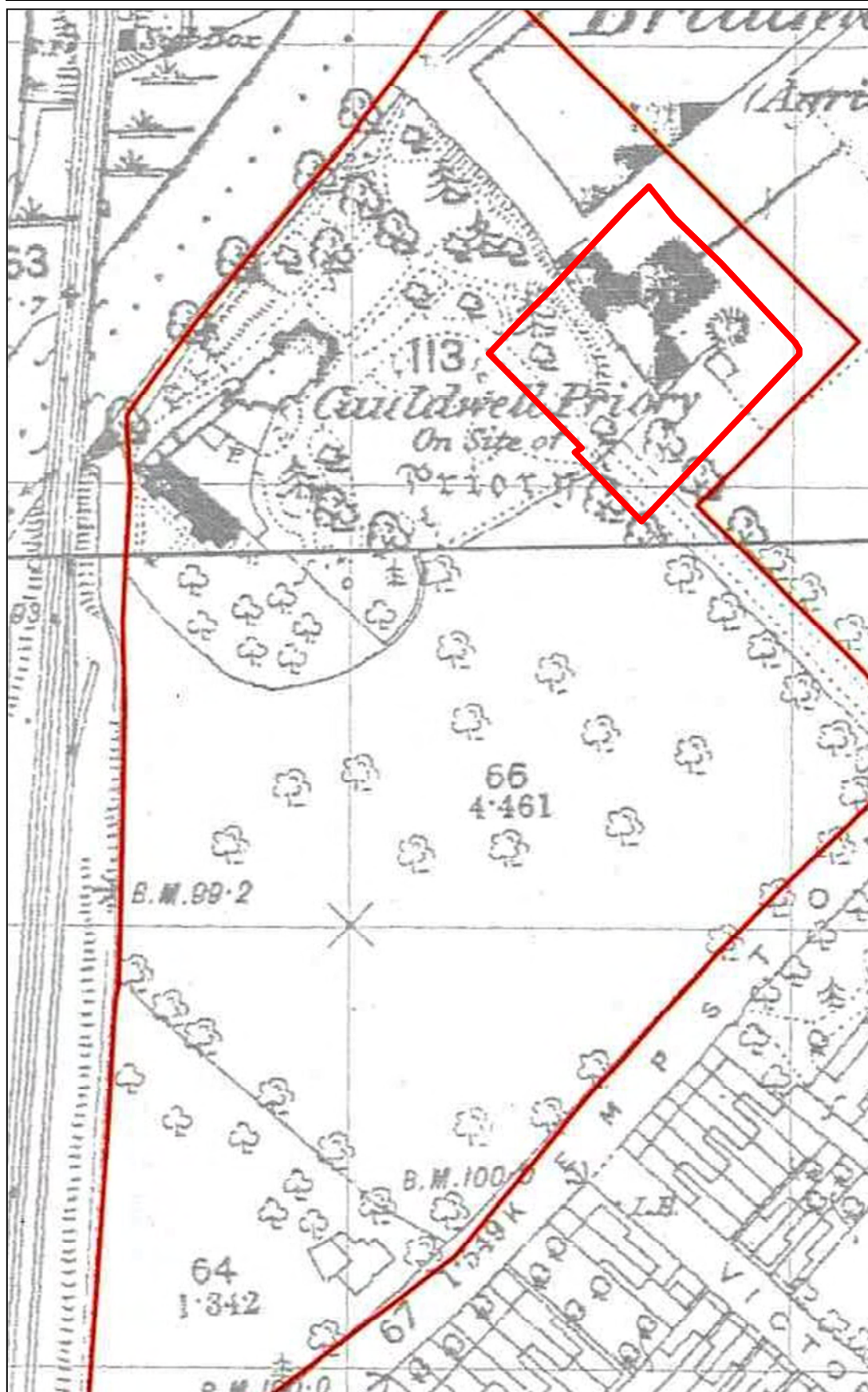


Figure 2: The PDA overlaid on the first edition 25-inch OS map 1884

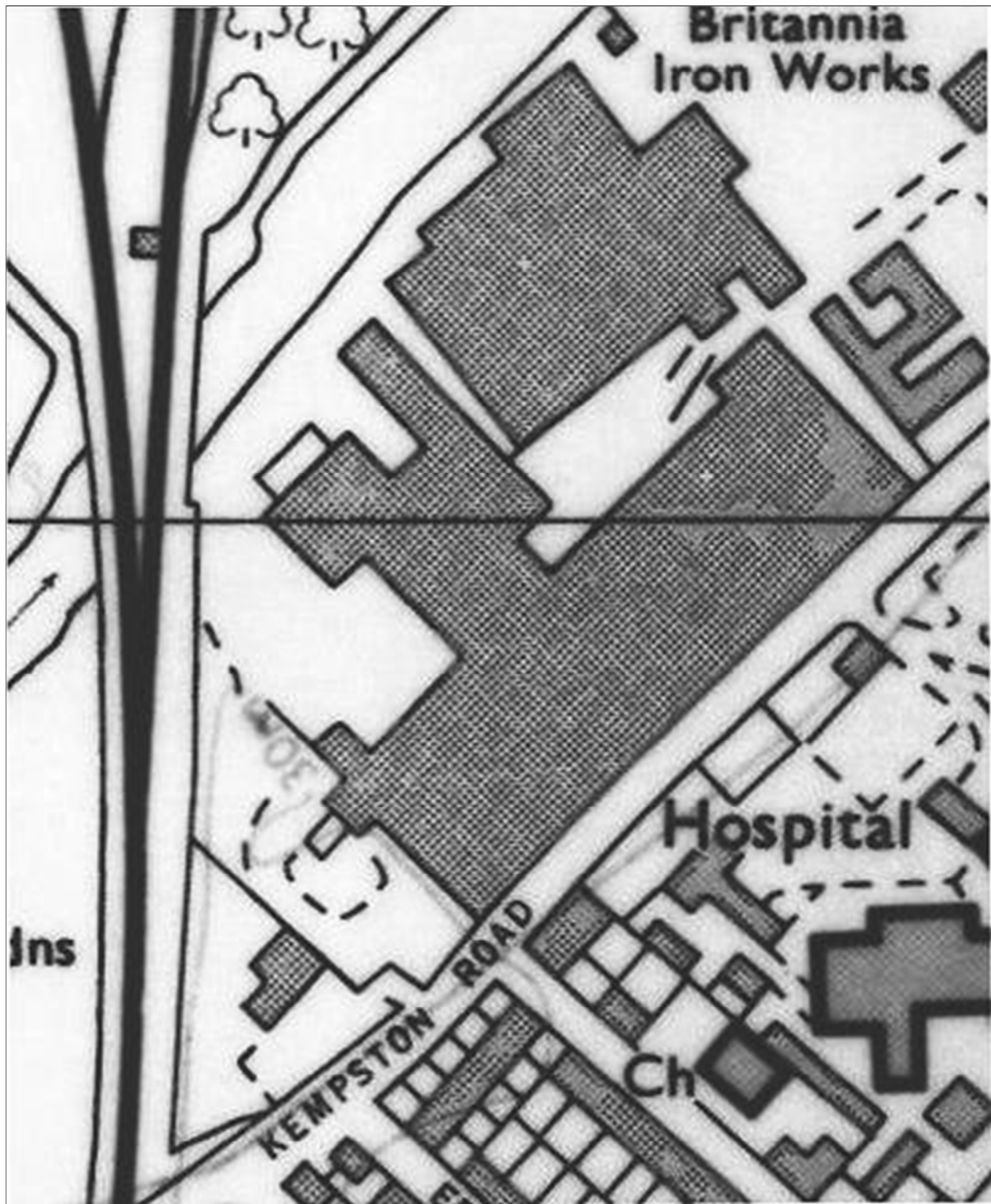


Figure 3: Detail from Ordnance Survey 1:10,000 map, c.1980

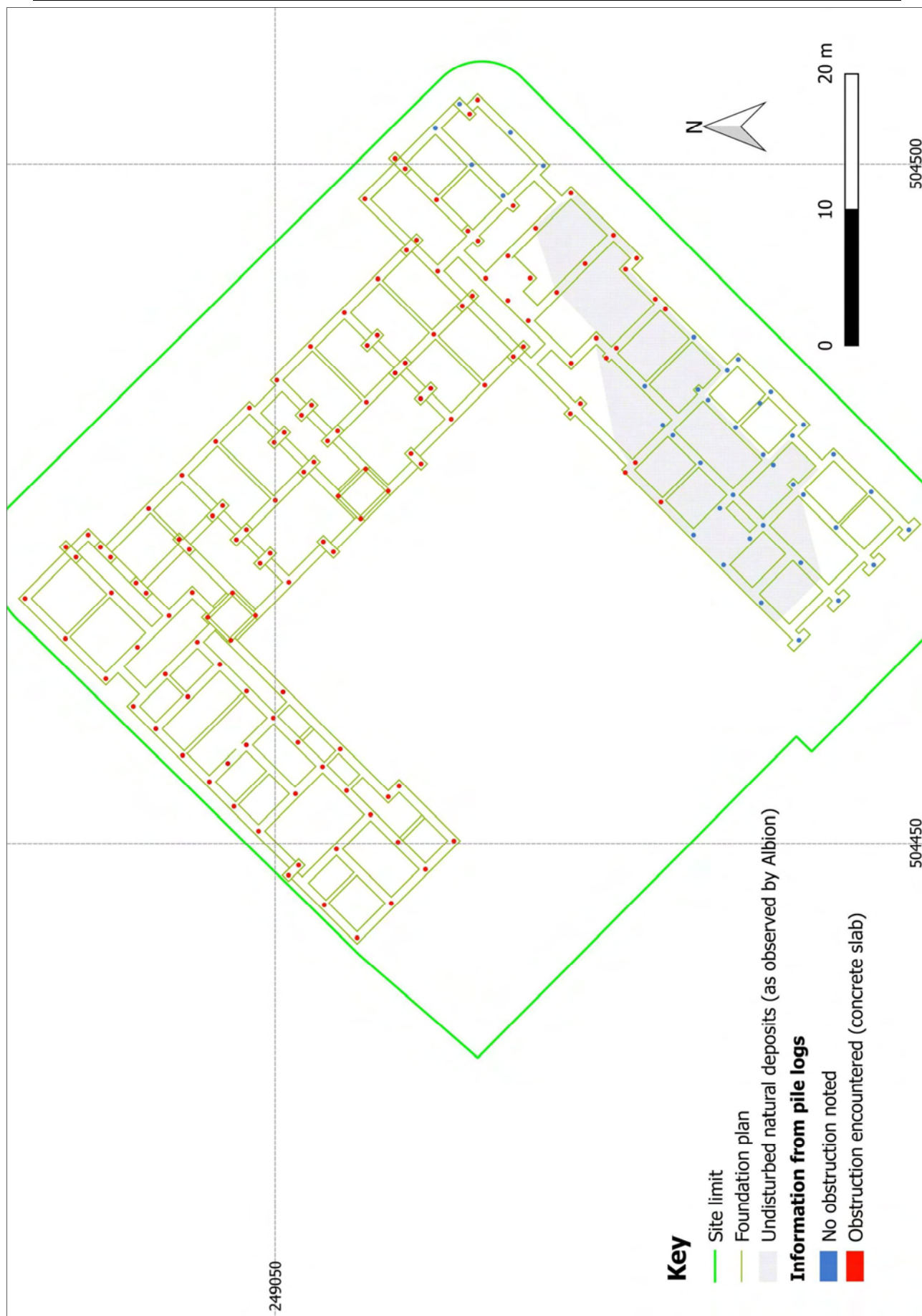



Figure 4: Evidence for extent of truncation inferred from engineer’s piling data



Figure 5: Archaeological observations
 Locations of photographs 1–18 indicated with this symbol 

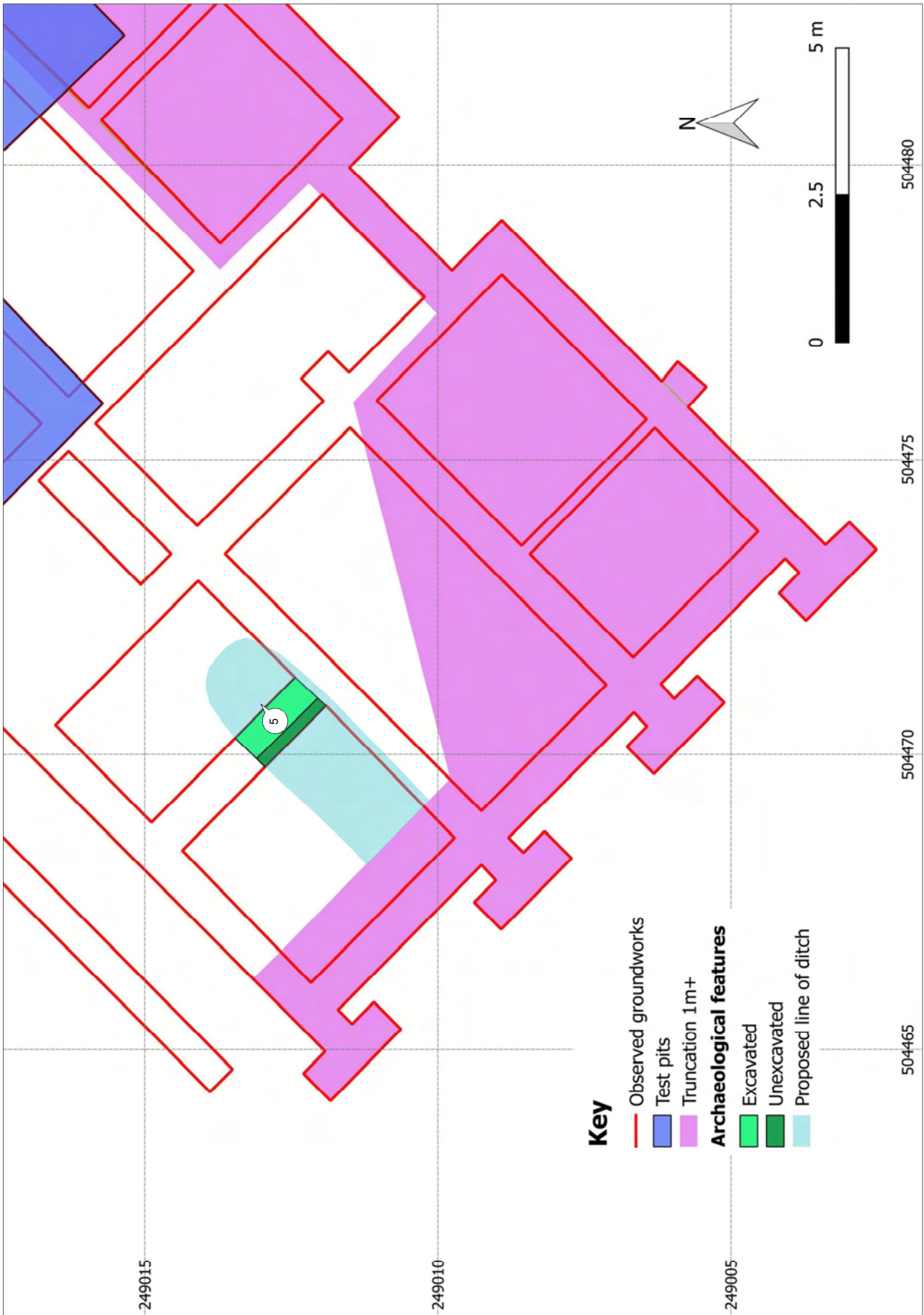


Figure 6: Detail of archaeological observations at the south-west end of the south wing

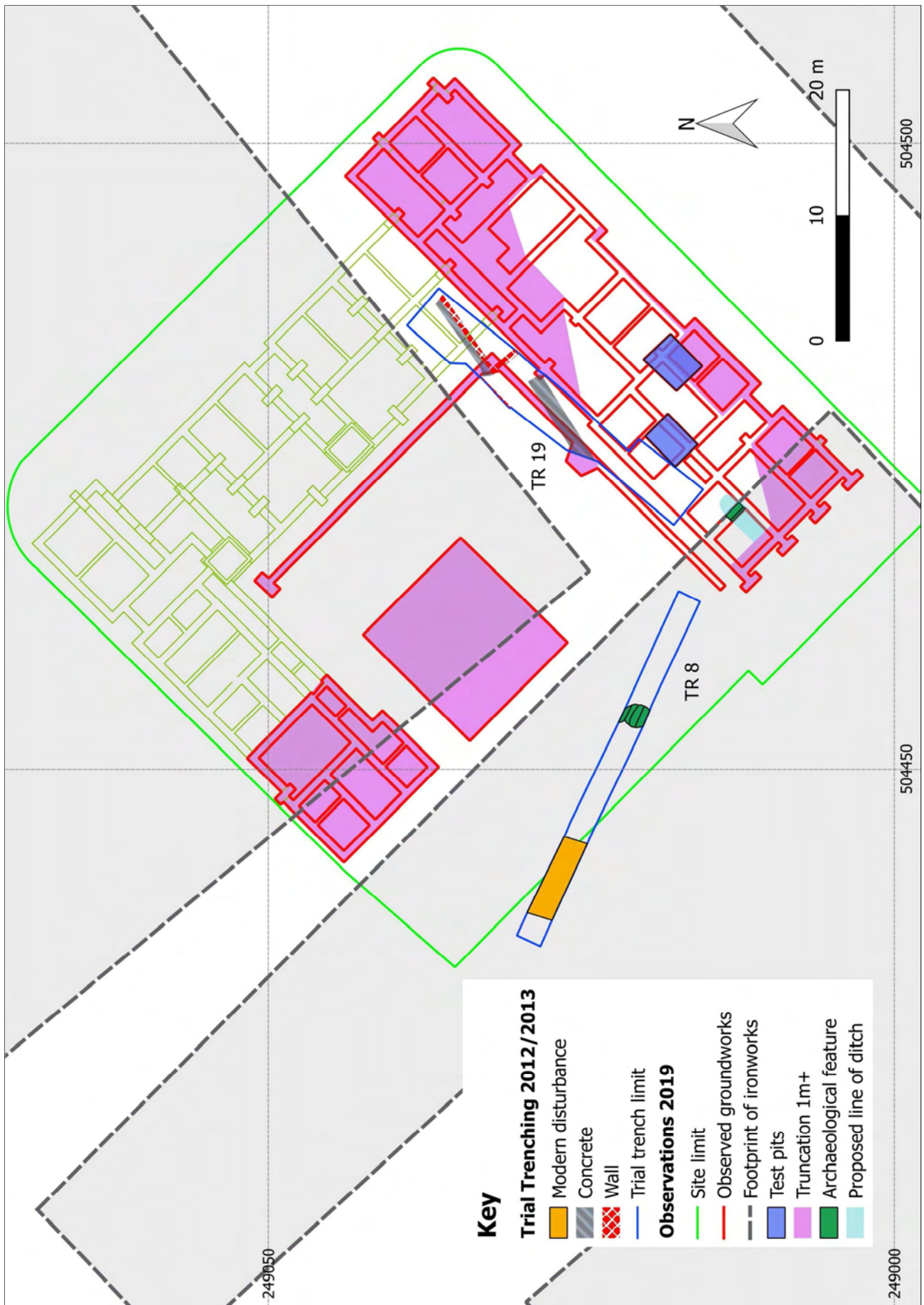


Figure 7: Collation of archaeological and documentary evidence



Photograph 1: South wing, beam trench with pile tops – natural sand and gravel surviving



Photograph 2: South wing, looking along south-east side, some natural geology surviving at c.28.2m AOD (centre) but largely truncated to c.27.8m AOD (right)



Photograph 3: South wing, south-west edge, heavily truncated by old service trench (black material)



Photograph 4: South wing, south-west edge, heavily truncated by large modern feature and old service trench



Photograph 5: Ditch cut into natural geology, south-west-facing section (top of archaeology at c.28.2m AOD)



Photograph 6: Test-pit 7, south wing (east of proposed lift pit), showing natural sand and gravel deposits surviving at c.28.2m AOD.



Photograph 7: Test-pit 8, south wing, showing natural sand and gravel deposits at c.28.2m AOD



Photograph 8: Service trench north of south wing, looking south-west; top of natural sand and gravel at c.28.2m AOD



Photograph 9: Service trench, looking north-east.



Photograph 10: Service trench in made ground, looking north-west



Photograph 11: Service trench on west side of the east wing; entirely excavated into made ground, looking south-east



Photograph 12: Attenuation tank, looking north-west; reduced to formation level (c.27.0m AOD), old floor slab visible in section at c.27.1m AOD



Photograph 13: Test-pit 1, *in-situ* slab in base at c.27.1m AOD



Photograph 14: Test-pit 2, *in-situ* slab in base at c.27.1m AOD



Photograph 15: Modern structures exposed by Test-pit 6



Photograph 16: Test-pit 5 with upper concrete slab in section, top at 28.0m AOD, made ground below



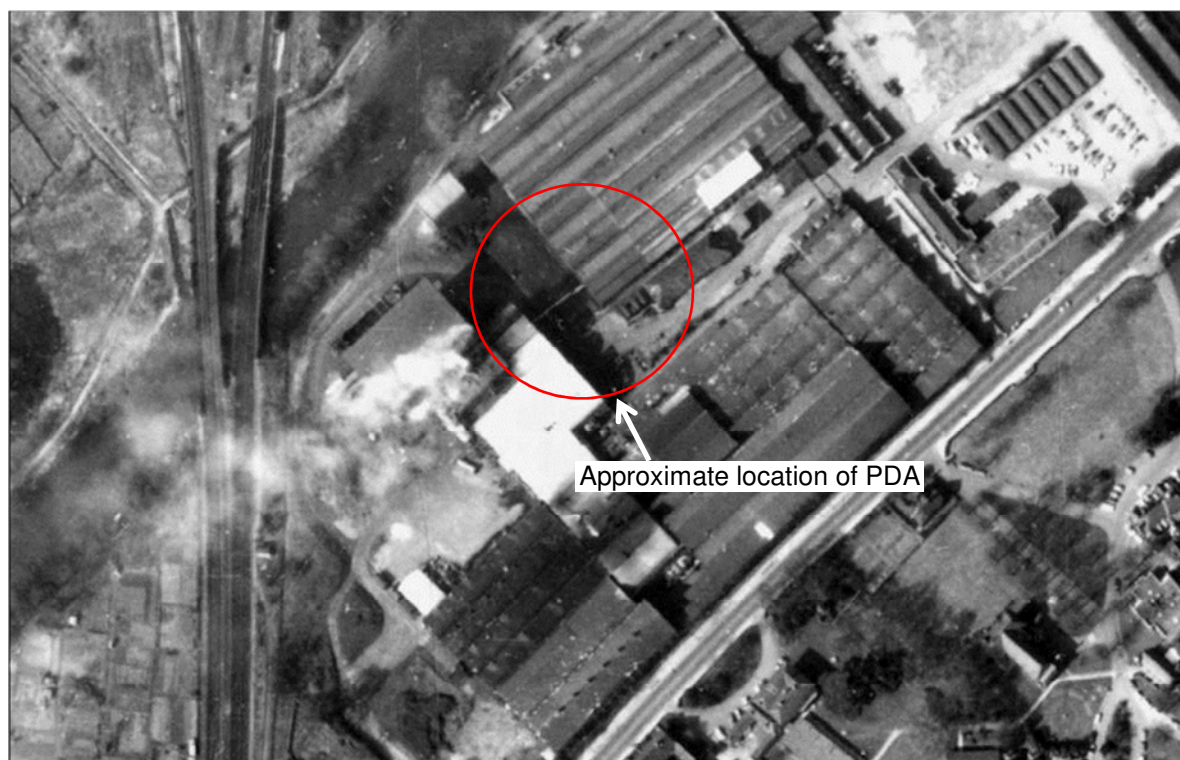
Photograph 17: Foundation trenches at the west end of the north wing, looking south-west; all exposed deposits comprise made ground, containing soil, brick rubble and other modern inclusions



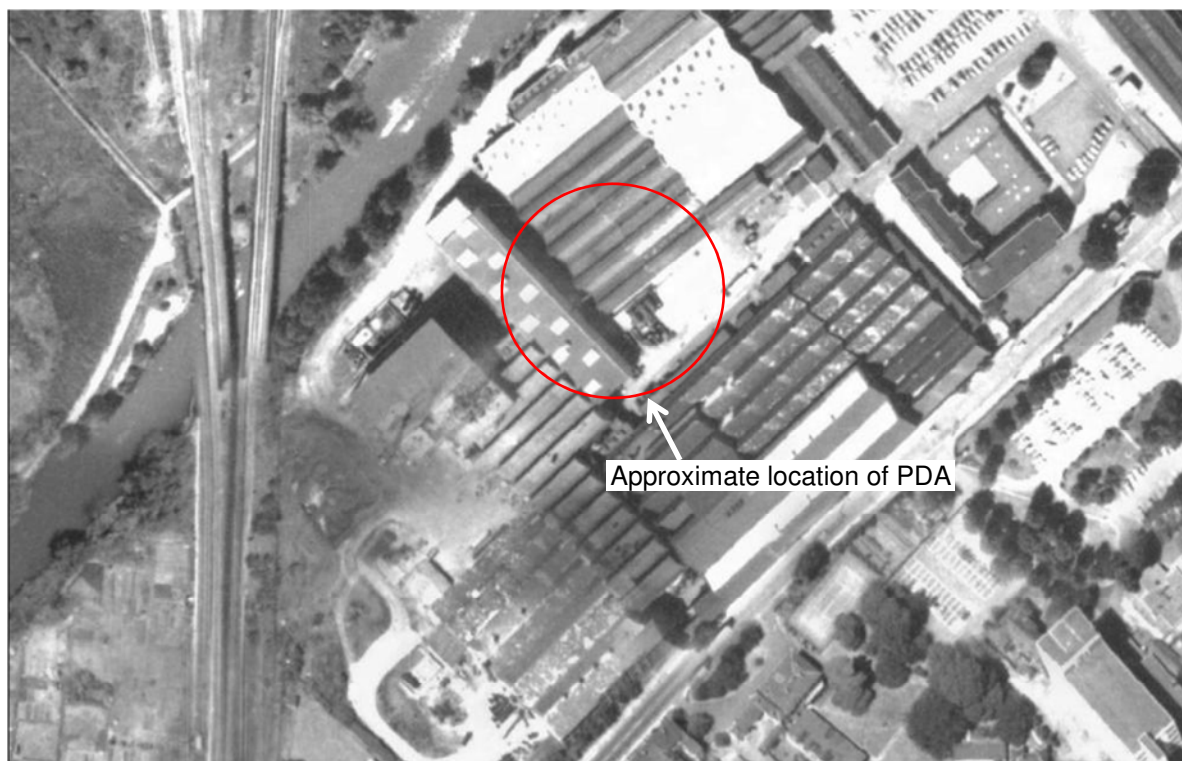
Photograph 18: Part of brick wall exposed at the base of foundation trench, looking north-east; all deposits are made ground, containing brick rubble and other modern inclusions



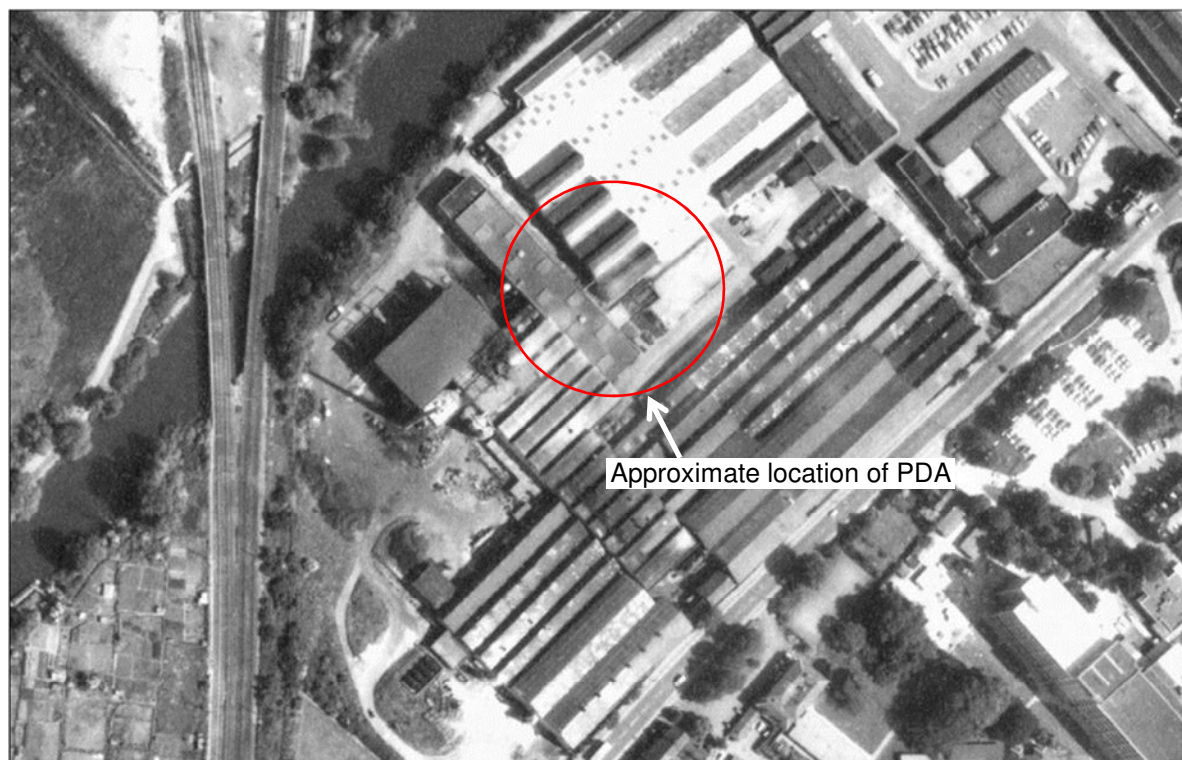
Photograph 19: RAF aerial photograph 1949–50 (BBC HER)
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Photograph 20: Aerial photograph 1968 (BBC HER)
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Photograph 21: Aerial photograph 1976 (BBC HER)
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Photograph 22: Aerial photograph 1981 (BBC HER)
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