

Archaeological Watching Brief Report

BOCKLETON GAS REPLACEMENT

For Balfour Beatty

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L~P:ARCHÆOLOGY

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Client: Balfour Beatty

Local Authority: Malvern Hills District Council

NGR: 359070,262400

Planning App: Permitted Development (Utilities Act 2000)

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Abstract

An Archaeological Watching Brief was carried out during gas replacement works on land off Bockleton Road, Bockleton. The Watching Brief was implemented because of the potential for archaeological remains on the site. The work was carried out by

L - P : Archaeology and this report has been prepared by Rebecca Jones of

L - P : Archaeology on behalf of Balfour Beatty.

An archaeological and historical background search was conducted on a 1km study area around the site and no evidence attesting to the Prehistoric to Roman periods had, as of yet, been recorded. Bockleton was recorded in the Domesday Survey of 1086 and must have been an established settlement by this time.

Map regression depicts the southern extent of the pipeline within open fields, but within the compound area a 'Brick Yard (disused)' and 'old lyme kiln' are shown on the 1886 OS. The brick yard and lime kiln would have been established and gone out of use after 1843 and before 1886, by the 1905 OS Map they are no longer extant.

The objectives of the Watching Brief were to record the character, date, type, state of preservation and extent of any archaeological remains on site. To specifically identify any archaeological evidence relating to Medieval settlement and to mitigate against any removal of the archaeological resource.

Within the compound the groundworks uncovered the remains of a brick kiln, presumed to be the 'old lyme kiln', a disused Post Medieval trackway and a brick platform, interpreted as the base for a shed. An assemblage of Post Medieval finds was garnered from this area.

In the southern extent of the pipeline a single undated linear feature was exposed in the pipe trench and a small assemblage of finds dating from Roman to Medieval dates were recovered, attesting to the interpretation that the site lay on the peripherals of settlement.

1. Introduction

- 1.1. This report details the results of an Archaeological Watching Brief carried out on the Bockleton Gas Replacement, Bockleton, Worcestershire on behalf of Balfour Beatty. The local authority is the Malvern Hills District Council.
- 1.2. The fieldwork was carried out by Rebecca Jones and Benjamin Sleep of L - P : Archaeology during November 2016 and January 2017. This report was written by Rebecca Jones of L - P : Archaeology.
- 1.3. The site is located off the eastern side of Bockleton Road, Bockleton, Worcestershire, WR15 8PP, within the Malvern Hills District (FIGURE 1). The site is centred around National Grid Reference (NGR) 359070,262400.
- 1.4. The site code allocated by L - P : Archaeology is LP2284C.
- 1.5. The work was carried out in accordance with the Written Scheme of Investigation (WSI) prepared by John Quarrell and Rebecca Jones of L - P : Archaeology (LP2284-WSI-V2.3, QUARRELL & JONES 2016).
- 1.6. The site work was also carried out in accordance to the Worcestershire Archive & Archaeology Service Standards and Guidelines for archaeological Projects in Worcestershire (WORCESTERSHIRE ARCHIVE & ARCHAEOLOGY SERVICE 2010), CIfA's Code of Conduct (CIFA 2014A) and Standards and Guidance for an Archaeological Watching Brief (CIFA 2014B).

2. Site Background

2.1.PLANNING

2.1.1. An archaeological Watching Brief was conducted during works for the Bockleton Gas Replacement off the eastern side of Bockleton Road, Bockleton (FIGURE 2).

2.1.2. In 2015 the Town and Country Planning (General Permitted Development) (England) Order was enacted, which is a national grant of planning permission allowing certain building works and changes of use to be carried out without having to make a planning application.

2.1.3. The relevant part for these works is:

Part 15, Class A: gas transporters, relevant permitted development is granted for:

(a) the laying of underground mains, pipes or other apparatus

(d) the placing and storage on land of pipes and other apparatus to be included in a main or pipe which is being or is about to be laid or constructed in pursuance of planning permission granted or deemed to be granted under Part 3 of the Act (control over development)

2.1.4. The Local Planning Authority is Malvern Hills District Council (MHDC) who take archaeological advice from the Worcestershire Archive and Archaeology Service (WAAS).

2.1.5. Balfour Beatty and MHDC have agreed the methodology for these works in the WSI (QUARRELL & JONES 2016).

2.1.6. This document seeks to complete the works by describing the results of the Watching Brief and clarifying the status and location of the project archive.

2.2.GEOLOGY

2.2.1. The British Geological Survey GeoIndex shows the site to be located on St Maughans Formation. This is interbedded purple, brown and green sandstones and red mudstones with intraformational conglomerates containing calcrete

clasts. This data is at relatively low resolution and offers only a rough indication of the site geology (BRITISH GEOLOGICAL SURVEY 2017).

- 2.2.2. The groundworks exposed a consistent stratigraphic sequence across the development area with an underlying natural subsoil of compact, red, coarse sandy clay.

2.3. TOPOGRAPHY

- 2.3.1. The site is located off the eastern edge of Bockleton Road (FIGURE 1).
- 2.3.2. The compound lies in an area of arable farmland bounded by hedgerows on a moderately south facing incline to be bounded by Rolls Brook to the south. The ground lies at an average elevation of 187m OD.



Plate 1 - View across site, looking east-northeast

- 2.3.3. The southern extent of the pipeline lies within open fields on a north facing incline. The northern part of this field lies at an average height of c.202m OD, increasing to c.210m OD in the southern most extent of the field.
- 2.3.4. Both areas of the Watching Brief lie in open arable land where the ground has been ploughed extensively. No standing structures occupy any part of the site.

2.4.ARCHAEOLOGY AND HISTORY

2.4.1. The aim of this section is not to give an entire history of Bockleton or Worcestershire but to highlight key periods and heritage assets with potential archaeological remains specific to the site.

2.4.2. A search of the local Historic Environment Record (HER) was conducted on a 1km radius from the central point between the compound and the southern extent of the pipeline (FIGURE 3), the results of which are discussed within the chronological background below.

PREHISTORIC

2.4.1. Across the region the earlier Prehistoric periods are represented by small scatters of stone tools, over 38 hand axes of the lower and middle Palaeolithic are recorded for Worcestershire predominantly from sand and gravel quarries and over 1400 fragments of flint tools and were recovered from Light Marsh Farm in the north of the region attesting to the Mesolithic period. The ephemeral nature of settlement means no features are recorded for these earlier periods.

2.4.2. Interestingly pollen evidence from archaeological works across the region suggests there was already a pattern of clearing forest and growing crops before the conventional emergence of Neolithic farmers. Neolithic sites of the region are comparatively wide spread, although mainly identified by crop marks, there is an increasing body of evidence for the widespread settlement of the region and with this saw the emergence of the use of pottery.

2.4.3. The Bronze Age brought about a period of great change, bringing the foundations of concentrated settlement in hill forts and the construction of burial monuments, of which there are up to c.20 possible surviving Barrow burial monuments.

2.4.4. There is increasing evidence for widespread Iron Age settlement, not only a continuation of use and development of the hill forts but also in the lowlands. The Iron Age period also saw the first evidence of large scale industry in the region with the extraction of the natural brine resources, creating a continuum

into the Roman period (ATKIN 2007: 10-13).

- 2.4.5. There are no recorded finds or features from the Prehistoric periods within the HER search area.

ROMAN

- 2.4.1. Worcestershire was behind the front line of Roman campaigns in the west and with the Roman period came the construction of roads and the continuation of extracting the natural brine. Ten possible forts have been recorded within the county and form a pattern for protecting the road networks (ATKIN 2007: 13-15).
- 2.4.2. No finds or features attesting to the Roman period have been recorded, as of yet, within the search area. The site lies c.3.2km north and 12km east of known Roman roads (ALLEN ET AL. 2016).

EARLY MEDIEVAL AND MEDIEVAL

- 2.4.1. Evidence for the Early Medieval period predominantly comes from place names. Bockleton meaning a farm/settlement connected with Boccel, from the Old English *Boccel*, a personal name and *-ingtûn*, a settlement called after or connected with (EKWALL 1960:51). The settlement is recorded as Boclintun in the 11th century, Bokilton and Bocklyngton in the 15th century and Boculton and Bockleton in the 17th century (PAGE & WILLIS-BUND 1924: 241).
- 2.4.2. Bockleton was recorded in the Domesday Survey of 1086, so was an established settlement by this time. It was recorded in the Doddingtree Hundred as quite a large settlement under the lordship of the Bishop of Hereford, including 26 households of 4 villagers, 8 smallholders, 12 slaves and 2 riders (DOMESDAY ONLINE 2017). Bockleton remained under the lordship of the Bishops of Hereford until 1683.
- 2.4.3. One hundred metres to the south of the pipeline lies the Grade II* listed Church of St Michael. The nave of the church dates to 1170, was added to in the mid 13th century and again around 1560 (PAGE AND WILLIS-BUND, 1924). It is likely that there would have been a Medieval settlement close to the church to warrant its erection and expansion.

POST MEDIEVAL

- 2.4.1. Study of the map regression shows that the main area of the site has remained undeveloped throughout the Post Medieval period. The 1st edition OS Map of 1832 shows both the compound and main site area within open fields lying on the east of Bockleton Road.
- 2.4.2. On the 1843 Tithe the southern extent of the site is recorded across Lady Meadow and Lady Meadow Croft with the field boundaries the same as present day boundaries and the compound area is listed as Cherry Orchard.
- 2.4.3. The 1886 OS Map (FIGURE 4) depicts the southern extent of the pipeline still within open fields, but within the compound area the map shows a '*Brick Yard (disused)*' and an '*old lyme kiln*'. This brick yard and lime kiln would have been established and gone out of use between 1843 and 1886, by the 1905 OS Map they are no longer extant.
- 2.4.4. The site is surrounded by a plethora of locally recorded 19th century buildings including a Lodge (WSM36874), Newtown Farm (WSM54273), Home Farm (WSM54276) and Little Romers (WSM54376), given the local importance of the buildings, these records may suggest a period of agricultural economic prosperity at this time.
- 2.4.5. The 19th century park and garden at Bockleton Court (WSM28811), which lies to the west of the site is also locally designated as historic.
- 2.4.6. Aerial photographs, as available on GoogleEarth from 1999-2013, do not highlight any potential features within the site area.

OTHER WORKS

- 2.4.1. There have been no intrusive archaeological works within the study area but a building recording (WSM41771) has been conducted to the east of the site at Romers Farm (WSM61924) on the 19th century granary, pigsty, root house, store (WSM42163) and the hop kiln (WSM42164).

3. Aims and Objectives

3.1. The general aims of the Archaeological Watching Brief were to record the character, date, type, state of preservation, and extent of any archaeological remains on site exposed or disturbed during groundworks.

3.2. The specific aims of the archaeological watching brief were:

- ◆ To record and highlight any archaeological remains relating to the Medieval church.
- ◆ To record evidence land use of the site and its nature over time.

4. Methodology

- 4.1. For a full description of the archaeological methodology please refer to section 4 of the WSI (QUARRELL & JONES 2016).
- 4.2. Groundworks were undertaken using a 360° tracked excavator with a toothless ditching bucket and all ground disturbances were monitored by an experienced archaeologist.
- 4.3. Excavation dimensions varied across the site dependent on phase of work (FIGURE 2). The topsoil was stripped to varying depths across the compound and for a 4m wide strip along the length of the pipeline, dependent on thickness of topsoil deposit.
- 4.4. A 0.4m wide x 1.3m deep trench was then excavated for the length of the pipe and two 3m long x 1.8m wide x 1.2m deep trenches were excavated at the entrance and exit for the directional drilling portion of the pipeline.
- 4.5. All plan and section surfaces were examined for archaeological deposits and features, with each deposit being allocated a two digit identifier (context number) and recorded on standard L - P : Archaeology recording sheets. Digital photography played an integral part in the recording of this site with specific shots taken of deposits and features and general shots taken to show wider site context.
- 4.6. All works were carried out in accordance with the Code of Conduct as set out by the CIfA (2014A). Accordingly the site archaeologist abided by the CIfA's Standards and Guidance for an Archaeological Watching Brief (2014B).

5. Results

5.1. Results are given below by phase of groundworks. Not all context numbers referred to in the text are illustrated, but all are in the archive. Deposit numbers are given in (parentheses) and cut and structure numbers are given in [square brackets]. All heights are given below in m below ground level (m bgl) or m OD.

5.2. COMPOUND (FIGURES 5-7)

- 5.2.1. Prior to excavation of the compound it was noted that the field was undulating reminiscent of old ridge and furrow ploughing.
- 5.2.2. Groundworks within the compound area consisted of removing the topsoil to lay hardstanding for the installation of a compound and excavations of a narrow trench for continuation of the pipeline and a drilling launch location.



Plate 2 - View across compound, looking northeast, with 1m and 0.5m scales

- 5.2.3. The stratigraphic sequence remained consistent, with a 0.22-0.28m thick moderately compact dark greyish brown silty topsoil (01) overlying a 0.46m thick compact mid reddish brown silty clay relict plough-soil (06). After the removal of the topsoil three archaeological features were exposed.
- 5.2.4. Remains of a 3.2m wide gravel track, (03), were exposed across the northern extent of the compound. The track led from the current gated entrance of the western boundary leading eastwards out of the limit excavation. The track is a

deposit of medium sized angular grey stones overlying the relict plough-soil (06). The depth of the topsoil accrued over the trackway being no more than 0.15m thick, lends to an interpretation that it is 20th century in date. The trackway may be the access visible on a 1999 aerial photo (GOOGLEEARTH 2017).



Plate 3 - Shot of trackway [03], looking west, with 1m and 0.5m scales



Plate 4 - 1999 aerial photo (GoogleEarth)

5.2.5. An assemblage of 20th century Iron objects was collected from the surface of the trackway, including four complete horseshoes and a short length of chain.

- 5.2.6. 3m south of the track the platform of a brick structure was exposed 0.26m bgl. A brick kiln [05], circular in plan and up to three courses deep, sat within a square cut [08] which had been excavated into the relict plough-soil (06) and backfilled with a compact mid greyish yellow sandy gravel (09).
- 5.2.7. The structure was made of modular sized (220 x 120 x 80mm) bricks, whole or cut to fit, un-coursed with cement and clay mortar creating a 5.4m diameter platform. The external brickwork of the structure was 0.9m wide with the interior made of a very compact reddish brown clay (15).



Plate 5 - Shot of Brick Kiln [05], looking south, with 1m, 0.5m and 0.2m scales



Plate 6 - Shot of external brickwork for kiln [05], with 0.5m scale

5.2.8. The base of the kiln was cut by a series of 'T' shaped flues linking with a central box flue to allow the flow of air into the centre of the kiln. Shallow cuts [11] and [12] led west and east respectively, away from the central box flue [10] to the outer wall of the kiln.



Plate 7 - Shot of brick kiln [05], looking east to show remains of western flue [13], with 1m and 0.5m scales

5.2.9. The western flue [13] survived to 0.6m wide and measured 2.3m in length from the central box flue [10] to the external face of the brick platform. The cut of the flue was only partially excavated to allow survival *in situ*, but the external part of the flue was denoted by a 0.4m wide gap through the brick platform lined by edge set bricks.

5.2.10. The central box flue [10] was derelict and was excavated to the top of one course high. Only the southern 'wall' of the structure appears to remain *in situ* with the rest having collapsed after the kiln went out of use. The central box flue measured 1.14 x 1.3m in plan.



Plate 8 - Overhead shot of central box [10], with 1m and 0.5m scales

5.2.11. The eastern flue [14] was not evident through the clay base (15) of the platform but was denoted on the eastern side of the kiln by a 0.4m wide gap through the brick platform lined by edge set bricks. This flue likely extended by 2m in length from the central box flue [10] to the external facing of the platform wall.



Plate 9 - Shot of brick kiln [05], looking west showing eastern flue [14]

5.2.12. The main flue of the structure led from the central box [10] to the northern extent of the kiln. The northern flue [17] was 0.8m wide and extended 2.2m in length from the central box to the outer facing of the kiln platform.



Plate 10 - Shot looking south along northern flue [17], with 1m and 0.2m scales

5.2.13. The northern flue was infilled by rows of undulating bricks within a loose silt soil matrix. Given the position of the bricks and the more substantial form of this flue it is possible that this flue had a domed top and the rows of bricks now infilling the structure represent the collapse.



Plate 11 - Overhead shot of bricks within flue [17], with 1m scale

- 5.2.14. Given their size and form, the east to west flues were used as inlets and outlets for air during firing, with the northern flue also being used for topping up fuel during the firing process.
- 5.2.15. A mixed assemblage of finds were collected during the cleaning of the kiln. The assemblage consisted of three Post Medieval handmade brick samples, the largest of which was shaped with a moulded cornice design, often used to create decorative details around window and door frames, a chicken tibia and a sherd of Creamware pottery dated c.1750+.
- 5.2.16. The corner of an undulating brick platform was exposed 0.26m bgl in the northeast corner of the compound area extending beyond the limit of excavation.



Plate 12 - Shot of platform [21], looking west, with 2 x 1m scales

5.2.17. The platform was exposed by 2m wide, 3.8m long and was excavated to one course high to allow preservation *in situ*.

5.2.18. Platform [21] has been constructed from bricks, measuring 220mm long x 110mm wide x 50mm high, edge set with the corner of the platform denoted by a change of alignment in the brickwork. A 0.4m wide drain runs north to south along the western edge of the platform.

5.2.19. Given the limited scope by which this platform has been exposed it is of limited interpretative value, however it likely extends up to c.10m eastwards where a terraced platform survives in the adjacent area aligned with the southern edge of the platform and the ground level decreases by c0.3m south-facing from this edge.



Plate 13 - Shot of platform [21] edging, looking east, with 2 x 1m scales

- 5.2.20. An assemblage of mixed Post Medieval finds was recovered from the surface of this platform. A collection of iron nails, a complete iron padlock, two potential door fittings and a sherd of Pearl Glazed Earthenware pottery, dating c1790+.
- 5.2.21. Given the form and potential extent of the platform, partnered with the assemblage of finds, it is interpreted to be a platform for a shed.
- 5.2.22. All features were revealed and recorded prior to pipe excavations, allowing the pipeline to be interred away from the archaeological features, allowing preservation *in situ*.
- 5.2.23. The pipe trench was excavated to 0.4m wide and 1.3m deep and revealed the stratigraphic sequence of the relict plough-soil (06) overlying a compact mid red glacial clay (07).



Plate 14 - South facing section of pipe trench, with 1m scale

5.2.24. The excavation of a 3m long, 1.8m wide by 1m deep launch location did not expose any archaeological finds or features. The stratigraphic sequence remained consistent with the rest of the compound.

5.3. SOUTHERN FIELD (FIGURE 8)

5.3.1. The works within the southern field were completed in two phases, the first comprised a 3m long, 1.8m wide and 1m deep drilling launch location and stripping and separating topsoil across a 4m wide a c.0.3m deep stretch along the length of the pipeline in order to reinstate the field post works.

5.3.2. The stratigraphic sequence throughout the southern extent of the pipeline remained fairly consistent. The 0.26-0.32m thick moderately loose dark brown silty topsoil (16) was removed to expose a 0.2-0.46m thick compact reddish brown silty clay relict plough-soil (19).

5.3.3. No archaeological find or features were exposed during the excavation of the launch location and no features could be seen within the exposed relict plough-soil.

5.3.4. A walkover survey was conducted along the length of the topsoil strip. An assemblage of residual pottery finds was recovered from the topsoil (16) and the relict plough-soil (19) in the southern most 25m of the topsoil strip.

Sherds of Roman pottery dating from the mid 1st to 4th centuries AD was recovered from both the top and relict plough-soils, consisting of fragments of Malvernian and Severn Valley wares.

- 5.3.5. A small assemblage of Medieval pottery, with fragments dating from the 9th/10th to 14th centuries, was garnered from the relict plough-soil.



Plate 15 - Shot of topsoil strip, looking north

- 5.3.6. The second phase of works in the southern field consisted of excavating the 0.4m wide and 1.3m deep pipe trench.



Plate 16 - Looking south along pipe trench, with 1m scale



Plate 17 - West to south west facing section of pipe trench, with 1m scale

- 5.3.7. The pipe trench exposed a variation in depth of the relict plough-soil across the southern field. The relict plough-soil was shallower across the most southern extent of the pipeline, in an area located on the crest of a north facing incline and much deeper at the northern extent of the field, located at the break of the slope. The varying depths would have been caused by the natural erosion of the clay and former topsoils on the slope, exacerbated by agricultural activity.
- 5.3.8. Pipe trench excavation revealed an isolated, undated, narrow, shallow linear feature [23]. The linear feature was aligned east to west c.10m from the southern boundary of the field. It measured 0.43m wide by 0.24m deep and contained a single fill of mid orangey brown silty clay (24) which was sealed by and intermixed with the relict plough-soil (19) caused by natural build up.



Plate 18 - West facing section of pipe trench, exposing linear feature [23], with 1m scale

- 5.3.9. The absence of any further features and the isolation of finds recovery to the southern most 25m of the pipeline led to the conclusion that the pipe trench excavation was moving out of the periphery of earlier settlement and the Watching Brief was ceased after 50m.

6. Finds

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6.1. A small assemblage of artefacts were recovered from the watching brief. The objects recovered are summarised below:

6.2. POTTERY

- 6.2.1. 24 sherds of pottery weighing 93 grams were recovered from contexts encountered within the watching brief; these have been catalogued on an xl.spreadsheet and will form part of the site archive. All of the pottery fabrics were identified with reference to the Worcestershire Ceramics online database <http://pottery.rigorka.net>
- 6.2.2. The Roman pottery amounted to 14 sherds weighing 38 grams. This included local oxidised and reduced Severn Valley Wares (Worcester Fabrics 12, 12.1 and 12.2) from contexts (16) and (19); which broadly date to the mid 1st to 4th century. All of the sherds were soft and lacking original surfaces owing to unfavourable soil conditions. Only one rim sherd was present and this was from a bowl with an everted rim of 2nd to 4th century date (WEBSTER 1976, PP 30, FIG 7.34-5).
- 6.2.3. Roman pottery from the Malvernian industry included two joining body sherds of handmade Malvernian 'tubby cooking pot' (Worcester Fabric 3.2) from context (16); dated 1st to 2nd century. There were also three small body sherds of wheelmade Malvernian ware (Worcester Fabric 19) from context (19); dated 2nd to 4th century.
- 6.2.4. The Medieval pottery was entirely recovered from context (19) and comprised 6 sherds weighing 37 grams. The fabrics identified ranged in date from the late 9th/10th to the 13th/14th century.
- 6.2.5. This small assemblage represented a diverse range of fabrics including: 1 body sherd of Cotswolds unglazed ware (Worcester Fabric 57.1); 1 body sherd of glazed siltstone tempered ware (Worcester Fabric 111); 1 body and 1 base sherd of Malvernian unglazed ware (Worcester Fabric 56); 1 body sherd of Minety type ware (Worcester Fabric 65); and 1 rim sherd of sandy limestone

tempered ware (Worcester Fabric 58).

6.2.6. The rim sherd of sandy limestone tempered ware was from a cooking jar with an everted rim and an internal lid seating; the ware is dated to the 11th to 12th century.

6.2.7. Post Medieval pottery was recovered from contexts (4), (16) and (22). The material included 3 sherds of Pearl glazed earthenware decorated with a blue transfer printed floral design; suggestive of a date after c.AD 1790. There was also 1 body sherd in a Creamware fabric decorated with hand painted yellow and green underglaze decoration; dated c.1750+.

6.3.GLASS

6.3.1. Two fragments of clear vessel glass were recovered from context (16); both were of 19th/20th century date.

6.4.CBM

6.4.1. Three Post Medieval handmade brick samples were recovered from context (4); however, none of these samples represented a complete brick, with only width and thickness dimensions present. The dimensions of the 3 samples were:

- ◆ Width 116 mm; thickness 62mm; weight 1.716 kg;
- ◆ Width 114 mm; thickness 60mm; weight 1.400 kg;
- ◆ Width 129 mm; thickness 79mm; weight 1.916 kg.

6.4.2. The largest of the three brick samples was a shaped brick with a moulded cornice design. This style of brick was often used to create decorative details around window and door frames.

6.4.3. Four undiagnostic fragments of post-medieval brick weighing 132 grams were recovered from context (16).

6.4.4. Four fragments of 19th/20th century ceramic field drain weighing 203 grams were recovered from context [5].

6.5.IRON

6.5.1. Five iron objects were recovered from context (2). These consisted of four complete horse shoes and a short length of chain consisting of four links (two circular links and two oval links). These objects are of 20th century date.

6.5.2. Thirteen iron objects of 19th/20th century date were recovered from context (22). Ten of these objects could be identified as hand forged nails and are detailed as follows:

- ◆ Complete nail of square section with a rounded head. Dimensions 180 x 14 x 14 mm, weighing 162 grams;
- ◆ Complete nail of square section with a flattened head. Dimensions 160 x 10 x 8 mm, weighing 69 grams;
- ◆ Complete nail of square section with a rounded head. Dimensions 130 x 12 x 10 mm, weighing 48 grams;
- ◆ Complete nail of square section with a square head. Dimensions 102 x 8 x 6 mm, weighing 29 grams;
- ◆ Complete nail of square section with a rounded head. Dimensions 75 x 11 x 8 mm, weighing 38 grams;
- ◆ Complete nail of square section with a rounded head; bent at 80° towards the middle. Dimensions 100 x 12 x 12 mm, weighing 162 grams;
- ◆ Incomplete nail of square section with no head. Dimensions 90 x 8 x 4 mm, weighing 12 grams;
- ◆ Complete nail of square section with a square head. Dimensions 36 x 5 x 5 mm, weighing 6 grams;
- ◆ Rounded head of a nail. Weighing 4 grams;
- ◆ Rounded head of a nail. Weighing 7 grams.

6.5.3. Amongst the remaining iron objects from context (22) was a complete iron padlock weighing 499 grams. There is a shield-shaped copper-alloy object

imbedded within the corrosion on one side of the padlock which may represent a sliding cover for the keyhole.

6.5.4. The other two objects are both complete and probably hand forged fittings associated with door latches: one measuring 65 x 13 x 8 mm; the other measuring 58 x 10 x 8 mm.

6.5.5. One iron object was recovered from context (16) and represents a fragment of roof guttering/pipe of 19th/20th century date

7. Discussion and Conclusions

- 7.1. An Archaeological Watching Brief was carried out during gas replacement works on land off Bockleton Road, Bockleton. The Watching Brief was implemented because of the potential for archaeological remains on the site.
- 7.2. The southern extent of the pipeline was a focus for archaeological mitigation due to the proximity of the Grade II* listed Church of St. Michael. The nave of the church was built in 1170 and the church was expanded in the mid 13th century and again in 1560. With the dominant evidence for Early Medieval and Medieval activity in the area coming from place-names, the concentration and development of the Medieval settlement remains unclear. It is likely that the development grew around the church or was the deciding factor for the church's location, in either instance that brings the correlation between proximity to the church and potential for archaeological remains. The southern extent of the pipeline, being just 100m from the church held the potential to expose features relating to these periods or to narrow the search.
- 7.3. A single undated linear feature was exposed obliquely within the pipe trench section, orientated east to west c10m from the current southern boundary of the field this potential ditch is likely a result of agriculture or drainage.
- 7.4. Although no significant archaeological features were exposed, the presence of Medieval pottery dating from the 9th through to the 14th centuries within the first 25m of pipe trenching allows the assumption that the southern area is on the periphery of earlier settlement.
- 7.5. The presence of Roman material culture was unexpected; with no results within the search area attesting to this period from the HER and the nearest recorded features, as of yet, being known Roman roads lying c.3.2km north and 12km east of the site. Given the fact the field has been extensively cultivated and the finds were recovered from the top and plough-soils, they are not likely *in situ*, but rather there by the result of ploughing. This would mean that the field also lies on the periphery of Roman settlement activity, but no features are visible on aerial photographs as available from GoogleEarth (1999-2017).
- 7.6. The compound was a focus for archaeological works to mitigate against the disturbance of the “old lyme kiln” and “brick yard (disused)” depicted on the 1886

OS Map (FIGURE 4). It is likely that 'the old lyme kiln' was actually the brick kiln found during the Watching Brief works. The 1886 OS Map depicts the kiln within the limits of the compound and the brick yard to the east.

7.7. The undulating topography of the compound area had been noted prior to excavation and although the majority of the variation is likely attesting to former ridge and furrow ploughing techniques, small areas are indicative of the features, for example a terrace was noticeable where the remains of the brick kiln was then exposed. It is therefore of interest to note that remains of the disused brick yard are likely *in situ* to the east of the compound, where mapped, as there is further terracing in the field.

7.8. The brick kiln was likely erected to meet local domestic needs. Being 5.4m in diameter the capacity of the kiln would not have been as substantial as kilns found in industrial urban areas. The kiln was also only used for a short period of time, being built after 1843 and then used and disused by 1886, a long enough time for a couple of generations to make use of but not there for longevity.

7.9. Given these points it is likely the kiln was constructed in a vernacular way, parts of the kiln base are well formed and geometric, whereas, in other parts the bricks have been laid to fit (FIGURE 5).

7.10. The location of the brick kiln was likely specifically chosen given the proximity to the Rolls Brook and ease of extraction of the natural clay subsoil – factors essential in the brick making process. The brick making process also helps interpret the function of any sheds on site.

7.11. BRICK MAKING

7.11.1. In order to make bricks, clay is extracted from a suitable deposit such as the clay subsoil present on site. Glacial clays usually contain small stones, which would weaken the brick or could cause cracking during firing, so the clay is mixed with water in a pit to allow the stones to sink to the bottom, and the upper clay/water mix is run off to shallow pits where the clay would sink to the bottom of the pit and the water drained.

7.11.2. The washed clay is piled up to weather for a few month and once weathered is

mixed with more water to become malleable. Once malleable the clay mix is shaped into bricks or tiles and then these 'green' bricks would be stacked in long, low drying sheds for the wind and air to dry them out, if the bricks were too wet when fired the steam building up inside them could cause them to explode.

7.11.3. The final stage of brick making is the firing. The unfired bricks would be stacked into the kiln and then baked using fires of wood, charcoal or coal. The whole process takes five or six days, with firing necessary day and night for perhaps three days (ENGLISH HERITAGE N.D.)

7.12. REPLICA

7.12.1. 25 miles north of the Bockleton site is Acton Scott Historic Working Farm. Present at Acton Scott is a replica of a Victorian brick kiln of similar dimensions and form to the one found during the Watching Brief works. Although the brick kilns may not have been identical, the Acton Scott example is a good indication of the form of smaller scale brick kilns which were being used at this time.



Plate 19 - Shot of Acton Scott Victorian Brick Kiln (replica),
from Acton Scott Historic Working Farm

7.12.2. The brick kiln at Acton Scott Historic Working Farm is a working copy of a Victorian brick maker's kiln which can fire up to 7000 bricks at a time, taking around 5 days to bring it up to temperature. A team of people keep it fed with fuel 24 hours a day (BRICK KILN INFORMATION PLAQUE, ACTON SCOTT HISTORIC WORKING FARM).

8. Archive

8.1.The paper archive consists of:

- ◆ 1 x Drawing Register
- ◆ 5 x Drawing Film
- ◆ 1 x Photographic Register
- ◆ 1 x Context Register
- ◆ 24 x Context sheets
- ◆ 9 x Watching Brief Visit sheets

8.2.The finds archive consists of:

- ◆ 1 x box artefacts as described in Section 6 (all materials).

8.3.The archive is to be deposited at Worcestershire Museums.

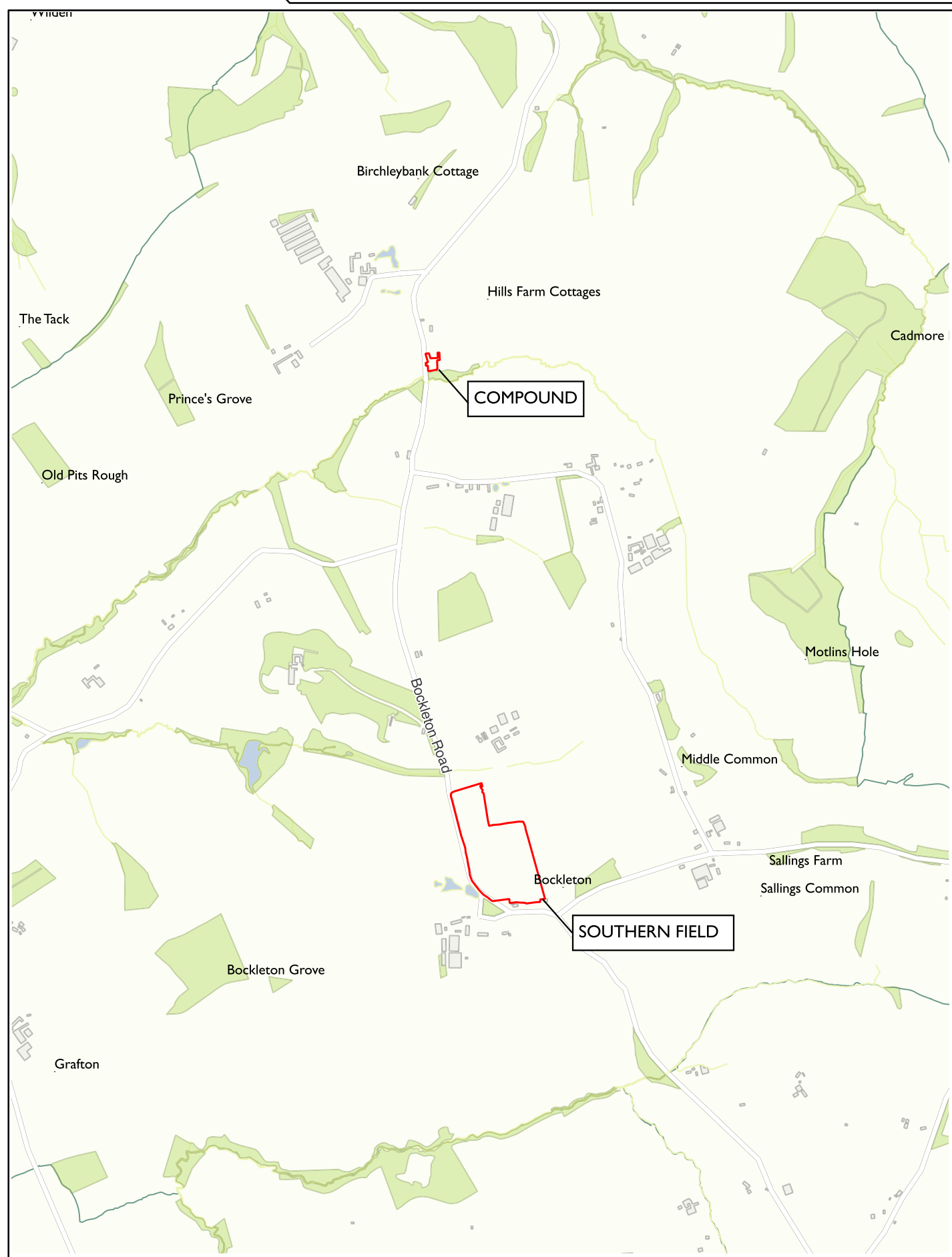
SOURCES CONSULTED

BIBLIOGRAPHIC

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FIGURES

FIGURE I // Site Location - General



0 500 m



PROJECT // 2284C - Bockleton Road

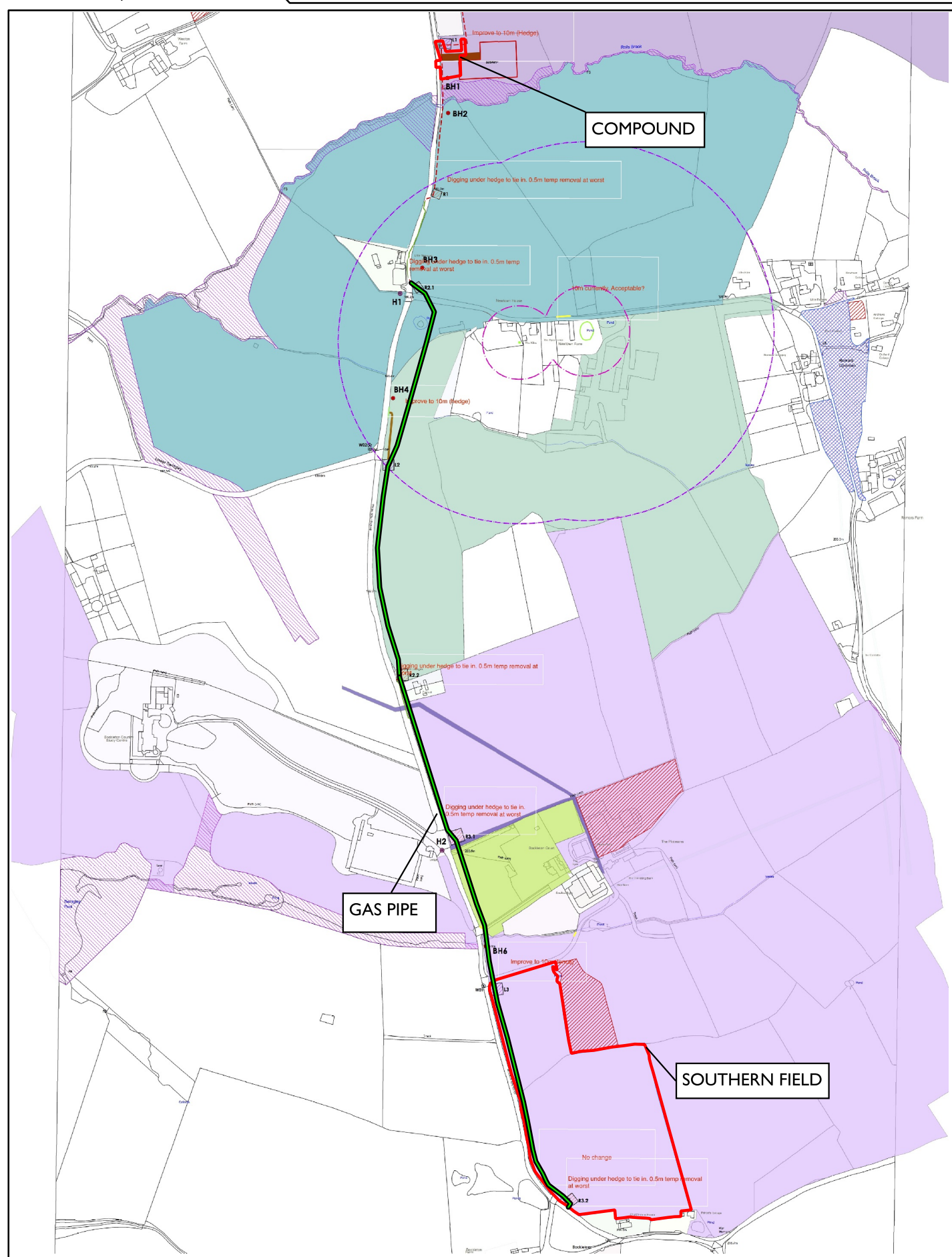
DESCRIPTION // Site Location

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DOC REF: LP2284C-WBR-v1

L~P:ARCHAEOLOGY

FIGURE 2 // Development Plan



0

500 m

N

PROJECT // 2284C - Bockleton Road

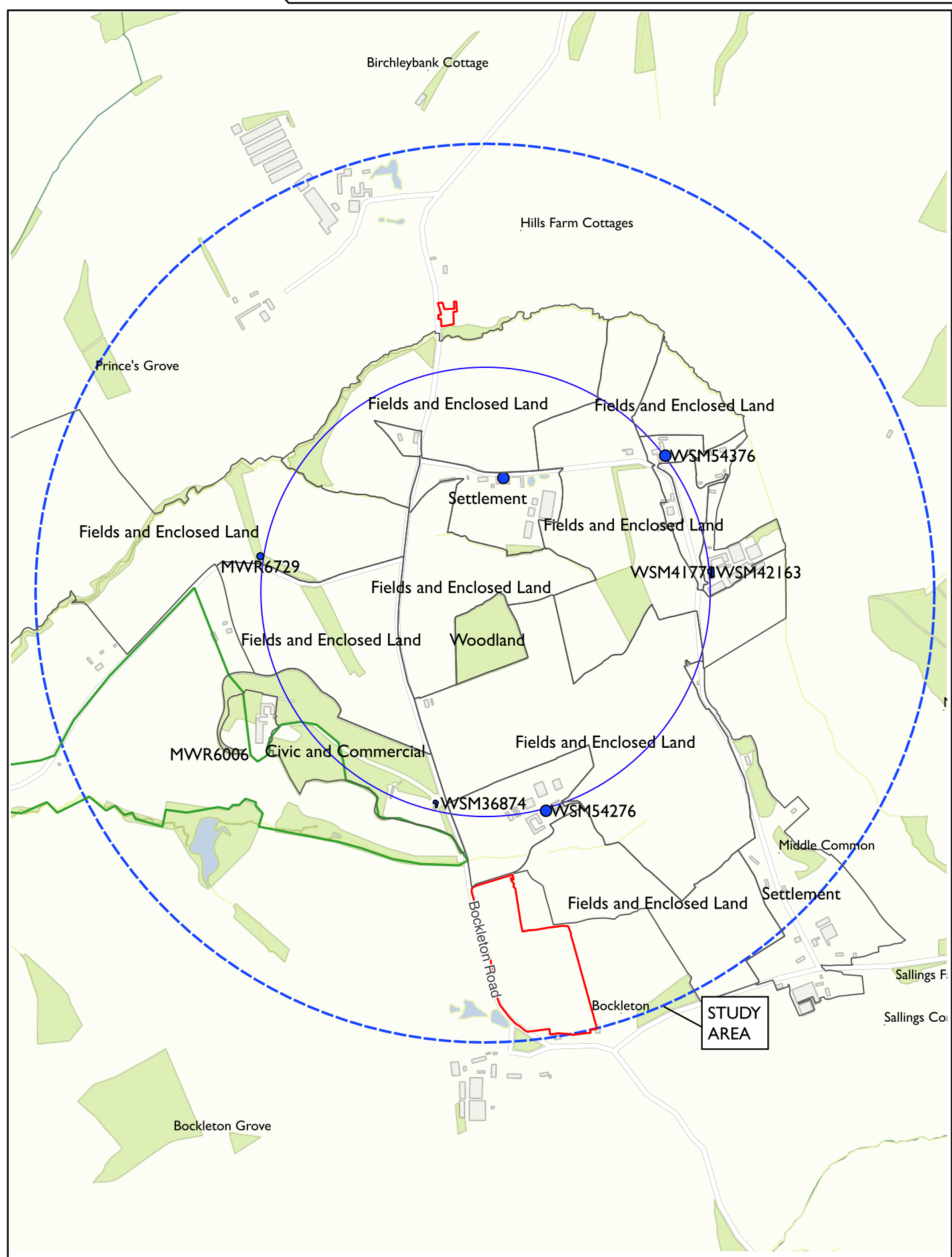
DESCRIPTION // Plan of works

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DOC REF: LP2284-WBR-v1

L-P:ARCHAEOLOGY

FIGURE 3 // HER Data



0 500 m



PROJECT // 2284C - Bockleton Road

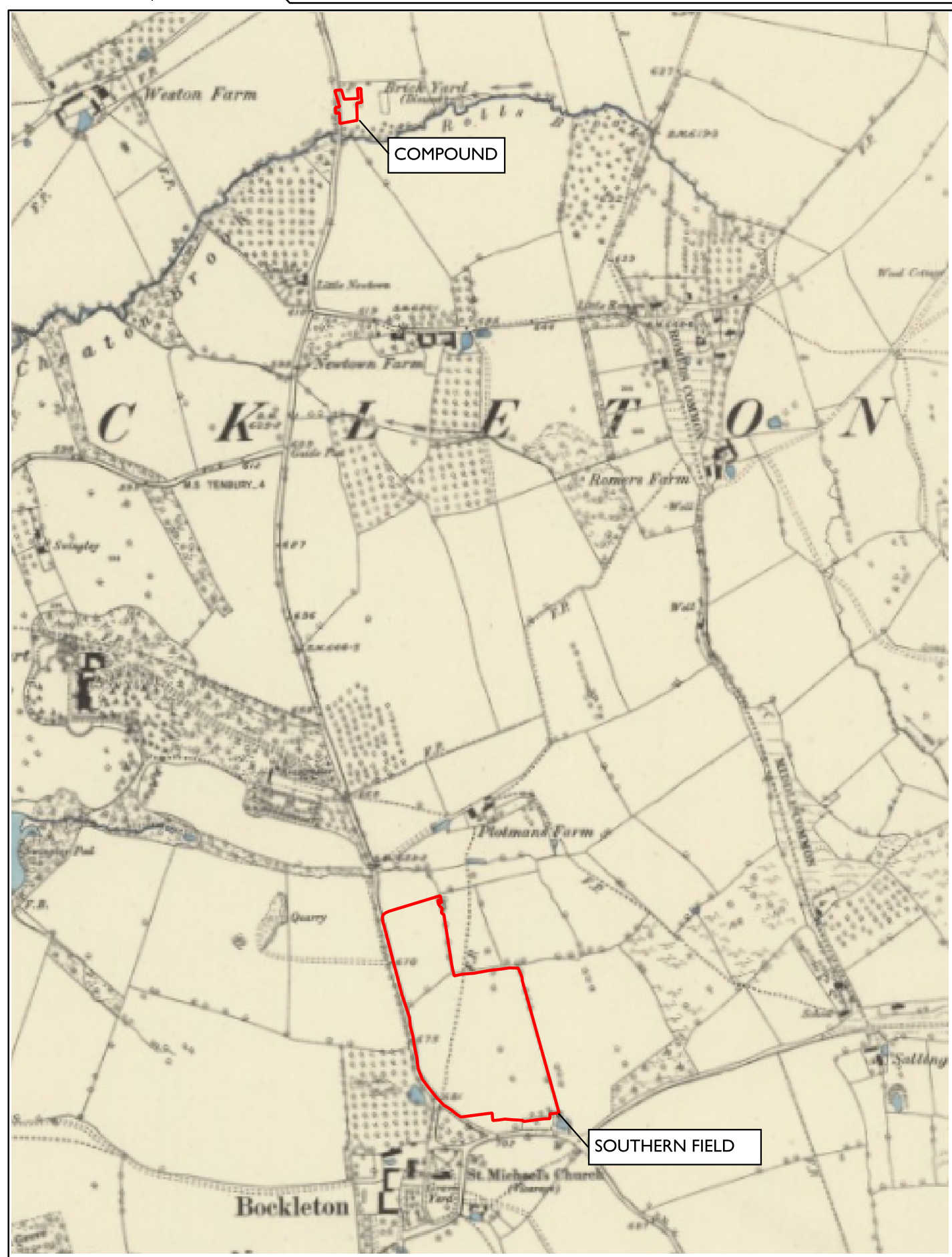
DESCRIPTION // HER Data

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L-P:ARCHAEOLOGY

FIGURE 4 // 1886 OS Map



0 500 m



PROJECT // 2284C - Bockleton Road

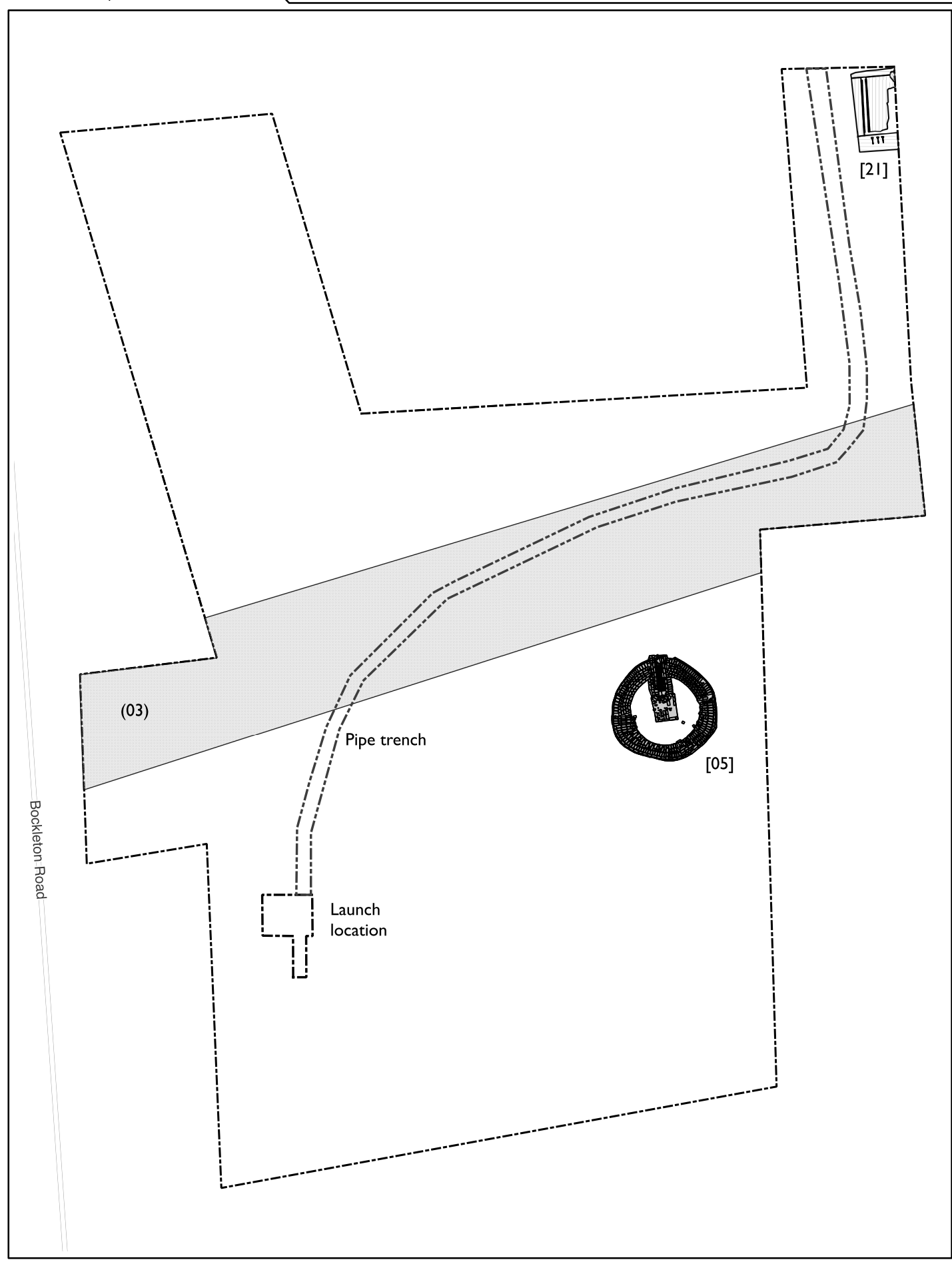
DESCRIPTION // 1886 OS Map

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FIGURE 5 // Compound Plan



0 10 m



PROJECT // 2284C - Bockleton Road

DESCRIPTION // Compound Plan

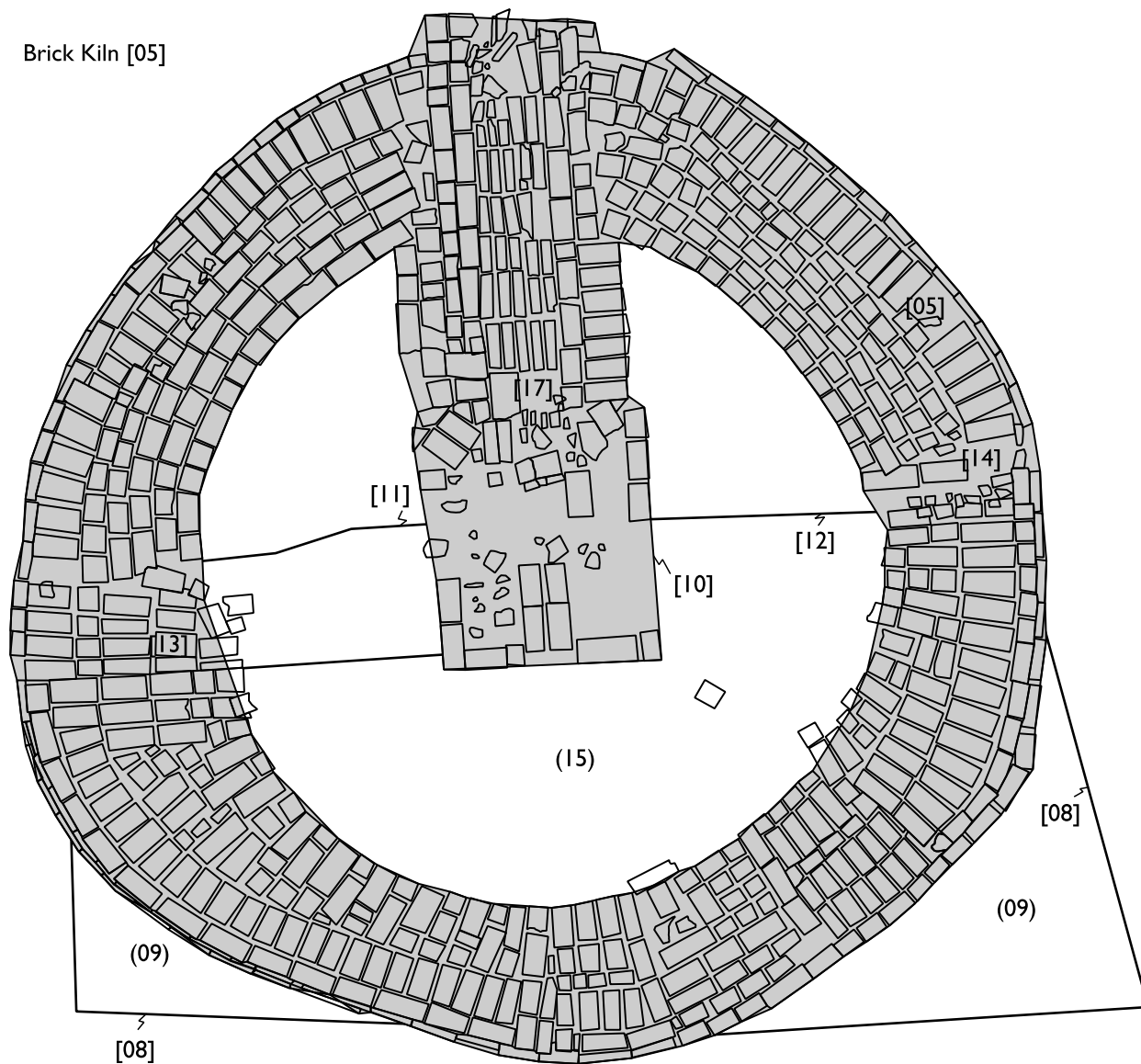
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DOC REF: LP2284C-WBR-v1

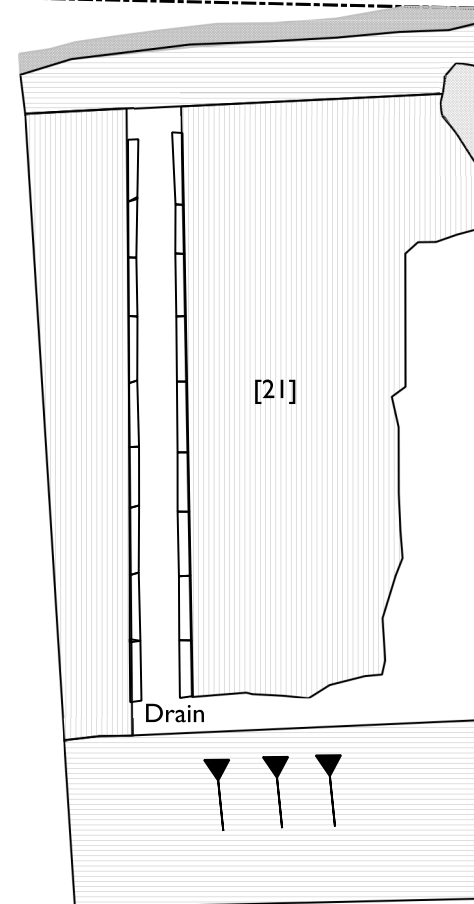
L~P:ARCHÆOLOGY

FIGURE 6 // Compound Features

Brick Kiln [05]



Brick Platform [21]



0 2 m



PROJECT // 2284C - Bockleton Road

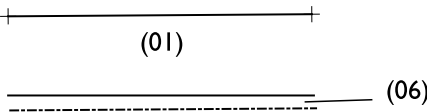
DESCRIPTION // Compound Features

Reproduced by permission of the controller of HMSO. Licence no. 100053067

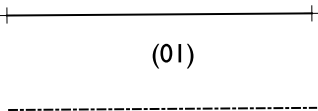
DOC REF: LP2284C-WBR-v1

L-P:ARCHAEOLOGY

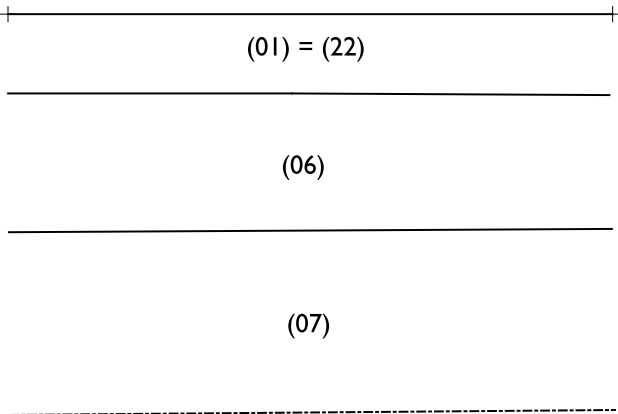
South facing representative section of compound



North facing representative section of compound



South facing section of pipe trench



PROJECT // 2284C - Bockleton Road

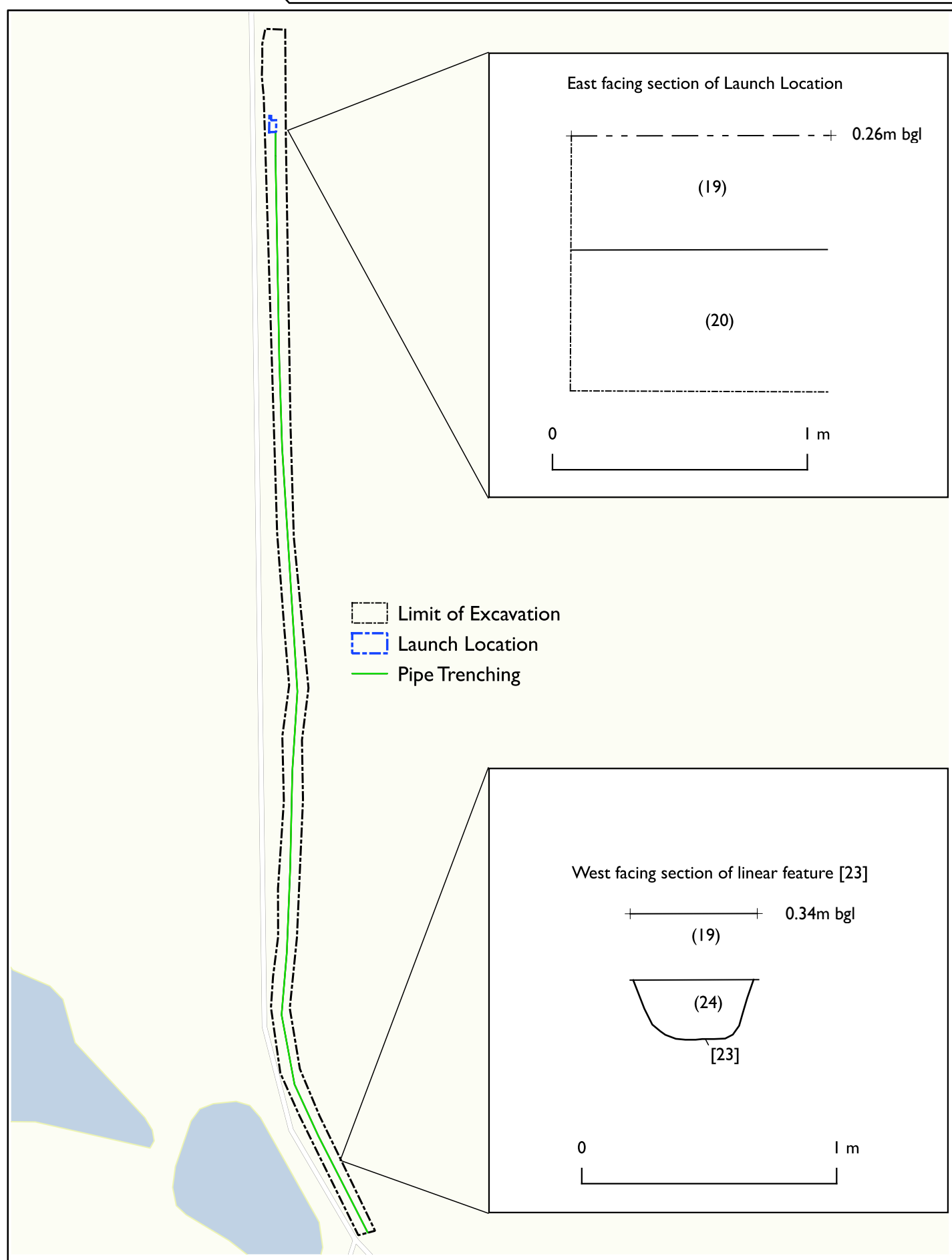
DESCRIPTION // Compound Sections

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FIGURE 8 // Southern Field



PROJECT // 2284C - Bockleton Road

DESCRIPTION // Southern Field

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HER GAZETTEER

APPENDIX I

Worcestershire Archive and Archaeology Service

Monument List Report

Bockleton Gas Upgrade

03/10/2016

Number of records: 14



Report prepared by Worcestershire HER, tel: 01905 845618 or email archaeology@worcestershire.gov.uk. Information is valid for three months from date of production.

Ref	Site Name	Monument Types	Parish	Grid Reference
Building				
WSM36874	Lodge about 100 yards east of Bockleton Court	Lodge (19TH CENTURY AD to 21ST CENTURY AD - 1890 AD to 2050 AD)	Bockleton	SO 5912 6203
WSM42163	Farmbuilding, Romers Farm, Bockleton	Granary (19TH CENTURY AD to 21ST CENTURY AD - 1870 AD to 2050 AD) Pigsty (19TH CENTURY AD to 21ST CENTURY AD - 1870 AD to 2050 AD) Root House (19TH CENTURY AD to 21ST CENTURY AD - 1870 AD to 2050 AD) Store (19TH CENTURY AD to 21ST CENTURY AD - 1870 AD to 2050 AD)	Bockleton	SO 5973 6254
WSM42164	Hop kiln, Romers Farm, Bockleton	Hop Kiln (19TH CENTURY AD to 21ST CENTURY AD - 1890 AD to 2050 AD)	Bockleton	SO 5973 6255
WSM54273	Newtown Farm, Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	
WSM54276	Home Farm (Plotmans Farm), Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	
WSM54376	Little Romers, Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	
Landscape Component				
WSM61923	Newtown Farm, Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	
WSM61924	Romers Farm, Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	

Ref	Site Name	Monument Types	Parish	Grid Reference
WSM61926	Home Farm (Plotmans Farm), Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	
WSM62026	Little Romers, Bockleton	Farmstead (19TH CENTURY AD to 21ST CENTURY AD - 1801 AD to 2050 AD)	Bockleton	
Monument				
WSM31352	Searchlight Site, Lower Swingley, Bockleton	Searchlight Battery (World War Two - 1939 AD to 1945 AD)	Bockleton	SO 5873 6258
General Parish Info				
WSM41597	General Information for the Parish of Bockleton	Event (POST MEDIEVAL - 1540 AD to 1900 AD)	Bockleton	SO 5895 6247
WSM44862	Record of unlocated finds in the Parish of Bockleton		Bockleton	SO 5895 6247
Historic Park or Garden				
WSM28811	Park and Garden at Bockleton Court, Bockleton	Garden (19TH CENTURY AD - 1801 AD to 1900 AD) Park (19TH CENTURY AD - 1801 AD to 1900 AD)	Bockleton	SO 5850 6214

Worcestershire Archive and Archaeology Service

Event Short Report

Bockleton Gas Upgrade

03/10/2016



Report prepared by Worcestershire HER. Tel
01905 845618 or email
archaeology@worcestershire.gov.uk.
Information valid for three months from date of
production.

Event no.	Event Name	Event Type	Organisation	Date of work	Grid Reference
WSM41771	Building Recording in 2009, Romers Farm, Bockleton	Event - Survey		2009	SO 5973 6254

OASIS FORM

APPENDIX 2

OASIS DATA COLLECTION FORM: England

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Printable version

OASIS ID: lparchae1-273615

Project details

Project name	Archaeological Watching Brief: Bockleton Gas Replacement
Short description of the project	<p>An Archaeological Watching Brief was carried out during gas replacement works on land off Bockleton Road, Bockleton. The Watching Brief was implemented because of the potential for archaeological remains on the site. The work was carried out by L - P : Archaeology and this report has been prepared by Rebecca Jones of L - P : Archaeology on behalf of Balfour Beatty. An archaeological and historical background search was conducted and no evidence attesting to the Prehistoric to Roman periods has been recorded. Evidence for the Early Medieval period predominantly comes from place names, with Bockleton recorded in the Domesday Survey of 1086, it must have been an established settlement by this time. Map regression depicts the southern extent of the pipeline within open fields, but within the compound area a 'Brick Yard (disused)' and 'old lyme kiln' are shown on the 1886 OS. The brick yard and lime kiln would have been established and gone out of use after 1843 and before 1886, by the 1905 OS Map they are no longer extant. The objectives of the Watching Brief were to record the character, date, type, state of preservation and extent of any archaeological remains on site. To specifically identify any archaeological evidence relating to Medieval settlement and to mitigate against any damage on the archaeological resource. Within the compound the groundworks uncovered the remains of a brick kiln, presumed to be the 'old lyme kiln,' a disused Post Medieval trackway and a brick platform, interpreted as the base for a shed. In the southern extent of the pipeline a single undated linear feature was exposed obliquely in the pipetrench and residual finds were recovered, attesting to the interpretation that the site lay on the peripherals of settlement.</p>
Project dates	Start: 01-11-2016 End: 28-02-2017
Previous/future work	Not known / Not known
Any associated project reference codes	LP2284C - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	BRICK KILN Post Medieval
Significant Finds	POTTERY Post Medieval
Investigation type	"Watching Brief"

Prompt General structure plan/local plan/minerals plan guidance

Project location

Country England

Site location WORCESTERSHIRE MALVERN HILLS BOCKLETON Bockleton Gas Replacement, Bockleton Road, Bockleton

Postcode WR15 8PP

Study area 2852 Square metres

Site coordinates SO 59323 61640 52.251034927014 -2.595921396201 52 15 03 N 002 35 45 W Point

Height OD / Depth Min: 187m Max: 210m

Project creators

Name of Organisation L - P : Archaeology

Project brief originator Balfour Beatty

Project design originator L - P : Archaeology

Project director/manager Blair Poole

Project supervisor Rebecca Jones

Type of sponsor/funding body Developer

Project archives

Physical Archive recipient Worcestershire Museums

Physical Archive ID LP2284C

Physical Contents "Animal Bones","Ceramics","Glass","Metal"

Digital Archive recipient Worcestershire Museums

Digital Archive ID LP2284C

Digital Contents "none"

Digital Media available "Images raster / digital photography","Text"

Paper Archive recipient Worcestershire Museums

Paper Archive ID LP2284C

Paper Contents "none"

Paper Media available "Context sheet","Diary","Drawing"

**Project
bibliography 1**

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Watching Brief Report: Bockleton Gas Replacement
Author(s)/Editor(s)	Jones, R.
Other bibliographic details	LP2284C-WBR-v1.2
Date	2017
Issuer or publisher	L - P : Archaeology
Place of issue or publication	Chester
Description	A4 spinal bound volume
Entered by	Rebecca Jones (r.jones@lparchaeology.com)
Entered on	17 January 2017

OASIS:

Please e-mail [Historic England](#) for OASIS help and advice

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