



Waltham Brooks – Desk-Based Assessment

RSPB

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Executive Summary

Ecus Ltd were commissioned by RPSB in April 2013 to prepare a Desk-Based Assessment to inform proposed works at the Waltham Brooks, near Coldwaltham in West Sussex, situated at National Grid Coordinate TQ 0238 1578. The proposed works are for access improvements including bridge and boardwalk; habitat management including ditch clearance; and the erection of a site interpretation board and the production of a leaflet. Known designated and non-designated heritage assets were assessed within a 1km study area around the site.

Whilst there are designated heritage assets within the study area, there is not considered to be a risk of impact to their setting due to the low visual impact of the works.

There is potential for evidence of prehistoric to Romano-British activity within the site with discoveries of finds indicating sparse occupation in the wider area. The site was likely utilised during the medieval and post-medieval period for seasonal grazing. In the 18th century the Coldwaltham Cut canal with associated lock and keeper's cottage were constructed within the site. The canal closed in the late 19th century, but remains of the canal, lock and cottage remain.

Due to the low impact of the proposed works it is considered unlikely that further archaeological investigation would be required by the planning archaeologist for the Local Planning Authority. At most, any further archaeological works would take the form of an archaeological watching brief during works in the vicinity of the lock and cottage and during excavation work associated with the creation of access roads.

There is potential for the proposed works to enhance the remains of the canal through the clearance of scrub and the erection of interpretative material that could highlight the canal features (e.g. lock) and place them in their wider context.

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1. Introduction

1.1 Project Background

- 1.1.1 Ecus Ltd were commissioned by RPSB (hereafter ‘the Client’) in April 2013 to prepare a Desk-Based Assessment to inform proposed works at the Waltham Brooks, near Coldwaltham in West Sussex (hereafter ‘the site’), situated at National Grid Coordinate TQ 0238 1578 (**Figure 1**).
- 1.1.2 The proposed works are for access improvements including bridge and boardwalk; habitat management including ditch clearance; and the erection of a site interpretation board and production of a leaflet.

1.2 The Site

- 1.2.1 The site comprises a SSSI forming an irregular plot of wetland (**Plate 1**) lying between Coldwaltham and the River Arun in the Parish of Coldwaltham and the South Downs National Park. The site is crossed towards its centre by the disused Coldwaltham Cut of the Wey and Arun Canal and to the west by the operational Arun Valley Railway Line.
- 1.2.2 Brook Lane to the north of the site forms the northern boundary of the site, and partially lies within it. To the northeast the boundary follows the parish boundary between Coldwaltham and Parum, before following the Arun south. The boundary then leaves the Arun at the southern arm of the Arun Canal, and follows a ditch northeast beneath the Arun Valley line before turning northwest along a ditch (circumventing a sewage works) to Brook Lane.
- 1.2.3 The underlying geology of site is sandstone of the Folkestone Formation to the west and mudstone of the Marehill Clay Member to the east. There are overlying superficial deposits of sand and gravel of the first terrace of the River Arun along the western side of the site with alluvial deposits beside the river (BGS Geology of Britain Viewer).



Plate 1: General view of the eastern half of the site, looking southeast

2. Methodology

2.1 Scope

2.1.1 The purpose this desk-based assessment is to determine, as far as is reasonably possible from existing records, an understanding of the historic environment resource in order to formulate:

- An assessment of the potential for heritage assets to survive within the area of study;
- An assessment of the significance of the known or predicted heritage assets considering their archaeological, historic, architectural and artistic interests;
- Strategies for further evaluation whether or not intrusive, where the nature, extent or significance of the resource is not sufficiently well defined;
- An assessment of the impact of proposed development or other land use changes on the significance of the heritage assets and their settings; and
- Proposals for further archaeological investigation within a programme of research.

2.1.2 This assessment is undertaken in accordance with the Institute for Archaeologists' Standard and Guidance for desk based assessment (IfA 1994, revised November 2012) and guidance presented in English Heritage (2010) PPS5: Planning for the Historic Environment Practice Guide which remains a valid and Government endorsed document pending the results of a review of guidance supporting national planning policy.

2.2 Study Area and Sources

2.2.1 Baseline conditions are established through consideration of recorded heritage assets within a 1km study area around the site and desk-based review of existing sources of publicly accessible sources of primary and synthesised information, comprising:

- The West Sussex Historic Environment Record (WSHER), comprising a database of all recorded archaeological sites, find-spots, and archaeological events within the county.
- National heritage datasets including The National Heritage List for England (NHLE), Images of England, PastScape, Viewfinder, NMR Excavation Index, and Parks and Gardens UK.
- Historic manuscripts and maps held at Local Records Office, Chichester.
- Historic aerial photography collections held at the English Heritage Archive in Swindon.
- Relevant primary and secondary sources including published and unpublished archaeological reports relating to excavations and observations in the area around the site were studied.

2.2.2 A bibliography of documentary, archive, and cartographic sources consulted is included in the References section of this report.

2.3 Site Visit

- 2.3.1 The site was visited on April 26th 2013 in order to assess its character, identify visible historic features and assess possible factors which may affect the survival or condition of known or potential assets.

2.4 Assessment of Significance

- 2.4.1 Local planning authorities require an applicant to provide an assessment of the significance of any heritage assets affected by a proposal, including any contribution made by their setting. Significance (for heritage policy) is defined by NPPF as:

The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

- 2.4.2 National guidance for the assessment of significance is provided by English Heritage (2008) in which professional judgment is used to assess the asset's demonstration of the following value criteria:

- **Evidential (Archaeological) value.** Deriving from the potential of a place to yield evidence about past human activity.
- **Historical value.** Deriving from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative.
- **Aesthetic (Architectural or Artistic) value.** Deriving from the ways in which people draw sensory and intellectual stimulation from a place.
- **Communal value.** Deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values, but tend to have additional and specific aspects.

- 2.4.3 The overall significance of the asset is weighed in consideration of its valued components and expressed using the following grading scale (after assessment guides in DMRB 2007 and ICOMOS 2010):

Significance	Example Criteria
Very High	<ul style="list-style-type: none"> • World Heritage Sites (including nominated sites). • Assets of acknowledged international importance. • Assets that can contribute significantly to acknowledged international research objectives.
High	<ul style="list-style-type: none"> • Scheduled Monuments (including proposed sites). • Undesignated assets of schedulable quality and importance. • Assets that can contribute significantly to acknowledged national research objectives
Medium	<ul style="list-style-type: none"> • Designated or undesignated assets that contribute to regional research objectives.
Low	<ul style="list-style-type: none"> • Designated and undesignated assets of local importance. • Assets compromised by poor preservation and/or poor survival of contextual associations.

Significance	Example Criteria
	<ul style="list-style-type: none"> Assets of limited value, but with potential to contribute to local research objectives.
Negligible	<ul style="list-style-type: none"> Assets with very little or no surviving archaeological interest.
Unknown	<ul style="list-style-type: none"> The importance of the resource has not been ascertained.

2.5 Assumptions and Limitations

- 2.5.1 This report is compiled using secondary information derived from a variety of sources, only some have been directly examined. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate.
- 2.5.2 In addition, the records held by WSHER represent a record of a wide range of information derived from historical sources and previous archaeological discoveries and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.

3. Baseline Resource

3.1 Introduction

- 3.1.1 The following section provides a brief summary of the archaeological and historical development of the site and its environs, compiled from sources listed above. The aim is to establish the known and potential resource which could be affected by the development.
- 3.1.2 All heritage assets with the 1 km study area identified by the WSHER are listed in the Appendix. The WSHER and National List entries and other identified sites are assigned a number with a HA (Heritage Asset) prefix within the text for ease of reference and depicted on **Figure 1**.

3.2 Previous Studies

- 3.2.1 An archaeological evaluation was been undertaken by Southern Archaeology in Coldwaltham during a housing development around Silverdale Road in 1997. The excavation recorded several ditches of Romano-British date, or possible late Iron Age, as well as one medieval ditch. The Romano-British ditches indicated two or three phases of activity.
- 3.2.2 There are no further records of archaeological fieldwork within the site or study area.

3.3 Statutory and Local Heritage Designations

- 3.3.1 The site is situated within an Archaeological Notification Area (ANA), as designated by West Sussex County Council. This reflects the wider archaeological potential of the area and requires pre-works consultation with the Council to discuss potential archaeological fieldwork.
- 3.3.2 Within the study area there are 11 Listed Buildings and one Scheduled Monument. The majority of the Listed Buildings are situated to the west within Coldwaltham, comprising:

- Grade II* Parish Church of St Giles (NHLE 1027424)
- Grade II The Nook (NHLE 1027426)
- Grade II Widneys (NHLE 1027420)
- Grade II Fowlers Cottages (NHLE 1027427)
- Grade II The Old Priest House Restaurant (NHLE 1027425)
- Grade II Ivy Cottage (NHLE 1192070)
- Grade II Waltham Farmhouse (NHLE 1027422)
- Grade II King's Lane Cottages (NHLE 1027421)

3.3.3 To the north and northeast of the site lie the:

- Scheduled and Grade II Greatham Bridge (NHLE 1005846/1354015)
- Grade II Stone Cottage (NHLE 1027396)
- Grade II Bridge Cottages (NHLE 1027353)

3.4 Archaeological and Historical Context

Prehistoric

3.4.1 The WSHER records several flint scatters within the study area indicating a level of prehistoric activity within the vicinity of the site. A flint core and four flakes were recovered during archaeological rescue excavations in Colwaltham (**HA 5**) whilst opposite the site, on the eastern side of the River Arun, 30 worked flints have been found of Neolithic date (**HA 14**).

Iron Age to Romano-British

3.4.2 There is evidence of activity within the area during the Iron Age period, with the discovery of finds that include iron brooches recovered in Coldwaltham to the west of the site (**HA 8**) and a coin from the study area east of Arun (**HA 15**).

3.4.3 Coldwaltham lies just off of the Roman road of Stane Street which crosses through the northwest edge of the study area on its route from London to Chichester. The road had likely facilitated the transportation to and from a group of iron working sites in the western South Downs with several known Romano-British settlements situated off the road in proximity to the River Arun.

3.4.4 Excavations prior to housing development off of Silverdale Road in Coldwaltham recorded evidence for Romano-British activity in the form of several phases of ditches that were dated to the 1st to 4th centuries AD (**HA 4** and **7**). Whilst the function of the ditches was not determined, it was suggested that they may represent plot boundaries with the density of material suggesting nearby settlement. The earliest phase of ditches was suggested to have possibly been of Late Iron Age date, which would correlate with wider evidence in the West Sussex area where strong continuity of settlement has been found between the Iron Age and Romano-British period (Leslie *et al.* 2010, 24).

Saxon to Medieval

- 3.4.5 The extent to which the area continued to be occupied in the Saxon period is not known. There was certainly settlement within the wider area with both Hardham and Greatham appearing in the Domesday Book of 1086 (domesdaymap.co.uk). Although Coldwaltham was not surveyed for the Domesday Book there are references to *Waltham* in the 10th century (Mills 2003), suggesting that the area was occupied by the late Saxon period, but perhaps included with a nearby settlement in the Domesday survey.
- 3.4.6 Place-names often contain earlier elements, and this evidence is traditionally used as an indicator of the date of origin of a settlement. Coldwaltham derives from the Anglian word *Wald* and the Old English *hām*, meaning forest homestead, with cold added in the 14th century supposedly describing its bleak situation a heath (*ibid.*). Whilst there is presently no evidence for settlement continuing during the Saxon period, there is an indication of activity in the area with a late Saxon knife or seax recovered during dredging of the River Arun at Greatham Bridge (**HA 10**).
- 3.4.7 The settlement at Coldwaltham developed during the medieval period with structures and features recorded within study area relating to this period. In the north of the settlement, excavations during the 1990s recorded a ditched boundary associated with medieval material (**HA 6**). Towards the centre of the settlement is the Parish Church of St. Giles (**HA 2-3**) which was originally built in the 13th century but largely rebuilt in 1871. The site during this period likely lay within an area of seasonal river meadows, utilised for grazing and cropping for hay during the summer.
- 3.4.8 To the east of the site lies Greatham Bridge (**HA 11**) which was originally constructed in the 13th century, and rebuilt in the medieval style during the 19th century. East of the bridge is the deserted medieval village (DMV) of Greatham, which survived in 1975 as earthworks to the west of Quell Farm (**HA 12**).

Post-medieval to 19th Century

- 3.4.9 There are no WSHER entries relating to the post-medieval or 19th century within the site or study area.
- 3.4.10 However the site is crossed by the remains of the Arun Canal's Coldwaltham Cut which was completed c.1790, involving a tunnel near Hardham Hill, bypassing a large bend in the River Arun to the east of Pulborough. Coldwaltham Lock and keeper's cottage was situated at the southern end of the canal, before a 400m tidal channel south to the River Arun. North of the lock the canal widened into a winding hole and turned slightly northeast, passing through the site in a slight curve to the north. A top up reservoir was situated on the eastern side of the lock south of Brook Lane, which presumably drew on water from the River Arun. A towing path was situated on the northern side of the canal.
- 3.4.11 The keeper's cottage is depicted on later mapping comprised a semi-circular plot with an L-shaped building with a small detached structure that may have served as an outhouse or, more likely, a toll house. Local histories record that the cottage would flood during winter, and that one keeper drowned in the lock in the 19th century (www.mywayandaruncanal.com/coldwaltham_cut).
- 3.4.12 The canal closed in 1889 but still survives as a distinct historical feature within the site containing standing water. The condition of the canal has however

declined with the sides of the canal, which are overgrown with scrub, having evidently eroded leading to the silting up of its base (**Plate 2**). The masonry sides of the lock partially survive, although the gates have been removed. The cottage, which stood to the north of the lock, still remained in a ruinous form into the 1960s and its location is still evident as raised ground over area of collapse (**Plate 3**).



Plate 2: General view of the canal, looking northeast



Plate 3: Site of the former Keeper's Cottage

3.4.13 The majority of the site is likely to have remained largely in agricultural use during this period. The 1844 Coldwaltham Parish tithe map (**Figure 2**) illustrates the site as comprising two large irregular fields either side of the Arun Canal. Both plots are listed in the apportionment as Waltham Common Brook, suggesting that the land had been held in common by the village most

likely as meadows. The surrounding land appears to be a mixture of strip and surveyed enclosure, with two distinctive narrow funnelled routes from Coldwaltham and Waterfield which likely represent former droveways.

- 3.4.14 There is no evidence from cartographic sources for the systematic drainage of the land within the site as seen in other wetland areas along the River Arun. This could be a result of its utilisation as common land, which would have made it difficult to instigate a scheme of enclosure and drainage.
- 3.4.15 The 1879 Ordnance Survey (OS) map (**Figure 3**) illustrates few changes within the site, the most significant being the construction of the Arun Valley Line which passes through the western edge of the site. The line was opened by London Brighton and South Coast Railway in 1863 forming a link between the Brighton Main Line and the West Coastway Line. The line passes through the site on a slight embankment.
- 3.4.16 Footpaths are depicted crossing the site, including one from Waterfield that passes over the railway embankment and joins the canal towpath north of the keeper's cottage; and one that follows the northern boundary of the site. Several natural streams or modified drains are shown crossing the site which were not depicted on the earlier tithe map.

Modern

- 3.4.17 By the production of the 1911 OS map, the Keeper's Cottage was no longer depicted, with an area of marshland developing around the canal suggesting that earlier drains managing water adjacent to the canal were not being maintained. The area is also labelled as 'Liable to Flood' from this edition. The drains had apparently been cleared by the mid-20th century, and are clearly depicted on the 1951 OS. Historic aerial photographs were consulted at the English Heritage Archives (full list of consulted aerials are in Appendix 8.2) and illustrate the site showing the drains crossing from higher ground in the west of the site to the lower marshy land east of the canal (**Plate 4**). No archaeological features were visible on the photographs.



Plate 4: Aerial photograph depicting the site, taken in 1946 (© English Heritage Archive, ref CPE/UK.1751.12.SEP.46; approximate site boundary in red.)

- 3.4.18 The WSHER records several historic sites and monuments within the study area relating to the Second World War. The site lies on a defensive network that was formed along the Arun-Ouse-Rother Line during 1940-41 in anticipation of imminent invasion (Osborne 2004, 228). Greatham Bridge was evidently identified as a tactical point and was defended with two 25 pounder concrete gun emplacements covering it from either bank (**HA 9** and **13**). The defences face in opposite directions so that attack from either direction might be resisted effectively. Within Coldwaltham there is site of a military camp, initially thought to have been built to accommodate British and Canadian troops but converted to hold Italian prisoners-of-war from 1942 (**HA 1**).
- 3.4.19 The most substantial recent changes to the site are depicted on the 1973 OS and 1981 OS (**Figure 4**) which shows the construction of riverside flood defences along the length of River Arun resulting in the diversion and improvement of several drains through the site, and the blocking of the earlier channel from Coldwaltham Lock to the Arun. The canal, which had been labelled as 'Old Canal' in 1961 was now depicted as a corridor of wetland, with the former river channel labelled as 'Arun Canal (disused)'. North of the railway line a new sewage works had been established within the area of Waltham Common Brooks to the north. Whilst the works is not situated within the site it is likely that the outfall from it drains into the Arun through the Site.

4. Summary of Heritage Constraints

4.1 Introduction

4.1.1 In line with current planning policy (NPPF Ch.12 Para.128), a description of heritage assets directly affected by the proposed development, based on the current level of available information, is presented below and an assessment of the significance presented in **Table 1** below.

4.2 Designated Heritage Assets

4.2.1 There are no designated heritage assets within the site.

4.2.2 The site lies within the setting of the Scheduled and Grade II Listed Greatham Bridge, and Grade II Listed Bridge Cottages on the eastern side of the Arun. Within their context the site preserves a historic wetland environment from which views are available both to and from the designated assets.

4.3 Non-designated Heritage Assets

4.3.1 Within the site is the disused Coldwaltham Cut of the Arun Canal. Associated with the cut are the remains of related structures including the Coldwaltham Lock, a lock-keeper's cottage, a top-up reservoir, and tow path. The cut retains standing water but has become overgrown, and is gradually silting up. No upstanding structures remain of associated structures, although the lock masonry is still visible and the keeper's cottage survives as an earthwork.

4.3.2 Based on the evidence presented within the baseline resource (section 3) there is also considered to be potential for as yet unknown buried archaeological remains within the site, comprising:

- Potential for prehistoric activity and well preserved organic deposits;
- Potential remains associated with Late Iron Age and Romano-British activity; and
- Potential remains relating to land improvement during the medieval to post-medieval period.

4.4 Previous Impacts

4.4.1 There are existing impacts within the Site from the construction of the canal cut and railway embankment, as well as disturbance from the associated modification of drainage channels.

4.4.2 The exact construction of the canal is unknown, however it likely comprises a cut with up-cast material used to raise the sides which appear not to have been retained behind walls. Railway embankments typically involved the removal of compressible superficial deposits and the raising and compaction of, often imported, material. In both instances the area of disturbance is likely to extend within a corridor along the features. Similar disturbances are likely to also be present along the flood defences adjacent to the River Arun.

4.4.3 There is likely that there will be additional impacts resulting from flooding episodes within the site which will have deposited silts and eroded features.

Table 1: Summary of Known and Potential Heritage Assets within the Site

Period and Description		Significance	Risk
Prehistoric	<p>The chance recovery of a number of flints within the fields to the east of the study area and with Coldwaltham to the north indicates a potential for occupation or flint working sites within the study area.</p> <p>There is considered to be a low potential for remains relating to this period to be located on the river terrace in the west of the site, above the river's flood plain. Any archaeological remains relating to this period are potentially of regional evidential value in informing research into early occupation in the area.</p>	Medium	Low
Iron Age to Romano-British	<p>The site lies to the southeast of a Roman road, and within proximity to a possible a Late Iron Age or Romano-British settlement at Coldwaltham.</p> <p>It is likely that any settlement activity within Coldwaltham would have extended down to the Arun although the low lying wetland nature of the site may have made it unfavourable. The exact position of the river during this period is unknown, it likely lay within the eastern half of the site.</p> <p>Any archaeological remains relating to riverside activity are likely to be of regional significance in understanding the wider economy of the settlement.</p>	Medium	Low
Saxon to Medieval	<p>The site lies on the opposite bank to the deserted medieval village of Greatham, which is of possible Saxon origins.</p> <p>As an area of wetland, Waltham Brooks is less likely to have been settled, however there is potential for activity associated with Greatham DMV within the site. Any remains of this period are likely to be of up to regional significance.</p>	Medium	Low
Medieval to Post-medieval	<p>The site lies within the agricultural hinterland of the medieval settlement of Coldwaltham.</p> <p>As the land within the site likely formed part of a wetland common, and the apparent absence of drainage improvements, there is considered to be a low potential for remains relating to land use, which would likely have comprised of grazing.</p> <p>However, any such remains will likely be of local evidential value in understanding the wider economy of the settlement during these periods.</p>	Low	Low
Post-medieval to 19 th century	<p>The site is crossed by the disused Arun Canal which has regional significance due to its influence on the development of the area.</p> <p>The route of the canal survives, although in</p>	Medium	High

Period and Description		Significance	Risk
	<p>declining condition, but has potential for high historic landscape value through management and interpretation.</p> <p>There is also potential for remains relating to the canal structures to be encountered within the site, with the remains of the Coldwaltham Lock and associated keeper's cottage of particular interest.</p>		

5. Impacts

Introduction

- 5.1.1 The management and mitigation of change to the historic environment is based on the recognition with planning policy that heritage assets are an “irreplaceable resource” (NPPF para. 126).
- 5.1.2 In line with national and local planning policies, development proposals which have the potential to affect designated and non-designated heritage assets and their settings should give weight to the conservation and enhancement of the assets consistent with their level of significance. For designated assets significant weight is given to conservation and for non-designated it is taken into account in a balanced judgement.

Proposed Work

- 5.1.3 The proposed work within the site (**Figure 5**) will comprise:
- The creation of new vehicle tracks and footpaths;
 - The creation of three new bridges;
 - Ditch cleaning; and
 - The creation of new culvert.

Statement of Impact

- 5.1.4 A summary of the proposed works and an assessment of their potential impacts are presented in **Table 2** below.

Designated Assets

- 5.1.5 There is not considered to be a risk of impact to the setting of Listed Buildings and Scheduled Monuments within the study area from the proposed works within the site. This is due to the low visual impact of the works.

Archaeological Potential

- 5.1.6 There is considered to be potential for work within the site to have an impact on buried archaeological remains, and to the extant remains of the canal lock.

Table 2: Summary of proposed work and assessment of impact

Proposed Work	Impact Assessment
Creation of new tracks and	Impact to potential buried archaeological

Proposed Work	Impact Assessment
footpaths	remains, including the 18 th century lock keepers cottage. Impact to the cottage can be avoided through sensitive alignment of the road, whilst impacts resulting from roads within the wider area could be minimised through design or mitigated by archaeological monitoring.
Creation of three new bridges	Potential impact to the structure of Coldwaltham Lock. Impact would be beneficial where works enhanced the visibility and condition of the lock.
Ditch cleaning	No impact.
Creation of new culvert	No impact. New culvert situated within area of existing disturbance alongside the canal.

6. Conclusion

6.1 Statement of Potential and Significance

- 6.1.1 The site is situated within an area of former wetland meadow associated with the medieval village of Coldwaltham on the banks of the River Arun.
- 6.1.2 There is potential for Romano-British activity to have continued southeast towards the Arun from a possible settlement at Coldwaltham, although no remains have been recovered within the vicinity of the site to date. Any such remains are likely to be of evidential value of up to medium significance.
- 6.1.3 The site was likely utilised during the medieval and post-medieval period for grazing, however, there is little evidence of land management and there is therefore a low potential for remains within the site. Any such remains are likely to be of evidential value of up to low significance.
- 6.1.4 The route of the Arun Canal passes through the site, and remains as a visible landscape feature in reasonable condition. Remains of the former lock and keeper's cottage are evident.

6.2 Recommendations

- 6.2.1 The site is situated within an Archaeological Notification Area (ANA), as designated by West Sussex County Council. This reflects the wider potential of the area as situated between the potential Romano-British settlement at Coldwaltham, and the deserted medieval village of Greatham and requires pre-works consultation with the Council to discuss potential archaeological fieldwork.
- 6.2.2 The principal risk to heritage from the works is the potential to impact the remains of the lock and cottage from the construction of a new bridge and vehicular access road. This risk can however be fully mitigated through a considerate construction strategy that avoids damaging the extant masonry of the lock, and aligning the road to respect the location of the former keeper's cottage that survives as an earthwork.

- 6.2.3 Furthermore, it is considered that the proposed works could enhance the remains through the clearance of scrub and the erection of interpretative material that could highlight the historic features and place them in their wider context.
- 6.2.4 In addition, the groundworks associated with new access roads outside of the former canal corridor could encounter stratigraphy underlying disturbances associated with recent landuse and flooding episodes. However, due to the low impact of the proposed works it is considered unlikely that additional archaeological investigation would be required by the planning archaeologist for the Local Planning Authority. At most, any further archaeological works would take the form of an archaeological watching brief during works in the vicinity of the lock and cottage, and during excavations associated with access roads.

7. References

7.1 Bibliography

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- English Heritage 2008. *Conservation Principles, Policies and Guidance*. English Heritage: York.
- The Institute for Archaeologists (IfA) 1994. *Standard and Guidance for historic environment desk-based assessment* (revised November 2012).
- International Council on Monuments and Sites (ICOMOS) 2010. *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*.
- Leslie, K.C. and Short, B. 2010. *Historical Atlas of Sussex*. Phillimore, Chichester
- Mills, A.D. 2003. *A Dictionary of British Place-Names*. Oxford University Press.
- Osborne, M. 2004. *Defending Britain: Twentieth-Century Military Structures in the Landscape*. Tempus, Stroud.

7.2 Historic Maps

- 1844 Tithe map of Coldwaltham Parish
- 1876 Ordnance Survey 1:2,500 map sheet 36.9-10 & 36.13-14
- 1879 Ordnance Survey 1:10,560 map sheet 36
- 1897 Ordnance Survey 1:2,500 map sheet 36.9-10 & 36.13-14
- 1911 Ordnance Survey 1:2,500 map sheet 36.9-10 & 36.13-14
- 1914 Ordnance Survey 1:10,560 map sheet 36
- 1951 Ordnance Survey 1:10,560 map sheet 36
- 1961 Ordnance Survey 1:10,560 map sheet 36
- 1973 Ordnance Survey 1:2,500 map sheet 36.9-10 & 36.13-14

1981 Ordnance Survey 1:10,000 map sheet

8. Appendix

8.1 WSHER data

HA	Period	Name	HER ref.	Easting	Northing
1	Modern	Prisoner-of-war camp, Coldwaltham	MWS8133	502300	116700
2	Medieval	The Parish Church of St. Giles, Coldwaltham	MWS2930	502340	116530
3	Medieval	Lychgate to St Giles Church, Colwaltham	MWS9065	502330	116522
4	Romano-British	Roman settlement - Coldwaltham	MWS2914	502456	116482
5	Prehistoric	Prehistoric flints - Coldwaltham	MWS2915	502492	116485
6	Medieval	Medieval settlement - Coldwaltham	MWS3383	502522	116488
7	Romano-British	Archaeological Monitoring - Silverdale	MWS6381	502546	116341
8	Iron Age	Iron Brooches	MWS5236	502300	116200
9	Modern	Coldwaltham Gun emplacement	MWS5242	502649	116180
10	Saxon	Saxon knife - Greatham Bridge	MWS6389	503100	116200
11	Medieval	Greatham Bridge	MWS2921	503130	116200
12	Medieval	Greatham DMV	MWS2924	503200	115900
13	Modern	Gun Emplacement	MWS5575	503320	115889
14	Prehistoric	Flint - Parham	MWS5237	503200	115700
15	Iron Age	Coin - Amberly Brooks	MWS3855	503300	115300

8.2 Aerial Photographs consulted at EHA, Swindon

Vertical								
Sortie number	Library number	Camera position	Frame number	Centre point	Run	Date	Scale 1:	Focal length (in inches)
RAF/3G/TUD/UK/154	230	V	5197	TQ 030 151	4	16 APR 1946	10500	12
RAF/3G/TUD/UK/154	230	V	5198	TQ 023 149	4	16 APR 1946	10500	12
RAF/CPE/UK/1751	481	RP	3254	TQ 033 156	9	21 SEP 1946	10625	20
RAF/CPE/UK/1751	481	RP	3255	TQ 027 158	9	21 SEP 1946	10625	20
RAF/CPE/UK/1751	481	RP	3256	TQ 021 160	9	21 SEP 1946	10625	20
RAF/3G/TUD/UK/157	960	V	5262	TQ 028 148	15	19 APR 1946	10300	20
RAF/3G/TUD/UK/157	960	V	5263	TQ 021 148	15	19 APR 1946	10300	20
RAF/58/2860	1920	F44	185	TQ 031 163	32	14 MAY 1959	11200	36
RAF/58/2860	1920	F44	186	TQ 024 163	32	14 MAY	11200	36

Vertical								
Sortie number	Library number	Camera position	Frame number	Centre point	Run	Date	Scale 1:	Focal length (in inches)
						1959		
RAF/106G/UK/854	3514	V	5045	TQ 034 153	2	29 SEP 1945	5000	12
RAF/106G/UK/854	3514	V	5046	TQ 029 152	2	29 SEP 1945	5000	12
RAF/106G/UK/854	3514	V	5047	TQ 025 151	2	29 SEP 1945	5000	12
RAF/106G/UK/854	3514	V	5048	TQ 020 151	2	29 SEP 1945	5000	12
RAF/106G/LA/191	3822	FV	7028	TQ 019 156	3	22 MAR 1945	10000	6
MAL/68063	5103	V	7	TQ 033 161	1	17 SEP 1968	7000	6
MAL/68063	5103	V	8	TQ 030 157	1	17 SEP 1968	7000	6
MAL/68063	5103	V	178	TQ 022 153	5	17 SEP 1968	3000	6
MAL/68063	5103	V	179	TQ 022 156	5	17 SEP 1968	3000	6
MAL/68063	5103	V	180	TQ 021 159	5	17 SEP 1968	3000	6
MAL/68064	5104	V	30	TQ 030 164	4	18 SEP 1968	6000	6
MAL/68064	5104	V	31	TQ 030 158	4	18 SEP 1968	6000	6
MAL/68064	5104	V	32	TQ 030 153	4	18 SEP 1968	6000	6
OS/70169	11177	V	408	TQ 031 160	14	03 JUN 1970	7500	12
OS/70169	11177	V	409	TQ 025 160	14	03 JUN 1970	7500	12
OS/94179	14678	V	69	TQ 033 155	2	15 JUN 1994	8300	12
OS/94179	14678	V	70	TQ 027 155	2	15 JUN 1994	8300	12
OS/94179	14678	V	71	TQ 020 156	2	15 JUN 1994	8300	12
MAL/63580	21120	V	110356	TQ 034 160	13	25 MAR 1963	6500	6
MAL/63580	21120	V	110357	TQ 030 155	13	25 MAR 1963	6500	6
MAL/63580	21120	V	110358	TQ 026 149	13	25 MAR 1963	6500	6
MAL/59406	21375	V	76433	TQ 019 159	3	30 DEC 1959	2500	6
MAL/59406	21375	V	76434	TQ 021 160	3	30 DEC 1959	2500	6
MAL/59406	21375	V	76435	TQ 022 161	3	30 DEC 1959	2500	6
MAL/59406	21375	V	76436	TQ 024 162	3	30 DEC 1959	2500	6
MAL/59406	21375	V	76437	TQ 025 163	3	30 DEC 1959	2500	6

Vertical								
Sortie number	Library number	Camera position	Frame number	Centre point	Run	Date	Scale 1:	Focal length (in inches)
						1959		
MAL/59406	21375	V	76438	TQ 027 165	3	30 DEC 1959	2500	6

Oblique						
Photo reference (NGR and Index number)	Film and frame number		Date	Film type		Map Reference (6 figure grid ref)
TQ 0215 / 1	CCC 8706	/ 61309-61321	14 OCT 1925	Black& white	Unknown	TQ 025155
TQ 0216 / 1	NMR 1006	/ 467	04 MAR 1977	Black& white	70mm,120,220	TQ 026166
TQ 0216 / 2	NMR 23309	/ 16	18 JAN 2004	Colour neg	35 mm	TQ 028167

9. Illustrations

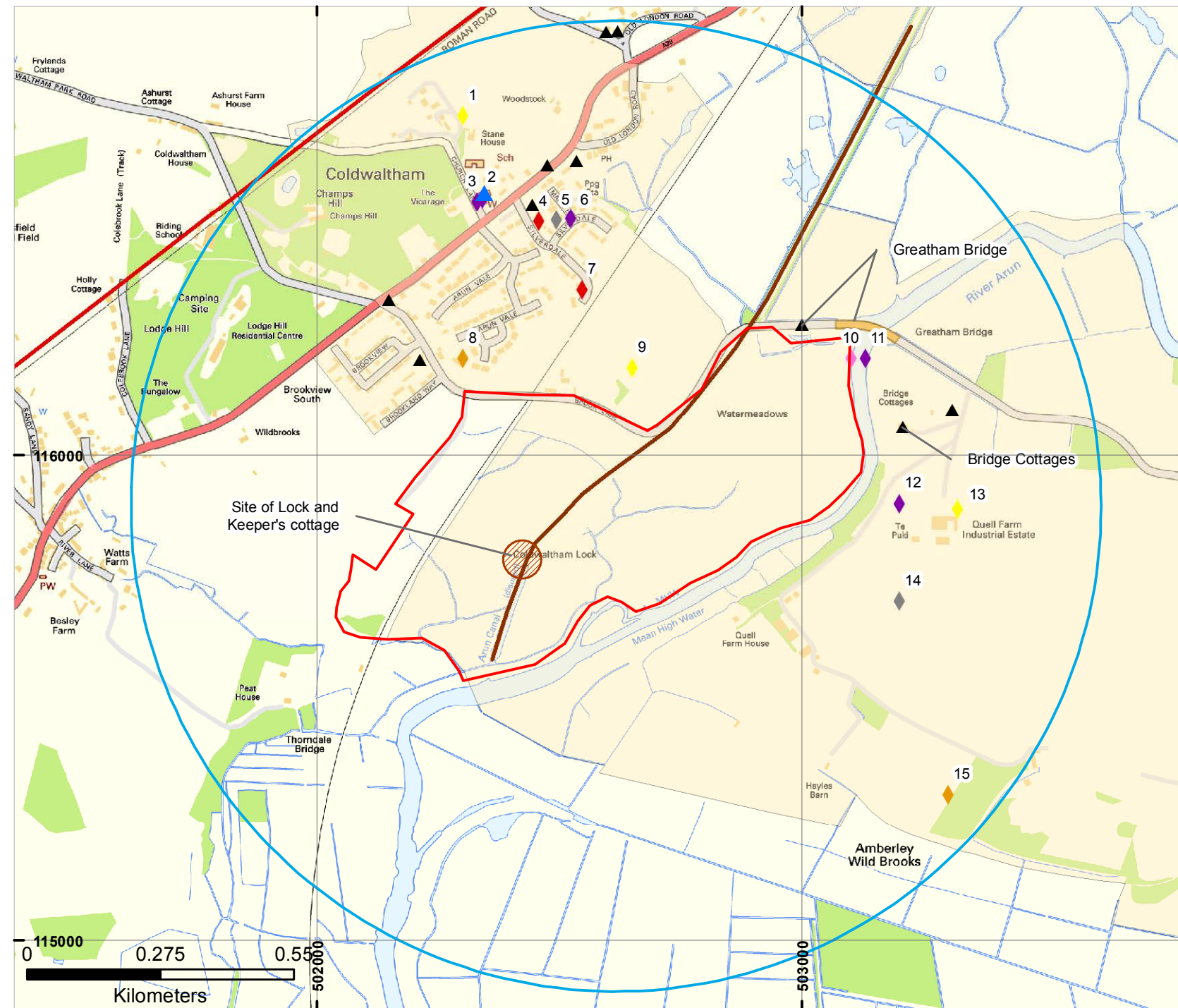
Legend

- Site
- Study Area
- Designated Assets**
- ▲ Grade I
- ▲ Grade II*
- ▲ Grade II
- Scheduled Monuments
- HER Assets**
- ◆ Prehistoric
- ◆ Iron Age
- ◆ Romano-British
- ◆ Saxon
- ◆ Medieval
- ◆ Modern
- Projected routes of Roman Roads
- Arun Navigation Canal
- Archaeology Notification Area

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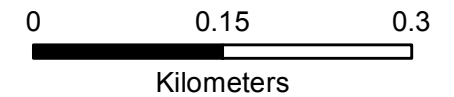
Figure 1. Site Location and known heritage assets (based on WSHER data)

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Legend

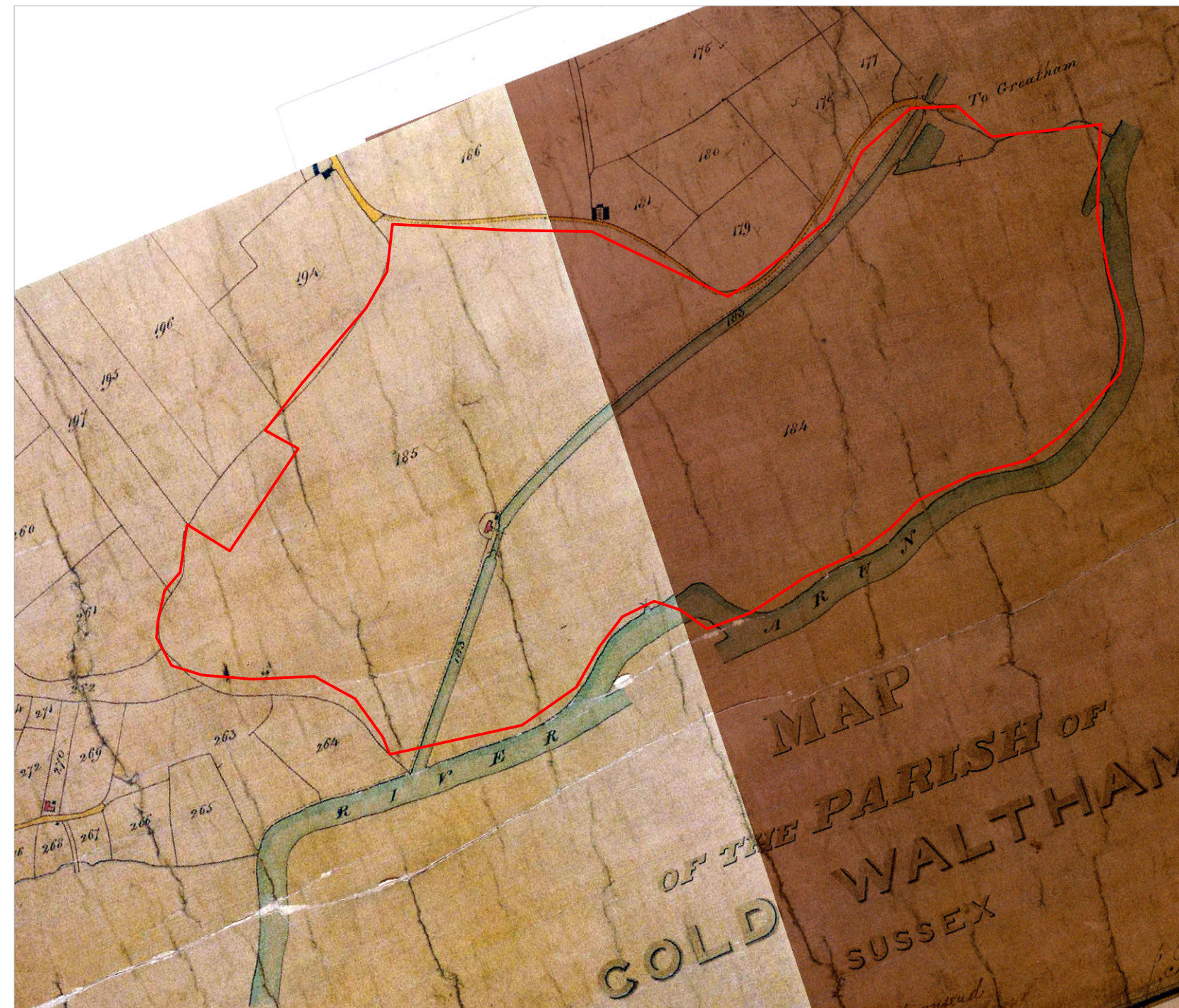
— Site



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Waltham Brook**

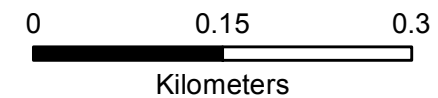
**Figure 2. 1844 Coldwaltham Parish
Tithe map**

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Legend

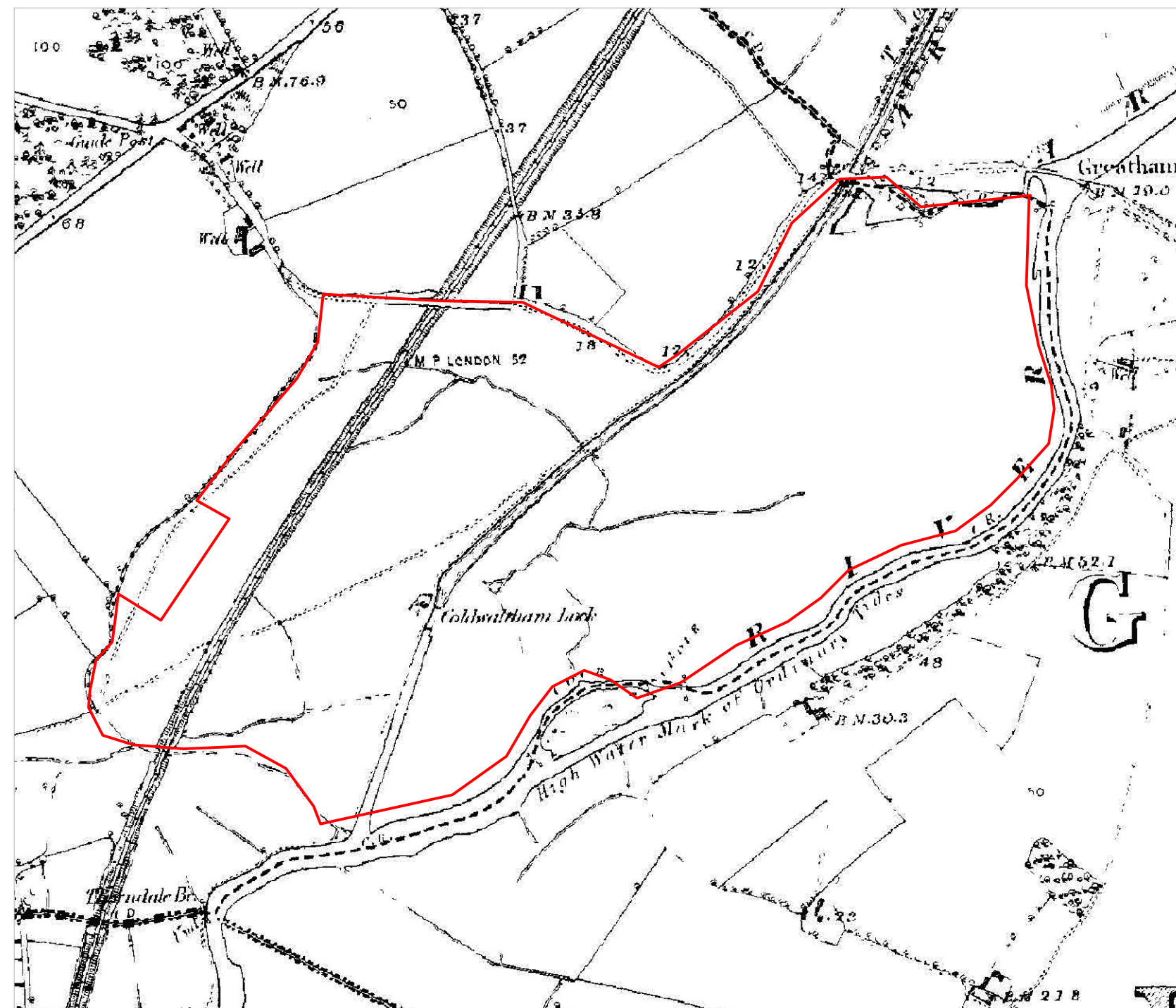
 Site



**ARC Project
Waltham Brook**

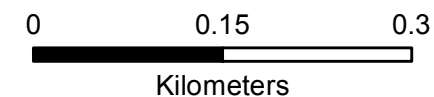
Figure 3. 1879 Ordnance Survey

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Legend

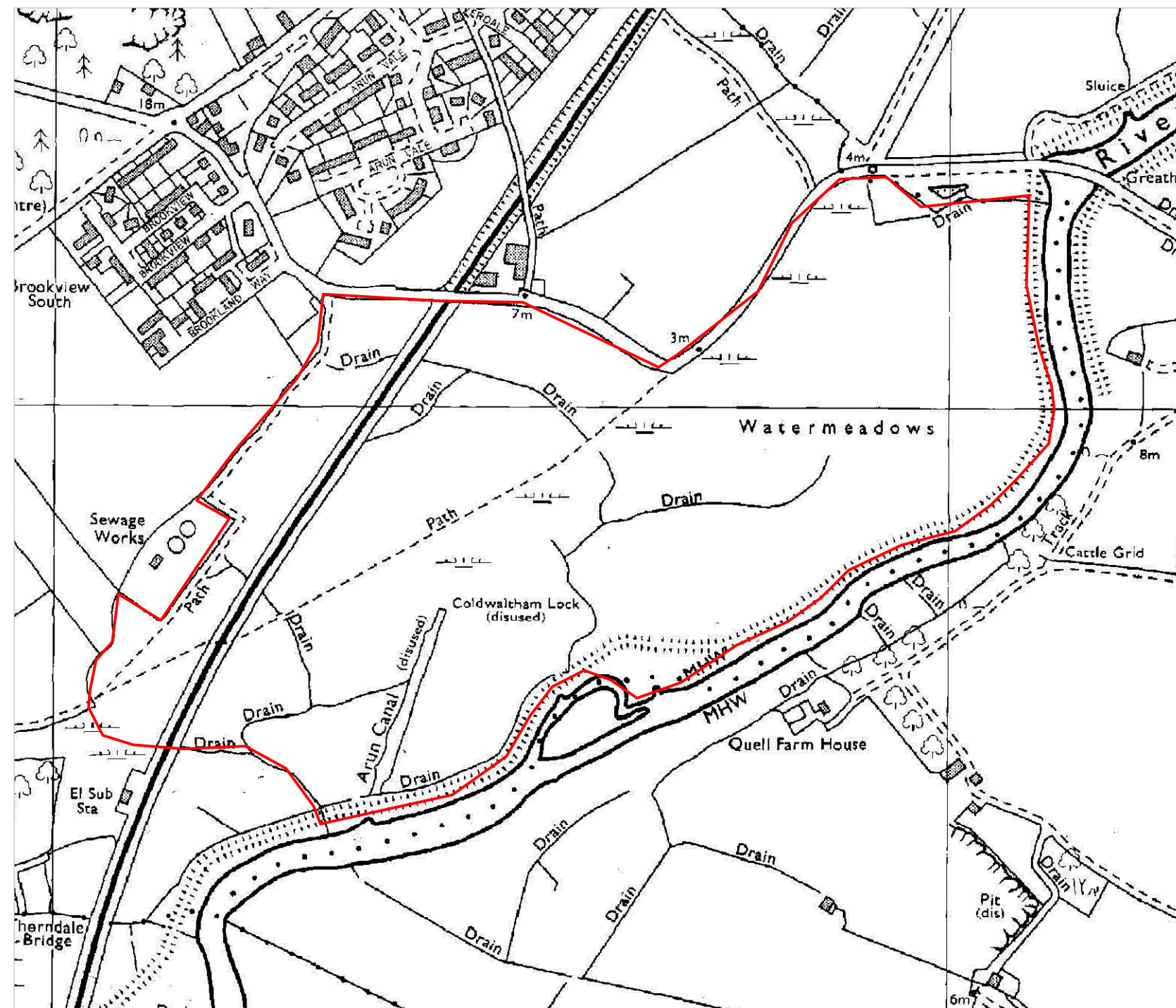
— Site














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Figure 4. 1981 Ordnance Survey

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Legend

-  Car Park
-  culvert
-  possible Culvert
-  New Bridge
-  Vehicle access
-  new vehicle acces
-  footpath route
-  new circular route
-  ditches
-  Open water
-  SWT_reserves

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Figure 5. Plan of proposed works

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