



Rapid Appraisal

On behalf of

south east water

Concerning

**Barcombe WTW to St Francis SR
Mains Renewal Scheme
South Chailey
East Sussex**

February 2019



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Cover: View looking northwest across field at eastern end of pipeline route, towards crossing of Bevern Stream

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1 Non-Technical Summary

Border Archaeology has been commissioned by South East Water (SEW) to undertake a Rapid Appraisal of the proposed Barcombe Water Treatment Works (WTW) to St Francis Service Reservoir (SR) Mains Renewal Scheme, in advance of the proposed installation of a water mains pipeline crossing the Bevern Stream and extending through fields to the south-east of the village of South Chailey (East Sussex) the results of which are summarised below:

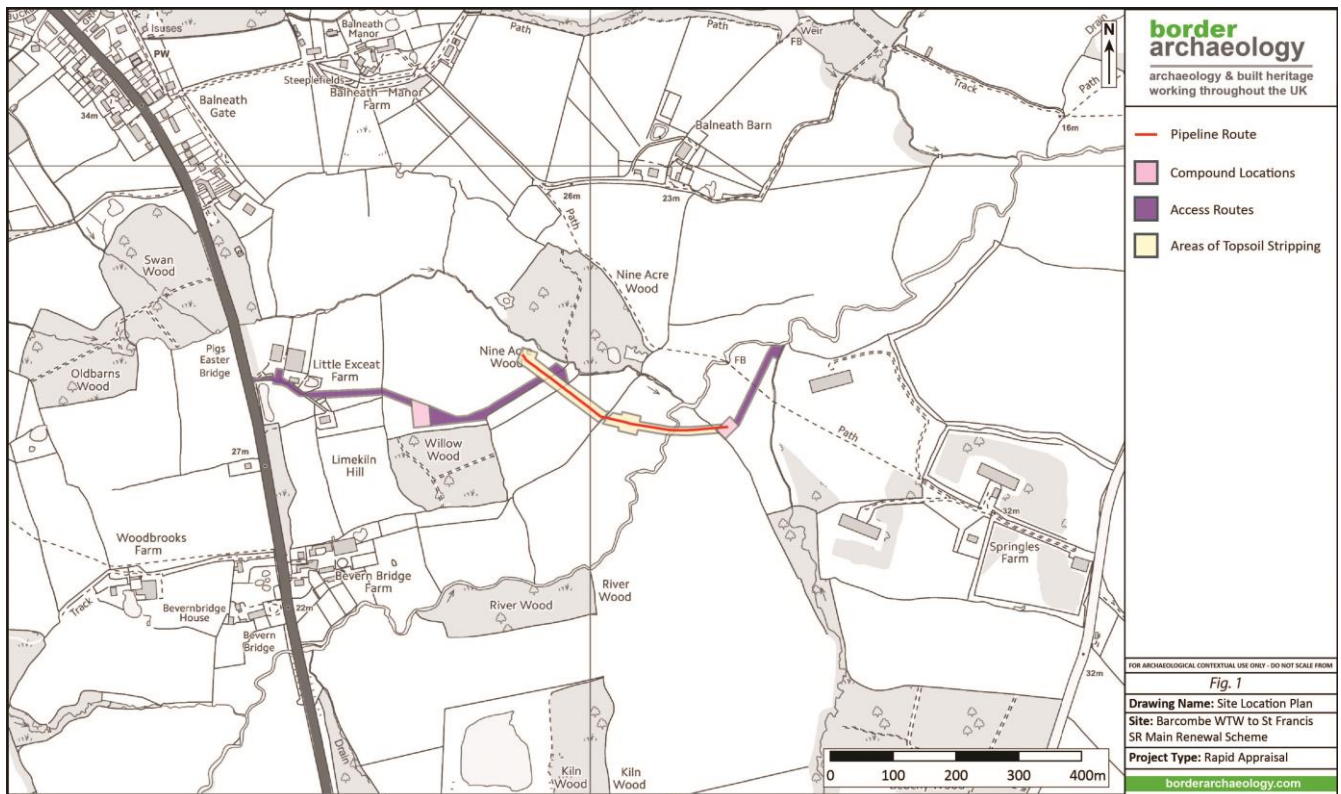
- *The potential for encountering evidence of prehistoric activity has been assessed as **Low to Moderate**. Although evidence for prehistoric activity in the vicinity of the route is slight, there is potential, where the pipeline route crosses the Bevern Stream, to encounter alluvial deposits with potential to contain well-preserved palaeoenvironmental material relating to changing environmental conditions and land use dating back to early prehistory.*
- *The potential for encountering evidence of Romano-British activity has been assessed as **Low to Moderate**. Although there are no recorded sites or finds of this period in the immediate vicinity of the route, evidence for Romano-British settlement and industrial activity (including ironworking and pottery kiln sites) has been recorded in the wider landscape crossed by the Bevern Stream.*
- *The archaeological potential of the route, in terms of medieval archaeology, has been assessed as **Low to Moderate**. Although recorded evidence of medieval activity in close proximity to the pipeline is slight, a number of medieval settlement sites and a pottery kiln site have been identified in the wider landscape traversed by the route.*
- *The potential for encountering evidence of post-medieval activity has been assessed as **Low**, reflecting the evidence of historic mapping which shows that the area traversed by the pipeline route has remained as undeveloped agricultural land throughout the post-medieval period.*

Conclusion: The archaeological potential for the entirety of the Scheme can be assessed in overall terms as **Low to Moderate**, with particular reference to the potential for deposits containing palaeoenvironmental material to be encountered in the vicinity of the Bevern Stream. This assessment applies to the sections of the Scheme either side of the watercourse (NGR: TQ 40021 16599 - NGR: TQ 40234 16576), as well as the site of the eastern compound (centred on NGR: TQ 40234 16576).

Recommendations: Given the overall **Low to Moderate** potential of the proposed Scheme, it is recommended that a limited programme of Archaeological Observation (Watching Brief) should be undertaken during any phase of works with the potential to disturb or reveal archaeological deposits or features, including monitoring of the topsoil strip and subsequent open-cut trenching, focused specifically on the section extending between NGR: TQ 40021 16599 and NGR: TQ 40234 16576 (in the vicinity of the Bevern Stream) and the eastern compound.

2 Introduction

Border Archaeology (BA) was commissioned by South East Water (SEW) to undertake a Rapid Appraisal (RA) in advance of the proposed Barcombe Water Treatment Works (WTW) to St Francis Service Reservoir (SR) Mains Renewal Scheme (*fig. 1*), extending through fields to the SE of the village of South Chailey (Lewes District, East Sussex).



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2.1 Site Description

The description of the Scheme is based on a route plan and engineering specifications of the proposed works provided by SEW on 13th of February 2019. The information in this document is, to the best knowledge of the author and BA, correct at the time of writing.

The proposed Scheme involves the installation of approximately 523m of new pipework, between NGR: TQ 39890 16698 (W) and NGR: TQ 40234 16576 (E). The proposed Scheme crosses the line of the Bevern Stream, a tributary of the River Ouse, at approximately NGR: TQ 40132 16579.

SEW have advised BA that the installation methodology will involve open-cut trenching either side of the river crossing, to a maximum depth of approximately 1.5m. This will enable the installation of approximately 211m of 400mm diameter ductile iron (DI) pipeline.

To enable the Scheme to cross the Bevern Stream, approximately 312m of twin 315mm PE100 SDR17 pipework will be installed by directional drilling techniques under the river bed. Directional drilling will be undertaken to a depth of approximately 3m. Prior to the works, the route of the Scheme, as well as the proposed access routes and compounds will be top soil stripped.

The route of the proposed Scheme extends to the SE of the village of South Chailey, situated approximately 6km NW of the town of Lewes (East Sussex). The pipeline route runs through six fields located either side of the Bevern Stream, to the S of Nine Acre Wood and to the NE of Willow Wood. A small unnamed stream, flowing into the Bevern Stream, forms the N boundary of the fields crossed by the Scheme to NW of the Bevern Stream.

The proposed Scheme does not cross any conservation areas, as designated by Lewes District Council. The nearest Scheduled Monument is a motte and bailey castle, fishpond and associated earthworks SW of Isfield Church, located c.4km NE of the pipeline route (List Entry No. 1013222).

2.2 Soils and Geology

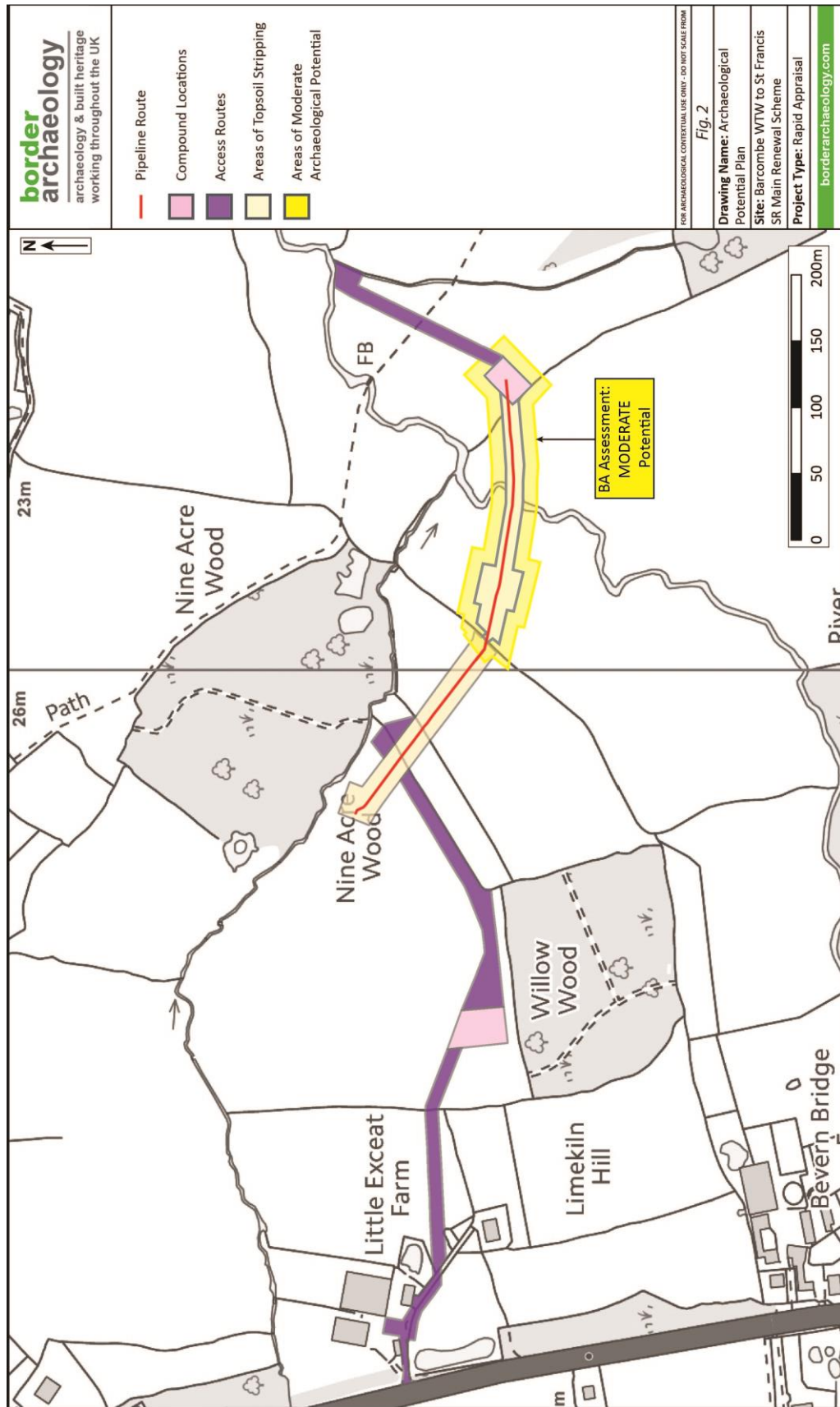
The Soil Survey for England and Wales (SSEW 1983) records the predominant soil type present in the landscape to the NW of the Bevern Stream as belonging to the typical stagnogley soils of the WICKHAM 1 series (711e). These are defined as slowly permeable seasonally waterlogged fine silty over clayey, fine loamy over clayey and clayey soils. The underlying geology is recorded as drift over Cretaceous clay or mudstone.

To the SE of the Bevern Stream the pedology changes to typical stagnogley soils of the WICKHAM 5 series (711i). These are defined as slowly permeable seasonally waterlogged fine loamy over clayey, clayey, and fine silty over clayey soils, with some locally reddish soils being present. Some coarse loamy soils with slowly permeable subsoils and slight seasonal waterlogging over sandstone are also present. The underlying geology is recorded as drift over Cretaceous clay and sandstone.

The British Geological Survey (BGS 2018) records the underlying bedrock for the Scheme as being a mixture of Weald Clay Formation (Mudstone) and Weald Clay Formation (Silicate Claystone). These formations represent bedrocks formed approximately 126 to 134 million years ago in the Cretaceous period, in a local environment dominated by swamps, estuaries and deltas.

Deposits of alluvium (clay, silt, sand and gravel) are recorded by the British Geological Survey along the banks of the Bevern Stream. These represent superficial deposits formed up to two million years ago in the Quaternary Period in a local environment previously dominated by rivers. Superficial head deposits, consisting of clay, silt, sand and gravel, are also recorded in the immediate vicinity of the Scheme. These are recorded as deposits formed up to three million years ago in the Quaternary Period in a local environment previously dominated by subaerial slopes.

No borehole surveys are recorded in the vicinity of the Scheme on the British Geological Survey (BGS 2018).



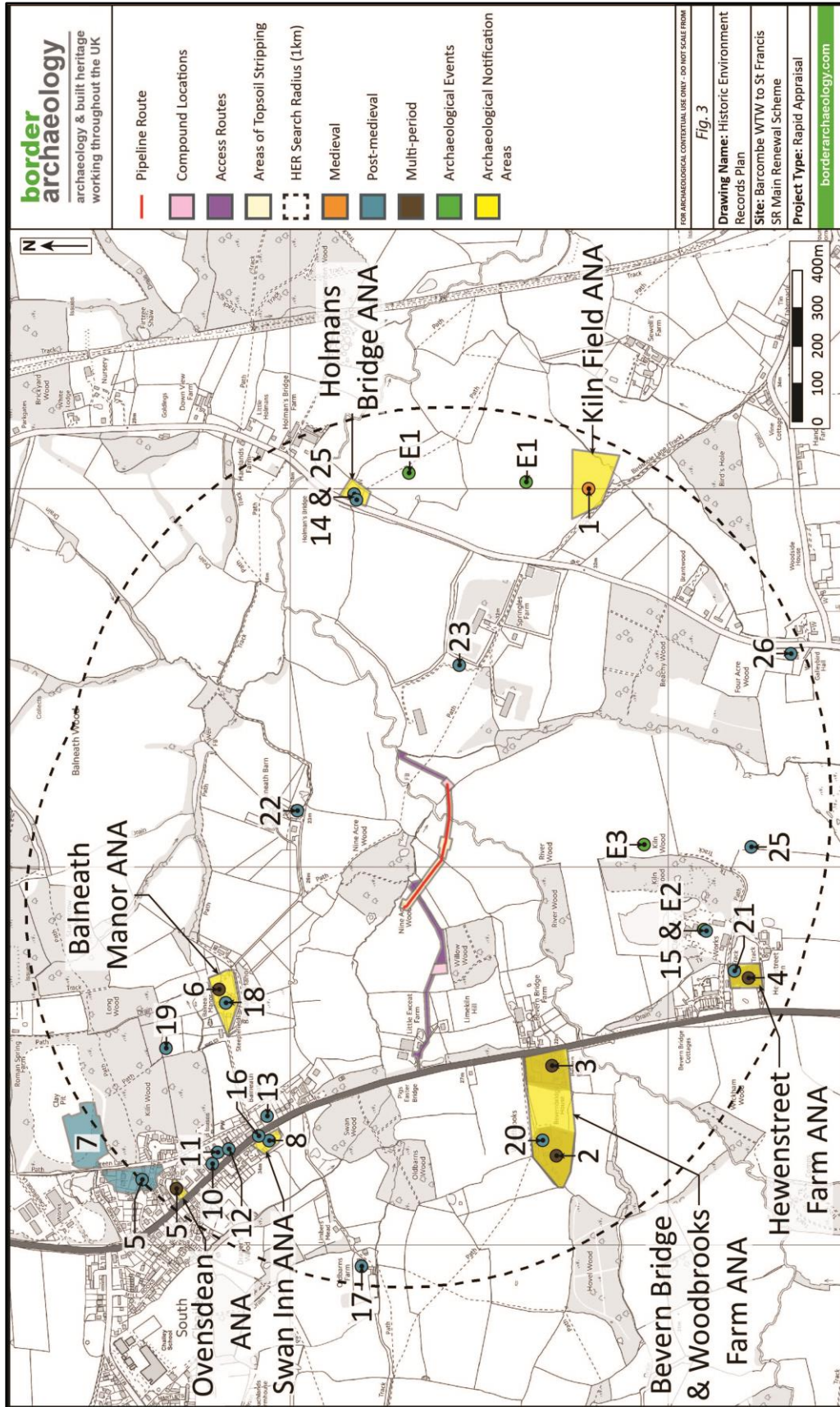
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3 Methodology

This RA provides a rapid review of all readily available sources of archaeological, documentary and cartographic information, where applicable and appropriate, in particular, those held by the East Sussex Historic Environment Record (HER), the East Sussex Record Office and the National Archives. A 1km search radius was commissioned from the East Sussex HER for the purposes of this RA to identify archaeological and built-heritage assets and previous archaeological interventions in the vicinity of the proposed pipeline route (*fig. 3: Table 1*). Sources consulted include tithe and Ordnance Survey (OS) mapping and published primary sources obtained from the East Sussex Record Office and the National Archives, as well as relevant available secondary literature (including unpublished archaeological reports and articles in *Sussex Archaeological Collections*).

Table 1: Archaeological Assets in the Vicinity of the Proposed Scheme recorded on the East Sussex HER

#	HER Ref	Name	Date	NGR
1	MES21014	Kiln Field	Medieval	TQ 4099 1621
2	MES17137	Woodbrooks Farm (GII)	Med./PM	TQ 3923 1630
3	MES17138	Bevern Bridge (GII)	Med./PM	TQ 3946 1632
4	MES17165	Hewenstreet	Med./PM	TQ 3971 1579
5	MES22643	C16th Century Building at Ovenden	Med./PM	TQ 3914 1730
6	MES22645	Balneath Manor (GII)	Med./PM	TQ 3967 1718
7	MES19595	Clay Pit	Post-med.	TQ 3928 1754
8	MES22644	Former Swan PH (GII)	Post-med.	TQ 3927 1705
9	MES22965	Chailey Potteries	Post-med.	TQ 3917 1741
10	MES23248	The Briars	Post-med.	TQ 3921 1720
11	MES23249	Old Forge	Post-med.	TQ 3925 1719
12	MES23250	Free Church	Post-med.	TQ 3925 1716
13	MES23251	Old Post Office	Post-med.	TQ 3934 1706
14	MES23697	Holmans Bridge Cottage (GII)	Post-med.	TQ 4098 1683
15	MES24621	Land at Old Hamsey Brickworks	Post-med.	TQ 3982 1589
16	MES25877	Bolneath Gate	Post-med.	TQ 3928 1708
17	MES31822	New Barn Farm (Oldbarns Farm)	Post-med.	TQ 3894 1681
18	MES31861	Balneath Farm	Post-med.	TQ 3963 1717
19	MES31862	Yard NW of Balneath Farm	Post-med.	TQ 3951 1732
20	MES31863	Woodbrook Farm (Woodbrooks Farm)	Post-med.	TQ 3927 1633
21	MES31864	Hewenstreet Farm	Post-med.	TQ 3972 1582
22	MES31897	Balneath Barn	Post-med.	TQ 4014 1698
23	MES31898	Springle Barn	Post-med.	TQ 4053 1655
24	MES31899	Farmstead SW of Holman's Bridge	Post-med.	TQ 4096 1682
25	MES31900	Little Hewenstreet Farm	Post-med.	TQ 4005 1578
26	MES31901	Mount Pleasant	Post-med.	TQ 4056 1567
E1	EES15169	Field Walking: Sewells & Knowlands Farms	2004-2006	TQ 4172 1694
E2	EES16037	DBA: Old Hamsey Brickworks	2014	TQ 3983 1590
E3	EES17859	DBA: Identifying/Mapping Sites within the East Sussex Wetlands	2014	TQ 6730 1610



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4 Assessment

4.1 Prehistoric

No features of a prehistoric date are recorded on the East Sussex HER within the designated study area surrounding the route of the Scheme. However, this may reflect the relative lack of previous archaeological fieldwork in this area.

The Scheme is located within the 'Low Weald', a heavily forested area located between the North Downs and the South Downs. Low level clearance of woodland within the Weald appears to have commenced during the Neolithic period, intensifying in the Iron Age. However, evidence for prehistoric activity in the wider vicinity is limited to a single isolated Palaeolithic hand-axe identified within a field approximately 1.2km to the SE of the route of the Scheme (HER MES7495). The potential for encountering features and deposits of a prehistoric date during the works associated with the Scheme, however, remains limited.

As the proposed Scheme crosses the line of the Bevern Stream at approximately NGR: TQ 40132 16579, and superficial deposits of alluvium (clay, silt, sand and gravel) are recorded by the British Geological Survey along the banks of the watercourse, there is potential for the works to encounter deposits containing well-preserved material with palaeoenvironmental potential. This material could potentially shed light on past environmental changes and land usage during the prehistoric period, particularly regarding levels of deforestation and agricultural activity.

Conclusion: *The potential for encountering evidence of prehistoric activity has been assessed as **Low to Moderate**, Although recorded evidence of prehistoric activity, in the vicinity of the route, in terms of findspots and features, is limited, there remains potential, specifically where the pipeline route crosses the Bevern Stream, to encounter alluvial deposits which may contain well-preserved palaeoenvironmental material relating to changing environmental conditions and land use possibly dating back to early prehistory.*

4.2 Romano-British

No features of a Romano-British date are recorded on the East Sussex HER in the immediate vicinity of the pipeline route. However, in the wider surrounding area, two pottery kilns of late 3rd century date have been identified at Chilington (HER MES2025; approximately 2km to the SW of the Scheme), and the projected line of a Roman road (Margary's route 140) branching off from the main London to Lewes road towards Stane Street (HER MES7393) runs approximately 1.3km to the S of the Scheme (Margary 1973, 68-70).

A significant focus of Romano-British occupation has been identified close to the course of the London to Lewes road in the vicinity of Barcombe, about 2km SE of the E terminus of the pipeline, where evidence of a villa and bath house site have been identified as well as a number of ironworking sites to the N of the village (Rudling et al. 2010, 22-27).

Evidence for ironworking activity of possible Romano-British date has also been identified on the northern periphery of the pipeline route, represented by a group of ore pits recorded by the Wealden Iron Research Group near Balneath Wood (NGR: TQ 4030 1750), approximately 920m to the N of the Scheme (Cleere & Crossley 1995, 16).

While this undated ironworking site is located at some distance from the Scheme, the location of the pipeline route in close proximity to a watercourse (the Bevern Stream) and at the interface of two distinct geological strata, recorded as Mudstone and Silicate Claystone of the Weald Clay Formation, suggests that there is potential for identifying evidence of historic ironworking activity in this area. Previous studies have demonstrated that similar riverine landscapes situated within liminal geological areas are often a focal point for iron production within the Weald (Johnson 1982).

Consequently, while the potential for encountering evidence of ironworking activity of a Romano-British date during the works associated with the Scheme is relatively limited, it should not be entirely discounted, particularly where the pipeline crosses the Bevern Stream (at approximately NGR: TQ 40132 16579).

Conclusion: *The potential for encountering evidence of Romano-British activity has been assessed as **Low to Moderate**. While there are no recorded sites or finds of this period in the immediate vicinity of the route, evidence for Romano-British occupation and industrial activity (including ironworking and pottery manufacture sites) has been identified in the wider landscape crossed by the Bevern Stream.*

4.3 Medieval

A number of features of a medieval date are recorded on the East Sussex HER within the designated study area. Fieldwalking at Sewell's Farm between 2004 and 2006 (HER EES15169) identified a distinct concentration of 13th/14th century pottery within a field known as 'Kiln Field' (approximately 870m to the SE of the Scheme). This was subsequently interpreted as evidence for a medieval pottery kiln, although no physical evidence for the kiln has ever been identified (HER MES21014).

The remaining medieval features recorded on the East Sussex HER consist of medieval/post-medieval settlement sites, located at Bevern Bridge (HER MES17138; 570m to the SW of the Scheme) and Balneath Manor (HER MES22645; 530m NW of the Scheme). However, it is highly unlikely that the pipeline works will reveal evidence of features associated with these occupation sites, due to the fact that they are located at some considerable distance from the route.

Evidence of field names and the extant pattern of field boundaries within the area crossed by the pipeline route suggests that the study area was heavily wooded and that it was subject to gradual, piecemeal assarting (enclosure and clearance) during the medieval and early post-medieval periods.

Conclusion: *The archaeological potential of the route, in terms of features and deposits of a medieval date, has been assessed as **Low to Moderate**. This assessment reflects the fact that, although recorded evidence of medieval activity in close proximity to the pipeline is slight, evidence of medieval settlement and a pottery kiln site has been identified in the wider surrounding area.*

4.4 Post-Medieval

While a number of post-medieval features are recorded on the East Sussex HER within the designated study area (see *fig. 3* and *Table 1*), these are mostly historic buildings or farmsteads, none of which are located in especially close proximity to the pipeline route. The nearest listed building, Bevernbridge House (Grade II) is located about 460m SW of the route.

Although the Weald is well-known as a significant focus of early post-medieval industrial activity (particularly ironworking), no positively identified iron production sites of post-medieval date have been recorded in close proximity to the route, based on consultation of the East Sussex HER and other available sources of archaeological information.

Located about 240m S of the E end of the pipeline route is a sinuous tract of woodland to the S of the Bevern Stream, marked on the Barcombe tithe map as Kiln Wood. The name of this woodland would appear to indicate the presence of a nearby kiln, possibly associated with pottery manufacture or ironworking. However, the precise location of the kiln remains uncertain, it is not marked on the tithe map or any other historic mapping, suggesting that it had disappeared prior to the late 18th/early 19th century.

The earliest available cartographic source to show the site in any appreciable detail is Thomas Budgen's 1798 Ordnance Survey drawing of Ditchling and district (*fig. 4*). The field morphology recorded on OS Surveyor's Drawings is usually fairly generic, and bears little relation to that seen in later maps, as is the case with this cartographic source, suggesting it is not a reliable source for analysing the field boundaries crossed by the proposed Scheme.

One feature of note on the 1798 map is the large area of woodland to the S of the route, crossed by the pipeline to the SE of the Bevern Stream. This appears to be an extension of what is now a series of small isolated areas of woodland to the S of the watercourse, marked on later maps as 'River Wood', 'Kiln Wood' and 'Beachy Wood'. As this extensive area of woodland does not appear on any 19th century maps, it is possible that the majority of this woodland was cleared in the early 19th century.

As the Bevern Stream formed the boundary between the parishes of Barcombe and Hamsey in the first half of the 19th century, the landscape crossed by the Scheme is recorded on two separate Tithe Surveys, dated to 1838 (Hamsey) and 1839 (Barcombe; *figs. 5 & 6*). The three fields crossed by the pipeline within the parish of Barcombe are all in the possession of Sir Charles Foster, and are being farmed by Ann Pannett. They are listed as 'Little Delvens' (Plot 333; pasture), 'Great Delvens' (Plot 334; Arable), and 'Home Mead' (Plot 336; Meadow). The route of the Scheme crosses two fields recorded on the Hamsey Tithe Survey, which are both owned by Sir George Shiffner and farmed by Thomas Holmden. These are named 'Part of Salisbury Plain' (Plot 18; arable) and 'Springle Field' (Plot 10; meadow). None of these field names appear to be especially indicative of previous land usage.

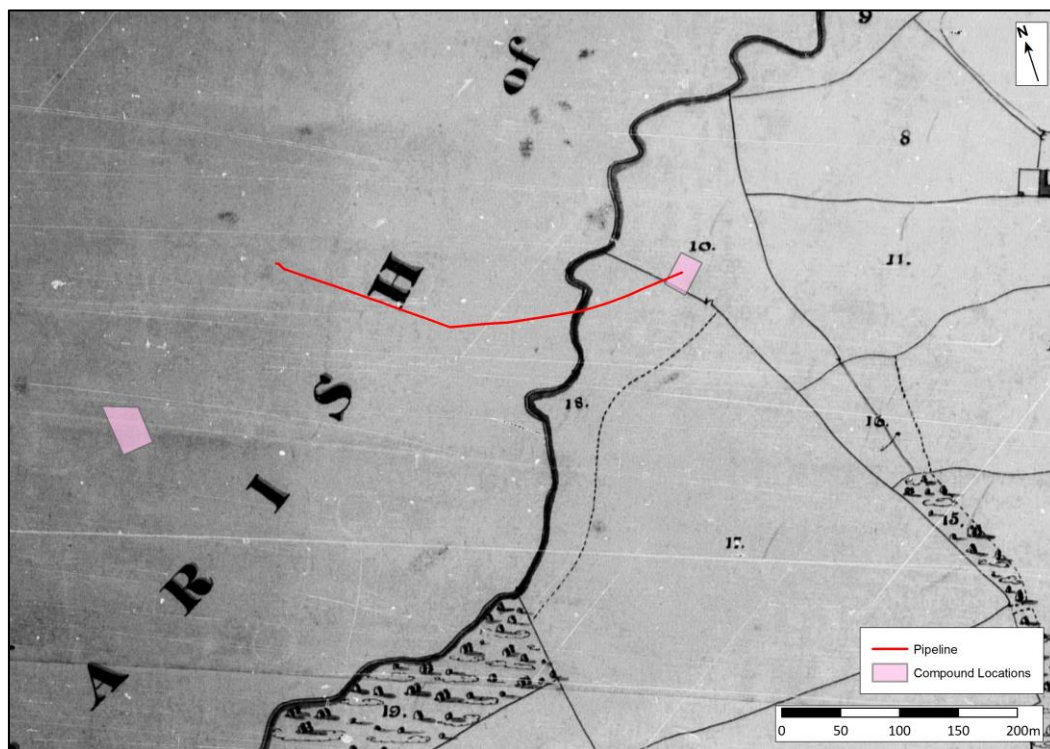
Comparison between the tithe maps and the OS 1st-3rd edition 25-inch maps dated 1875, 1899 and 1910 respectively (*fig. 7*) show that there had been remarkably little overall change to the field morphology of the landscape surrounding the Scheme between the mid-19th century and the early-20th century, with the OS County

Series maps recording an almost identical fieldscape to that recorded in the 1830s. No changes in the fieldscape crossed by the route are recorded on more recent OS cartography, including the 1957 1:2,500 National Survey, the 1961 1:10,560 National Survey, and the 1981 1:10,000 National Survey.

Conclusion: *The potential for encountering evidence of post-medieval activity has been assessed as **Low**, chiefly reflecting the evidence of historic mapping which shows that the area traversed by the pipeline route has remained as undeveloped agricultural land throughout the 18th-20th centuries. Place name evidence (Kiln Wood) may indicate the presence of a kiln site of early post-medieval date somewhere near to the E terminus of the route, although its precise location is not indicated on historic mapping of the study area.*



Fig. 4: Extract from Thomas Budgen's 1798 OS Surveyor's Drawing of Ditchling and district
(Reproduced courtesy of the British Library)



*Fig. 5: Extract from the 1838 Tithe Survey of Hamsey
(Reproduced by courtesy of the National Archives)*



*Fig. 6: Extract from the 1839 Tithe Survey of Barcombe
(Reproduced by courtesy of the National Archives)*

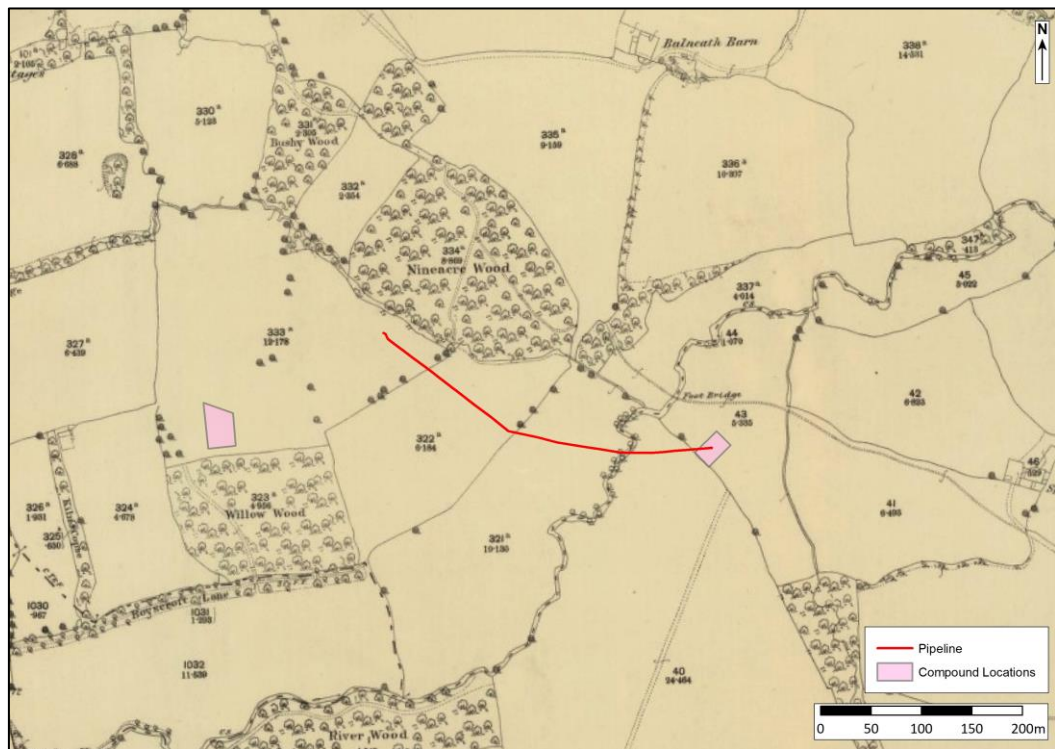


Fig. 7: Extract from the 1875 OS 1st Edition 25-Inch Survey of Sussex
(Reproduced by courtesy of The East Sussex Record Office)

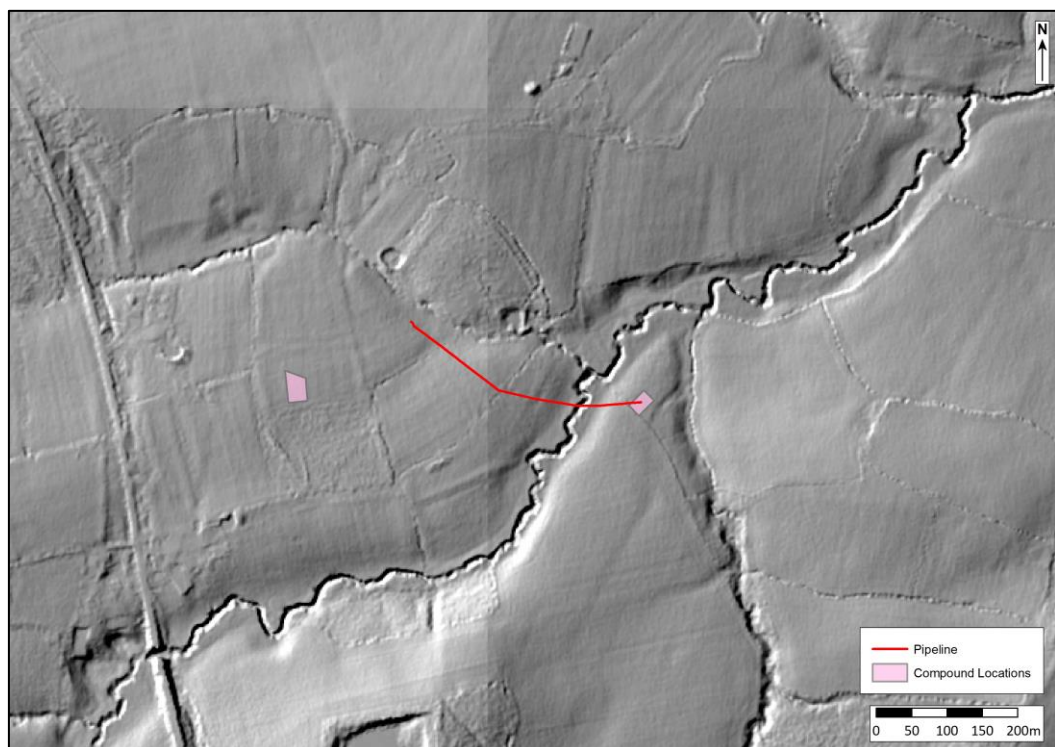


Fig. 8: Composite 2m LiDAR DTM Data
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6 Bibliography

East Sussex Historic Environment Record: HER Report and GIS Dataset

National Record of the Historic Environment Database (<https://pastscape.org.uk/>)

British Geological Survey, 2019, *Geology of Britain Viewer* (<http://mapapps.bgs.ac.uk/geologyofbritain/home>)

Wealden Iron Research Group, 2019, *Wealden Iron Research Group Database* (<http://www.wirgdata.org/>)

Cleere, H. F. & Crossley, D. W., 1995, *The Iron Industry of the Weald*, Cardiff

Johnson, C., 1982, *Geology & Bloomery Site Distribution in East Sussex*, Unpublished University of Bristol Thesis.

Margary, I.D., 1973, *Roman Roads in Britain – Third Edition*, London

Mawer, A., Stenton, F.M. and Gover, J. E. B., 1930, *The Place-Names of Sussex, Part 2*, Cambridge.

Rudling, D., Butler, C. & Wallace, R., 2010, *Barcombe Roman Villa*. *Journal of the British Archaeological Association*, **111**, 22-27

SSEW, 1983, *Soil Survey of England and Wales Scale 1: 250,000*, Harpenden

6.1 Cartography

(All maps were obtained from the East Sussex Record Office unless otherwise stated)

1798: Thomas Budgen's Ordnance Survey Surveyor's Drawing of Ditchling (British Library)

1838: Hamsey Tithe Map and Apportionment (National Archives)

1839: Barcombe Tithe Map and Apportionment (National Archives)

1875: OS 1st Edition 25-inch Survey of Sussex

1899: OS 2nd Edition 25-inch Survey of Sussex

1910: OS 3rd Edition 25-inch Survey of Sussex

1957: OS 1:2500 National Survey

1961: OS 1:10,560 National Survey

1981: OS 1:10,000 National Survey

(Aerial photographs dating back to c.1946 were consulted at the East Sussex Record Office)

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