Written Scheme of Investigation
for an
Archaeological Watching Brief
on the route of the
Sovereign Harbour Cycle Network
Phase 2A,
(Ringwood Road to Lottbridge Drove)

EB/2990/CC

by
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1.0 Introduction

1.1 Chris Butler Archaeological Services Ltd has been commissioned by East Sussex County Council to prepare this Written Scheme of Investigation for an Archaeological Watching Brief of the route of the Sovereign Harbour Cycle Network Phase 2 between Ringwood Road and Lottbridge Drove, Eastbourne, East Sussex, in order to record any archaeological remains that may be affected or destroyed by construction of the cycleway.

1.2 The cycleway route is located on the east side of Eastbourne, on Southbourne Level (Fig. 1), between Ringwood Road (TQ 6133 0069) and Lottbridge Drive (TQ 6231 0127). The route follows the course of the Horsey Sewer which flows from west to east to meet the Langney Sewer beyond the site boundary before turning south towards the sea.

1.3 The site is 1.26km long and 80m wide, and is situated at between 3m to 5m OD (Fig. 2). There is a recreation ground to the west of the site with an informal path extending from the recreation ground to Hammonds Drive where the route joins the existing footway. Most of the site is overgrown with some areas being cut back by the Environment Agency twice a year. A Stage 1 Habitat Survey has been carried out for the site.

1.4 The site is not within a designated Conservation Area\(^1\) or Archaeological Notification Area, although there are Archaeological Notification Areas immediately to the north and south of the site (Fig. 3). The Horsey Sewer forms the boundary between Eastbourne and Willingdon Parishes. The site falls outside the area covered by the Eastbourne Extensive Urban Survey\(^2\). The Land Utilisation Survey 1931-1935 shows the route of the cycleway to be meadowland with new housing to the south and south-east\(^3\).

1.5 An archaeological assessment excavation\(^4\) was carried out in early 2011 in advance of planning permission, following the completion of a desk based assessment report\(^5\) which identified the presence of a 19\(^{th}\) and early 20\(^{th}\) century railway along part of the route, and the potential for waterlogged prehistoric and later deposits at deeper depths.

1.6 According to the British Geological Survey (sheet 319/334), the site is underlain by alluvium with Blue Marl Gault Clay beneath that (Fig. 4). Up to approximately the 5m OD contour alluvium will be the predominant substrate with the Gault Clay at near surface in the higher areas above 5m AOD. The soil at the site is described as a slightly acid loamy and clayey soil with impeded drainage\(^6\).

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3. http://landuse.edina.ac.uk/
4. Meaton, C. & Butler, C. 2011 An Archaeological Evaluation along the route of the Sovereign Harbour Cycle Network Phase 2A (Ringwood Road to Lottbridge Drive), CBAS0192
2.0 **Archaeological & Historical background**

2.1 A single acheulian handaxe has been found at Lottbridge Drove (MES507). Most local finds of Palaeolithic flintwork come from the South Downs, with the nearest find spots being located in the Cuckmere Valley\(^7\). This isolated find is from an unusual location, and is probably not in its original context.

2.2 There is no evidence for Mesolithic activity in the immediate vicinity of the site, however there are numerous find spots of Mesolithic flintwork around the edges of the Levels, to the north and east. It has been noted that the Mesolithic sites around the Pevensey Levels occur just above the 5m contour level, where they have not been covered by the subsequent accumulation of peat, and may indicate that the Levels provided an ideal landscape for hunting and fishing throughout this period\(^8\). The evidence for this period suggests that there is a high possibility of Mesolithic activity being present on the site, given its location adjacent to a 5m contour line.

2.3 In 1995 a Late Bronze Age timber platform and associated trackway (MES7375) was discovered on Shinewater Marsh a short distance to the north of the site. Copper-alloy artefacts, pottery, worked and burnt flint was recovered during the limited excavations\(^9\). This and other trackways/alignments (MES15463 & MES16119) hint at extensive activity in the Late Bronze Age. A Bronze Age stone macehead was found at Bedford Well Waterworks (MES621) to the south-west of the site.

2.4 The large Saxon Shore Fort at Pevensey was built in the later 3\(^{rd}\) Century AD on a peninsular that stuck out into the Levels, and may have provided shelter for a harbour on its protected north side. A pit containing Roman pottery has been found just to the south of the site (MES516) indicating that there may have been activity in this area. During the Saxon period it is likely that few people lived in the area as it was still marginal land on the edge of the flooded Levels.

2.5 After 1066 the Manors of Eastbourne and Willingdon were granted to the Count of Mortain\(^10\). As well as meadow, land for 28 ploughs and a mill there were 16 salthouses in Eastbourne, whilst in Willingdon there was land for 36 ploughs, 60 acres of meadow and 11 salthouses. The salthouses are likely to have been situated around the edges of the Levels, and indicate the importance of this industry in the area.

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\(^7\) Wymer, J. 1999 *The Lower Palaeolithic Occupation of Britain, Vol. 1*, Wessex Archaeology & English Heritage

\(^8\) Butler, C. 2002 ‘A Mesolithic site and later finds at Magham Down, near Hailsham, East Sussex’, *Sussex Archaeological Collections* **140**, 139-144.

\(^9\) Greatorex, C. 2003 Living on the Margins? The Late Bronze Age Landscape of the Willingdon Levels in Rudling, D. *The Archaeology of Sussex to AD2000*, Heritage Marketing & Publications Ltd

2.6 There were a number of Medieval settlements in the area which do not appear to have survived, such as Cudnow (MES5053) and Hydneye (MES517) to the north of the site. The latter was a port attached to Hastings from early times although there is practically no significant documentary evidence and the site has been built over by housing development since 1940. Turner maintained that the earliest reference was a deed of 1229 with further mentions in charters throughout the period 1235-60 and 1308. There was probably a small harbour at Hydneye which silted up in the period 1250-1350 depriving the community of its livelihood. This suggests that this land was still marginal, reflecting the risk from flooding and difficulties in reclaiming the land, although much of the Levels had been reclaimed by the 13th century.

2.7 The presence of the remains of a possible Medieval boat (MES504), probably clinker-built, found in 1963 during sewer laying operations, and possibly a 12th-14th century trading vessel, under the roundabout at the Junction of Lottbridge Drove and Seaside, suggests that this location was on the edge of the navigable waters.

2.8 There is little evidence for the use of this area during the early Post Medieval period until the 19th century. A lease of 1682 includes meadow of 4½ acres, part of the Totts, near Lottbridge Drove, together with pieces of marshland. The presence of Lottbridge Drove on the east side of the site suggests that it was used for moving animals around the edges of the Levels between areas of grazing, although it is likely to have originated at an earlier date.

2.9 A map of Eastbourne published in 1819 shows the area to the east of Eastbourne up to Lottbridge Drove as ‘Pasture Fields’. To the south of Seaside is the loose shingle of the Crumbles, with the Redoubt, West Langney Fort and the Martello Towers 67 to 72. A draft of c.1820 shows fields called Great Horsey, Little Horsey, Jordans Field on the Willingdon to Ditton road and others in Willingdon and tenantry land. However it is not clear whether this relates to fields in the area of the site.

2.10 The first indications of land ownership in the area come from the Tithe Maps. The Eastbourne Tithe map of 1841 shows that the fields to the south of the Horsey Sewer are owned by Lord Cavendish and Lord Burlington; and are mostly leased by Benjamin Waters and used for pasture. The Willingdon Tithe map of 1842 shows the fields to the north mainly owned by Lord Burlington and Lord Liverpool and leased to John Waters and James Pagden, again being used for pasture.

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15 ESRO ASH/4501/1083
16 Elleray, D.R. 1995 Eastbourne A Pictorial History, Phillimore (Map possibly drawn by W. Figg in 1816)
17 ESRO ACC3412/3/81
2.11 The 1st Edition OS map (1874) shows that there have been significant changes to the landscape. The Horsey Sewer is shown with a pattern of fields that broadly reflects that shown on the early maps. A tramway runs along its length, crossing it at three places, to run past the Eastbourne Gas Works and on to the Crumbles, with a single branch off the line into the gasworks. Immediately to the south is Horsey Farm, and then further south are Rose Lands and a brickfield.

2.12 The tramway served the beach gravel extraction that was taking place on the Crumbles, and can be seen on the broader OS map extending onto the Crumbles before dividing into three separate branches. In 1857-62 the London Brighton & South East Railway negotiated to purchase not less than 48,000 cubic yards of shingle from the Duke of Devonshire at 1 penny per cubic yard\(^1\), to be extracted from the Crumbles. They constructed a railway from near Eastbourne railway station through open countryside, along the Horsey Sewer, then turning south to cross the turnpike road (Seaside) near its junction with Lottbridge Drove. The railway was 7 yards wide and ran for 3½ miles, and was known as the Ballast Line or the Crumbles Railway. It also served the gasworks from 1870 onwards.

2.13 The Eastbourne Gas Company was formed in 1852\(^2\), and was incorporated by an Act of Parliament in 1868\(^3\), whilst the brickworks was in existence by 1866, and was operated by James Peerless, who leased the land from the Devonshire Estate in 1860\(^4\). It continued to operate here until 1899. A second brickworks was located at Roselands, and was operated from 1860 to the 1880’s by the Eastbourne Brick Co Ltd\(^5\).

2.14 By the 2nd Edition OS map of 1899 the gasworks have expanded eastwards. A plan of the land intended to be acquired for this expansion by H.E. Jones, Engineer, for Eastbourne Gas deposited in 1879 is held by ESRO\(^6\). The brickworks have also migrated to the north-east, with allotment gardens along the northern edge of the earlier workings. Rose Lands is now a nursery, with a refuse destructor works and air compressing station located on its north side.

2.15 The tramway now has additional sidings serving the gasworks, as well as continuing on to the Crumbles, where it now runs to the east, while a branch turns south-west before returning westwards to Seaside on an existing earthwork shown on the 1st Edition OS map (MES7968). Housing development has expanded eastwards along the southern side of Seaside. The tramway also later served the refuse destructor works and air compressing station, the brickworks and a timber yard. On the 3rd Edition OS map of 1909 there has been little change in the immediate area around the site, although there has been further housing development along Seaside.

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\(^1\) Botha, A. 2006 *The Crumbles Story*, ALB Books
\(^2\) Wright, J.C. 1902 *Bygone Eastbourne*, Spottiswood & Co Ltd
\(^3\) ESRO amsh/AMS5616/2/70
\(^6\) ESRO QDP/448
2.16 By the 4th Edition OS map (1928) the tramway has developed to include a branch line to the refuse destructor works and air compressing station, and additional sidings at the gasworks. The return route of the tramway to Seaside from the Crumbles is no longer shown, having been dismantled. Some ‘tanks’ are shown adjacent to the Horsey Sewer north of the gasworks and alongside a footbridge. Major housing development has taken place to the south of the site along the north side of Seaside. Eastbourne Corporation had a licence put a footbridge over the Horsey Sewer in 1926\(^24\), and had an agreement for works in the Horsey Sewer in 1937\(^25\).

2.17 The decline of the tramway began in 1920 when the ballast used on the railways changed to granite chippings and there was no further requirement for the shingle, although the tramway continued to serve the gasworks and other industrial sidings, taking thousands of tons of coal to the gasworks\(^26\).

2.18 A 1947 aerial photograph shows that the pre-war housing development had extended almost as far north as the Horsey Sewer. By the 1962 OS map the housing developments had reached the southern edge of the Sewer, and the tramway is still shown. Between the 4th Edition OS map and the 1962 OS map, the sharper bends in the course of the Horsey Sewer immediately to the north of the gasworks appear to have been straightened out to provide a much gentler curve.

2.19 The tramway had gone by the time of the 1975 OS map, as it had finally been closed in 1966\(^27\). The 1975 map also shows the commercial developments at the south end of Lottbridge Drove. These had extended along both sides of Lottbridge Drove by the 1981 OS map which also shows new housing developments along the north side of the Horsey Sewer.

2.20 An archaeological evaluation was undertaken out between Monday 28\(^{th}\) February 2011 and Friday 4\(^{th}\) March 2011 along the route of the Sovereign Harbour Cycle Network between Ringwood Road and Lottbridge Drive (Phase 2A). A total of three trenches were opened, two of which were excavated by machine (Trenches B & C) whilst the third was hand dug by a group of local volunteers (Trench A). Trench A was located on the route of a 19\(^{th}\) to 20th century railway line, at a crossing point over the Horsey Sewer. Excavations by the volunteers revealed a number of in-situ sleepers and associated track furniture, along with possible evidence for the original bridge spanning the Horsey Sewer. Trenches B and C were excavated alongside the Horsey Sewer, and no significant archaeological deposits were encountered in either trench. Up to 3m depth of silty clay was exposed in Trench C, and in Trench B peat deposits were revealed at approximately 1.3m below the ground surface.

\(^{24}\) ESRO SRA7/15/33  
\(^{25}\) ESRO SRA4/6/16  
\(^{26}\) Botha, A. 2006 The Crumbles Story, ALB Books  
\(^{27}\) Ibid
3.0 Method Statement

3.1 The archaeological work will be carried out in accordance with ESCC’s Standards for Archaeological Fieldwork, Recording and Post-Excavation in East Sussex dated April 2008 (Recommended Standards), and in accordance with this WSI.

3.2 The Client shall give the archaeological contractor at least seven days notice of any groundworks that require an archaeological presence, and a suitably qualified archaeologist will be present on site during the groundworks. If any archaeological deposits are encountered which will be disturbed or destroyed by the groundworks, they will be archaeologically excavated and recorded in accordance with Section 4 below. Reasonable time will be provided by the Client and site contractors, to permit the adequate recording of any such archaeological deposits.

3.3 A targeted watching brief is required to monitor the groundworks along the route of the cycleway to ensure that any further elements of the railway that survive can be briefly recorded before their destruction or removal. It is recommended that such recording should comprise simple location sketch plans and photographic recording of any sleepers, after minimal cleaning, with more detailed recording only being carried out where other unusual features are encountered. It is understood that no work is to be carried out on the bridges, although any adjustment to the ground surface or other works at these locations should also be subject to a watching brief. The only other locations where a watching brief is required are where any works may have a deeper impact than 300mm (Fig. 6). These areas are shown on Figs. 7 and 8, and are detailed in Appendix 1.

3.4 If archaeological remains are unexpectedly revealed in other areas, then groundworks should cease until such time as a qualified archaeologist can attend site to assess record the remains. If it becomes clear that an area being monitored has been disturbed and archaeological deposits are unlikely to be encountered, then with the prior agreement of the County Archaeologist, monitoring of that area may cease.

3.5 In accordance with the Recommended Standards, in the event that important archaeological remains come to light during the course of the watching brief, which require more than a brief record (i.e. more than 2-4 hours continuous recording for one person in that area) provision should be made, as a contingency, for up to two days archaeological investigation and recording, in addition to the basic monitoring, and free of disturbance from building works (as far as is reasonably practicable).

3.6 The spoil from the excavations will be inspected by archaeologists to recover any artefacts or ecofacts of archaeological interest. A metal detector will be used at regular intervals to scan spoil derived from the excavations. A record will be kept of which deposits/features are detected and the areas in which objects were found. The make and model of the metal detector will be noted in the final report. Metal remains from the railway should be retained for comparison with those recovered during the evaluation excavation.
3.7 Archaeological deposits or features of local, regional or national significance will be reported to the County Archaeologist at the earliest opportunity. All finds that fall under the definition of the Treasure Act will be reported to the Coroner’s Office and to the Sussex Portable Antiquities Liaison Officer.

3.8 In the event of human burials being discovered, a Licence will be required from the Ministry of Justice (in accordance with Section 25 of the Burial Act 1857) before the remains can be lifted. The need for a Licence applies to both inhumation and cremated remains. Inhumations and cremations will be excavated completely within 24 hours of their exposure. The Archaeological Contractor will submit details of the procedures for the excavation and recording of burials if these are encountered. The County Archaeologist will be notified immediately.

3.9 All artefacts recovered during the excavations on the site are the property of the Client. They are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, Conservation Guidelines No 2 and on completion of the archaeological post-excavation programme the Client/Developer will arrange for them to be deposited in a museum or similar repository agreed with the County Archaeologist.

3.10 During the works the Environment Agency have requested that reasonable precautions should be taken to keep materials out of the water channel, avoid disturbing the stability of the riverbanks, reinstate land to existing conditions, levels etc and tidy up afterwards. Personnel attending the site should be familiar with the Environment Agency Pollution Prevention Guidelines: Works and maintenance in or near water (PPG5).
4.0 Recording Systems and Scales, and Finds Collection Policy

4.1 Obviously modern features (post railway closure) will only be recorded cursorily or not at all, unless of unusual intrinsic significance, except where it is necessary to do so to indicate their impact on features of archaeological interest. All other revealed features will be cleaned, planned, excavated and recorded in accordance with the Recommended Standards as amended by the Section 3 of this WSI.

4.2 Palaeoenvironmental sampling will be undertaken in accordance with the Recommended Standards.

4.3 Archaeological features will be recorded at the scale of at least 1:100 in relationship to a fixed point, or temporary base lines, and related to the Ordnance Survey national grid. Further plans at 1:20 and sections at 1:10 will be drawn as necessary. All plans and sections will be drawn on plastic tracing film.

4.4 All features will be photographed in colour transparency and digitally. Photography will form the primary record of any railway remains, and thus appropriate scales, direction arrows and location boards must be included in each photograph.

4.5 All significant archaeological remains will be levelled to the Ordnance Datum, or from a Temporary Bench Mark derived from the Ordnance Survey Bench Mark where practicable. The position of plans will be planned on a copy of the Ordnance Survey base map of 1:2500 scale or greater.

4.6 All archaeological features and deposits will be recorded using a standard Context record sheet. Soil colours will be recorded by visual inspection and not by reference to a Munsell Colour Chart.

4.7 All artefacts pre-dating 1960AD, except as detailed below, will be collected and retained, unless their size and number makes this impracticable.

The following artefact types will be identified and recorded (counted and weighed) and discarded on site or during post excavation work:

- Burnt flint, Building material (except where worked), Burnt clay & Iron slag

4.8 All retained finds will be washed and marked prior to deposition in the chosen museum. Suitable conservation measures (e.g. packaging with silica gel or with water) will be used to ensure the stabilisation of finds where relevant.
5.0 Post-exavation Analysis and Report

5.1 The Post-exavation analysis will follow the requirements of the Recommended Standards.

5.2 The report will be completed within 60 working days of the completion of the monitoring. The report and its associated plans, illustrations and photographs will be supplied to the East Sussex Historic Environment Record (HER) in a digital format agreed, in advance, with the County Council. The final report should incorporate the results of the evaluation excavation and watching brief into a single detailed site plan.

5.3 In the event of complex archaeological features being encountered during the groundwork, then a programme of post-exavation analysis will be agreed and a final publication report will be prepared for submission in a suitable journal.

5.4 The site archive will be created in accordance with the requirements of the Recommended Standards, and will be deposited within the recipient museum within five years from the date of completion of the investigation.

5.5 Information and records resulting from the watching brief may be used to prepare information boards, which will be displayed along the route of the cycleway in due course.

6.0 Health & Safety

6.1 Adherence to standard health and safety requirements, together with any constraints imposed by the contractor’s health and safety practices, will be paramount. Recording of deeply cut trenches, including any which exceed 1.2m in depth or which are judged to be unsafe, shall only be undertaken from the ground level.
7.0 Monitoring and Standards

7.1 The project will be monitored by ESCC. The archaeological contractor is to allow the site records to be inspected and examined at any reasonable time, during or after the excavation work, by the County Archaeologist, or any designated representative of Lewes District Council.

7.2 The project will be managed by an appointed Project Manager, who will be responsible for ensuring that the works are implemented correctly in accordance with the following:

a. all statutory provisions and by-laws relating to the work in question, especially the Health and Safety at Work etc Act 1974;

b. the Institute for Archaeologists Code of Conduct; and

c. the Institute for Archaeologists Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology.

d. the Environment Agency Pollution Prevention Guidelines: Works and maintenance in or near water (PPG5).
Fig. 1: Eastbourne Cycleway: Location Map
(Adapted from map provided by ESCC)
Ordnance Survey © Crown copyright 2004
All rights reserved. Licence number 100037471
Fig. 2: Eastbourne Cycleway: Map of Cycleway Route
(Adapted from map provided by ESCC)
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Fig. 3: Eastbourne Cycleway: Archaeological Notification Areas
(Adapted from map provided by ESCC)
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Fig. 4: Eastbourne Cycleway: Geological Map
(Adapted from map provided by ESCC)
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Fig. 5: Eastbourne Cycleway: West end of Cycleway Route showing the location of the Evaluation trenches
(Adapted from map provided by ESCC)
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Fig. 6: Eastbourne Cycleway: Section along cycleway showing ground level change (Provided by ESCC)
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Fig. 7: Eastbourne Cycleway: West end of Cycleway Route showing areas to be monitored
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Fig. 8: Eastbourne Cycleway: East end of Cycleway Route showing areas to be monitored
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## Appendix 1 Areas to be Monitored

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
<th>Potential Archaeology</th>
<th>Level of Monitoring*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bridge 3 (Fig. 7)</td>
<td>Surviving elements of railway bridge and possible track, includes adjacent area of track to each side of bridge</td>
<td>Single visit during works around bridge</td>
</tr>
<tr>
<td>B</td>
<td>Path between Bridges 3 and 2 (Fig. 7)</td>
<td>Possible surviving elements of railway &amp; most areas of impact &lt;250mm depth</td>
<td>Single visit during groundworks</td>
</tr>
<tr>
<td>C</td>
<td>Bridge 2 (Fig. 7)</td>
<td>High probability of surviving bridge and track</td>
<td>Single visit during works around bridge</td>
</tr>
<tr>
<td>D</td>
<td>Path between Community Centre &amp; Churchdale Road (Figs. 7 &amp; 8)</td>
<td>Possible surviving elements of railway especially at Churchdale Road end &amp; most areas of impact &lt;250mm depth</td>
<td>One or two visits depending on time taken on groundworks</td>
</tr>
<tr>
<td>E</td>
<td>Path between Allotments and Hammonds Drive (Fig. 8)</td>
<td>No railway present here. Some areas of impact c.300mm depth</td>
<td>One or two visits depending on time taken on groundworks</td>
</tr>
</tbody>
</table>

*The actual time required for monitoring will depend upon the methodology employed by the groundworkers.
Chris Butler Archaeological Services Ltd

Chris Butler has been an archaeologist since 1985, and formed the Mid Sussex Field Archaeological Team in 1987, since when it has carried out numerous fieldwork projects, and was runner up in the Pitt-Rivers Award at the British Archaeological Awards in 1996. Having previously worked as a Pensions Technical Manager and Administration Director in the financial services industry, Chris formed Chris Butler Archaeological Services at the beginning of 2002.

Chris is a Member of the Institute of Field Archaeologists, and a committee member of the Lithic Studies Society. He is a part time lecturer in Archaeology at the University of Sussex, and teaches A-Level Archaeology at Bexhill 6th Form College having qualified (Cert. Ed.) as a teacher in 2006. He continues to run the Mid Sussex Field Archaeological Team in his spare time.

Chris specialises in prehistoric flintwork analysis, but has directed excavations, landscape surveys and watching briefs, including the excavation of a Beaker Bowl Barrow, a Saxon cemetery and settlement, Roman pottery kilns, and a Mesolithic hunting camp. He has recently undertaken large landscape surveys of Ashdown Forest and Broadwater Warren and is Co-Director of the Barcombe Roman Villa excavation project.

His publications include Prehistoric Flintwork, East Sussex Under Attack and West Sussex Under Attack, all of which are published by Tempus Publishing Ltd.


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