Discovery, Innovation and Science in the Historic Environment

RESEARCH

Historic England

ISSUE 15 • SPRING 2020

Welcome...

...to the Spring issue of Research magazine.

The last issue of Historic England Research focused on our work in Heritage Action Zones (HAZs) and other priority places, urban and rural. We continue that theme in the first two articles of this issue, looking at two HAZs in the South East, Ramsgate and Gosport.

Geraint Franklin describes the colourful past and rich heritage of Ramsgate as a seaside resort and how a range of complementary research initiatives in the town have informed a wider programme of work in the HAZ carried out in partnership with Thanet District Council and other local partners. This includes expert advice through listing to owners of heritage assets alongside the provision of targeted grant-aid. The results of the research are brought together in a beautiful new book *Ramsgate: The town and its seaside heritage*.

Also on the coast, Gosport has a very different past with the town's military and naval history contributing much to its present-day character, as Olaf Bayer and Wayne Cocroft explain. Among various new discoveries and reinterpretations, archaeological investigation work has shed new light on the extensive Stokes Bay Lines which were constructed in the 1860s and subsequently substantially levelled in the 1950s.

Continuing the maritime theme in the South East, Antony Firth and Tim Dapling report on research by the Sussex Inshore Fishing and Conservation Authority (IFCA) for Historic England to better understand the connection between 'fishermen's fasteners', features on the seabed that traditionally get snagged in fishing nets, and wreck or aircraft crash sites on the sea floor.

Moving to the South West, a companion article co-authored by Antony Firth explores work with the local IFCA and marine ecologists from the University of Plymouth to examine the relationship between underwater heritage sites and marine habitats in the waters around the Isles of Scilly.

Also in the South West, but back on land, Olaf Bayer with Andy Simmonds and Ken Welsh from Oxford Archaeology tell the story of Emmets Post, a small Early Bronze Age barrow on Dartmoor. The site forms part of a wider archaeological landscape and was excavated in 2014 in advance of china clay quarry expansion.

Lastly in this issue, Tony Presland describes the John Laing Collection held by the Historic England Archive and its remarkable collection of images that record major twentieth century construction projects, particularly those of the post-war era such as the M1 motorway. The scanning of 10,000 images from the collection as part of our 'Breaking New Ground' project has captured the attention of the media and highlights the huge potential of the Historic England Archive as a major research resource. Indeed the Laing collection forms the subject of Tony's PhD.

Emily Gee
Director of London and South East Region.

Rebecca Barrett
Director of South West Region.

Front cover image:
Stokes Bay, concrete matting laid to assist troop embarkation for D-Day. Photograph courtesy W D Cocroft

We are the **public body** that **helps people care for, enjoy** and **celebrate** England's **spectacular historic environment**

Contents.....Spring issue

RESEARCH magazine

Editor
Colum Giles

Designer
Vincent Griffin

Web design
Robin Page

Managing Editor
Robin Page

Previous issues of Historic England Research can be viewed online at: **http://bit.ly/HEresearchbackissues**

ISSN: 2058-1858

Product Code: HE0032

For any further information and questions please email: **Research@HistoricEngland.org.uk**

If you would like this document in a different format, please contact our customer service department on:

Telephone: **0370 333 0607**

Textphone: **01793 015 0174**

Email: **customers@HistoricEngland.org.uk**

Research and regeneration in Ramsgate

Providing historic environment evidence in planning change.

Jacob's Ladder of 1826 by John Shaw. This elegant flight of ashlar steps replaced a timber framework of the same name, erected in 1754 by Jacob Steed to provide access to the construction works on the west pier.

A Heritage Action Zone for Ramsgate

The Kentish seaside town of Ramsgate was amongst the initial tranche of ten Heritage Action Zones selected by Historic England in March 2017. Ramsgate's HAZ aims to put the town's outstanding heritage – which includes its royal harbour and historic resort – at the forefront of its economic regeneration. The Ramsgate HAZ is a partnership in which several organisations, including Historic England, Thanet District Council, Ramsgate Town Council, the Ramsgate Coastal Community Team and Ramsgate Society, are working alongside the local community to deliver a variety of projects.

In order to support and enhance the objectives of the HAZ, Historic England commissioned a raft of research initiatives. A historic landscape characterisation (HLC) involved assessing and mapping patterns of historic landscape character across Ramsgate and its adjacent seascape (Manson *et al* 2018).

Historic England's Aerial Investigation and Mapping team carried out an analysis of aerial photographs held in the Historic England Archive, identifying and interpreting archaeological remains as well as 'lost' 20th-century features such as Second World War defences (Small and Barber 2019). In addition, a report by Historic England's landscape strategy adviser considered Ramsgate's prehistoric landscapes (Last 2019).

That was not all. Historic England's architectural investigators carried out an historic area assessment (HAA) of Ramsgate, and this project and its outcomes form the focus of this article. Historic area assessment is a practical tool which helps understand and explain the heritage interest and significance of a place. It combines field observation with documentary research to refine our understanding of the evolution of an area and its character. The research has resulted in an accessible publication on Ramsgate's heritage (Franklin *et al* 2020) as well as a historic area assessment report in Historic England's research report series (Franklin forthcoming). >>

Ramsgate's HAZ aims to put the town's outstanding heritage – which includes its royal harbour and historic resort – at the forefront of its economic regeneration

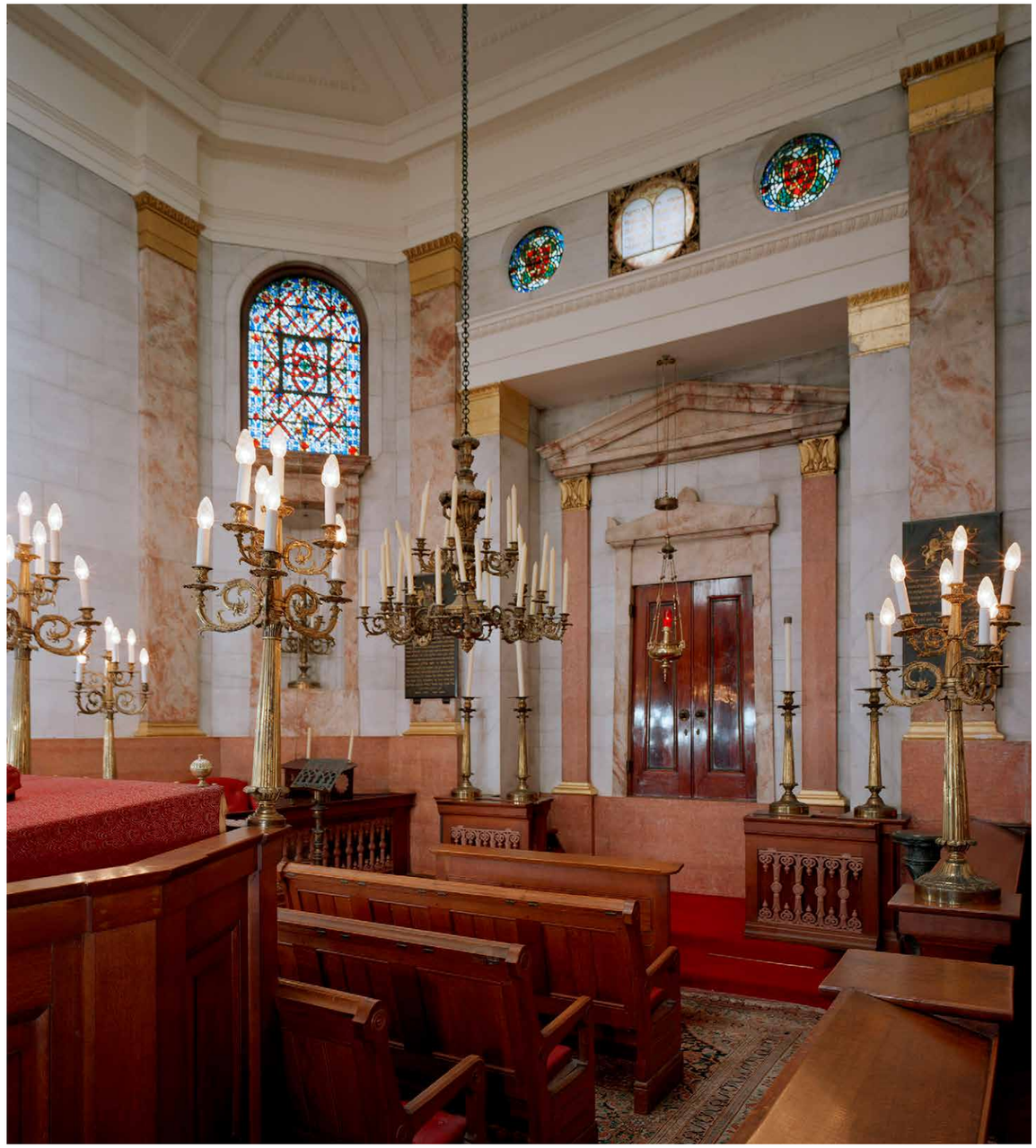
Right: Ramsgate's townscape is predominantly mid- to late 19th century in character, although in places earlier buildings have survived rebuilding and street widening schemes. © Historic England Archive. Photographer Chris Redgrave, DP247278.

Ramsgate's seaside story

Ramsgate is a maritime town on the Isle of Thanet, the most easterly point in Kent. Its growth from a humble fishing village to a coastal trading centre in the 16th and 17th centuries was driven by its accessibility by sea and improvements in its maritime infrastructure. Work started on a 'harbour of refuge' in 1750, which became a major embarkation point during the Napoleonic Wars, with a temporary barracks established on the west cliff. By 1800 Ramsgate was a fashionable seaside resort, attested by the provision of assembly rooms, warm salt-water baths and new crescents and squares.

The resort thrived by welcoming all comers. By the 19th century Ramsgate was noted for its minority faith communities, represented by the synagogue completed in 1833 for Sir Moses Montefiore and A W N Pugin's Roman Catholic church of St Augustine (1845-50). The arrival of the railway in 1846, coinciding with an increase in disposable income and leisure time, began to open up the resort to tens of thousands of lower-middle class and, increasingly, working class holidaymakers. Ramsgate remained a popular holiday destination until the advent of cheap foreign travel in the post-war decades. Falling visitor numbers were exacerbated by dwindling investment in resort facilities and the decline of the town's small trades and maritime industries. >>

By 1800 Ramsgate was a fashionable seaside resort, attested by the provision of assembly rooms, warm salt-water baths and new crescents and squares.



Above left: Of probable late-17th century origin, 1-2 Queens Court is one of Ramsgate's earliest dwellings. Like many middling houses of its date it sports shaped gables, a distinctive feature of the east Kentish vernacular. © Historic England Archive. Photographer Chris Redgrave, DP247280

Above right: The Montefiore Synagogue of 1831-3 by David Mocatta for Sir Moses Montefiore. Its interior was lined with marble in 1912 and stained glass windows were added in 1933 on the initiative of Ida Sebag-Montefiore. © Historic England Archive. Photographer Nigel Corrie, PLB_N020012

Selling the seaside

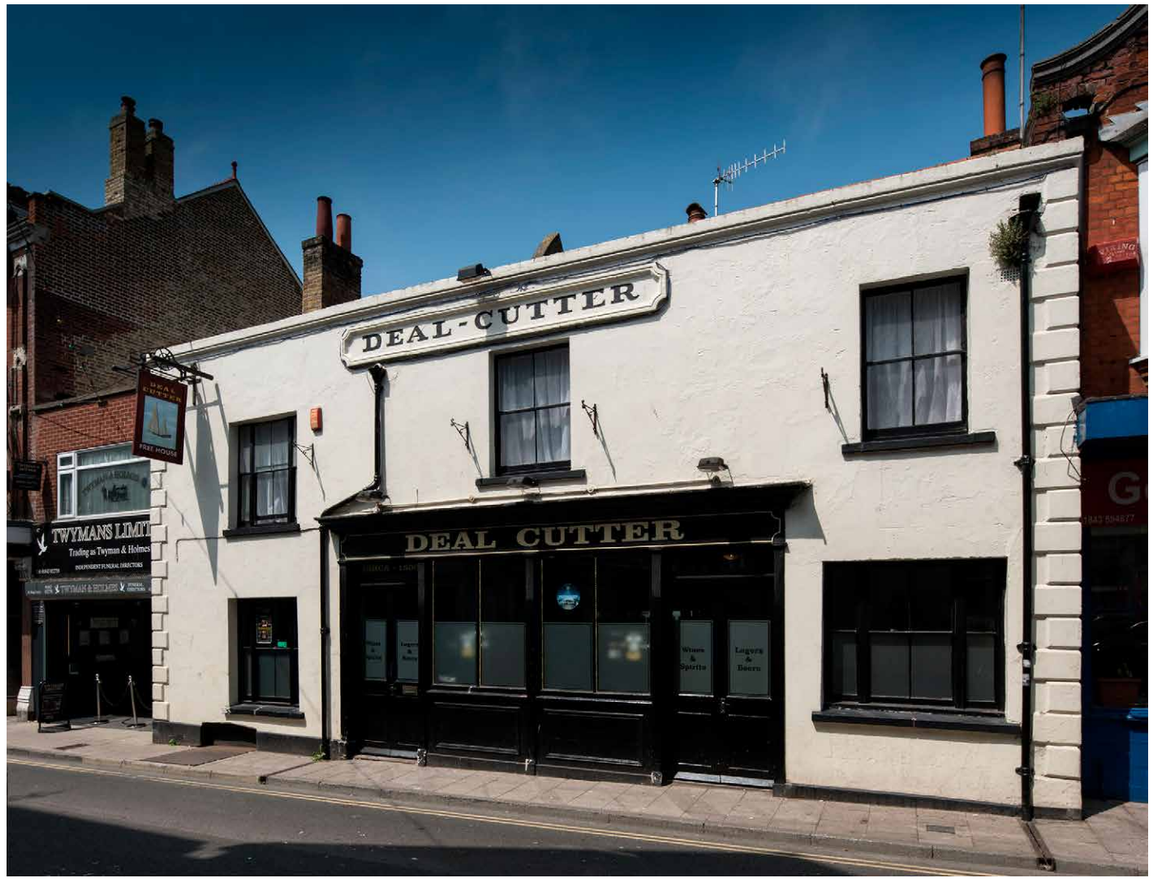
That is Ramsgate's back story in a nutshell. But documentary research has built up a nuanced picture of the growth and dynamics of the town. From the start, its fortunes have been closely linked to the entertainment facilities and attractions which have drawn visitors and holidaymakers to this corner of Kent. Ramsgate's first piece of tourist infrastructure, documented from 1754, was the bathing machine, a cart fitted with a canopy which could be lowered at the rear to allow bathers to enter the sea in privacy. Timber-built bathing rooms were provided for waiting bathers.

As Ramsgate became a favoured watering place for wealthy visitors, inns were converted into assembly rooms and coffee houses, while small circulating libraries and warm-water baths offered respectable places in which both males and females could undertake improving and health-giving activities.

Ramsgate's fortunes have been closely linked to the entertainment facilities and attractions which have drawn visitors and holidaymakers to this corner of Kent

In 1785 an Act of Parliament was obtained to improve the streets and provide a market house. At its Regency heyday Ramsgate was patronised by royalty; a granite obelisk commemorates the visit of King George IV, who in 1821 accorded royal status to the harbour. Even so, some visitors observed that Ramsgate's resort facilities were relatively limited and modest in scale. Certainly, the resort lacked the grand, purpose-built attractions of its local rival Margate, which at an early date boasted an assembly room, theatre and sea bathing hospital.

By the end of the 19th century it was evident that Ramsgate needed to improve its tourist 'offer' to compete with other southern resorts and attract better-off visitors. In the 1890s the recently-established Borough of Ramsgate took the initiative, laying out Ellington Park and commencing an ambitious programme of seafront improvements. Two landscaped carriageways, Royal Parade and Madeira Walk, upgraded access between the harbour area and the east and west cliffs. They were followed in the inter-war period by Winterstoke Gardens, designed by Sir John Burnet & Partners for Dame Janet Stancomb-Wills, and Royal Esplanade / Prince Edward's Promenade, a strip of amenities on the west cliff. >>



Above: The Deal Cutter on King Street: a well preserved 19th century façade disguises what is in origin two properties. © Historic England Archive. Photographer Chris Redgrave, DP247268.

Right: a multi-phase landscape on the east cliff. Albion Place Gardens, initially laid out in the 1790s, underwent significant change a century later with the addition of Madeira Walk and serpentine paths defined by Pulhamite artificial rockwork. © Historic England Archive. Photographer Chris Redgrave, DP251117.

The characterful terraces, crescents and squares in which Ramsgate is unusually rich are the product of speculative building

Speculative histories

The characterful terraces, crescents and squares in which Ramsgate is unusually rich are the product of speculative building. The basic unit – the three or four-storeyed terraced house – was sufficiently flexible to be used as a lodging house, a private residence or some combination of the two. Such ventures responded to the growth of the resort and they were on the whole organised and executed by Ramsgate tradespeople. A proportion were financed directly or indirectly by the proceeds of fishing and coastal trade but even at the smallest scale property speculation remained a risky, hand-to-mouth business.

On a more ambitious scale was the 19th century development of landed estates into middle-class suburban housing. In some cases these were long established estates, such as Ellington Farm to the north west of the town, which was purchased and parcelled off by the British Land Company from 1867. More often the larger landholders were wealthy outsiders who settled in Ramsgate and who, seeing the development potential, gradually acquired corn fields above the chalk cliffs flanking the harbour. A good example is the Mount Albion estate on the east cliff, assembled from 1807 by Lady Augusta Murray (1768–1830), best known for her illegitimate marriage to the sixth son of George III.

After her death there were several halting attempts to develop the 16-acre grounds, starting with a layout of 1838 by the London architect and surveyor Thomas Allason. In 1867, the Ramsgate-born E W Pugin and his associates purchased several seafront plots with the idea of combining residential development with exclusive resort facilities. The monument to Pugin's hubristic vision of 'St Lawrence on Sea' is the Granville Hotel, an extensive complex which boasted a suite of saline spa baths.

Putting research to work

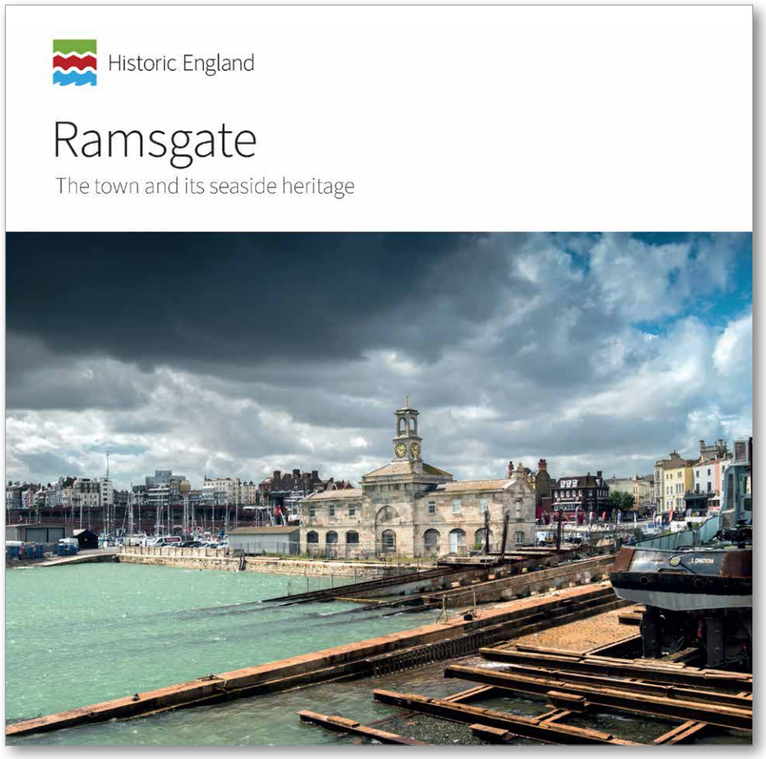
Historic England's investment in applied research is based on the principle that an improved understanding of a historic place encourages others to enjoy it and protect it for the benefit of future generations. The historic area assessment undertaken for Ramsgate's HAZ will have a variety of applications beyond the forthcoming book and research report. It has already fed into Historic England's recent Ramsgate listing project, which resulted in ten new listings, the upgrading of an existing listing from grade II to II* and the rewriting of a further ten list entries. >>

Above: The neoclassical Augusta Villa is an early development of the Mount Albion estate. It may have been designed by the London architect George Gutch whose brother purchased the plot in 1838. Augusta Villa was listed at Grade II in 2019. © Historic England Archive. Photographer Chris Redgrave, DP247249

Ramsgate's story continues to unfold.

The HAA research involved the compilation of a gazetteer of built heritage assets, an interim format chosen for its potential to feed into conservation area appraisals and, it is hoped, a future local list. A variety of outreach activities are planned, including a Heritage Open Days walking tour and a local exhibition showcasing the Ramsgate images of Historic England photographer Chris Redgrave.

Ramsgate's story continues to unfold. The final chapter of the new book, contributed by Nick Dermott and Allan Brodie, unpacks some of the challenges and opportunities that the town faces. As a seaside resort, Ramsgate is not alone in seeking to redefine itself as an attractive place to visit, live and work. By highlighting its engaging story and distinctive historic environment it is hoped that Ramsgate's heritage will play a central role in its 21st century regeneration ■



Above: Ramsgate: The town and its seaside heritage, published by Liverpool University Press in April 2020. © Historic England

The author

Geraint Franklin
Architectural investigator with Historic England.

Geraint joined English Heritage in 2005, and has worked on a variety of thematic and place-based investigation projects. He is the author of Historic England's *Understanding Place: Historic Area Assessments* (2017); *Introduction to Heritage Assets: Post-Modern Architecture* (2017) and *Post-War Public Art: Protection, Care and Conservation* (2016). Geraint specialises in British architecture after 1945 and is currently writing a study of the architect John Outram.

Further Information

Franklin, G, with Dermott, N. and Brodie, A. 2020 *Ramsgate: the Town and its Seaside Heritage*. Historic England / Liverpool University Press https://historicengland.org.uk/images-books/publications/ramsgate-town-and-seaside-heritage/

Franklin, G forthcoming *Ramsgate, Thanet, Kent: Historic Area Assessment*, Historic England research report series will be available through the Research reports Series database https://research.historicengland.org.uk/

Last, J. 2019 *Prehistory, Landscape and Heterotopia: a Contribution to the Ramsgate HAZ*, Historic England research report 24/2019 Available online: https://research.historicengland.org.uk/Report.aspx?i=16242

Manson, D. *et al* 2018 *Ramsgate, Kent: Historic Characterisation of Ramsgate*, Historic England research report 48/2018 Available online: https://research.historicengland.org.uk/Report.aspx?i=16100

Small, F. and Barber, M 2019 *Ramsgate Heritage Action Zone: an Assessment of Aerial Photographs and Lidar*, Historic England research report 25/2019 Available online: https://research.historicengland.org.uk/Report.aspx?i=16243

Gosport

a town defined by its military heritage

Research supporting the Heritage Action Zone project to understand Gosport's heritage.

Gosport is situated on the south coast England, opposite Portsmouth, at the seaward end of Southampton Water. It is a place whose character is defined by its military heritage, but changing ways of defending the country have led to the redundancy of parts of the military infrastructure. Key regeneration sites in the area are, however, characterised by having significant heritage assets including historic buildings and scheduled monuments.

These are now coming forward for redevelopment via public sector land releases, placing Gosport's historic environment under pressure. This has led to the creation of a Heritage Action Zone, whose vision is to ensure that Gosport's unique military character is sustained and supports the physical, economic and social regeneration of the borough. It is recognised that research to establish the significance of these sites is the first stage in identifying new uses and leases of life for redundant buildings or ones facing change. The HAZ will be delivered through a range of partners including Gosport Borough Council, the Defence Infrastructure Organisation, One Public Estate, the Gosport Society and Hampshire County Council.

Gosport's defences

From the 15th century the development of the town has been intimately linked to the growth of the Royal Navy and Portsmouth dockyard. The earliest fortification was built on the western side of the entrance to Portsmouth harbour, on the site of the present Fort Blockhouse. Over the succeeding centuries additional defences were built to deter attack from the west. The late 18th and 19th century forts at Browndown, Gilkicker and Monckton are the most obvious remains of these defences. >>

the HAZ vision is to ensure that Gosport's unique military character is sustained and supports the physical, economic and social regeneration of the borough.

Above left: Portsmouth Harbour is a large natural inlet that forms an ideal shelter for shipping. © Historic England Archive. Photographer Damian Grady, 33563/044

Above right: Stokes Bay. This view illustrates the vulnerability of Portsmouth if hostile forces landed on this shore. © Historic England Archive. Photographer Damian Grady, 33561/002

Above: Map of Gosport showing HAZ area (red line) and historic features noted in the article. © Historic England 2020. Illustrator Sharon Soutar. Contains OS data © Crown Copyright and database right 2020

Research, however, has focused on a series of slighter remains which are a key to today's landscape. A series of massive defensive works was constructed during the 1860s in response to the perceived threat of a French invasion. Originally consisting of an earthwork rampart, carrying a concrete-lined canal containing the re-routed River Alver, the Stokes Bay Lines extended for 2.7 kilometers along the full length of the bay. Five gun batteries were built into, or immediately behind the rampart, and were designed to defend either the area behind the beach or the Lines themselves.

The Lines survived almost unaltered until the 1950s when they were substantially levelled. Today they are all but invisible, surviving as a series of mostly very slight earthworks and parch marks in dry summers. A few short lengths survive and give an impression of their original scale.

To the west of the town the 'advanced' lines, represented by five substantial artillery forts – Forts Grange, Rowner, Brockhurst, Elson, and Gomer (demolished) – were also added in the 1860s. Research in this area has contributed to many enhanced listed building descriptions.

Supporting the navy

From the early 18th century ships were supplied from Weevil Yard, and this provision evolved into the vast storehouses of Royal Clarence Yard. These included bakeries, breweries and a slaughterhouse. Gosport also became an important garrison town with barracks for marines at Forton, the Haslar naval hospital (1746-1762) and a military prison. Surviving examples of barracks include St George (1856-59) and parts of St Vincent (1847). In 1777 a powder magazine was completed at Priddy's Hard and later developed into a large ordnance depot. >>

Above right: Parch marks created by the Stokes Bay lines. Photograph courtesy O Bayer

Below right: Priddy's Hard, gunpowder magazine, 1777. Photograph courtesy W D Cocroft

Gosport was also at the forefront of military technology. Coinciding with the Crimean War (1854-56), a new gunboat yard was built at Haslar. Later in the century the Royal Engineers established a School of Electrical Lighting to develop coastal search lights and Submarine Mining Companies to defend the approaches to Portsmouth. From their establishment in the late 19th century the Admiralty Experimental Works were at the vanguard of naval architecture, leading trials into ship design and propulsion.

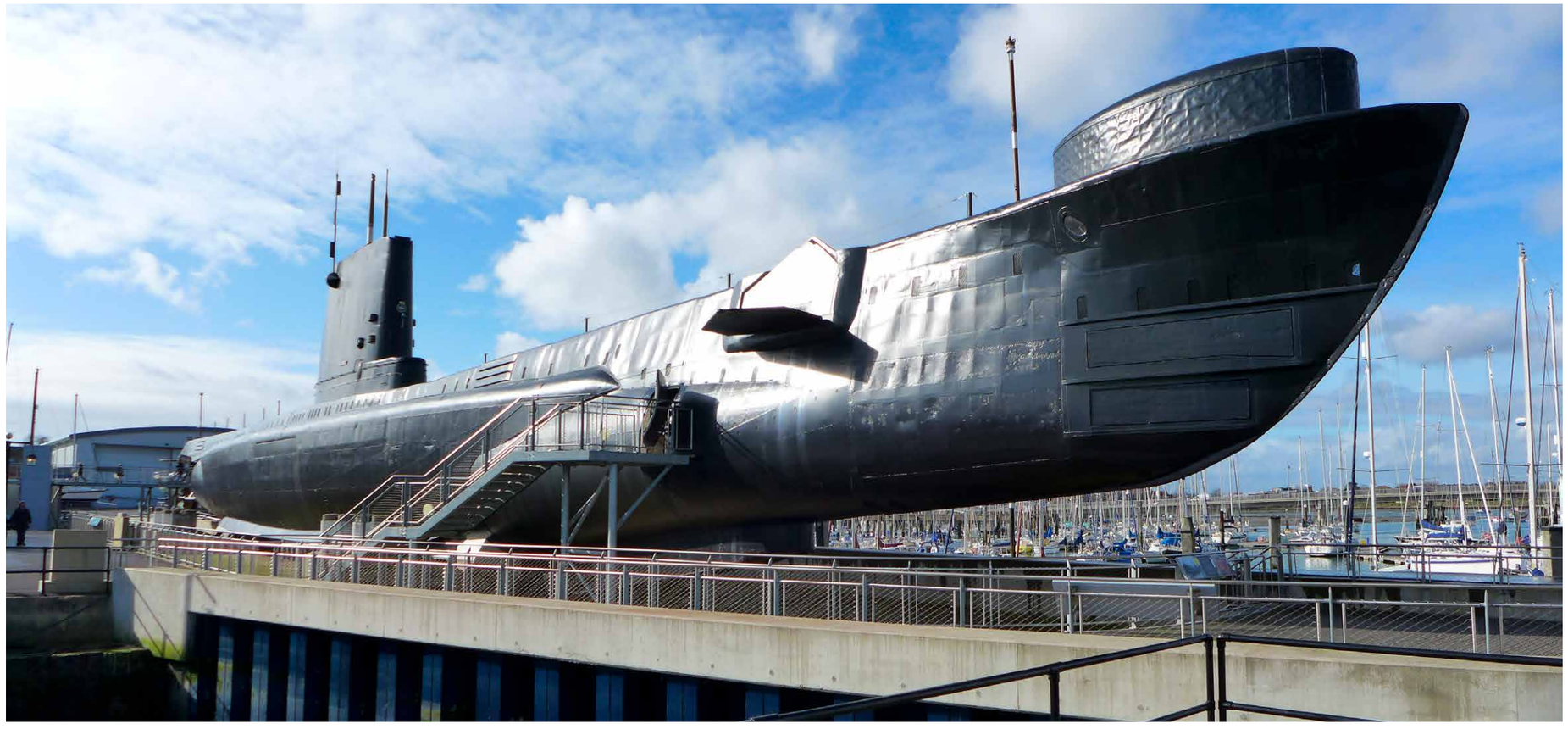
Gosport was also at the forefront of military technology

At the beginning of the 20th century Fort Blockhouse, renamed HMS *Dolphin*, became the principal home of the submarine service. Gosport was also at the beginning of manned flight when in 1910 land adjacent to Forts Grange and Rowner was used by the Hampshire Aero Club. At the outbreak of war in 1914 it was acquired by the Royal Flying Corps.

The town

Gosport's economy became entwined with the expansion of the Royal Navy. A characterisation study has documented how in the 19th century the town underwent rapid expansion as the urban area pushed out beyond the original fortifications, eventually filling most of the area inside the line of the western defences. The town is characterised by terraced housing for dockyard workers, with a large number of public houses and relatively little industry unconnected to the military.

This study might be used to assist in master planning, to help fit new economic activity into appropriate historic locations and identify how the historic environment can be enhanced to benefit the local community. >>



Above left: Haslar Gunboat Sheds. Originally the boats were moved from the slipway on a traverser. © Historic England Archive. Photographer Damian Grady, 33563/051

Left: Royal Navy Submarine Museum, Gosport, HMS *Alliance*, A-class submarine launched 1945. Photograph courtesy W D Cocroft

To the west of the town, on the Browndown army range, are some of the best preserved First World War practice trenches in the country

An important element of work at Browndown has been to encourage young people to appreciate the heritage of Gosport and its place in the wider world

The 20th century

Throughout the two world wars Gosport continued to play its vital role of supporting the fleet and defending the nation. To the west of the town, on the Browndown army range, are some of the best preserved First World War practice trenches in the country. The northern part of the Range is criss-crossed by a series of trenches used to train troops prior to their embarkation for the Western Front.

Detailed survey has revealed two opposing front lines, each with support and communication trenches separated by a no-man's-land. This is partially overlain by a much more extensive series of less structured trenches, as well as by traces of Second World War and more recent military activity. An important element of work at Browndown has been to encourage young people to appreciate the heritage of Gosport and its place in the wider world. The project will also raise awareness of the trenches and their potential as an educational resource.

In the Second World War, Gosport's military importance and easily located coastal position made it a prime target for German bombing. However, just as the gently shelving beach at Stokes Bay led to fears of its use as an invasion site, during the Second World War the same qualities leant themselves to preparations for Operation Overlord, the Allied landings in occupied France in June 1944. >>

Above left: Browndown trenches. To the left is the site of a wartime anti-aircraft battery. © Historic England Archive. RAF Photography. RAF/540/453/RS/4185.

Above right: Pupils from Brune Park School discuss the trenches with the survey team. Photograph courtesy H Spencer

Above left: Stokes Bay, concrete matting laid to assist troop embarkation for D-Day. Photograph courtesy W D Cocroft

This included the construction of four hards and associated road ways to enable the embarkation of troops and tanks onto landing craft. The hards each consisted of a concrete apron, built between the access road and the high-tide line, beyond which a flexible mat of interlinked rectangular concrete slabs extended to the low tide line. All four aprons survive either as car parks or areas of concrete at the rear of the beach. Elements of concrete 'chocolate block' matting survive on the beach at the western hards 1 and 2. Prior to the D-Day landings one of the hards was used for the development of, and training troops in, 'Duplex-Drive' amphibious tanks.

Perhaps the most dramatic preparations for D-Day at Stokes Bay are represented by remains of two construction facilities for elements of Mulberry harbours, the floating concrete harbours which were towed across the channel to allow supplies to be landed on the Normandy beaches. Of the 147 Phoenix caissons (62 metres long by 13.5 metres wide by 10.5 metres tall) constructed nationally, 14 were made by 1400 workers at Stokes Bay. Slight traces of the construction sites survive as low earthworks and areas of concrete at the rear of the beach.

Military drawdown

Since the end of the Second World War, Gosport, in common with other towns in the south of England closely associated with the armed forces, has witnessed a large reduction in establishments, personnel and support jobs. Over the next decade further closures are planned, although support services for the Navy will continue to be a major employer.

Through the Heritage Action Zone the partners are determined to ensure the town's military heritage is a bridge to a more prosperous future. The initiative will inform decision-making, identify opportunities and raise public awareness about Gosport's Heritage ■

Above right: Earthwork remains of a D-Day Mulberry Harbour construction site. Photograph courtesy O Bayer

The authors

Olaf Bayer, PhD, MCIfA
Archaeological Investigator with Historic England.

Olaf joined Historic England in October 2015, having previously worked in academic, commercial and community archaeology for over 20 years. Olaf specialises in prehistoric landscape archaeology. Since working in Gosport he has learnt to recognise at least three different types of Second World War concrete.

Wayne Cocroft, FSA, MCIfA
Senior Archaeological Investigator with Historic England.

Wayne specialises in the investigation of modern military and industrial heritage and has published widely on these subjects.

Further information

Henriks, S 2014 *The Gunboat Yard, Haslar, Gosport: Historic Buildings Assessment*, available at: https://research.historicengland.org.uk/Report.aspx?i=15247&ru=%2fResults.aspx%3fp%3d1%26n%3d10%26a%3d4783%26ns%3d1

Phimester, J 2014 *Gosport Historic Urban Characterisation Study*, available at: https://research.historicengland.org.uk/Report.aspx?i=15786&ru=%2fResults.aspx%3fp%3d1%26n%3d10%26a%3d4996%26ns%3d1

Phimester, J 2018 *National Planning Overview for 19th Century Forts and Associated Fortifications*, available at: https://research.historicengland.org.uk/Report.aspx?i=16215&ru=%2fResults.aspx%3fp%3d1%26n%3d10%26a%3d4996%26ns%3d1

Williams, M and Bayer, O 2019 *Stokes Bay, Gosport: Five Centuries of Coastal Defences*, available at: https://research.historicengland.org.uk/Report.aspx?i=16259&ru=%2fResults.aspx%3fp%3d1%26n%3d10%26a%3d4848%26ns%3d1

Excavating an Early Bronze Age barrow

Emmets Post, on the edge of a china clay quarry on Dartmoor.

Emmets Post is the name given to a small Bronze Age barrow set high on the south-western edge of Dartmoor. The site is named after a 19th century boundary post erected on top of the barrow mound. It is surrounded by a rich archaeological landscape including Neolithic and Early Bronze Age ritual and mortuary monuments; extensive Bronze Age 'reave' field systems, enclosures and hut circles; and traces of historic settlement and more recent industry. From the medieval period onwards, extractive industries have had a massive impact on this area of the moor. Stream working, deep mining and more recently open-cast quarrying have all left their mark on this landscape.

In 2014 Oxford Archaeology (funded by Historic England and mineral company Silbelco), undertook the topographic survey and full excavation of Emmets Post barrow in advance of china clay quarry expansion. This was followed by a programme of post-excavation research funded by Historic England. >>

Looking north across Emmets Post Barrow. © Oxford Archaeology

Emmets Post: structure and sequence of construction

The topographic survey showed the barrow to be a small, steep-sided, mound approximately 10 metres in diameter with a maximum height of 1 metre. The mound was irregular in shape with a large central depression. The eponymous Emmets Post was set into the southern side of the top of the mound.

Excavation revealed that the barrow comprised four elements

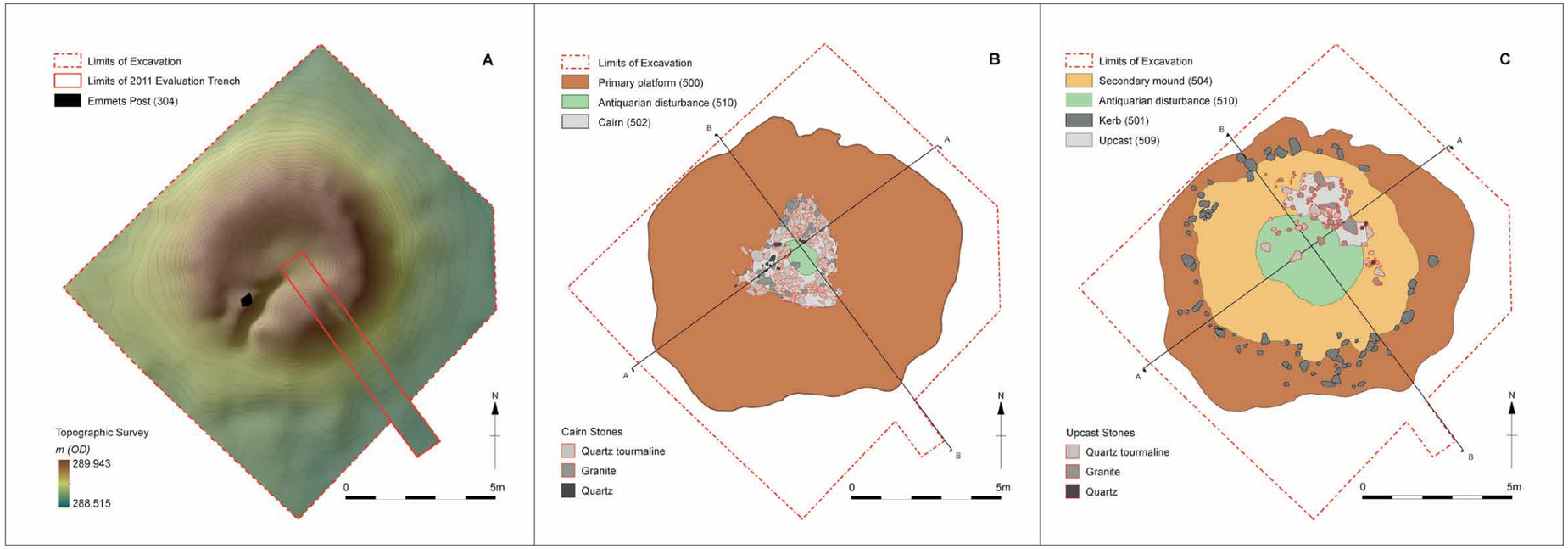
Excavation revealed that the barrow comprised four elements. The earliest consisted of a low, turf-built, flat-topped platform. Set centrally on this platform was a small stone cairn. Fragments of two Early Bronze Age Trevisker ware vessels (typical Early Bronze Age pottery from the area) and several quartz blocks were found within, or close to, the cairn. No human remains were recovered from the cairn. A more substantial turf mound covered both the cairn and most of the turf platform. The fragmentary remains of a probable kerb of granite blocks surrounded the base of the mound.

Barrows on Dartmoor are diverse in size and morphology. Whilst no close parallels exist for the entirety of the Emmets Post barrow, elements of its structure are echoed in neighbouring sites. For example, the conjoined turf-built barrows at Headon Down (Dyer and Quinnell 2013), and some of the smaller cairns recorded at Shaugh Moor (Wainwright *et al* 1979) have similar features to those of Emmets Post. Several of the cairns at Shaugh Moor and Hemerdon have phases that include kerbing (Wainwright *et al* 1979). However, none of these examples provide close parallels with the intermittent kerb enclosing the final mound at Emmets Post.

Two later episodes of activity were also recorded. The mound was disturbed by an unrecorded excavation which cut through the upper turf mound and into the central part of the underlying cairn, disturbing and potentially removing any centrally placed deposits. Upcast from this excavation covered the top and side of the northern quadrant of the barrow mound. The granite pillar 'Emmets Post' was inserted into a narrow steep-sided pit cut into the top of the barrow mound. >>

Left: The barrow and post before excavation (scales 1m and 2m). © Oxford Archaeology

Below: Survey and excavation plans of the barrow. © Oxford Archaeology



A: Pre-excavation topographic survey of the barrow. © Oxford Archaeology

B: Plan showing the initial turf platform and cairn. © Oxford Archaeology

C: Plan showing the final barrow mound and kerb, and the undated excavation with associated upcast. © Oxford Archaeology

Dating the barrow

It had been hoped to construct a detailed chronology for the construction and development of the barrow mound. However, this was prevented by the presence of both already-old 'residual' material within the turves used to construct the barrow, and of more recent 'intrusive' material introduced into the barrow by the unrecorded excavation, or by roots/animal burrows.

By comparison with dates from excavated examples of similar monuments, and the presence of Trevisker ware pottery, a single date of 1750-1560 cal BC is indicated for the base of the turf platform. This date was determined using radiocarbon analysis, incorporating the variations, or 'wiggles', in the carbon content of the recovered organic materials. The date is likely to establish the date of construction for the monument.

An earlier group of dates from the site spanning the third and earliest second millennia BC suggest several episodes of burning during the late Neolithic and Early Bronze Age caused either by wild fires or possibly by deliberate burning to improve grazing.

The single date of cal AD 1430-1610 from the centre of the cairn is probably too early for the unrecorded barrow excavation. Most antiquarian investigations on Dartmoor were undertaken between the mid-18th and early 19th centuries and it is likely that the dated sample comprised old material that was inadvertently introduced during a later excavation.

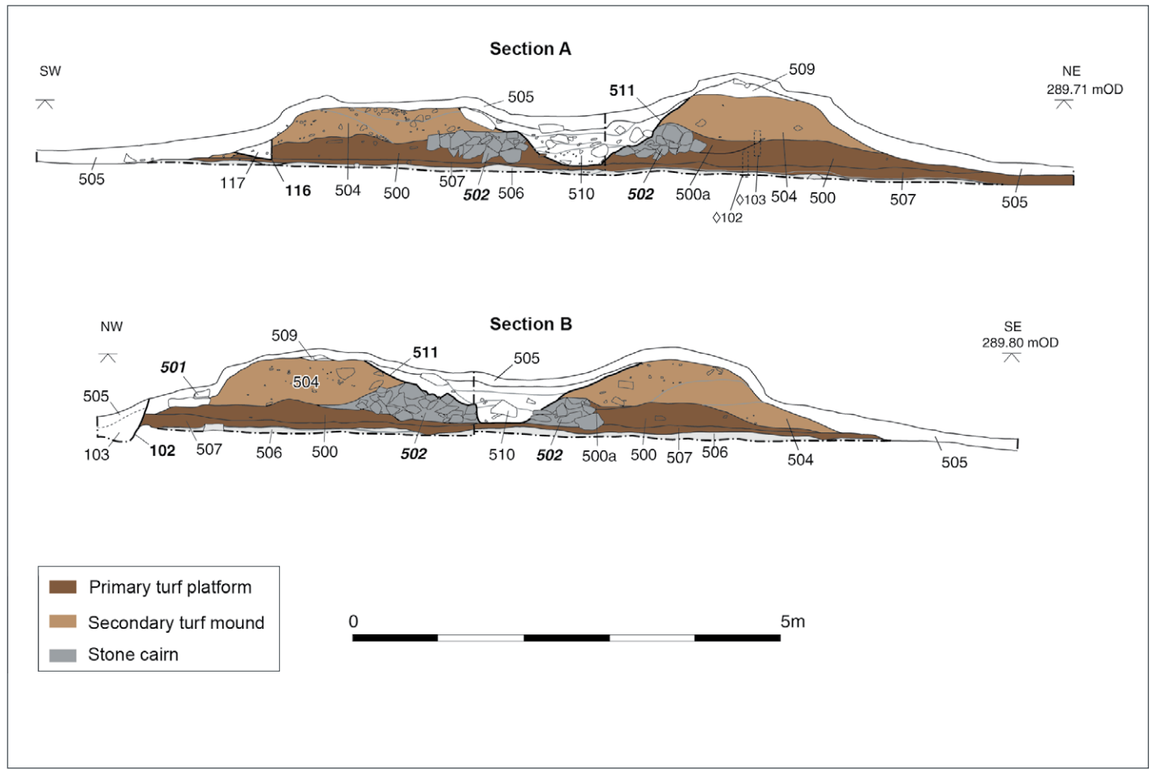
How the barrow was constructed

Microscopic analysis suggests that the underlying land surface was stripped of its turf before the construction of the barrow. Occasional lenses of fine granitic gravel observed during the excavation of both the platform and mound are likely to represent the weathered surface of the underlying bedrock adhering to the base of individual turves. Variation in the frequency of these lenses (implying different thicknesses of turf) and in their geological composition, suggest that the turves used came from several sources.

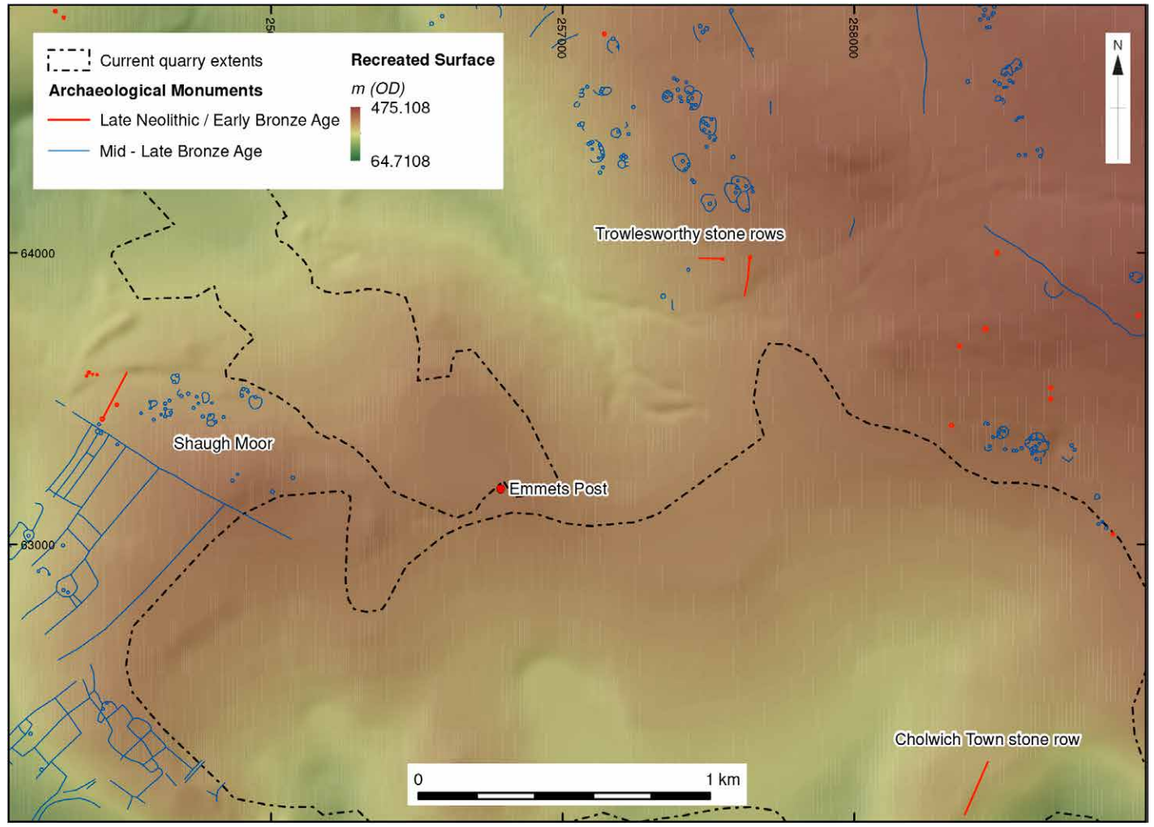
A significant aspect of the cairn is the selection of materials used in its construction. The cairn is made up of quartz tourmaline blocks, with much smaller quantities of granite blocks. Quartz tourmaline is a grey/blue mineral that exists as an infrequent vein material running through the underlying china clay deposits. Whilst it is occasionally present locally as surface stone, it is much less common than granite. The proportion of quartz tourmaline used therefore suggests that it was deliberately selected, potentially indicating a particular significance or association attached to this material by the cairn's builders. >>

A significant aspect of the cairn is the selection of materials used in its construction

Above left: The barrow during excavation (scales 2m).
© Oxford Archaeology



Above right: Sections through the barrow mound.
© Oxford Archaeology



Above left: Emmet's Post in its pre-quarry landscape. © Oxford Archaeology. Archaeological features after Butler 1994, topography derived from © NERC and © Ordnance Survey data

Above right: Emmet's Post (scales 1m and 0.25m). © Oxford Archaeology

The barrow in its landscape setting

Examination of both preserved pollen and carbonised plant material samples taken from all phases of the barrow indicate that it was built in rough heather moorland with scrubby hazel vegetation.

In this relatively treeless environment, sightlines would have been virtually uninterrupted and the monument would have been a prominent landscape feature, particularly after it was enlarged by the addition of the final mound.

The modern landscape has been drastically altered by the effects of quarrying but it has been possible to construct a model of the pre-quarry topography using a combination of present-day Lidar data and contour information from 1950s Ordnance Survey mapping. This has established that Emmets Post would have sat on an east-to-west running ridge separating the catchments of the Blackabrook to the north and the Tory Brook to the south. The barrow mound is most prominent when approached upslope across this ridge from the valley of the Blackabrook to the north east.

The mound may still have been recognised as an ancestral monument during the middle Bronze Age, when the landscape of ceremonial and funerary monuments gave way to one of domestic settlements and agriculture. The barrow would have been overlooked by the field systems and enclosed settlements on the rising ground of Trowlesworthy Warren, Lee Moor and Shell Top to the east and north east.

the monument would have been a prominent landscape feature

It is likely that the monument would have been completely hidden from the more or less contemporary field system, enclosures and cairns on Shaugh Moor, only 1 kilometre to the west, by the rising ground of Saddelsborough Tor.

Marking a boundary

By the mid-19th century the barrow and its newly erected post was used to demarcate land holding on the unenclosed landscape of the Moor. This may well reflect a longer tradition of using the mound as a boundary marker. Emmets Post is one of a series of granite pillars, some of which bear the date 1835, used to mark the boundary between the estates of Lord Morley and Sir Ralph Lopes (Brewer 2002, 232-33). The letters 'SM' for Shaugh Moor (owned by Lopes) and 'LM' for Lee Moor (owned by Morley) are carved into the north and south faces of Emmets Post respectively.

China clay quarrying on Dartmoor began on Lee Moor in 1830 (Harris 1992), and the boundary stones would have marked the northern limits of the initial china clay leases. How the post, and hence the barrow on which it stood, came to be associated with the name 'Emmet', a family that lived in nearby Shaugh Prior in the late 18th century (Hemery 1986, 211), remains unclear.

The full excavation of Emmets Post has given archaeologists a rare opportunity to reveal the complexity of one of Dartmoor's Bronze Age funerary monuments. It has also enabled us to consider its post-medieval afterlife both as focus for antiquarian excavation and as a boundary marker. Information gained here will enable a richer understanding of hundreds of similar barrows on Dartmoor and beyond. ■

The authors

Dr Olaf Bayer MA, MCIfA
Archaeological Investigator with Historic England.

Olaf is an archaeological Investigator in the Archaeological Survey and Investigation Team based in Swindon. He joined Historic England in October 2015, having previously worked in academic, commercial and community archaeology for over 20 years. In 1999 whilst working for Exeter Archaeology he undertook emergency recording at Emmets Post barrow and in 2014 whilst working for Oxford Archaeology he supervised its full excavation. He has a PhD in prehistoric landscape archaeology, and has a particular research interest in the prehistoric landscapes of south-west Britain.

Andrew Simmonds PG Dip, ACIfA
Senior Project Manager with Oxford Archaeology.

Andy has 20 years' experience in professional archaeology and has been working in Oxford Archaeology's post-excavation department since 2005. Major projects that he has been involved in include a Roman villa at Kingshill South on the outskirts of Cirencester, a late Roman cemetery at Lankhills School, Winchester, and a multi-period excavation in advance of construction of Banbury Flood Alleviation Scheme. He is currently working on the post-excavation analysis stage of an excavation of a middle Bronze Age settlement and cremation cemetery near Bridgewater, Somerset.

Ken Welsh ACIfA
Regional Manager with Oxford Archaeology.

Ken has over 20 years' experience in professional archaeology. After graduating in 1986 with a BSc (Hons) in Environmental Science, Ken worked as a geologist before transferring to archaeology in 1988. Since joining Oxford Archaeology in 1995, Ken has managed a wide range of archaeological projects, including large-scale mineral extraction schemes, housing developments, pipelines and road schemes. He was Project Manager for the archaeological fieldwork at Terminal 5 and has also been Project Manager for a number of other fieldwork projects at Heathrow, Stansted and Edinburgh Airports.

Further information

The full report on the excavation of Emmets Post is available at: https://library.thehumanjourney.net/4499/

Bayer, O Simmonds, A and Welsh, K 2017. 'Excavation of an Early Bronze Age round barrow at Emmets Post, Shaugh Prior, Dartmoor'. *Proc. Devon Archaeol. Soc.* **75**: 51-96

Brewer, D 2002 *Dartmoor Boundary Markers: and Other Markers on and Around the Moor*. Tiverton: Halsgrove

Butler, J 1994 *Dartmoor Atlas of Antiquities: volume 3 – the south west*. Exeter: Devon Books

Dyer, M and Quinnell, H 2013 'Excavation of a group of early Bronze Age monuments on Headon Down, Sparkwell'. *Proc. Devon Archaeol. Soc.* **71**: 55-80

Harris, H 1992 *The industrial archaeology of Dartmoor*. Newton Abbot: Peninsula Press

Hemery, E 1986 *Walking Dartmoor's ancient tracks*. London: Robert Hale

Newman, P 2011 *The field archaeology of Dartmoor*. Swindon: English Heritage

Wainwright, G J Fleming, A and Smith, K 1979 'The Shaugh Moor Project: first report', *Proc. Prehist. Soc.* **45**: 1-34

Left: Community archaeology. Volunteers working alongside professional archaeologists from Oxford Archaeology.

Fishing for heritage

A project to better understand
‘fishermen’s fasteners’ off the coast of Sussex.

Sussex Inshore Fishing and Conservation Authority (IFCA) carried out a project for Historic England to investigate the archaeological potential of features on the seabed found by commercial fishermen. The project looked at historic records of ‘fishermen’s fasteners’ – places where fishermen have snagged their fishing gear – alongside recent data about the seabed. It also examined the seabed using equipment employed by Sussex IFCA: the purpose was to establish whether its methods, designed to better understand seabed habitats, could also be used for archaeological purposes. Working with fishermen, several underwater heritage sites were investigated, including one site that proved to be a crashed US military aircraft.

Above: Sussex IFCA’s vessel *Watchful*. © Sussex IFCA

The project looked at historic records of ‘fishermen’s fasteners’ – places where fishermen have snagged their fishing gear – alongside recent data about the seabed.

Setting out the study area

Sussex IFCA is one of ten IFCAs around the coast of England that are responsible for managing both commercial and recreational inshore fisheries and protecting the marine environment from the impacts of unsustainable fishing activities. IFCAs are statutory local government bodies with powers and duties described within the Marine and Coastal Access Act 2009.

The District of each Authority extends six nautical miles seaward from the coastal local authorities represented in each IFCA. Sussex IFCA’s District lies on the south coast between Dungeness and Chichester Harbour. ‘Features of archaeological or historic interest’ are included within the definition of the marine environment for which IFCAs are responsible. >>

The overlap between fishing and heritage is complex.

Exploring a complex relationship

The overlap between fishing and heritage is complex. The history of fishing – one of humanity's oldest activities – is part of our heritage, contributing to the structure, character and vibrancy of coastal communities. Fishing is also a very hazardous occupation and the wrecks of many fishing vessels lie on the seabed – especially from the period of the two World Wars when fishing boats and their crews were used to protect Allied shipping from mines and attacks, suffering many casualties.

Many fishing methods rely on towing or deploying some form of net or other gear in the water column or down to the seabed and subsequently recovering the gear and the catch it contains. In so doing, there is a danger that the gear will snag on features of the seabed such as rock outcrops, but also on shipwrecks and other heritage assets. When the equipment snags there is a strong chance that gear will be damaged and occasionally lost. In fact, snagging can endanger vessels and crew, and some fishing boats have foundered – with fatalities – from snagging gear, even in recent years.

However, the same features that cause a risk of snagging are also attractive habitats for marine life and fish often gather around them for protection or to feed. Hence fishermen target these features, aiming to work their gear as close as possible to improve their catches, yet not so close that they snag.

Historically, fishermen recorded information about their 'marks' in notebooks and on paper charts. They continue to do so today, but with the assistance of GPS and digital navigation tools known as plotters. Typically, this information is not freely shared because it can be commercially valuable to competing fishermen, but there are instances where snags have been added to published charts – such as the series of Kingfisher Charts for fishermen issued between the 1960s and the 1990s.

Several of the most important historic wrecks that are designated under the Protection of Wrecks Act 1973 were first discovered because fishermen snagged their gear on them, with divers then investigating the snag to find out what caused it. Consequently, gear snags are a potentially important source of archaeological information – as too are the artefacts recovered by fishermen with their catches. Of course, such snags and recoveries also represent impacts to archaeological material on the seabed, which can be damaged and destabilised by fishing activity. It is important for archaeologists to respond to snags and recoveries not only to understand more about the remains of the past, but also to encourage fishermen to avoid places where fishing might cause damage.

Recording fishermen's fasteners

The first national database of marine archaeological sites was established for England in the early 1990s by Historic England's predecessor, the Royal Commission on the Historical Monuments of England. Information about gear snags on the Kingfisher Charts was incorporated wholesale into the new record as 'Fishermen's Fasteners' because they potentially represented archaeological sites. Some local authorities also recorded fishermen's fasteners, and this evidence was also transferred to the national record. Consequently, the national database – maintained by Historic England – contains almost 7,000 records of fishermen's fasteners.

However, nothing more is known about these places other than fishermen have recorded a snag at some point in the past. Also, methods of position-fixing at sea have – until recent years – been quite poor, especially for possibly small features encountered by fishing gear at a distance from the vessel. It is difficult, therefore, to gauge how much archaeological weight to place on these records: they could prove to indicate highly significant historic wrecks, or they might just identify small rock outcrops or other natural topographic features. There are so many fasteners recorded – with possibly imprecise positions – that diving on each of the recorded locations is not a viable approach.

Working with fishermen

Sussex IFCA's project addressed the conundrum presented by fishermen's fasteners, working within the commercial fishing sector using existing capabilities and with fishermen themselves to better understand the implications of fasteners for marine management.

Several important technical developments have occurred in how we are able to investigate the seabed since the national marine record was initiated. These include precise position-fixing using GPS, detailed topographic surveys using multibeam echosounders, and imaging using digital underwater cameras. These tools – and the data they generate– are commonly used in a variety of marine sectors including fishing, as well as by archaeologists.

The project centred on how Sussex IFCA could use these methods and data to better understand fishermen's fasteners. To help design and implement the project, Sussex IFCA employed Fjordr Limited, a small consultancy specialising in marine and coastal archaeology. >>

There are so many fasteners recorded... ...that diving on each of the recorded locations is not a viable approach

One of the fishing vessels used for the project: Graham's Doswell's *Halcyon* in Eastbourne.
© AJ Firth / Fjordr Ltd

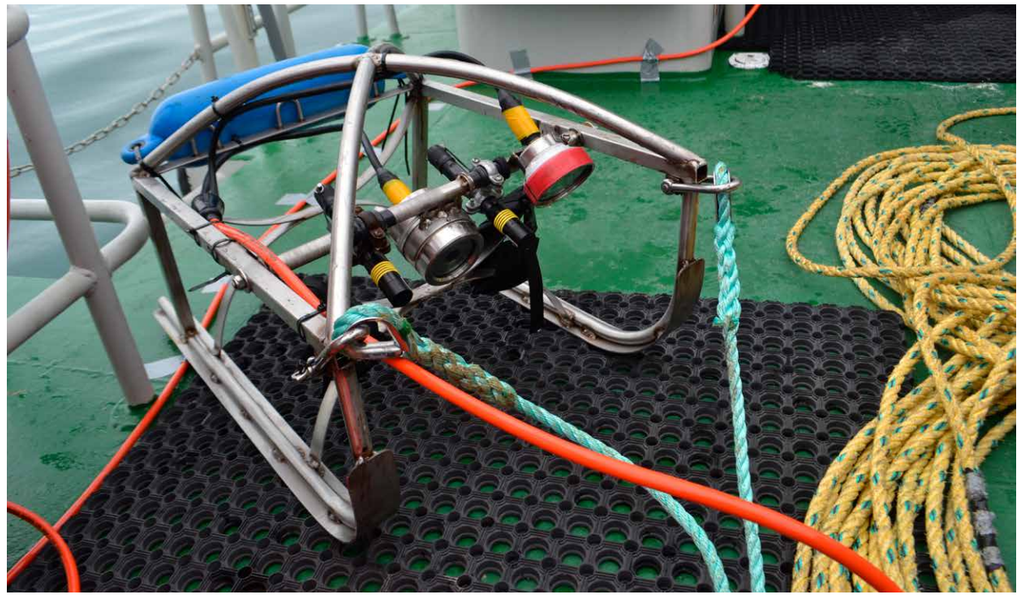
Comparing data

Part of the project was desk-based. Historic England provided data from its marine database so that fasteners could be compared to other types of record, including known shipwrecks. The fastener data was also considered alongside information about the type of seabed and information about fishing activity, to see if the fasteners were associated with rocky areas (which might imply a natural origin) or if fishing activity was still taking place in their vicinity (which might confirm the presence and position of a feature). The positions of fasteners were also compared with regional seabed topography data collected in recent years by the Civil Hydrography Programme, to see if the fasteners could be correlated with topographic features. As well as providing feedback on the character of fasteners, this desk-based work was used to prioritise a series of fasteners that could be examined through fieldwork.

Surveying the seabed

Fieldwork took two main forms: seabed survey using multibeam echosounders; and imaging the seabed using cameras deployed from the surface. Different methods of each were tried, both from Sussex IFCA's vessel *Watchful* and from hired fishing vessels. These methods are used by IFCAs to help provide the scientific basis for their management of fisheries in the district: *Watchful* is used both to conduct research activities and to support the enforcement of fisheries management measures.

Multibeam echosounders are now relatively common place. Rather than sending out a single beam of sound to bounce off the seabed and calculate its depth, a fan of beams spreads out on either side to build up a picture of the swathe of seabed under the vessel. Expensive survey-grade equipment can generate very detailed images of features such as wrecks, but smaller inshore fishing vessels use less costly 'fish finders' that work in a similar way to show the seabed together with fish



Above leftt: The video sled that is towed across the seabed. © AJ Firth / Fjordr Ltd

Above right: IFCA staff deploying the sled from *Halcyon*. © AJ Firth / Fjordr Ltd

Fieldwork took two main forms: seabed survey using multibeam echosounders; and imaging the seabed using cameras deployed from the surface

in the water column. Although working at a lower resolution, the echosounders we used aboard *Watchful* and the hired fishing vessels provided very useful data on the extent of fasteners that were represented simply as a 'dot' in the existing record, and we were able to use this data to direct the camera systems across the seabed.

Sussex IFCA was also able to deploy a survey-grade multibeam over a couple of fasteners in conjunction with another project. This aspect of the project demonstrated the archaeological value of seabed topography data acquired by IFCAs and fishermen during their work, both in confirming whether there is a feature present at the location where a fastener is recorded, and in providing preliminary information about extent, form and character that indicates whether the feature might be of archaeological interest.

Acquiring images of the seabed using a camera is used in fisheries science to characterise the type of seabed habitat – which is a product of the seabed sediments and the plant and animal species that live there. Understanding the extent and nature of marine habitats and the associated marine fauna and flora is critical to the success of future marine fisheries and conservation management, so IFCAs are involved in mapping and monitoring the habitats within their districts using underwater cameras. Our question was whether we could use the same equipment to obtain images of fasteners?

Two types of camera system were deployed: a relatively small system comprising a forward-facing video camera mounted within a stainless steel 'sled' that is towed across the seabed; and a large system with both a video camera and a still camera, plus lights, which is lowered onto the seabed to obtain high-resolution downward-facing images. Both systems relay a video picture to the surface, which can be monitored by the crew and recorded. The sled could be deployed both from *Watchful* and hired fishing vessels, whilst the downward facing camera requires quite a powerful winch arm over the side and could only be deployed from *Watchful*.

Again, the project demonstrated that with the equipment available it was possible to obtain images of features on the seabed that were sufficient to identify their character, including if they were of archaeological interest or not. The relative ease with which the sled could be deployed was an advantage, even if the resulting images were not as high resolution as the bigger drop-camera.

A further important benefit of working on the hired fishing vessels – a sea angling charter boat and an inshore fishing vessel – was the opportunity to work directly with fishermen. As well as the fasteners we targeted from our existing data, the fishermen shared information about other marks they knew about, and which we were able to examine. >>

we found a previously unrecorded metal wreck with a cargo of stone and unexpectedly relocated the crash site of a US bomber

Discovering wrecks and submerged landscapes

To test the methodologies, a variety of targets were selected including some features and wrecks that were already known and confirmed, some features whose presence was fairly certain but whose character was not known, and some features that had only been noted as 'marks'. Among the wrecks and features that were investigated, we found a previously unrecorded metal wreck with a cargo of stone and unexpectedly relocated the crash site of a US bomber that had been visited by divers in the 1970s-80s but whose position was uncertain. Among the marks shared by fishermen we examined several localised and prominent rock outcrops that are natural in origin, but which might – as underwater tors – bear further examination as former features of now-submerged prehistoric landscapes fringing the Sussex coast.

Although the periods of fieldwork were quite short – just a matter of days – they provided extremely useful feedback about the practicalities of investigating very localised targets from regular workboats. Trying to tow a video sled across the seabed so that it intercepts a relatively small feature in such a way that it will provide useful images is a tall order, bearing in mind that the underwater visibility may only be a few metres at best, and that the tidal current, wind and sea state will act on the boat, the sled and its cable in complex ways. In each case this required remarkable skill by the skippers and good teamwork by the IFCA crew and onboard archaeologist. The project bodes well for further collaboration between archaeologists, IFCAs and fishermen to improve our understanding and management of the marine historic environment ■

The authors

Antony Firth
Director of Fjordr Limited.

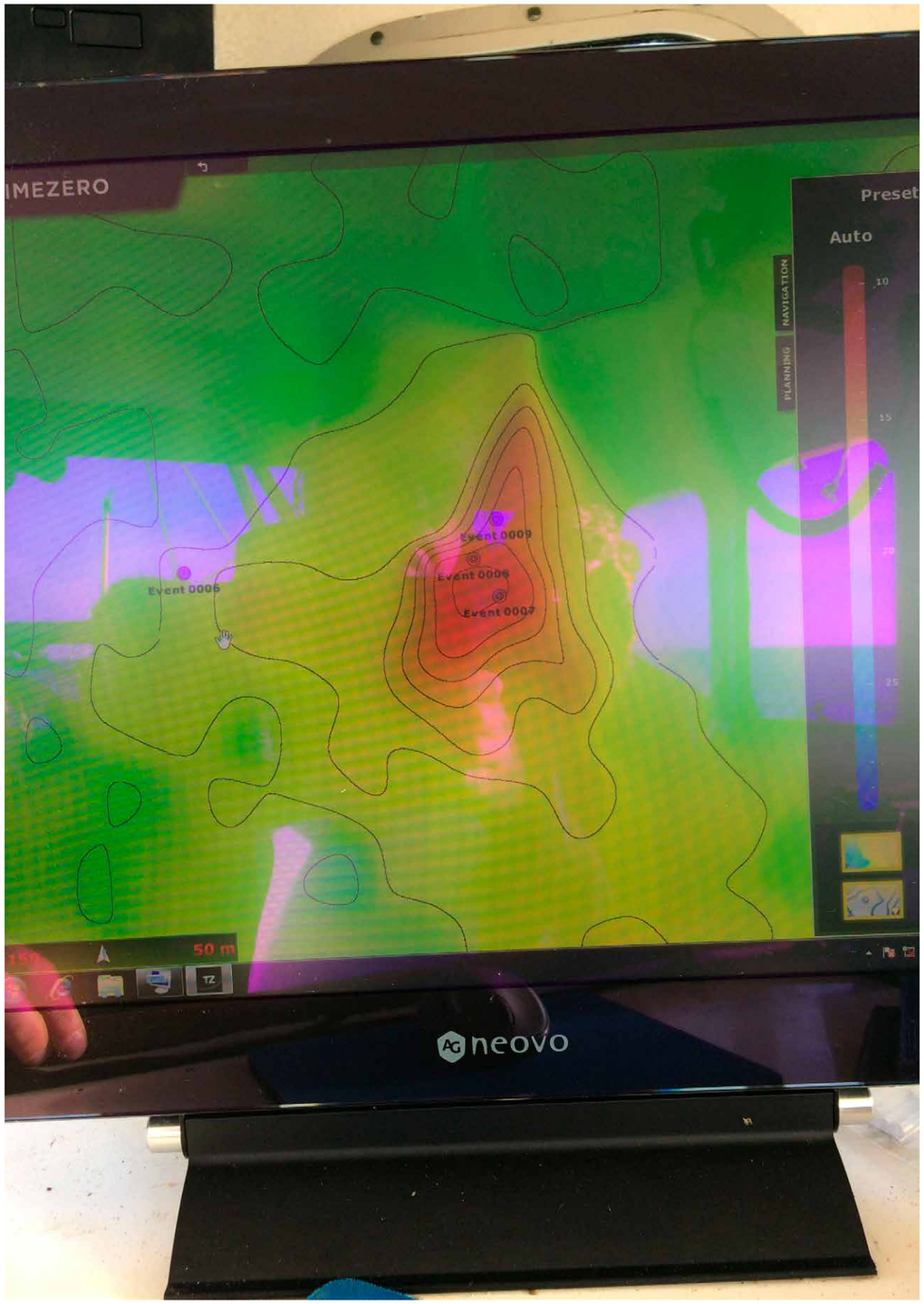
Antony started his career in marine archaeology as a volunteer diver in 1986. He subsequently combined fieldwork and research on historic wreck sites and submerged landscapes before working for Wessex Archaeology, where he was Head of Coastal and Marine until 2011. Antony established Fjordr Ltd. in 2012, specialising in strategic research and public engagement projects.

Tim Dapling
Chief Fisheries and Conservation Officer with Sussex IFCA.

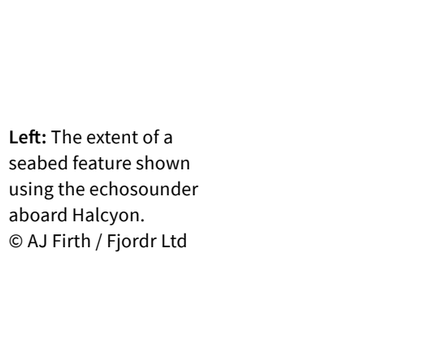
Tim studied fisheries and aquaculture at Plymouth University and Stirling University's Institute of Aquaculture. To date his career has been entirely orientated towards fisheries, with experience in the aquaculture industry and both freshwater and marine fisheries management in the public sector. He has led inshore fisheries management in Sussex for almost two decades, first with Sussex Sea Fisheries Committee and subsequently to date with Sussex Inshore Fisheries & Conservation Authority.

Further Information

Fjordr website www.fjordr.com.
Sussex Inshore Fishing and Conservation Authority website https://www.sussex-ifca.gov.uk/



Left: The extent of a seabed feature shown using the echosounder aboard Halcyon.
© AJ Firth / Fjordr Ltd



Below top: Still image grabbed from the video sled, showing the diamond-pattern tread of the tyre from a crashed US aircraft.
© Sussex IFCA

Below bottom: Still image from the video sled, showing fish around a 'mark' that proved to be a prominent rocky reef.
© Sussex IFCA

The TUV consists of a rugged metal frame with buoyancy tubes, carrying a high-definition camera, underwater lights and laser pointers to provide a scale. © AJ Firth / Fjordr Ltd

Fish and ships

Integrating heritage with habitat surveys off the Isles of Scilly.

Heritage consultancy Fjordr Ltd worked with Isles of Scilly Inshore Fisheries and Conservation Authority (IFCA) and marine ecologists from the University of Plymouth to start examining whether historic shipwrecks provide habitats for important fish species. A towed underwater vehicle was used to obtain high resolution video of a First World War wreck in deep water during a wider habitat survey for fisheries management purposes. This is a step towards understanding the role that the marine historic environment may play in providing ecosystem services in relation to nature conservation, sea angling, recreational diving and commercial fishing. >>

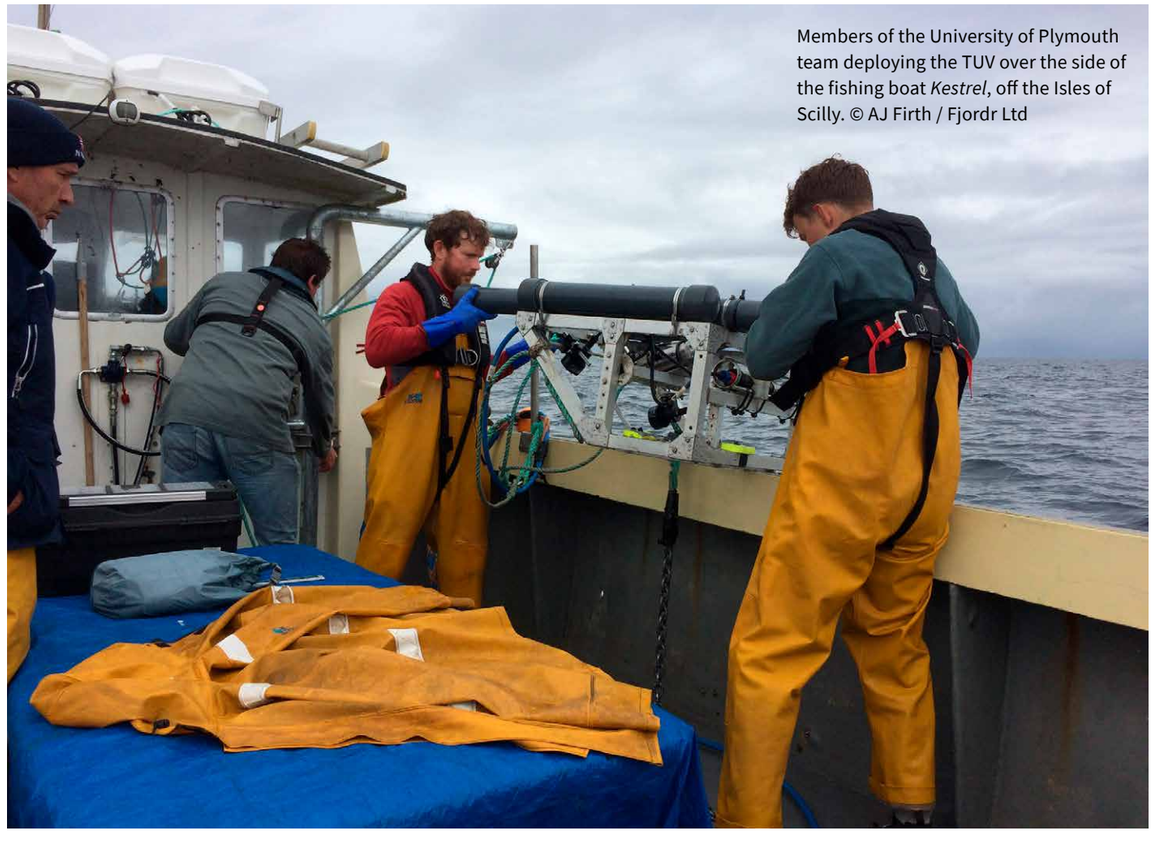
Over the centuries, countless ships have been snared around the rocky reefs and islets which make up the archipelago.

Shellfish and Shipwrecks

The Isles of Scilly, 28 miles off the tip of Land's End, are well known for their shipwrecks. Over the centuries, countless ships have been snared around the rocky reefs and islets which make up the archipelago. The wrecks are a poignant reminder of these dangers and serve as a permanent monument to the fishermen, sailors and travellers who have lost their lives around Scilly.

The last shipwreck was over 20 years ago, and today the seas around the islands are an important local fishery. Around 20 local boats use pots to catch lobster, crab and crawfish around the islands between March and November. Wrecks provide a habitat for fish and shellfish who find protection from their predators amongst timbers, boilers or disintegrating superstructures. Fishermen distinguish crabs that have been living around old metal wrecks by their very dark brown or black colour, thought to be caused by their proximity to ferrous metals.

Around the islands, the rocky seabed descends steeply and changes to a complex network of sand, shingle and low-lying reefs. Here, wrecks provide relatively rare upstanding features that offer habitat and shelter for fish and shellfish. For fishermen using nets and lines, these wrecks often become a target for bumper catches, but gear can also quickly



Members of the University of Plymouth team deploying the TUV over the side of the fishing boat *Kestrel*, off the Isles of Scilly. © AJ Firth / Fjordr Ltd

Wrecks provide a habitat for fish and shellfish who find protection from their predators amongst timbers, boilers or disintegrating superstructures.

become wrapped around their jagged edges. The Isles of Scilly IFCA is keen to understand how key shellfish species are using wrecks through their life history, and the extent to which they have an importance in the overall ecology of the Isles of Scilly and their surrounding waters.

Surveying habitats and heritage

Isles of Scilly IFCA contacted Fjordr and Historic England to explore the possibility of integrating a shipwreck survey with a seabed habitat survey that had already been planned. The survey, by the University of Plymouth, was to focus on obtaining high-definition video of transects of the seabed; still images from the video could then be examined for the species represented in the images. The results would then be mapped – together with sediment samples and the results of a geophysical survey carried out previously by Cornwall IFCA – to indicate the extent of different seabed habitats. The video would be obtained using a towed underwater vehicle (TUV) deployed from a fishing boat.

The buoyancy of the TUV is balanced so that it 'flies' a little above the seabed while video images are transmitted through an umbilical cable to the surface, where they can be monitored and recorded. >>

The TUV flying over the seabed, photographed during an earlier survey. © University of Plymouth

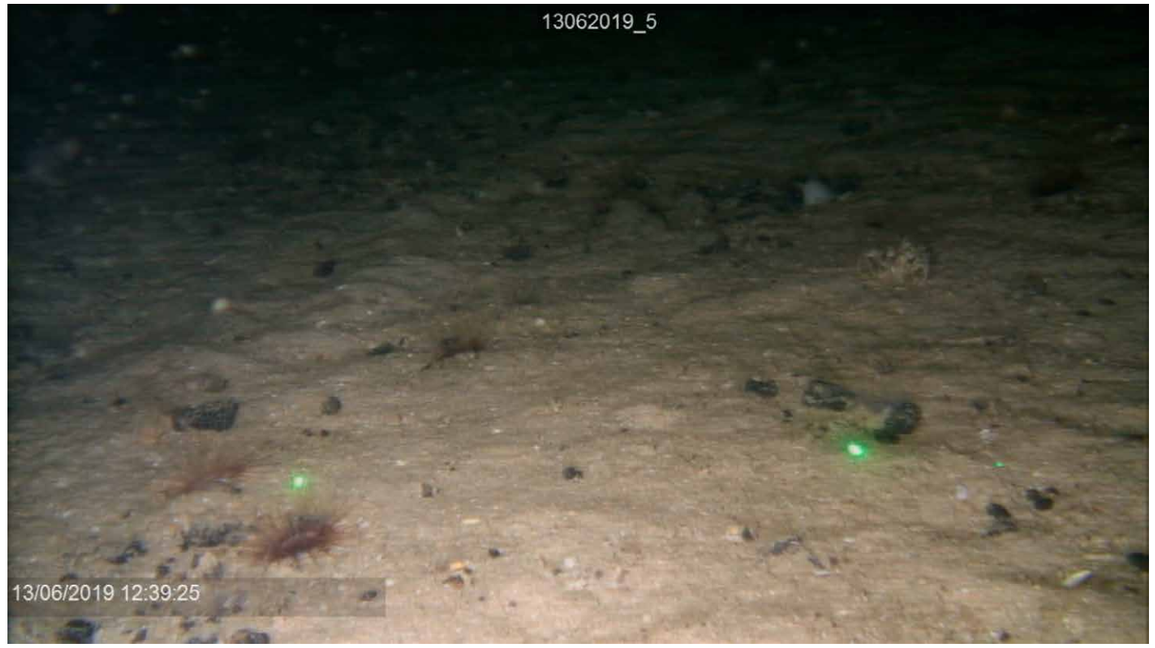
Three targets were examined: one known wreck and two anomalies.

Prior to the survey, desk-based information was collated about wrecks in the survey area from Historic England's maritime record and other sources. Bathymetric data – which indicates the topography of the seabed – was also scanned to identify localised anomalies that might prove to be shipwrecks. The seabed in the survey area is quite deep – typically 70-80 metres – so there are relatively few known wrecks despite the number of losses closer inshore. Several 'targets' were identified, including both known wrecks and more ambiguous anomalies.

Unfortunately, poor weather intervened in June 2019 when the archaeological element was due to take place, so the surveys directed towards wrecks had to be concentrated into one available day. Nonetheless, the method proved successful. Three targets were examined: one known wreck and two anomalies. In all three cases it proved possible to fly the TUV sufficiently close to the target

Above left: Plumose anemones and hydroid/bryozoan turf covering the upstanding remains of the wreck of the SS *Beechpark*, torpedoed by a U-boat in August 1917 whilst carrying coal and coke from Newcastle to Port Said. © University of Plymouth

the wreck had a dense cover of marine life, including plumose anemones, Devonshire cup coral, dead men's fingers, encrusting sponges and 'turf'



Above right: The seabed surrounding the wreck of SS *Beechpark* is flat and sandy, with a scatter of coal fragments from the ship's cargo or bunkers. © University of Plymouth

to obtain video of sea life on the seabed and in the water column. This was no mean feat given the water depth and the localised character of the targets, reflecting the skill of the skipper and diligence of the University of Plymouth team.

One anomaly – which appeared in the bathymetric data to be the shape and size of a classic 'three island' cargo ship – proved to be an outcrop of boulders. The other anomaly was characterised by more broken rock which again seemed more likely to be natural than a cargo. Fortunately, the known wreck was very definitely a shipwreck – the SS *Beechpark*, torpedoed in 1917 – and was successfully imaged in 90 metres of water. In contrast to the surrounding sandy seabed, the wreck had a dense cover of marine life, including plumose anemones, Devonshire cup coral, dead men's fingers, encrusting sponges and 'turf' made up of hydroids and bryozoans (encrusting animals that form a kind of moss underwater). >>

this piece of work demonstrated that methodologies for mapping seabed habitats could be combined with archaeological objectives, even in exacting conditions

The presence of these species indicates that the wreck is providing a hard surface that can be colonised, increasing the structural complexity of the habitat and attracting fish species such as the shoal of poor cod recorded on the approach to the wreck.

Although its scope was quite limited, this piece of work demonstrated that methodologies for mapping seabed habitats could be combined with archaeological objectives, even in exacting conditions. It showed that it is possible to capture robust ecological data from historic wreck sites with equipment deployed from the surface using a relatively small vessel. Being able to quickly clarify the character of topographic anomalies – which might in other circumstances prove to be unrecorded wrecks – was also an advantage.

Shipwrecks as habitats

Management of the marine environment is increasingly discussed in terms of the benefits that it generates for society, framed as 'ecosystem services' arising from 'natural capital'. As part of a wider set of case studies for Historic England, Fjordr has been examining historic shipwrecks in terms of natural capital and the ecosystem services that are obtained through nature conservation, sea angling, recreational diving, commercial fishing and so on. Survey data on the character of shipwrecks as habitats is necessary to understand the contribution that marine heritage assets make to the biodiversity and productivity of our seas, and to the coastal communities that depend on them. The success of this trial is an important step towards more extensive interdisciplinary research that will help Isles of Scilly IFCA to achieve long-term sustainability of its local fisheries whilst conserving and enhancing the marine environment ■

The authors

Antony Firth
Director, Fjordr Limited.

Antony started his career in marine archaeology as a volunteer diver in 1986. He subsequently combined fieldwork and research on historic wreck sites and submerged landscapes before working for Wessex Archaeology, where he was Head of Coastal and Marine until 2011. Antony established Fjordr Ltd. in 2012, specialising in strategic research and public engagement projects.

Tom Hooper
Chief Fisheries and Conservation Officer, Isles of Scilly IFCA.

Tom is responsible for scientific and enforcement matters at the Isles of Scilly Inshore Fisheries and Conservation Authority.

Emma Sheehan
Senior Research Fellow, School of Biological and Marine Sciences.*

To inspire and inform ambitious marine policy and management, Emma leads a research group, www.sheehanresearchgroup.com, that uses non-destructive techniques to assess the effectiveness of spatial management for species and habitats over large spatial and temporal scales.

*(Faculty of Science and Engineering), University of Plymouth

Picturing construction, constructing identity

Research into the John Laing Photographic Collection.

Architectural history student Tony Presland gives us a preview of his developing research into the John Laing Collection, which is being curated and made accessible by the Historic England Archive. >>

Craggs School, Rosley, Cumbria, the earliest photograph identified to date in the Collection, the school was renovated by Laing, J Wilkinson circa 1872. © Historic England Archive John Laing Collection, JLP01/20/012/2

Laing was instrumental in the creation of a ‘modern Britain’ following the cessation of hostilities after the Second World War.

In architecture early photography found the perfect subject matter, something that was static, allowing exposure times of minutes or hours as necessary to enable an image to be captured using the materials available with their very limited sensitivities. It is thus natural that photography has played a vital part in architectural history and this is nowhere more evident than in the John Laing Photographic Collection.

The development of the collection

The company that would become John Laing and Son Ltd was founded in 1848 and by the early 1890s was already making use of photography to record the works that it was undertaking. Over the course of its 170-year history the company would go on to build a photographic record of the business and its output that would grow to more than 230,000 prints and negatives. The photography started to be more formally managed as an archive from 1985 when the company’s first archivist started work to bring this information together.

A report by English Heritage – now Historic England – notes that there are few photographic collections created by a single company which have such scope and breadth, and that ‘the collection contains unique visual evidence of twentieth-century structures and construction methods’ (Little and Bevan 2013).

Exploring what stories the archive tells

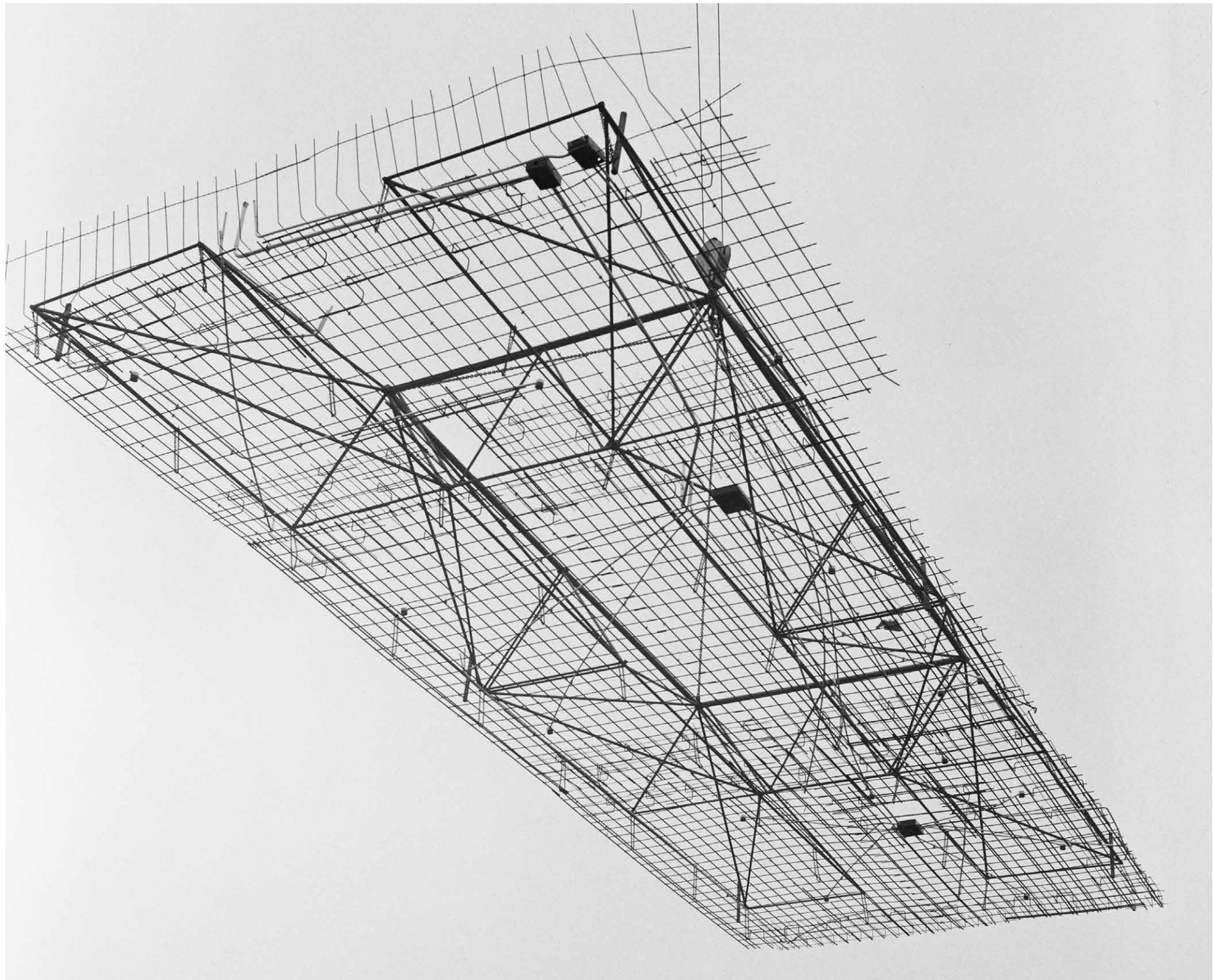
While significant research has been undertaken on some aspects of the company’s output, most notably the M1 motorway, no research has been carried out on the Collection as a whole (Merriman 2007; Wall *et al* 2012). This has given me the opportunity to undertake a PhD based on this rich source of material which combines architectural and construction history woven through discussions on photographic representation and archival theory.

An important part of this work will be to understand the story that this archive tells and how that story may be a reflection of Laing’s corporate goals rather than a complete and comprehensive account of all its works. To test this argument the Collection will be compared to other archives which deal with similar subjects such as the S. Pearson & Son archive which provides an alternate view to the work carried out by Laing at Gretna in World War I (Santana 2018). It will be important to understand what processes may have been in place to determine which documents were preserved and, if possible, how decisions were taken on what to capture. Harley’s idea that ‘silences could be regarded as positive statements and not merely as passive gaps’ is useful in this regard (Johnson et al, 2017).

In particular I will argue that Laing was instrumental in the creation of a ‘modern Britain’ following the cessation of hostilities after the Second World War. The company was involved in many large-scale works and a wealth of domestic architecture from housing estates to shopping parades and industrial estates, often using innovative building techniques and materials.

The Collection demonstrates how the company documented these works and created both an external and internal identity which foregrounded the ideas of teamwork permeating all aspects of the business. Laing appears to have been conscious of the power of brand from an early stage and workers and machinery feature the company logo prominently. >>

Above: View of excavators at work during the construction of the M1 motorway circa 1958-9 © Historic England Archive John Laing Collection JLP01/10/00113



Above: Sectra Multi-story flats, Haywood, Lanarkshire, Slab reinforcement being lifted by special device, 1963 © Historic England Archive John Laing Collection JLP01/114 / 65161

An engagement programme is being delivered as part of the Breaking New Ground project to raise awareness in different audiences.

Heritage as part of corporate identity has been defined as including 'corporate competencies, cultures, philosophies, activities, markets and groups etc. and may find, in addition, expression in distinctive visual identities, architecture and service offerings' (Balmer 2011: 1385). The yellow colour that was a cornerstone of the Laing logo was considered so important that it was retained for the combined Laing O'Rourke company on merger in 2001.

I am interested not only in the images themselves but also in the process by which they came into the Collection, considering the nature of archives generally and photographic archives more specifically. For example, within Laing, what protocols were used for accessioning, attribution and managing its archive?

Also important is the idea of an archive constantly being refreshed though its use in many contexts, not least the ongoing digitisation and cataloguing of 10,000 images from the Laing Collection as part of Historic England's *Breaking New Ground* project. This project will make the images accessible to the public through the enhanced archive search facilities on the Historic England web site.

Breaking new ground

An engagement programme is being delivered as part of the *Breaking New Ground* project to ensure that different audiences learn about the Collection. Historic England staff and former Laing employees have visited school children in Swindon, Bristol, Coventry and London to explain how Laing shaped the built environment of the students' local areas. Three films are being made which will detail these interactions. In addition to this, a short film entitled 'Building Britain' has been commissioned; this will include interviews with former Laing employees at iconic Laing sites such as the Barbican and the Second Severn Crossing. >>

I am interested in how the photography of construction and architecture can be viewed as both human and inhuman.

Changing forms of representation

I will be considering how the Collection demonstrates changing forms of representation. Aesthetics, the use of colour and the evolving technical landscape all offered photographers opportunities to approach their subject in an increasing variety of angles and approaches. This will be linked to considerations of whether the types of buildings being documented impacted the way in which they were represented.

Much of the Laing Collection can be characterised as progress photography, and its ability to act as a record will be considered, linking the photography of individual architecture to a wider documentary approach. Photography has been viewed as 'truth', with photographs 'seen to have the force of evidence: they are taken to be unmediated conveyers of architectural experience' (Higgott and Wray 2012, 2). I will be exploring this idea, linking it to considerations of a wider documentary photography practice by looking at work such as Eugène Atget's record of Paris and Berenice Abbott's work in New York (Nesbit 1992; Weissman 2011).

I am interested in how the photography of construction and architecture can be viewed as both human and inhuman. Buildings are primarily built for human habitation but much of construction photography, and indeed also more general architectural photography, is relatively devoid of people. But buildings, and records of buildings, tell stories, and Elizabeth Yale makes the important point that archives allow a range of histories to be told depending, on the desired message or outcome, suggesting that 'archives and archival practices have stood at the heart of empires, nations, commercial companies, and religious orders, institutions that have defined the modern world' (Yale 2015, 333). >>

Above: View of Preston Bus Station showing the south east side and ramp entrance into the multi storey car park 1969 © Historic England Archive John Laing Collection JLP01/08/082563

The material that is retained in the Collection is the result of a series of survivals

Using this idea I will consider how the Laing Collection sits at the heart of our understanding of the company, what image the company wished to project and whether alternative narratives can be constructed from the Collection to complement the company's version of the building of modern Britain.

Joel Smith describes how 'the history we inherit in buildings is no comprehensive archive' but a 'patchwork of survivals, a discontinuous and evolving collage' (Smith 2011,14). The material that is retained in the Collection is the result of a series of survivals and understanding what is missing may help us understand what was important for the business at many stages in its history and offers a unique perspective on an important period in architectural history.

Peter Burke suggests that images allow us to 'imagine the past more vividly' and research into photographic archives of the built environment can take advantage of that power and it is hoped that this research may provide insights for others looking to investigate photographic archives, especially those relating to a single business, by describing the strengths and weaknesses of such archives as an historical source (Burke 2011, 13) ■

The author

Tony Presland MSc MA MSt
Head of IT with Historic England.

Tony is a part-time doctoral student with interests in a wide range of subjects from Victorian portrait photographer Julia Margaret Cameron to the Boeing B-314, the first commercial transatlantic passenger aircraft. He is currently studying Architectural History at The Bartlett School of Architecture, University College London.

Contact Details
Tony.Presland.18@ucl.ac.uk
https://www.ucl.ac.uk/bartlett/architecture/tony-presland

Further information

For more information on the John Laing Photographic Collection see Historic England's Breaking New Ground project at https://historicengland.org.uk/images-books/archive/new/breaking-new-ground-project/ and images from the Collection can be found at: https://historicengland.org.uk/images-books/photos/results/?searchType=HE+Archive+New&search=Jlp01&filteroption=images

Balmer, J M T, 2011, 'Corporate Heritage Identities, Corporate Heritage Brands and the Multiple Heritage Identities of the British Monarchy', *European Journal of Marketing*, 45, 1380-98

Burke,P Eyewitnessing: *The Uses of Images as Historical Evidence*, (Ithaca, NY: Cornell University Press, 2001)

Higgott, A and Wray,T, 2012, *Camera Constructs : Photography, Architecture and the Modern City*, Burlington: Ashgate Pub. Co.

Little, H and Bevan, K, 2013, 'John Laing Plc Collection Project Report', Swindon: English Heritage, 2013

Johnson, V, Fowler,S and Thomas, D 2017 *Silence of the Archive*, (London: Facet Publishing) p. xx

Merriman, P, 2007, Driving Spaces: *A Cultural-Historical Geography of England's M1 Motorway.* Oxford: Blackwell

Nesbit, M 1992, *Atget's Seven Albums*. Yale University Press

Santana,N 2011 *'Engineering and the Corporate Photographic Archive'*, (Royal Holloway, 2018)

Smith, J, 2011, *The Life and Death of Buildings: On Photography and Time*. Princeton, N.J.: Princeton University Art Museum; New Haven

Wall, C, Clarke, L, McGuire, C and Muñoz-Rojas, O, 2012, *Building the M1 Motorway*. London: University of Westminster, PRoBE

Weissman, T, 2011, *The Realisms of Berenice Abbott: Documentary Photography and Political Action*. Berkeley, Calif.; London: University of California Press

Yale, E, 2015, 'The History of Archives: The State of the Discipline', *Book History*, 18, 332-59

Historic England