

Forgotten Wrecks of the First World War: examining the significance of merchant ship sites

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Abstract: The large numbers of merchant vessels lost off the south coast of England during the First World War were investigated during a major study undertaken during the centenary of the war. This study analysed archaeological and historical data to understand how the collection contributes to the understanding of themes related to warfare, ship technology, international trade and personal experiences. Recognising that none of these merchant vessels are protected by heritage legislation, case study examples were used to test the application of the criteria for ascribing significance within the available protection mechanisms.

Detailed review of two average sized cargo vessels, *Eleanor* and *Camberwell*, and two larger passenger-cargo liners, *Medina* and *Alaunia*, considered their individual stories to reveal a range of rare, unique and highly significant attributes. The process revealed how current approaches to significance assessment struggle to capture elements related to late nineteenth- and early twentieth-century shipwrecks, particularly their international significance and their commemorative importance.

Introduction

During the First World War, the global transport and supply network which fed, fuelled and sustained civilian and military populations was key to supporting both Britain and the Central Powers. As a result, the most intense naval warfare took place in the English Channel, in the Western Approaches of the Atlantic and in the North Sea. A high proportion of ships lost in the area were merchant vessels (Friel 2003: 237; for further detail, see MacNeile Dixon 1917; Hurd 1921–1929; HMSO 1976).

This chapter explores the application of current UK approaches to the assessment of significance to First World War cargo wrecks and the effectiveness of this methodology to reflect fully the historical and social context of the ships. It utilises the results of the Forgotten Wrecks of the First World War project, which investigated a collection of over 1,000 wrecks off the south coast of England and demonstrated the diversity of ships and shipping and the magnitude of the conflict. Within the dense and complex dataset, there are many merchant ship losses which have historically been grouped together as ‘cargo vessels’. This somewhat reductive term masks the potential for these modern wrecks to add to the understanding of social, economic and political themes at a range of scales, from the perspective of individual vessels to the group value for informing on warfare tactics and outcome, as well as the movement of goods and people transnationally during conflict.

The ascribing of significance is examined through four case studies: the *Eleanor*, which carried a unique wartime

cargo and held personal connections for commemoration; the *Camberwell*, which carried a cargo destined for British interests in India; the *Medina*, which carried a colonial Governor’s possessions and has been subject to modern salvage interests; and the *Alaunia*, which had an unusual engine type and had been involved with troop transport for Gallipoli and from Canada. They represent the merchant fleet which kept Britain running at a time when it was part of a global empire.

Each case study wreck provides a unique expression at a micro-level, with their physical remains providing perspectives different from the historical record. Research demonstrates how a more holistic approach to their interpretation can illustrate themes within the late nineteenth and early twentieth centuries, allowing them to be placed within their full historical context of the evolving systems of colonialism and capitalism, as well as reflecting developing ship technology. They also demonstrate issues related to heritage management of modern ships in UK waters; many historic wrecks are currently unprotected and vulnerable. The protective legislation which could be applied to these wrecks and the associated criteria for assessing significance are explored, highlighting areas within this system where modern ships are not well served.

First World War wrecks off the south coast of England

Between 2014 and 2018, a major study of First World War wrecks off the south coast of England was undertaken (Forgotten Wrecks of the First World War 2023). It coincided with the centenary of the war and aimed to

raise the profile of the maritime archaeological resource. Despite hundreds of centenary projects being delivered, very few concentrated on maritime aspects of the war. The *Forgotten Wrecks* project did not focus on the major naval battles of the war at sea, but instead considered everyday maritime activity from close to the shore to out in the English Channel.

Project delivery included engaging volunteers, working within a framework managed by Maritime Archaeology Trust staff, and the research and investigation of sites and artefact collections. The resulting information built an understanding of individual wreck sites and the wider south coast resource. The dataset of over 1,000 wrecks included ocean liners, merchant vessels, fishing trawlers, submarines, troop and hospital ships, naval and commercial ships. Each of these sites is not just a ‘dot on a map’, but each has its own fascinating story of activity and diversity.

The dataset is publicly available through an online viewer through which it is possible to interrogate the wreck collection (*Forgotten Wrecks of the First World War Interactive Map 2023*). Accessible information includes vessel statistics on construction, ownership, use and build, archaeological site reports, geophysical survey images, videos and 3D models. Options for filtering the data by factors such as ship type, nationality, year of loss and associated archive support a range of potential research questions on a wide variety of themes and data attributes.

The project outputs provided the first opportunity for the collective analysis of First World War wrecks in the study area. Analysis of losses by year (Figure 15.1a) reveals the very large numbers lost in 1917, resulting from the campaign of unrestricted submarine warfare and its devastating impact on shipping losses (Couper 2000: 110; Friel 2003: 238; Greenway 2009: 43). The nationalities of the ships are shown in Figure 15.1b; 67% of the losses are British, which would be expected, considering the location of the study, the size of the British shipping fleet and the density of the traffic in the area. The next most numerous of losses by country are Norwegian, at 10% of the collection; this reflects Norway’s large merchant fleet which was active during the war, with almost half of their fleet being lost during the war years. Although officially neutral, their ships were targeted by submarines due to continued trade with Britain. Norwegian ships were allowed to join British convoys, and a number of Scandinavian countries lent ships to Britain in return for coal and food, and these vessels were under the control of the British Shipping Controller (Cant 2013: 85). From 1917, there were increasing numbers of Norwegian ships on the coal route from Wales to Normandy (Koren 2021: 545–560). Although this was less exposed than the North Sea, a significant number of vessels were lost. A similar percentage of ships are of French and German nationality, with the remaining 10% falling within the category of ‘Other’, including American (11), Australian (1), Belgian (13), Canadian (4), Danish (13), Dutch (14), Greek (5),

Irish (6), Italian (14), Spanish (9), Swedish (6), Uruguayan (1), Portuguese (3), Russian (2) and Brazilian (1), with some whose national affiliation is unknown. Although the vessels were owned by a particular nation, those onboard the ships were often from diverse global locations (Parham and Maddocks 2013: 199). Crews often included sailors and mariners from a number of countries; for example, the British merchant marine navy was recorded as having 30% ‘foreign’ crews (Hughes 2018).

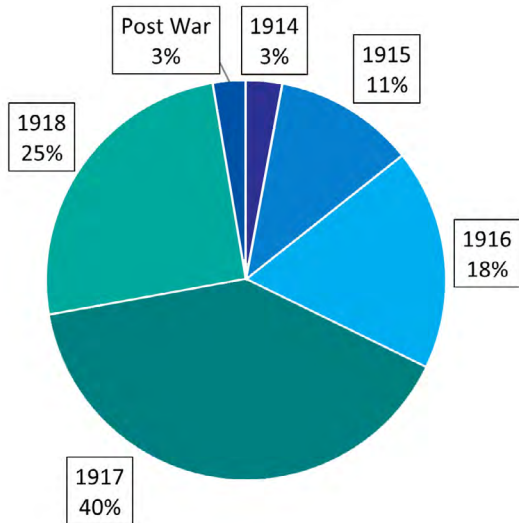
Review of vessel type, shown in Figure 15.1c, reveals a large number of steamships (57%). Twenty-three percent of the collection are sailing vessels, demonstrating there were still a significant number of sail-powered vessels being used for a range of purposes during this period. They varied in size from smaller fishing vessels to large metal-hulled sailing ships. The military vessels represented include warships, submarines, torpedo boats and destroyers, which reflect the naval aspects of the war at sea, while other interesting examples include paddle steamers and sail-steamers.

The vessels were being used for a broad range of functions at their time of loss (Figure 15.1d). Nine percent were fishing vessels, many lost while working to maintain food supplies (Robinson 2019). Four percent were minesweepers, casualties of what was a highly hazardous task during the war (Historic England 2016). Eight percent were in use for general military purposes, with a wide range of additional military functions represented under the category of ‘other’, which includes ships classed as passenger, pleasure cruiser, troopship, hospital ship, Q ship, tender, minelayer, patrol vessel, auxiliary patrol, blockship, anti-submarine net vessels, seaplane carrier and net layers. Sixty-six percent of the collection are categorised as ‘commercial’, showing the huge losses within the merchant vessel fleet; this group of cargo vessel losses provides the broad context for the four case study ships being examined in relation to significance.

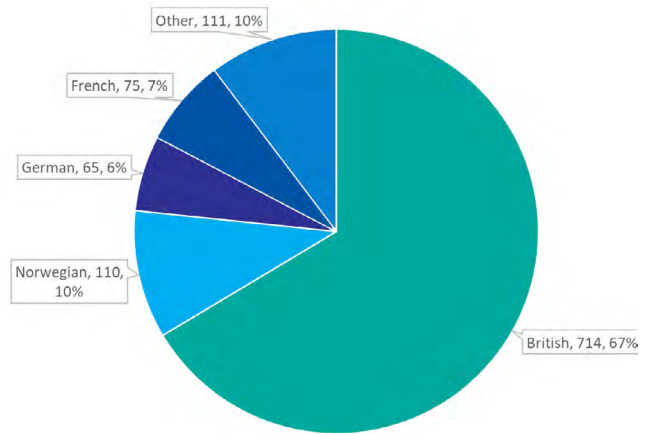
Merchant ship losses

In 1914, 60% of the food consumed in Britain arrived by sea (Friel 2003: 236). The merchant fleet kept the country running, with everything necessary for the war—from troops and munitions to materials and intelligence—being moved by sea. Britain was not an island nation going to war, but a global empire which was truly maritime (Parham and Maddocks 2013: 199). Although some larger cargo vessels were armed, many, particularly the smaller vessels, relied upon convoys, vigilance and avoidance techniques (Preston 2000: 54). The merchant mariner communities continued to work through the war, risking their lives. However, the number of merchant ships lost indicate the hazardous nature of this occupation.

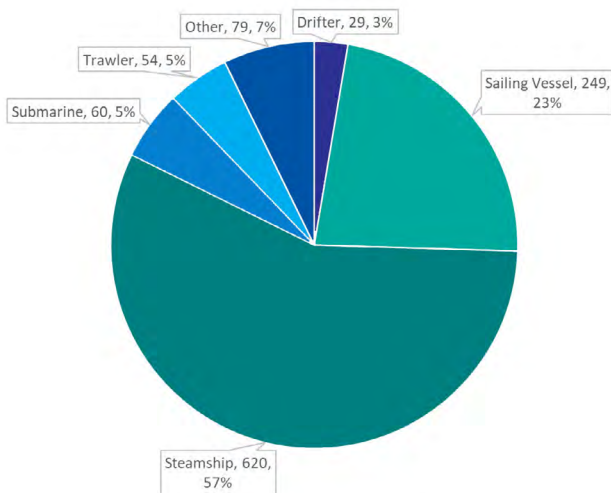
Examining the distribution and characteristics of the merchant ship losses (Figure 15.2) exhibits relatively similar distribution of steamship losses and sailing ship losses, with a small number of steam-sail vessels. Clusters



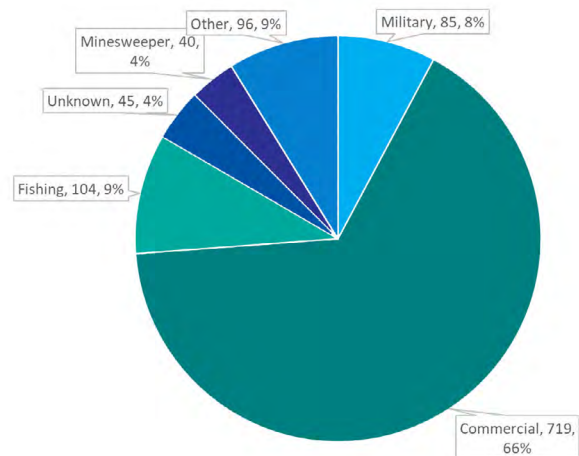
1a: Vessel losses by year



1b: Nationality of vessels



1c: Types of vessels



1d: Use at time of loss

Figure 15.1. Statistics on vessel losses within the Forgotten Wrecks of the First World War project area: (a) vessel losses by year; (b) nationality of vessels; (c) types of vessels; (d) use at time of loss. Maritime Archaeology Trust.

within this data are evident at the main headlands of the southwest coast of England, where there are concentrations of losses around the initial landmass which ships first encounter when heading to the English Channel. Filtering these data for the cause of loss displays concentrations of vessels mined in and around the Dover Straits and a less dense cluster to the east of the Isle of Wight. Many vessels were torpedoed, and these have a wide distribution across the area, with some concentrations off the main peninsulas of the southwest. There is a relatively even distribution of ships which were scuttled within the area ranging from off the county of East Sussex, moving west through the study area. The distribution patterns reveal the impact of a range of warfare tactics; losses in areas which were mined

differ from those in areas where submarines were actively hunting shipping.

Examining the collection for steam-powered merchant ship losses reveals that, in terms of nationality, they tend to mirror the collection as a whole, with British ships making up 63% of the total, with an even higher proportion of Norwegian vessels at 18%. The tonnage of the ships as shown in Figure 15.3a demonstrates the highest numbers are between 1,000 and 1,500 tonnes, with numbers of vessels of greater tonnage decreasing as the ship size increases. Most vessels in the collection are under 4,500 tonnes. A review of the decade in which ships were launched, Figure 15.3b, reveals examples of earlier steam

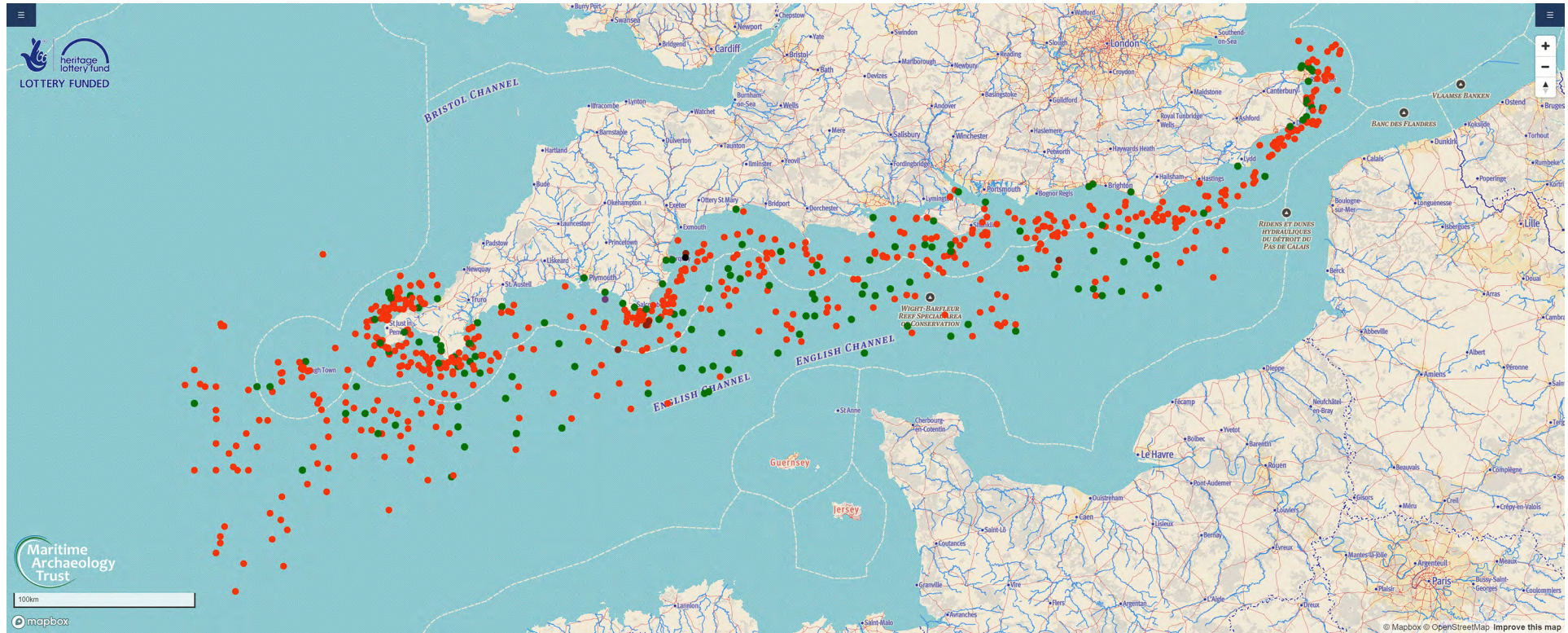
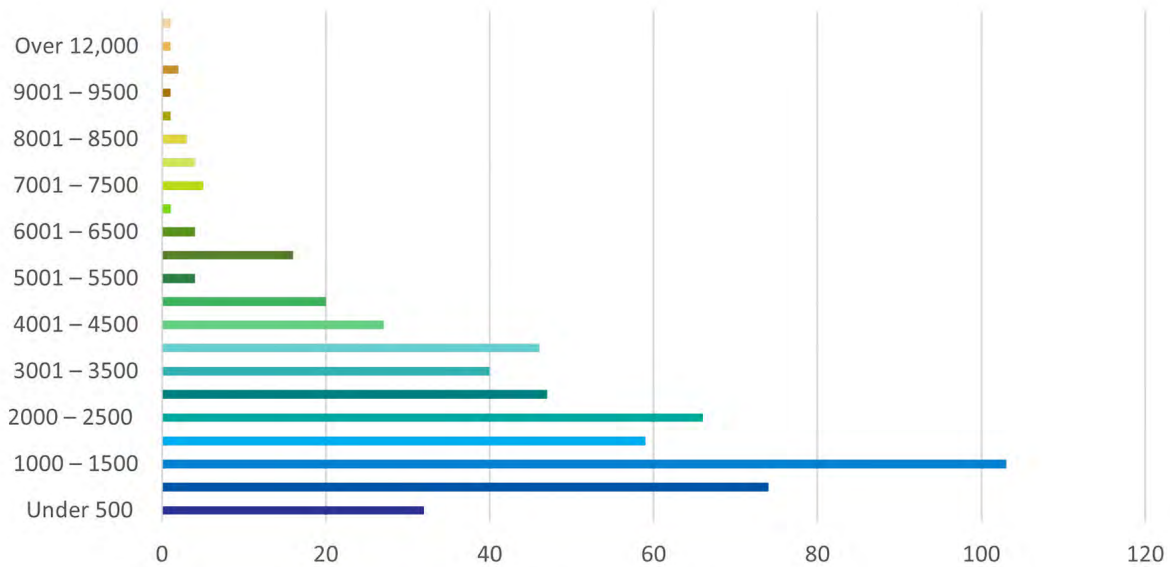
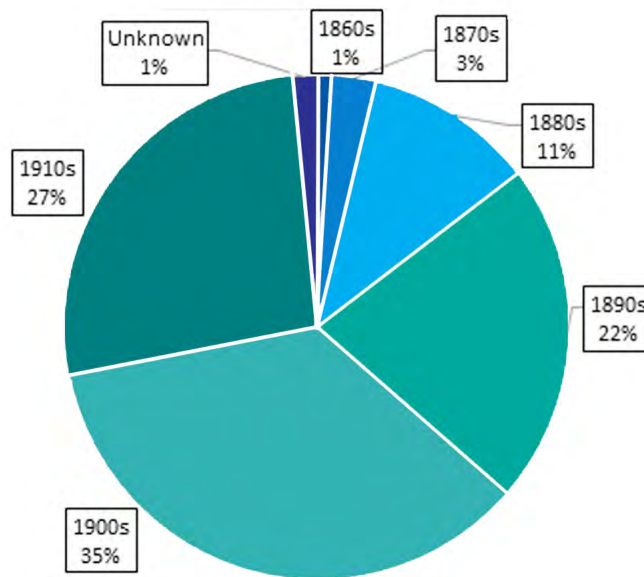


Figure 15.2. Distribution of merchant ship losses within the Forgotten Wrecks of the First World War project area. Steamships are represented by red dots, sailing ships by green dots and sail-steamers by brown dots. Maritime Archaeology Trust.



3a: Tonnage of merchant vessels



3b: Decade of launch

Figure 15.3. Statistics related to merchant ship losses within the Forgotten Wrecks of the First World War project area: (a) tonnage; (b) decade of launch. Maritime Archaeology Trust.

ships constructed in the 1860s and 1870s, with the largest percentage launched between 1900 and 1909.

The cargoes being carried exhibit large variety, and there is further research potential for analysis of these goods, the ports of embarkation and intended destinations. The coal trade is well represented with significant numbers of colliers lost either with their cargo of export or returning to coal ports in ballast. During the First World War, ships were still the most efficient way to transport coal, and the war drove demand, increasing exports from the UK, especially to French ports, to maintain operations. The dataset from

the south coast of England supports Cant’s (2013: 85) statement that ‘Taken as a whole, colliers can be seen to be a substantial discernible group in the landscape of war’.

Within the very large class of vessels described as ‘merchant steam ships’, there are many further avenues for research, including consideration of the differing types, classes and sizes of ships, place of build and biography of use. While assessment of the collection as a whole provides statistics supporting group considerations and patterning which contribute to understanding of wider historical narratives, such large group categorisations can

be reductive, making it difficult to recognise difference and nuance within the dataset. This can mask the significance of individual ships, each of which has its own important story capable of illustrating a range of themes. Examining how significance is ascribed to the assessment of these individual vessels within the UK legislative framework is explored through four examples:

- **Eleanor:** Launched in 1888, 1,980 tonnes in size and lost in 1918 while heading to Malta (via Falmouth) with a military cargo (MAT 2018a).
- **Camberwell:** Launched in 1903, 1,478 tonnes in size, armed and heading from London for Calcutta with a general cargo (MAT 2018b).
- **Medina:** A passenger-cargo vessel (liner), launched in 1911, 12,358 tonnes in size and lost in 1917 while heading from India to London with a mixed cargo and passengers (MAT 2018c).
- **Alaunia:** A passenger-cargo vessel (liner), launched in 1913, 13,405 tonnes in size and lost in 1916 while heading from New York to London with a general cargo (MAT 2018d).

They were lost in positions which span the English Channel (Figure 15.4). They include two relatively averaged-sized cargo vessels, along with two of the largest vessels within the dataset, which were liners used for both passengers and cargo. Two were outbound vessels from the UK, one with military cargo, the other with a mixed cargo, while

two were inbound with mixed cargoes. They demonstrate the range of vessel sizes and cargoes carried, while each has aspects which make their stories and associated physical remains archaeologically and historically significant. Diving survey work has been undertaken on three of the four sites (MAT 2018a, 2018b, 2018d), with high resolution geophysical survey data also available for three of the wrecks (MAT 2018b, 2018c, 2018d). Each of these heritage assets have elements which contribute to historical narratives of nineteenth- and twentieth-century developments, while some have features of particular significance for shipbuilding technology. At present, none of these sites have any formal heritage protection within the UK system, placing them outside of active curatorial management frameworks.

Shipwreck heritage protection mechanisms in England and First World War wrecks

The approach to the management and protection of underwater cultural heritage in the UK, and more specifically, within England, does not take a blanket-coverage approach to protection, but instead utilises specific legislation to apply to individual wrecks (for more on marine protection legislation, see Firth 2010, 2014a; Dromgoole 2013; UK UNESCO 2001 Convention Review Group 2014). The pros and cons of the various mechanisms in terms of protection and management will not be covered here, but instead, there will be a focus

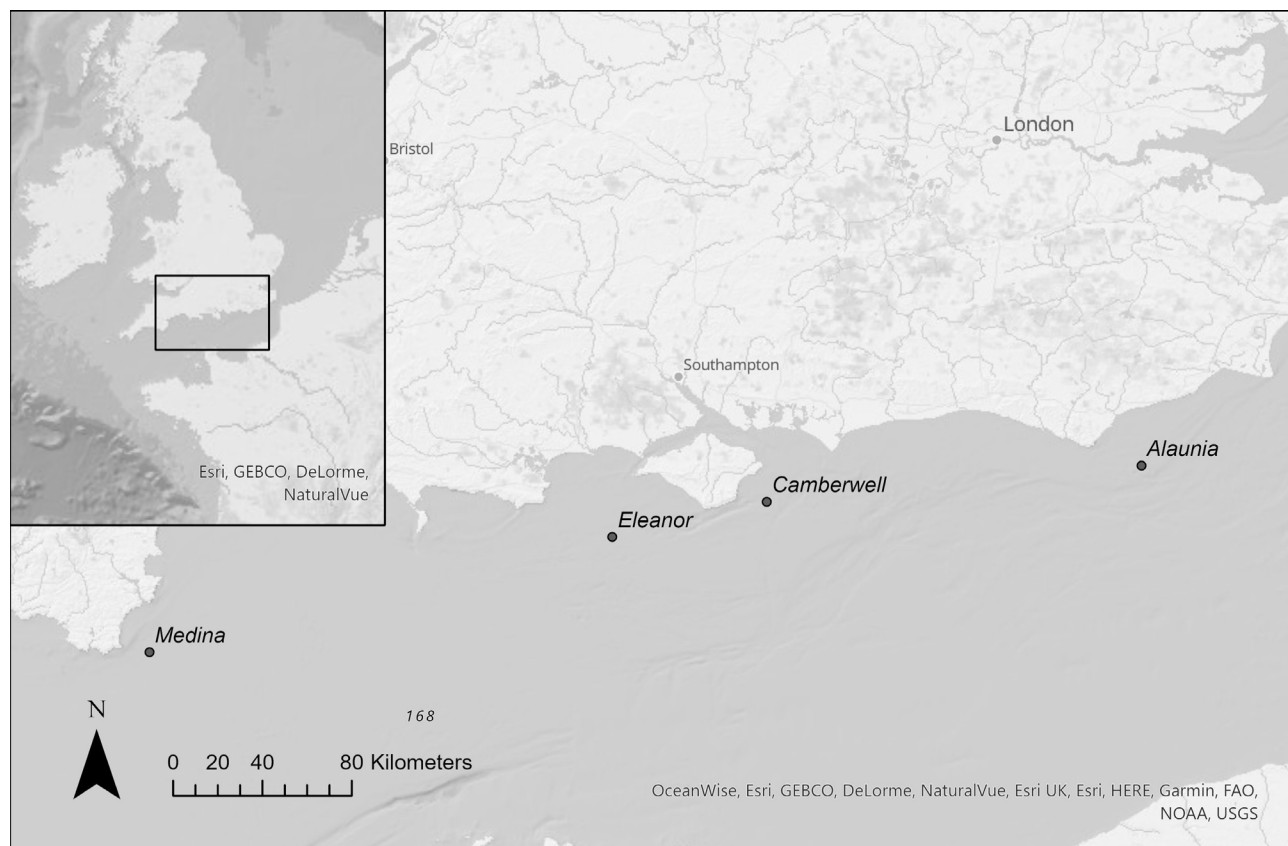


Figure 15.4. Position of the four First World War merchant shipwrecks examined within this chapter, all of which lie off the south coast of England. Maritime Archaeology Trust.

on how the four case study sites can be used to test the significance criteria which are applied to sites within both the Protection of Wrecks Act 1973 (PWA) and the Ancient Monuments and Archaeological Areas Act 1979 (AMAAA). The ability to assess and elucidate the significance of a heritage asset then enables conservation strategies to be enacted to maintain this significance and manage sites for future generations (for more on analysing significance, see Historic England 2019). A further mechanism for protecting UK military wrecks is the Protection of Military Remains Act 1986 (PMRA), which covers sites containing war graves. This legislation can help protect historic vessels from interference and has been applied to several First World War wrecks; however, heritage is not its primary driver, and designation is not accompanied by heritage management strategies.

The selection criteria applied within the PWA and AMAAA, along with examples of their application to wrecks, are outlined by Historic England (2017). In summary, they are:

- **Period:** Vessels from all periods, particularly those which reflect technological advances or provide evidence of trade, industry and transport.
- **Rarity:** Most vessels earlier than 1700 are likely to be of national importance. Those of later dates for which examples survive today will be chosen in exceptional circumstances.
- **Documentation/finds:** Survival of associated historical documentation can be a key factor establishing importance, and the existence of artefacts from a site in museums or collections can enhance significance.
- **Group value:** Importance can be strengthened by association with other similar vessels, or by reflecting wider contexts of use.
- **Survival/condition:** For vessels of a later date, increasingly complete survival, along with strong historical importance is required.
- **Fragility/vulnerability:** The presence of valuable objects within a wreck can make it particularly vulnerable.
- **Diversity:** Can have a diverse combination of high-quality features, or a single important attribute; could relate to ship design, decoration or craft, technological innovation or representativeness.
- **Potential:** A vessel's potential to answer questions on the maritime past; having surviving cargo adds considerably to a vessel's significance.

At present, there are no First World War merchant ships protected using either the PWA or AMAAA. This lack of representation has been recognised by Firth and Rowe (2016: v), who highlight, 'The lack of substantive consideration afforded to post-1849 cargo vessel wrecks as a type of heritage asset is difficult to justify given their importance to so many strands of England's history'.

A small number of First World War military vessels are designated under the PWA. These are two German

submarines—U-8 (Historic England (HE) Uid: 901747) and UC-70 (HE Uid: 909220), and the HMT *Arfon* (HE Uid: 1600390), which was a fishing trawler requisitioned by the Admiralty and in use for mine sweeping when lost. Outside of the Forgotten Wrecks of the First World War project, few wrecks of the period in English waters have received archaeological attention which has resulted in publication. Exceptions are HMS *Falmouth*, which is not protected but has been studied and modelled as it represents the only substantial wreck in inshore waters which fought at the Battle of Jutland (Firth *et al.* 2019), and the SS *Mendi*, which sank with huge loss of life from the South African Native Labour Corp and is protected under the PMRA (Gribble and Sharfman 2014; Gribble and Scott 2017). Both examples add to understanding of narratives of the war at sea.

A number of relevant studies have sought to examine the research context of modern shipwrecks within English Waters (Parham and Maddocks 2013; Historic England 2017). The assessment of the collection of First World War ships within English Territorial Waters by Wessex Archaeology (2011) provides a detailed review of sites, including considerations of 'special interest' which contribute to significance. Particularly relevant for First World War merchant ships is the work by Firth and Rowe (2016) applying an approach to determining national importance or significance within a regional group of merchant ship losses dating post-1840. They explore key narratives of vessels—construction, motive power, trade, life on board and England's history—and the application of these to the build, use and loss of a vessel and how, within each of these, significance can be ascribed at a scale from local to international. Their conclusion—that a detailed ship biography, alongside information from seabed remains, enable greater certainty in the ascribing of national importance—has been further tested through the outputs of the Forgotten Wrecks of the First World War project, which has considered whether the current UK selection criteria fully reflect expressions of significance within this element of the English seabed cultural heritage resource.

The Forgotten Wrecks project examination of the large group of vessels off England took place against an international backdrop of a growing profile for issues related to the assessment, management and protection of First World War shipwrecks coinciding with the centenary of the war (Guerin *et al.* 2014; Tell and Pieters 2022). Investigations across a number of countries reflected the international nature of the archaeological remains related to the conflict. Just some examples include those which audited or collected data on the resource over wider areas, such as Belgium (Deceuninck *et al.* 2014), Ireland (Kelleher 2022), France (Huet 2014) and Northern Ireland (Cotswold Archaeology 2015); took a regional landscape approach (Firth 2022); or related to a particular campaign, such as the Dardanelles (Kolay and Karakas 2014) or battle, such as Jutland (McCartney 2018). Others considered individual ships (Gribble and Sharfman 2014;

L'Hour 2022; Termote 2022), small groups of vessels (Yorke 2014) or a type of vessel within an area (McCartney 2022). Information from these studies, in addition to work undertaken on sites of this period in a number of countries prior to the centenary, provided appreciation of the substantial global resource, against which considerations of significance could be examined.

Examining the significance of merchant ship losses: case studies from English waters

The four case study wreck sites benefited from a range of archive research and fieldwork which enabled consideration of their significance on an individual site level, and within the wider southern English coast dataset, and in relation to any available published comparative material.

SS *Eleanor*

Eleanor was an 82-metre tramp steamer, built in 1888 (Figure 15.5a), powered by a three-cylinder, triple-expansion engine with two single ended boilers. Built for and operated by J.Ridley, Son and Tully of South Shields, the ship worked on merchant voyages around the UK, Ireland and Northern Europe (MAT 2018a). *Eleanor* operated throughout the First World War, usually referenced as MFA (Mercantile Fleet Auxiliary), a designation recognising the ship as on hire to the Admiralty. While on a voyage from the Humber (northeast English coast) bound for Malta with a cargo of mines and mine components on 12 February 1918, the ship was around nine miles off the Isle of Wight, when it was hit at 3:30 am near the No. 3 hatch by a torpedo fired by German submarine UB-57. The crew of 35 onboard, made up of a mix of Royal Navy, Royal Naval Reserve, Royal Naval Volunteer Reserve and Mercantile Marine Reserve personnel, had little time to react, and the ship sank almost instantly. There was only one survivor, 2nd Officer Barton Hunter, whose account of the incident and rescue provides significant historical detail, along with an archive of letters which were sent to him following the sinking by family members of those who were lost (MAT 2018a: 12–14).

The wreck lies relatively intact in 40 metres of water, with 7 metres of structure proud of the seabed. It had 'broken its back' during the sinking, around the position where the torpedo hit. Elements of the cargo are in situ, with a number of unusual types of mines and mine components recognisable. The ship's manifest includes an extensive list of what was on board, with one of the key cargo items being more than 1,400 mines. To put this number into perspective, by 1918, 6,800 mines were being laid per month (Friedman 2011: 363); *Eleanor*'s cargo would have made up 21% of the average monthly amount required. The financial value of this cargo at the time was £170,000 (worth £63 million in 2023), demonstrating the large financial loss, as well as the strategic loss in terms of the war effort. Within the cargo of mines, there are examples of rare—and in some cases, unique—fittings and devices essential to anti-submarine activities in the First World War;

there is significant research potential for these artefacts, particularly as many are still either in, or close to, their original position within the ship, providing information on the stowage and carriage of hazardous cargoes.

The *Eleanor*'s use as a tramp steamer and previous role in the Mercantile Fleet Auxiliary make the site a rare survival in the archaeological record (Wessex Archaeology 2011). While site recording and research have provided detail of the cargo, it is important to consider other aspects of the site as a physical expression of the First World War, such as being armed with deck guns, showing torpedo damage and the geographical place of sinking, all of which are tangible aspects of the site's significance which can be related to historical narratives. More intangible aspects of its significance relate to its commemorative importance. The sole survivor's daughter was contacted and shared an archive of letters sent to her father, which helped disseminate stories associated with the site. The letter archive, and direct personal connection with crew members, poignantly emphasise the connection between archaeological remains on the seabed and commemoration of those who lived and died through the war at sea. Many First World War wreck sites are war graves which are highly important to surviving relatives of those lost. This is an aspect of significance which is often overlooked, and it is arguably not well served by the heritage designation assessment criteria.

SS *Camberwell*

The steam ship *Camberwell* highlights the global nature of trading during the conflict and the diversity of crews involved in keeping the fleet operational. Built in 1903, this 112 metre-long vessel had a crew of 65 who were mostly from the Indian Merchant Service. The ship, built by L.J. Thompson and Sons, Sunderland, had two decks and was powered by a three-cylinder, triple-expansion engine. Its career operating as a general cargo ship transporting goods between the UK and various ports in India is well documented (MAT 2018b). Voyages continued during the war, with a stern gun being fitted. On 18 May 1917 while en route from Middlesbrough to Calcutta via London, the ship hit a mine, laid by submarine UC-36, and listed heavily. The mine explosion blew the hatch covers off and left a hole in the side of the ship (TNA: ADM 137 2962). The crew took to the boats; one boat was lost, including seven men from the Indian Merchant Service. Their loss is just one example highlighting the contribution of the many Black and Asian seamen during the First World War (MAT 2018e) and emphasises the significance wrecks in British waters can hold for other countries, particularly when they are the final resting place of sailors from around the globe.

In the 1970s, the site was located, and a collection of artefacts were recovered, which are now on display at the Shipwreck Centre and Maritime Museum on the Isle of Wight. The site lies 5.5 miles off the Isle of Wight at a depth of 31 m. Recent geophysical survey data (Figure 15.6a) and diver records demonstrate there are still substantial remains in situ on the seabed, both structural and the cargo.

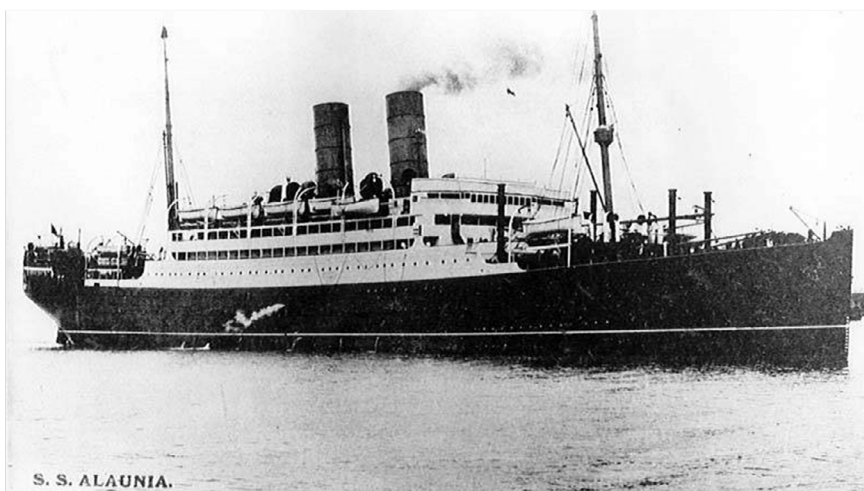
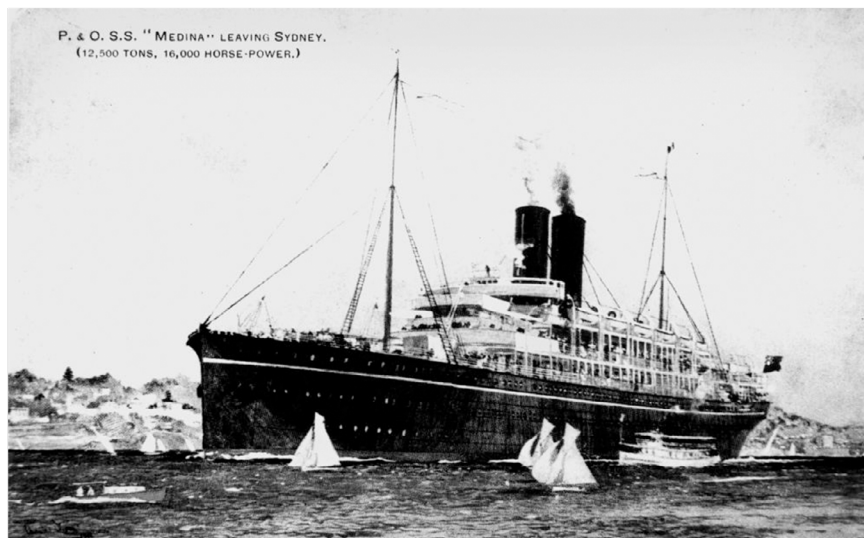
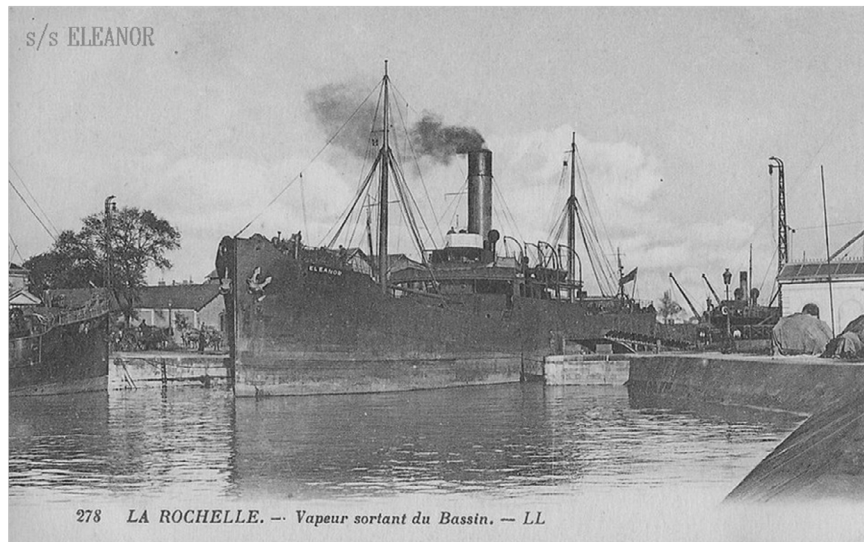


Figure 15.5. Photographs of First World War merchant ships: (a) SS *Eleanor* at La Rochelle, courtesy of Dave Wendes; (b) P&O Liner SS *Medina*, image from the public domain via Wikimedia Commons; (c) SS *Alaunia* at sea, copyright unknown.

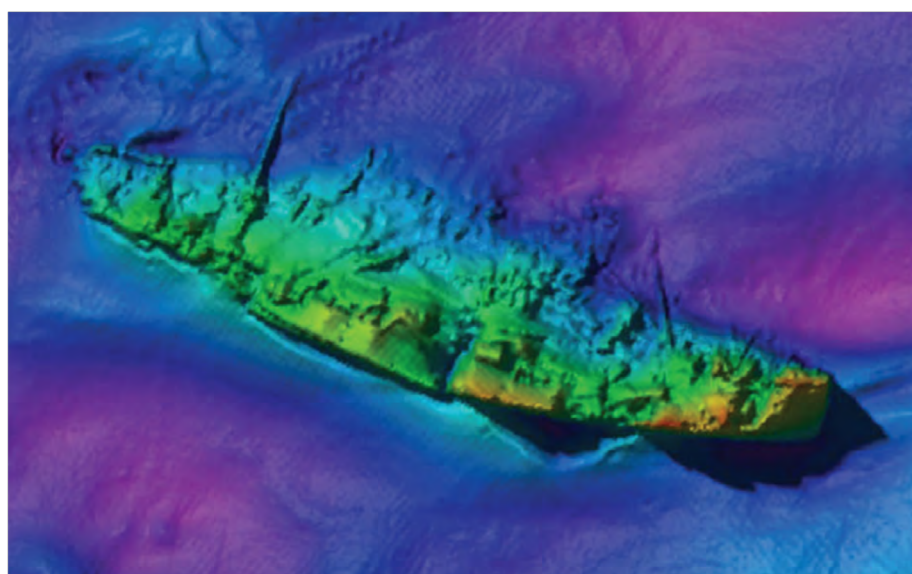
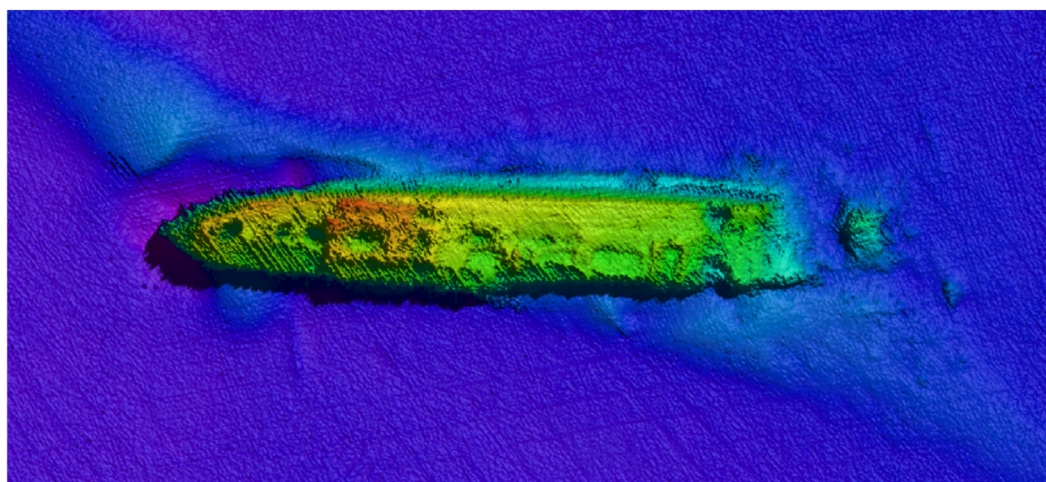
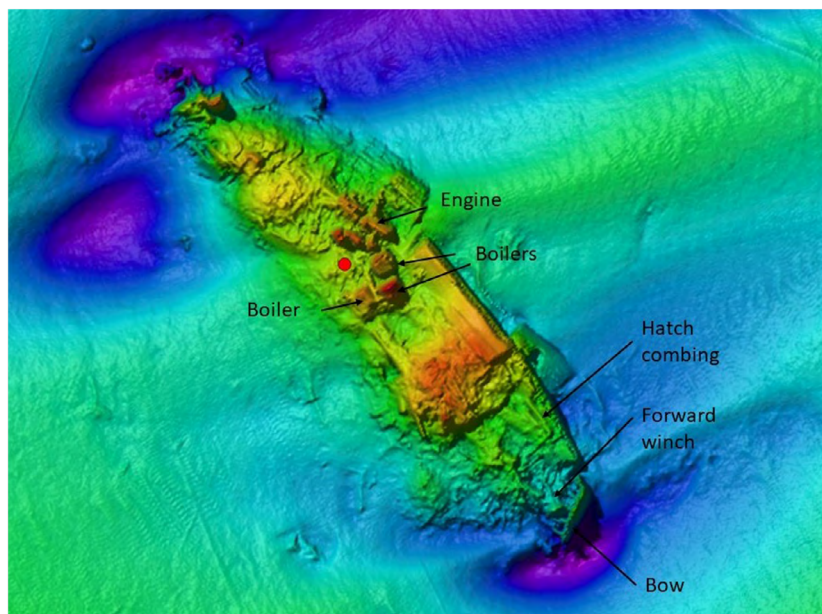


Figure 15.6. Geophysical survey images of First World War merchant ships: (a) SS *Camberwell*; (b) SS *Medina*; (c) SS *Alaunia*. Contains public sector information, licensed under the Open Government Licence V3.0, from the Maritime and Coastguard Agency.

In terms of ship type, *Camberwell* is an example of a relatively ‘ordinary’ cargo vessel. However, it provides significant potential through the historical documentation, recovered collection and seabed archaeological data for exploring the relationship of Britain with India through the goods being traded during this period at the ‘end of Empire’. The cargo, as detailed within the War Risk Insurance records (TNA BT 365), was highly mixed; it included examples of everyday goods, as well as more surprising items (MAT 2018b: 20–34) such as billiard tables, gramophones and footballs which were being exported from Britain to India at the height of the war. Data on the rich and diverse cargo provides a snapshot of the goods, food and items being taken around the globe, and can provide insight on varied social and economic dynamics.

Camberwell illustrates a number of factors of special interest relevant to broader First World War narratives. It was lost during the period of unrestricted submarine warfare and was just one of the many casualties resulting from this new form of warfare. In terms of location, the site is within a cluster of other First World War cargo vessels which show grouping in an area of dense wartime shipping traffic, illustrating how the distribution of archaeological remains of wrecks reflects tactics for marine shipping operations and combat tactics.

SS *Medina*

The *Medina* was designed and built for P&O in 1911 as a passenger and general cargo liner destined for the London-to-Australia mail service via India; it was the last of the ‘M’ class ships built for P&O (P&O 2017) (Figure 15.5b). Built by Caird and Company of Greenock (Clydeships 2017), *Medina* was a large vessel at 167 metres long. Powered by two quadruple-expansion engines, it had 6,807 cubic metres of cargo capacity and could carry 450 first-class and 216 second-class passengers, in addition to its crew of around 350. Prior to completion, there was a request to use the ship to take King George V and Queen Mary to India for the Delhi Durbar, so it was altered and launched as a Royal Yacht (TNA P&O/65/17a-b, /95/16). The following year, the ship was refitted and repainted to commence its mail, cargo and passenger service (MAT 2018c). Its first commercial voyage for P&O was to Australia, and during its return voyage, it called at a range of ports in the Far East, India and Mediterranean before disembarking at London. Prior to the outbreak of war, *Medina* continued to voyage to Australia and occasionally just to India; these trips continued during the war, with armament added to the ship for protection.

During its final voyage, the ship disembarked most passengers at Plymouth, UK before heading on for London. On 28 April 1917, it was hit in the starboard side by the rear of the engine room by a torpedo from German submarine UB-31. The resulting explosion killed six crew, with the rest of those onboard using the lifeboats to escape. Onboard the ship were the possessions of the retiring Governor of Bengal, Lord Carmichael (he himself had taken a safer

route home); the rest of the cargo included metals (copper, silver and tin), rubber, paint and produce (meat, eggs, butter, tea and dried fruit). It amounted to £262,319 of insurance claims, equivalent to £17 million today.

The wreck lies in 60 metres of water off the county of Devon, England; it sits almost upright and is largely intact (Figure 15.6b). The site has been salvaged repeatedly, first in 1932 and more persistently in the 1970s and 1980s. Salvage operations in the 1980s targeted the personal possessions of Lord Carmichael, which included art, jewellery, porcelain and personal papers. These artefacts were auctioned at Sotheby’s in 1988, with the auction catalogue (Sotheby’s 1988) providing lavish images of the antiquities on offer. Some of these were purchased by museums, with many ending up in private collections.

The *Medina* is significant for a number of reasons. In terms of propulsion, it is a rare survival of quadruple-expansion engines; there are only five other examples from the period 1914–1938 in English territorial waters recorded in the national heritage database (Wessex Archaeology 2011: 32), all within liners. Passenger-cargo liners are also rare survivals in the archaeological record and should be ‘regarded to be of special interest on the basis of their rarity’ (Wessex Archaeology 2011: 32). The seabed remains are relatively intact, with torpedo damage and salvage having had some physical impacts. However, there is much potential for further study of the structure, fixtures and fittings.

The ship is also significant in relation to a number of historical narratives. Its use as a Royal Yacht for the trip to Delhi gives it a unique place in history. Its regular commercial route to Australia via India is a reflection of trade and movement of peoples in the late colonial period. Later in its biography it is significant for use during the First World War, links to Lord Carmichael and his collection, being armed as a reflection of the conflict and being sunk by U-boat action. Each of these narratives has a physical expression within the vessel remains and its associated artefacts. The late changes to the ship design and use for the Royal trip meant alterations not on the original plans; the arming of the ship for war is seen through guns, and the torpedo damage reflects enemy action. Lord Carmichael’s collection includes a range of antiques and ‘collectables’ which have not yet been assessed for their relationship to Indian heritage; more of this material may still be on the seabed.

Less tangible historical narratives related to life on board can be observed within the *Medina*’s 350-member crew; of this number, 200 were Indian, including five of the six who died. In 1914, one in six British merchant mariners—about 51,000 men—were classed as ‘lascars’ (of Asian or Arabic origin); P&O liners were usually crewed mainly by white officers and Indian seamen. The latter typically received a fifth to a third of the wages of seamen on ‘European’ employment contracts, fewer rations and smaller quarters (MAT 2018e).

SS *Alaunia*

The *Alaunia*, like the *Medina*, was built as an ocean-going liner for passengers and cargo, this time for the Cunard shipping company and the transatlantic trade. Built in 1913 by Scott's Shipbuilding and Engineering Company in Greenock, it was 158 metres long with four decks, with the capacity to carry 8,000 tonnes of cargo (Figure 15.5c). It was powered by twin screws driven by four quadruple-expansion engines. It had accommodation for 520 second-class and 1,620 third-class passengers (Macdonald 2012).

Launched in June 1913, the ship completed Atlantic crossings from Liverpool to Boston. At the outbreak of the war, *Alaunia* was requisitioned as a troop ship and was responsible for carrying the first contingent of Canadian soldiers for the war; it was also involved in troop transport for the Gallipoli campaign and carried troops to Bombay (Warwick and Roussel 2012). The ship also continued to carry civilian passengers and cargo, and it would be lost on one of these voyages (MAT 2018d). Having sailed from New York bound for London with passengers and a mixed cargo, most passengers were disembarked in Falmouth, UK. The ship then continued travelling along the English Channel, where it hit a mine (laid by UC-16) on 19 October 1916. The explosion under the propellers stopped the ship. Of the 165 crew, two lost their lives.

The ship lies off the coast of East Sussex, UK, in 30 metres of water, on its port side with the forward structure more intact than aft. Salvage during the 1960s and 1970s has impacted the vessel remains, although substantial amounts still lie on the seabed, with the positions of the masts and the boilers evident (Figure 15.6c). Diving investigation recorded the intact bow with wooden decking still in place and a bower anchor still hanging on the hull, with the anchor winch and chains in place. The port bow anchor is buried in the seabed. This situation is corroborated by historical accounts which indicate the tug crew who tried to save the vessel were able to raise the starboard anchor but not the port one (MAT 2018d). The site is popular with divers, and a range of artefacts have been recovered and reported over the years through the UK Receiver of Wreck. Most of these are held in private ownership.

The *Alaunia* shares some similar characteristics with the *Medina*: it is one of the five rare survivals of quadruple-expansion engines within passenger-cargo liners in English territorial waters. Significant aspects of the ship's biography include its status as a Cunard liner in this 'golden age of the ocean liner', as well as its role in the war, having been requisitioned to carry troops and equipment, while also continuing to operate as a liner when not engaged in government work. Involvement in transporting troops for the Gallipoli campaign is particularly significant, alongside its importance to both Canada and the United States, in having carried troops from these countries and for the descendants of those carried onboard.

Examining archaeological significance and implications for protection

The Forgotten Wrecks of the First World War project collected new archaeological datasets and interrogated historical sources, enabling a review of the significance of a number of merchant ship vessels. The four case study examples test approaches to significance assessment within the available heritage protection regimes (although none of them currently have any protection) and facilitate review of whether the criteria used fully reflect and recognise the historical and social significance of First World War merchant vessels.

In relation to *Period*, in theory, the relatively modern date of the ships does not impact their significance within the criteria, which recognise any vessel illustrating important aspects of social, political, economic, cultural, military, maritime or technological history. In practice, however, there are very few First World War ships with formal protection in the UK, with most of those with protection being submarines.

Within *Rarity*, due to the relatively modern date of these ships and apparent high numbers of examples, they would only be protected under 'exceptional circumstances'. However, there are aspects of these sites which would be considered rare, including the rarity of the remains of the *Eleanor* as both an example of a tramp steamer and part of the Mercantile Fleet Auxiliary and its unique cargo, as well as the quadruple-expansion engines and status as passenger-cargo liners of the *Medina* and *Alaunia*.

The *Documentation* criterion states the 'significance of a wreck may be enhanced by close historic association with documented important historical events or people'. Clearly, the sites are linked with the key historical event of the First World War and, as a group, they demonstrate elements of this within their physical remains through armament carried, cargo, damage from mines or torpedoes and their location of loss. Each individual site also has its own significant historical associations, either pre-war or within First World War narratives. Of particular note are the *Medina* and its use as a Royal Yacht and its carriage of the goods of the retiring Governor of Bengal; the *Alaunia* and its links with Canadian troops and the Gallipoli campaign; the *Eleanor* with its cargo and the details of its loss and the associated archive of letters from relatives of those lost; and the *Camberwell* with its varied cargo and associated historical records.

Group value can be applied where vessels are linked through events such as the site of a battle or with a particular port or navigational hazard. Approaches to the assessment of the group value of the global collection of wrecks of the First World War as a whole have not yet been tackled in detail. Clearly, the four case study wrecks are part of the group of First World War merchant ship losses off the south coast of England, and the consideration of this

group within the Forgotten Wrecks project area (as noted previously) provides an initial review of the wider dataset and their context. However, further work is required to analyse the full potential of this collection.

With more modern wrecks, the application of the *Survival/condition* criterion usually prioritises sites with more complete survival for protection; of the four case study wrecks, *Medina* and *Eleanor* are substantially complete, while *Alaunia* and *Camberwell* exhibit impacts from salvage and/or clearance activities. For metal First World War wrecks, this criterion is intrinsically linked with that of *Fragility/vulnerability*. As these ships have now been underwater for over 100 years, some are in a state of rapid decline due to corrosion, and there is a limited window for their investigation. Additional vulnerability comes from their being targeting due to the financial value of their cargo or parts of their remains; legislation could be used to help protect against this.

The criterion *Diversity* recognises the need to protect a range of vessels which exhibit different design, decoration or innovation, or which are representative of a particular type. As no First World War cargo vessels off England have heritage protection, all ‘types’ are currently absent from the national collection of managed sites. Within the case studies, both *Medina* and *Alaunia* have the innovative quadruple-expansion engines, and are both representative of passenger-cargo liners. The *Eleanor* is a rare representative of a tramp steamer and also part of the Mercantile Fleet Auxiliary, although both of these characteristics are derived from the vessel’s use rather than its design. The *Camberwell* is a representative example of the relatively ‘ordinary’ merchant steam ship.

The *Potential* of a wreck site to answer questions about the maritime past is recognised within the assessment criteria. Ships with surviving cargo are acknowledged as having added significance due to evidence of trade through material culture. *Potential* is also applied to contributions demonstrating historical associations or aspects of social, economic and mercantile history. All four of the case study examples have high potential within this criterion.

Each case study site arguably possesses characteristics making it eligible for formal heritage protection within the current criteria; as a group, they also illustrate a number of themes and narratives which are not well represented within current assessment approaches. There is a need to recognise the significance which ships may have for other countries, including significance achieved through the movement of goods and people during a ship’s career, the international composition of a ship’s crew, the status of sites as the final resting place of those lost during the sinking, as well as within the cargoes carried onboard which may survive on the seabed. The importance of a wreck for commemoration and family history is a less-tangible aspect of significance which is harder to quantify

alongside the broader narratives. However, there are many individual stories of bravery and sacrifice which should be identified and commemorated. Recognising the contributions and narratives of the sailors and merchant seamen who fought the vital, yet little-known struggle on a daily basis just off the shore is a vital part of understanding the full significance of these individual ships.

Conclusion

There is a need to take a more holistic approach to determining significance of individual vessels and their role within the wider historical narratives of economic, political and social transformations. This is particularly important for ships of the later nineteenth and early twentieth centuries, many of which played a role within these evolving international systems of colonialism and capitalism, as well as reflecting developing ship technology and involvement in global conflict. This reiterates the position of Firth and Rowe (2016), who emphasise that each of these vessels is not just an anonymous metal ship in a seeming mass of dots on the map; rather, each has its own important story to tell. The Forgotten Wrecks of the First World War project has considered patterning within the losses and statistics of this group of vessels to more fully understand narratives related to the war at sea. It has drawn on information from seabed remains and, in some cases, associated recovered collections to examine how the unique physical expression at a micro-level can challenge the detailed historical documentation available for the period.

The power of maritime archaeology within the historical archaeology of shipwrecks is its ability to add new perspectives to understanding human experience onboard ships, as well as how shipboard communities reflect wider social and economic circumstances. Considering individuals within interpretations provides a direct human connection, emphasising ships as active communities, not passive containers for life. These factors can be overlooked when a site is represented with only the basic information often included within heritage databases, which, within this large class of seabed site, can be as minimal as ship type (usually steam cargo ship), date, builder and use on final voyage. This is a product of the large numbers of sites and limited archaeological or historical attention they have received. However, with detailed ship-career biography information alongside the recording of the physical remains, a more comprehensive understanding of a ship’s significance is reached. As argued, elements of significance are often not well expressed using only the legislative assessment criteria for these vessels of the modern period. With increasing volumes of digital access to historical archive material and a higher profile for the rapidly degrading First World War merchant ships, there is an opportunity to capture the full research potential of these important sites and use the results as a basis for the application of appropriate protection and management measures.

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The recovery of a Fairey Barracuda from the Solent off the former RNAS Daedalus

Alistair Byford-Bates, Ben Saunders and Euan McNeill

Abstract: During survey work in 2018, the extant remains of a Fairey Barracuda—subsequently presumed to be Fairey built LS473, recorded as lost during take-off—were discovered submerged off the former Royal Naval Air Station (RNAS) Lee-on-Solent, HMS *Daedalus*. Widely used, the Barracuda was the first all-aluminium high-winged monoplane of the Royal Navy's Fleet Air Arm, but no surviving complete example of this aircraft exist.

This paper outlines the ongoing research into the aircraft and various archives, identifying several inconsistencies leading to questions about the initial identity of the aircraft, the records around its loss and that of other aircraft of the same type lost in close proximity to the crash site. The examination of the aircraft's remains has provided insights into wartime production contingencies across aircraft manufacturers, and the variations in aircraft design as types were altered or upgraded during the production process, with the recovered aircraft showing features from more than one mark. Though the aircraft were produced under licence to the same set of design drawings, with updates to individual drawings, there is evidence of significant variation between manufacturers' methods. There is also evidence of differing interpretations of the construction drawings, along with several ad hoc alterations to correct errors in the construction process.

Introduction

This paper reports on the recovery of a Mk II Fairey Barracuda (Figure 16.1) from the sea close to the end of the runway at the former Royal Navy Air Station (RNAS) Daedalus in Hampshire, England. The discovery of the extant remains of an aircraft in a shallow marine environment, and its subsequent excavation and recovery under the direction of professional marine archaeologists, is considered a rare opportunity within the UK. Research into recorded losses produced two possible candidate aircraft. These were being flown as training flights with just the pilots onboard, neither of which resulted in a fatality, following their ditching into the sea on take-off.

The aircraft was found due to its location in the planned High Voltage AC (HVAC) cable corridor of the IFA2: Interconnexion France-Angleterre 2 (IFA2) cable route between France and England (Figure 16.2, left). The location of the crash site resulted in a significant restriction on the proposed cable corridor and left insufficient space so close to the landfall to reposition the cables around the site. It was therefore decided, once the research showed neither potential aircraft involved fatalities, to obtain permission to remove the wreckage under licence from the UK Ministry of Defence (MOD) as required under the *Protection of Military Remains Act* (1986). The excavation and recovery followed the methodology created by Wessex Archaeology and approved by Historic England, as the heritage regulator for England and advisor to the UK Government's licencing body for the *Marine and Coastal*

Access Act (2009), the Marine Management Organisation (MMO). This was also in line with the Service Personnel and Veterans Agency, Joint Casualty and Compassionate Centre guidance (2011) on obtaining a licence for the recovery of military aircraft material. The recovery was carried out with the incorporation of Wessex Archaeology archaeologists into the contractor's operation, under the conditions set out in the MMO Marine and the MOD licences issued.¹ Full details of the methodology are set out in Wessex Archaeology's Written Scheme of Investigation (2017) and Method Statement (2019a). The project aim was therefore to excavate and remove the aircraft, producing a record sufficient to enable analytical reconstruction and/or reinterpretation of the site, its components and its matrix. All the material recovered was to be transferred to the Fleet Air Arm Museum (FAAM) for disassembly to aid with their ongoing reconstruction project.

The aircraft was found approximately 500 m offshore, near the end of the runway of the former RNAS Lee-on-Solent (HMS *Daedalus*) with the nose of the aircraft pointing approximately southeast. The fuselage and engine were upright and slightly canted to port, with the port wing buried within the seabed sediments from approximately 1 m outboard of the fuselage. The starboard wing was partially detached from the wing stub lying flat on the seabed. The upper part of the engine was 0.5 m proud

¹ MMO Marine licence L/2017/00021/2 issued under the *Marine and Coastal Access Act* (2009), and MOD licence number 1878, issued under the *Protection of Military Remains Act* (1986).